To	Company Announcements Office	Facsimile	1300 135 638
Company	ASX Limited	Date	19 October 2023
From	Helen Hardy	Pages	431
Subject	**Notice of Scheme Meeting and Scheme Booklet**		

Please find attached a release on the above subject.

Authorised for lodgement by:

Helen Hardy
Company Secretary
02 8345 5000

ASX/Media Release

19 October 2023

Court approves distribution of Scheme Booklet and convening of Scheme Meeting

Scheme Booklet registered with ASIC

Origin Energy Limited (Origin) provides the following update on the proposed acquisition of Origin involving a Brookfield-led consortium of investors, and EIG.

First court hearing

The Supreme Court of New South Wales has made orders:

- that Origin convene a meeting of Origin shareholders to consider and vote on the proposed Scheme to effect the acquisition of all of the shares in Origin (Scheme Meeting); and
- approving the dispatch to Origin shareholders of an explanatory statement providing information about the Scheme and the notice of Scheme Meeting (Scheme Booklet).

Scheme Booklet and Independent Expert's Report

Origin confirms that the Scheme Booklet has now been registered with the Australian Securities and Investments Commission. A copy of the Scheme Booklet is attached and will also be available at www.originenergy.com.au/scheme2023.

The Scheme Booklet provides Origin shareholders with important information about the Scheme. Origin shareholders are advised to carefully read the Scheme Booklet in its entirety, including the Independent Expert's Report, before deciding how to vote on the Scheme.

Further details will be sent to Origin shareholders shortly as follows:

- Origin shareholders who have previously elected to receive communications electronically will receive an email to their nominated email address that will contain instructions about how to view or download a copy of the Scheme Booklet and submit a proxy vote online.
- Origin shareholders who have elected to receive a full copy of communications will receive (by post to their registered address) a printed copy of the Scheme Booklet and a personalised proxy form.
- Origin shareholders who have not made such an election will receive a letter (sent by post to their registered address) enclosing a personalised proxy form and containing details of where they can view and download a copy of the Scheme Booklet.

- Origin shareholders who wish to receive a printed copy of the Scheme Booklet may request one by calling the Origin Shareholder Information Line on 1300 540 303 (within Australia) or +61 2 9066 4083 (outside Australia), Monday to Friday between 8.30am and 5.30pm (Sydney time).

Independent Expert's Report

The Independent Expert's Report contained in the Scheme Booklet was prepared by Grant Samuel (Independent Expert). The Independent Expert has concluded that the Scheme is fair and reasonable and is therefore in the best interests of Origin shareholders, in the absence of a superior proposal.

The Independent Expert's conclusion should be read in the context of the full Independent Expert's Report and the Scheme Booklet.

Recommendation of the Origin Board

The Origin Board unanimously recommends that shareholders vote in favour of the Scheme at the Scheme Meeting, in the absence of a superior proposal and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin shareholders. Subject to the same qualification, each member of the Origin Board intends to vote, or cause to be voted, any Origin shares held or controlled by them, in favour of the Scheme.

Scheme consideration and special dividend

The total cash payment to shareholders under the Scheme is approximately $8.81 per share as described in further detail in the Scheme Booklet. This figure represents the approximate cash amount Origin shareholders will be paid if the Scheme is implemented in accordance with the timetable set out in the Scheme Booklet, and may increase or decrease based on the USD/AUD rate at the time of conversion.

The total cash payment of approximately $8.81 per share comprises[1]:

- AUD scheme consideration of $6.25 per Origin share held on the scheme record date (less the special dividend of 39 cents if determined and paid by Origin before the Scheme is implemented);
- USD scheme consideration of US$1.64 per Origin share held on the scheme record date, which will be converted to Australian dollars and paid in Australian dollars (unless a valid Currency Election is made to receive US dollars), with a current Australian dollar implied value of $2.56 based on the USD/AUD exchange rate of 0.64 as at the last practicable date[2]; and
- a fully franked special dividend of 39 cents per Origin share (special dividend) held on the special dividend record date, which the Origin Board intends to pay subject to certain conditions being met.

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[1] This implied amount assumes an implementation date of 18 December 2023 and is based on the spot USD/AUD exchange rate of 0.64 as at the last practicable date of 10 October 2023. Refer to the Scheme Booklet for further detail. Capitalised terms used but not defined have the meaning given to them in the Scheme Booklet.

[2] The Australian dollar value of the USD scheme consideration may increase or decrease based on the USD/AUD exchange rate at the time of conversion.

The Origin Directors will determine, in their absolute discretion, whether or not to pay any special dividend. If a special dividend is paid, it will be deducted from the AUD scheme consideration. As such, regardless of whether the special dividend is paid, Origin shareholders will still receive the same total cash payment of approximately $8.81 per Origin share.

For those Origin shareholders who can realise the benefit of franking credits, the franking credit attached to a special dividend of 39 cents per share is approximately 16.7 cents per share.

Scheme Meeting

The Scheme Meeting will be held at 2.00pm (Sydney time) on 23 November 2023, at the Swissôtel Sydney, 68 Market Street Sydney, NSW and will also be broadcast online. Origin shareholders (or their proxies, attorneys or corporate representatives) will be able to attend and vote at the Scheme Meeting in person.

Origin shareholders who are unable to attend in person can view the Scheme Meeting via live webcast at www.originenergy.com.au/scheme2023. Origin shareholders who participate in the Scheme Meeting via the online platform will not be able to vote at the meeting, ask questions or make comments.

All registered Origin shareholders as at 7.00pm (Sydney time) on 21 November 2023 will be eligible to vote at the Scheme Meeting.

Origin shareholders are encouraged to vote either by completing and returning the proxy form or alternatively by attending the Scheme Meeting in person, or by proxy, attorney or corporate representative.

Key Dates

Event	Time and date
First Court Date	18 October 2023
Date of the Scheme Booklet	18 October 2023
Special dividend announcement date Origin will announce via ASX whether a special dividend will be paid	Before the Scheme Meeting
Latest time and date for receipt of proxy forms or powers of attorney by the Origin share registry for the Scheme Meeting	2.00pm, 21 November 2023
Time and date for determining eligibility to vote at the Scheme Meeting	7.00pm, 21 November 2023
Scheme Meeting	2.00pm, 23 November 2023
If the Scheme is approved by Origin shareholders	
Court hearing to approve the Scheme (Second Court Date)	27 November 2023

Effective Date Court order lodged with ASIC and announcement to ASX Last day of trading in Origin shares – Origin shares will be suspended from trading on ASX from close of trading	28 November 2023
Special dividend record date (for determining entitlements to the special dividend if the Origin Directors decide to pay a special dividend)	7.00pm, 30 November 2023
Election time (time by which an election form must be received by the Origin share registry for a valid currency election)	7.00pm, 4 December 2023
Special dividend payment date (if the Origin Directors decide to pay a special dividend)	8 December 2023
Scheme record date (for determining entitlements to the Scheme Consideration)	7.00pm, 11 December 2023
Implementation date Provision of scheme consideration	18 December 2023

All times and dates in the above timetable are references to the time and date in Sydney, Australia and all such times and dates are subject to change. Certain times and dates are conditional on the approval of the Scheme by Origin shareholders and by the Court. Any changes will be announced by Origin to the ASX.

Further information

If shareholders have any questions in relation to the Scheme or the Scheme Booklet, please contact the Origin Shareholder Information Line on 1300 540 303 (within Australia) or +61 2 9066 4083 (outside Australia), Monday to Friday between 8.30am and 5.30pm (Sydney time).

Contact details:

Media
Anneliis Allen
Ph: +61 2 8345 5119
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Investors
Lindsay Donnelly
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Scheme Booklet

For a scheme of arrangement between Origin Energy Limited ABN 30 000 051 696 and its shareholders in relation to the proposed acquisition by MidOcean Reef Bidco Pty Ltd ABN 22 665 950 318.

origin

Vote in favour

Your Directors unanimously recommend that you vote in favour of the Scheme, in the absence of a Superior Proposal and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin Shareholders.

The Independent Expert has concluded that the Scheme is fair and reasonable and therefore is in the best interests of Origin Shareholders, in the absence of a Superior Proposal.

This is an important document and requires your immediate attention.

You should read it entirely before deciding whether or not to vote in favour of the Scheme.

If you are in any doubt about how to deal with this document, you should contact your broker or financial, taxation, legal or other professional adviser immediately.

If, after reading this Scheme Booklet, you have any questions in relation to this Scheme Booklet or the Scheme, please contact the Origin Shareholder Information Line on 1300 540 303 (within Australia) or +61 2 9066 4083 (outside Australia) between 8.30am and 5.30pm (Sydney time), Monday to Friday (excluding public holidays).

This Scheme Booklet has been sent to you because you are shown in the Origin Share Register as holding Origin Shares. If you have recently sold all your Origin Shares, please disregard this Scheme Booklet.

Financial Advisers

Barrenjoey

JARDEN

Legal Adviser

HERBERT SMITH FREEHILLS

Important Notices

General

This Scheme Booklet is important and requires your immediate attention. You should read this Scheme Booklet in full before making any decision as to how to vote at the Scheme Meeting.

Nature of this Scheme Booklet

This Scheme Booklet includes the explanatory statement for the Scheme required by subsection 412(1) of the Corporations Act.

This Scheme Booklet does not constitute or contain an offer to Origin Shareholders, or a solicitation of an offer from Origin Shareholders, in any jurisdiction. This Scheme Booklet is not a disclosure document required by Chapter 6D of the Corporations Act. Subsection 708(17) of the Corporations Act provides that Chapter 6D of the Corporations Act does not apply in relation to arrangements under Part 5.1 of the Corporations Act approved at a meeting held as a result of an order under subsection 411(1). Instead, Origin Shareholders asked to vote on an arrangement at such a meeting must be provided with an explanatory statement as referred to above.

ASIC and ASX

A copy of this Scheme Booklet has been registered by ASIC for the purposes of subsection 412(6) of the Corporations Act. ASIC has been given the opportunity to comment on this Scheme Booklet in accordance with subsection 411(2) of the Corporations Act. Neither ASIC, nor any of its officers, takes any responsibility for the contents of this Scheme Booklet. ASIC has been requested to provide a statement, in accordance with paragraph 411(17)(b) of the Corporations Act, that it has no objection to the Scheme. If ASIC provides that statement, it will be produced to the Court at the time of the Court hearings to approve the Scheme.

A copy of this Scheme Booklet has been provided to the ASX. Neither the ASX, nor any of its officers, takes any responsibility for the contents of this Scheme Booklet.

Defined terms

Capitalised terms used in this Scheme Booklet are defined in section 10, which also sets out some rules of interpretation which apply to this Scheme Booklet. Some of the documents reproduced in the annexures to this Scheme Booklet have their own defined terms, which are sometimes different to those set out in section 10.

Important notice associated with Court order under subsection 411(1) of the Corporations Act

The fact that, under subsection 411(1) of the Corporations Act, the Court has ordered that a meeting be convened and has approved the explanatory statement required to accompany the Notice of Scheme Meeting does not mean that the Court:

- has formed any view as to the merits of the proposed Scheme or as to how Origin Shareholders should vote (on this matter Origin Shareholders must reach their own conclusion); or
- has prepared, or is responsible for the content of, the explanatory statement.

Notice of Scheme Meeting

The Notice of Scheme Meeting is set out in Annexure 4.

Notice of Second Court Hearing

At the Second Court Hearing, the Court will consider whether to approve the Scheme following the vote at the Scheme Meeting. Any Origin Shareholder may appear at the Second Court Hearing, currently expected to be held at 2.00pm (Sydney time) on 27 November 2023 at the Supreme Court of New South Wales, Law Courts Building, 184 Phillip Street, Sydney, NSW 2000. Any Origin Shareholder who wishes to oppose approval of the Scheme at the Second Court Hearing may do so by filing with the Court and serving on Origin a notice of appearance in the prescribed form together with any affidavit that the Origin Shareholder proposes to rely on.

No investment advice

This Scheme Booklet has been prepared without reference to the investment objectives, financial and taxation situation or particular needs of any Origin Shareholder or any other person. The information and recommendations contained in this Scheme Booklet do not constitute, and should not be taken as, financial product advice. You are encouraged to seek independent financial and taxation advice before making any investment decision and any decision as to whether or not to vote in favour of the Scheme. This Scheme Booklet should be read in its entirety before making a decision on whether or not to vote in favour of the Scheme. In particular, it is important that you consider the risk factors set out in section 7, and the views of the Independent Expert set out in the Independent Expert's Report contained in Annexure 1. If you are in doubt as to the course you should follow, you should consult an independent and appropriately licensed and authorised professional adviser immediately.

Forward looking statements

Some of the statements appearing in this Scheme Booklet (including in the Independent Expert's Report) may be in the nature of forward looking statements. Forward looking statements or statements of intent in relation to future events in this Scheme Booklet (including in the Independent Expert's Report) should not be taken to be forecasts or predictions that those events will occur. Forward looking statements generally may be identified by the use of forward looking words such as 'believe', 'aim', 'target', 'expect', 'anticipate', 'intending', 'foreseeing', 'likely', 'should', 'planned', 'may', 'estimate', 'potential', or other similar words. Similarly, statements that describe the objectives, plans, goals, ambitions, intentions or expectations of Origin, Bidder or their related entities are or may be forward looking statements. You should be aware that such statements are only opinions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to Origin, Bidder or their related entities and/or the industries in which they operate, general economic conditions, prevailing exchange rates and interest rates and conditions in financial markets.

Actual events or results may differ materially from the events or results expressed or implied in any forward looking statement and deviations are both normal and to be expected. None of Origin, Bidder, their respective entities, or their respective officers, directors, employees or advisers or any person named in this Scheme Booklet or any person involved in the preparation of this Scheme Booklet makes any representation or warranty (either express or implied) as to the accuracy or likelihood of fulfilment of any forward looking statement, or any events or results expressed or implied in any forward looking statement. Accordingly, you are cautioned not to place undue reliance on those statements.

Any forward looking statements in this Scheme Booklet reflect views held only at the date of this Scheme Booklet. Subject to any continuing obligations under the Listing Rules or the Corporations Act, Origin and Bidder and their respective officers, directors, employees and advisers, disclaim any obligation or undertaking to distribute after the date of this Scheme Booklet any updates or revisions to any forward looking statements to reflect (a) any change in expectations in relation to such statements; or (b) any change in events, conditions or circumstances on which any such statement is based.

Responsibility statement

Origin has prepared, and is responsible for, the Origin Information. Neither Bidder, Brookfield nor any of their subsidiaries, directors, officers, employees or advisers assume any responsibility for the accuracy or completeness of such information.

Bidder has prepared, and is responsible for, the Bidder Information. Neither Origin nor any of its subsidiaries, directors, officers, employees or advisers assume any responsibility for the accuracy or completeness of such information.

The Independent Expert has prepared the Independent Expert’s Report as set out in Annexure 1 and takes responsibility for that report. The Independent Technical Specialist has prepared the Independent Technical Specialist’s Report included in the Independent Expert’s Report and takes responsibility for that report. None of Origin or Bidder or any of their respective subsidiaries, directors, officers, employees or advisers assume any responsibility for the accuracy or completeness of the information contained in the Independent Expert's Report or the Independent Technical Specialist’s Report, except, in the case of Origin, in relation to the information which it has provided to the Independent Expert and Independent Technical Specialist.

Herbert Smith Freehills has prepared, and is responsible for, the Taxation Information. None of Origin or Bidder or any of their respective subsidiaries, directors, officers, employees or advisers assume any responsibility for the accuracy or completeness of the Taxation Information, except, in the case of Origin, in relation to the information which it has provided to Herbert Smith Freehills.

No consenting party has withdrawn their consent to be named before the date of this Scheme Booklet.

Foreign jurisdictions

The release, publication or distribution of this Scheme Booklet in jurisdictions other than Australia may be restricted by law or regulation in such other jurisdictions and persons outside of Australia who come into possession of this Scheme Booklet should seek advice on and observe any such restrictions. Any failure to comply with such restrictions may constitute a violation of applicable laws or regulations.

Important Notices *continued*

This Scheme Booklet has been prepared in accordance with the laws of Australia and the information contained in this Scheme Booklet may not be the same as that which would have been disclosed if this Scheme Booklet had been prepared in accordance with the laws and regulations of a jurisdiction outside of Australia.

Origin Shareholders who are nominees, trustees or custodians are encouraged to seek independent advice as to how they should proceed.

Financial amounts and effects of rounding

All financial amounts in this Scheme Booklet are expressed in Australian currency unless otherwise stated. A number of figures, amounts, percentages, estimates, calculations of value and fractions in the Scheme Booklet are subject to the effect of rounding. Accordingly, any discrepancies between totals in tables or financial statements, or in calculations, graphs or charts are due to rounding. All financial and operational information set out in this Scheme Booklet is current as at the date of this Scheme Booklet, unless otherwise stated.

Implied Value

The Australian dollar value of the USD Scheme Consideration will vary based on changes in the AUD/USD exchange rate. Any reference to the implied value of the USD Scheme Consideration should not be taken as an indication that the implied value is fixed.

Charts and diagrams

Any diagrams, charts, graphs or tables appearing in this Scheme Booklet are illustrative only and may not be drawn to scale. Unless stated otherwise, all data contained in diagrams, charts, graphs and tables is based on information available as at the Last Practicable Date.

Timetable and dates

All times and dates referred to in this Scheme Booklet are times and dates in Sydney, Australia, unless otherwise indicated. All times and dates relating to the implementation of the Scheme referred to in this Scheme Booklet may change and, among other things, are subject to Origin Shareholder approval and Court approval.

External websites

Unless expressly stated otherwise, the content of the websites of Origin, Brookfield and EIG do not form part of this Scheme Booklet and Origin Shareholders should not rely on any such content.

Privacy

Origin may collect personal information in the process of implementing the Scheme. The type of information that it may collect about you includes your name, contact details and information on your shareholding in Origin and the names of persons appointed by you to act as a proxy, attorney or corporate representative at the Scheme Meeting as relevant to you. The collection of some of this information is required or authorised by the Corporations Act. The primary purpose of the collection of personal information is to assist Origin to conduct the Scheme Meeting and implement the Scheme. Without this information, Origin may be hindered in its ability to issue this Scheme Booklet and implement the Scheme. Personal information of the type described above may be disclosed to the Origin Share Registry, third party service providers (including print and mail service providers and parties otherwise involved in the conduct of the Scheme Meeting), authorised securities brokers, professional advisers, related bodies corporate of Origin, Government Agencies, and also where disclosure is otherwise required or allowed by law. Origin Shareholders who are individuals and the other individuals in respect of whom personal information is collected as outlined above have certain rights to access the personal information collected in relation to them. If you would like to obtain details of the information about you held by the Origin Share Registry in connection with Origin Shares, please contact the Origin Share Registry. Origin Shareholders who appoint an individual as their proxy, corporate representative or attorney to vote at the Scheme Meeting should ensure that they inform such an individual of the matters outlined above. Further information about how Origin collects, uses and discloses personal information is contained in Origin's Privacy Policy located at https://www.originenergy.com.au/privacy/privacy-policy/.

Date of Scheme Booklet

This Scheme Booklet is dated 18 October 2023.

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Letter from the Chair of the Origin Board

Dear Origin shareholder,

On behalf of the Origin Board, I am pleased to present you with this Scheme Booklet. It contains information for you to consider before voting your shares in relation to the proposed acquisition (**Scheme**) of all the issued shares in your company, Origin Energy Limited (**Origin**), involving a Brookfield-led consortium of investors, the BGTF Consortium, and EIG.

The Scheme is proposed under a Scheme Implementation Deed entered into in March 2023 on customary terms. Under that deed, the BGTF Consortium and EIG propose the Scheme and Origin commit to put it to Origin shareholders, and for the Origin Board to recommend the Scheme subject to the Independent Expert concluding it to be in the best interests of Origin shareholders and in the absence of a Superior Proposal.

Under the Scheme, Origin shareholders will receive a total cash payment of approximately $8.81 per share. The composition of this payment, and potential variances in this amount between now and the time of implementation of the Scheme, are outlined in more detail below.

The Independent Expert, Grant Samuel, has valued Origin in the range of $8.45 to $9.48 per share as at 30 June 2023 and concluded that the Scheme is fair and reasonable and therefore is in the best interests of Origin shareholders, in the absence of a Superior Proposal.

The Independent Expert has also noted that while a valuation as at the implementation date of 18 December 2023 cannot be reliably determined in advance, a 'roll forward' of the valuation to that date assuming a return on equity of, say, 10 per cent could theoretically increase Origin's value by approximately 40 cents per share (to the low end of the valuation range), and a 6 per cent rate in line with the ticking fee[1] would add approximately 24 cents, assuming the business achieves its FY2024 budget, pays no dividends and there is no change to long-term cash flows or economic conditions.

We note that, following receipt of ACCC authorisation on 10 October 2023, the Origin share price closed trading at $9.21 per Origin share, which is 40 cents per share above the total cash payment shareholders would receive under the Scheme, and, as at the date of publication of this Scheme Booklet, Origin's share price has continued to trade above the total cash payment. Ultimately, the Scheme requires shareholder approval to proceed and the Origin Board will continue to work to facilitate that. Origin Shareholders should however note that the trading price of Origin Shares is impacted by the proposed Scheme and that the Origin Share price may not necessarily trade at these levels in the absence of the proposed Scheme. If the Scheme does not proceed, the Origin share price may fall.

You will have an opportunity to vote at the Scheme Meeting. The Scheme can only be implemented if approved by the Requisite Majorities of Origin shareholders.

Your Board unanimously recommends that Origin shareholders vote in favour of the Scheme, in the absence of a Superior Proposal, and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin shareholders.[2]

Your vote is important. Please read this Scheme Booklet carefully.

Background to the Consortium's proposal

In August 2022, Origin was approached by Brookfield Asset Management Inc. (together with its affiliates and their managed funds) and EIG (**Consortium**) with a confidential non-binding indicative proposal to acquire all of Origin's issued shares at a price of $7.95 per share. The Origin Board rejected this, and a

1. Additional Consideration for the ticking fee of approximately 4.5 cents per month, accruing on a daily basis from 1 December 2023.
2. Origin Shareholders should, in considering this recommendation, note that (as detailed in section 9.2 of this Scheme Booklet), if the Scheme becomes Effective, the following will occur in relation to the equity incentives and deferred cash awards held by Frank Calabria (Managing Director and Chief Executive Officer): full vesting and exercise of 992,212 unvested share rights, lifting of restrictions on 472,417 restricted Origin Shares and waiving of the deferral period for $1,229,499 deferred cash. Despite this interest in the outcome of the Scheme, Mr Calabria considers that, given the importance of the Scheme and his role as Managing Director and Chief Executive Officer, it is important and appropriate for him to provide a recommendation to Origin Shareholders in relation to the Scheme. Additionally, the Origin Board (excluding Mr Calabria) also considers that it is appropriate for Mr Calabria to make a recommendation on the Scheme given his role.

subsequent proposal, before deciding to engage with the Consortium and provide access to due diligence following a further indicative proposal from the Consortium of $9.00 per share.

Following a three-month period of due diligence, Origin and the Consortium (through the Bidder, MidOcean Reef Bidco Pty Ltd, and Brookfield Renewable Group Australia Pty Ltd) entered into the Scheme Implementation Deed, as announced on 27 March 2023, with an implied consideration of $8.91[3] per Origin share, consisting of Australian dollar consideration of $5.78 per share and US dollar consideration of US$2.19 per share. The Consortium has noted that the inclusion of the US dollar consideration reflects the underlying exposure of Origin's Integrated Gas assets, and specifically cash distributions from its 27.5 per cent interest in Australia Pacific LNG.

Following adjustments to the mix of Australian dollar and US dollar consideration in accordance with the Scheme Implementation Deed and accounting for changes to the AUD/USD exchange rate since that time,[4] the current implied consideration on a like-for-like basis with the implied consideration in March 2023 is approximately $9.15 per share (**Implied Scheme Consideration at March 2023**).

Deducting the total of 36.5 cents per share of ordinary dividends paid to shareholders in March and September 2023, as required under the Scheme, and adding 2.7 cents per share for an agreed ticking fee **results in a total cash payment to shareholders of approximately $8.81 per share** as described further below and in section 4.2[5]. This figure represents the approximate cash amount you will be paid if the Scheme is implemented in accordance with the timetable set out in this Scheme booklet and may increase or decrease based on the AUD/USD rate at the time of conversion.

Scheme consideration

The total cash payment of approximately $8.81 per share comprises:[6]

- AUD Scheme Consideration of $6.25[7] per Origin share you hold on the Scheme Record Date (less the Special Dividend of 39 cents if determined and paid by Origin before the Scheme is implemented);
- USD Scheme Consideration of US$1.64 per Origin share you hold on the Scheme Record Date, which will be converted to Australian dollars and paid to you in Australian dollars (unless you make a valid Currency Election to receive US dollars), with a current Australian dollar implied value of $2.56 based on the AUD/USD exchange rate of 0.64 as at 10 October 2023. The Australian dollar value of the USD Scheme Consideration may increase or decrease based on the AUD/USD exchange rate at the time of conversion; and
- a fully franked special dividend of 39 cents per Origin share (**Special Dividend**) you hold on the Special Dividend Record Date, which the Origin Board intends to pay subject to certain conditions being met.

The Origin Directors will determine, in their absolute discretion, whether or not to pay any Special Dividend. If a Special Dividend is paid, it will be deducted from the AUD Scheme Consideration. As such, regardless of whether the Special Dividend is paid, you will still receive the same total cash payment of approximately $8.81 per Origin Share.

For those Origin shareholders who can realise the benefit of franking credits, the franking credit attached to a Special Dividend of 39 cents per share is approximately 16.7 cents per share[8].

Further detailed information on the Scheme Consideration is contained in section 4.2 of this Scheme Booklet.

3. Based on the conversion of US$2.19 per share assuming an AUD/USD exchange rate of 0.70. As outlined in the ASX announcement on 27 March 2023, this is equivalent to $9.077 at the AUD/USD spot exchange rate of 0.665 at 5.00pm on 24 March 2023.
4. From a rate of 0.665 at the signing of the Scheme Implementation Deed to a spot AUD/USD exchange rate of 0.64 as at 5.00pm on 10 October 2023.
5. Assuming an Implementation Date of 18 December and based on the spot AUD/USD foreign exchange rate of 0.64 as at 5.00pm on 10 October 2023.
6. This amount assumes an Implementation Date of 18 December 2023. The amount of the total cash payment and the USD Scheme Consideration is an implied value, based on the spot AUD/USD exchange rate of 0.64 as at 5.00pm on 10 October 2023. Refer to section 4.2(e)(1) for further detail regarding the impact of the AUD/USD exchange rate and the process for conversion of the USD Scheme Consideration to Australian dollars under the Scheme.
7. In accordance with the Scheme Implementation Deed, the AUD Scheme Consideration has been adjusted from $5.78 per share as announced on 27 March 2023, to $6.25 as a result of:
   - adjusting the AUD/USD consideration mix as a certain amount of USD consideration has been converted to AUD since the Scheme announcement;
   - deducting the ordinary dividends totalling 36.5 cents per share paid to shareholders in calendar year 2023 prior to the date of this Scheme Booklet; and
   - adding the ticking fee of 2.7 cents per share (assuming an Implementation Date of 18 December 2023).
8. When assessing the benefit of franking credits attached to any Special Dividend, Origin Shareholders should also seek independent professional taxation advice on this matter in respect of their individual circumstances. Refer to section 8 of this Scheme Booklet for further information.

Letter from the Chair of the Origin Board *continued*

Origin Directors' recommendation

In deciding whether to enter into the Scheme Implementation Deed in March 2023, both the Consortium and the Origin Board had visibility of various factors shaping the outlook for the business. This included the anticipated recovery of Energy Markets earnings, draft tariff arrangements for the FY2024 default market offer for retail electricity prices, the coal price cap implemented by the New South Wales Government, and the continued success of Octopus Energy, including its acquisition of the Bulb retail energy business in the UK, and Octopus Energy's rapid growth in its retail and Kraken licensing businesses.

Over recent years, Origin's business has faced significant external challenges including a global pandemic and the war in Ukraine which created almost unprecedented volatility across global commodity markets. In addition, there have been ongoing changes in the regulatory framework and weather events affecting the business.

Despite these challenges, we believe Origin is well positioned to execute on its strategy of providing unrivalled customer solutions, accelerating renewable and cleaner energy, supporting the ongoing growth of Octopus Energy and delivering reliable energy through the transition.

Execution of Origin's strategy will involve significant capital commitments to accelerate the development of renewables and energy storage assets in its energy supply portfolio, and there remains continuing regulatory and market uncertainty, particularly as the economy rapidly decarbonises.

It was against this context that the Origin Board carefully considered its recommendation at the time of entering into the Scheme Implementation Deed, including assessing the advantages and disadvantages of the proposed transaction against the opportunities and risks to Origin's business into the future.

In summary, the key reasons for the Origin Board's recommendation in favour of the Scheme, in the absence of a Superior Proposal and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin shareholders, are as follows:

- The Independent Expert has concluded that the Scheme is fair and reasonable and therefore is in the best interests of Origin's Shareholders, in the absence of a Superior Proposal.
- The Implied Scheme Consideration at March 2023 of $9.15 per Origin share[9] represents a significant premium of 57.5 per cent relative to Origin's last closing share price of $5.81 per share on 9 November 2022, and 63.3 per cent relative to Origin's one month VWAP of $5.60 per share on 9 November 2022, being the last trading day prior to Origin announcing the Consortium's indicative proposal.

  We note the significant passage of time and change in market circumstances since 9 November 2022, meaning the share price on that date may no longer be representative of where Origin shares may trade today if the Scheme does not proceed. The above premia reflected the attractiveness of the Scheme Consideration compared to the price of Origin shares in the period prior to first announcing the proposed transaction with the Consortium.

  As noted above, as at the date of this Scheme Booklet, following receipt of ACCC authorisation on 10 October 2023, the Origin share price has continued to trade above the total cash payment payable under the Scheme. The Origin share price at the Last Practicable Date of 10 October 2023 was $9.21, and as such the total cash payment of $8.81 is a discount of 4.3% to the Origin share price. It is not possible to predict what Origin's share price would be now if the Scheme had not been proposed or what the premia would be (if any). Origin Shareholders should however note that the trading price of Origin Shares is impacted by the proposed Scheme and that the Origin Share price may not necessarily trade at these levels in the absence of the proposed Scheme.
- If the Special Dividend is paid, eligible shareholders may be able to realise the benefit of franking credits attached to the Special Dividend.
- The Scheme Consideration is 100 per cent cash, providing Origin shareholders with the ability to accept cash for their Origin shares now for the Scheme Consideration, rather than be exposed to continuing and future risks and uncertainties associated with Origin's business.
- No Superior Proposal has emerged since the announcement of the first proposal from the Consortium on 10 November 2022, and the Origin Board is not aware, as at the date of this Scheme Booklet, of any Superior Proposal that is likely to emerge.

9. This figure is based on the implied consideration of $8.91 per Origin share announced by Origin on 27 March 2023 following execution of the Scheme Implementation Deed, adjusted to reflect current mix of Australian dollar and US dollar consideration, and the current spot AUD/USD exchange rate of 0.64 as at 5.00pm on 10 October 2023.

In recommending the Scheme, the Board has also considered reasons why an Origin shareholder may wish to vote against it, including that you may:

- disagree with the Origin Board's unanimous recommendation, which in accordance with the Scheme Implementation Deed is subject to there being no Superior Proposal and to the Independent Expert's conclusion that the Scheme is in the best interests of Origin shareholders.
- disagree with the Independent Expert's conclusions. The Independent Expert's conclusion as to whether the Scheme is in the best interests of Origin shareholders depends on whether, not where, the Scheme falls in the Independent Expert's valuation range. You may have formed your own view of the value of Origin shares (which may be outside the Independent Expert's valuation range or positioned higher within the range).
- prefer to have the opportunity to participate in Origin's business into the future, including its continuing investments in the energy transition, Octopus Energy and any other potential future value creation.
- believe that the share price will not fall materially if the Scheme is unsuccessful.
- believe there is potential for a Superior Proposal to emerge in the future.
- consider that the tax consequences of the Scheme are not beneficial for you.

The Origin Board unanimously recommends that you **vote in favour** of the Scheme, in the absence of a Superior Proposal and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin shareholders. Subject to the same conditions, each Origin Director intends to vote all their Origin shares in favour of the Scheme.[10]

Further details on the recommendation given by the Origin Board are contained in section 1 of this Booklet.

Independent Expert's opinion

The Origin Directors appointed Grant Samuel as the Independent Expert to assess the merits of the Scheme. The Independent Technical Specialist, Gaffney, Cline & Associates, was appointed to prepare the Independent Technical Specialist's Report. The Independent Expert has concluded that the scheme is fair and reasonable and therefore is in the best interests of Origin shareholders, in the absence of a Superior Proposal.

The Independent Expert has assessed the full underlying value of Origin shares as at 30 June 2023 at between $8.45 and $9.48 per share. The total cash payment of approximately $8.81 is within this range.

The Independent Expert has also noted that while a valuation as at the implementation date of 18 December 2023 cannot be reliably determined in advance, a 'roll forward' of the valuation to that date assuming a return on equity of, say, 10 per cent could theoretically increase Origin's value by approximately 40 cents per share (to the low end of the valuation range), and a 6 per cent rate in line with the ticking fee[11] would add approximately 24 cents, assuming the business achieves its FY2024 budget, pays no dividends and there is no change to long-term cash flows or economic conditions.

A copy of the Independent Expert's Report (which includes the Independent Technical Specialist's Report) is included in Annexure 1.

What should you do?

The Scheme can only be implemented if approved by the Requisite Majorities of Origin shareholders at the Scheme Meeting, which is scheduled for 2.00pm on 23 November 2023 at the Swissôtel Sydney, 68 Market Street, Sydney, NSW.

Your vote is important and I encourage you to vote by attending the Scheme Meeting or by completing the proxy form accompanying this Scheme Booklet.

If you wish the Scheme to proceed, it is important that you vote in favour of the Scheme so that it is approved.

Further information

You should carefully read this Scheme Booklet in its entirety before making any decision in relation to the Scheme.

If you have any questions, please contact the Origin Shareholder Information Line on 1300 540 303 (within Australia) or +61 2 9066 4083 (outside Australia), between 8.30am and 5.30pm (Sydney time), Monday to Friday (excluding public holidays).

If you are in any doubt as to what you should do, please consult your legal, financial, tax or other professional adviser without delay.

On behalf of the Origin Board, I would like to take this opportunity to thank you for your continued support of Origin.

Yours sincerely,

Scott Perkins
Chair

10. Origin Shareholders should, in considering this recommendation, note that (as detailed in section 9.2 of this Scheme Booklet), if the Scheme becomes Effective, the following will occur in relation to the equity incentives and deferred cash awards held by Frank Calabria (Managing Director and Chief Executive Officer): full vesting and exercise of 992,212 unvested share rights, lifting of restrictions on 472,417 restricted Origin Shares and waiving of the deferral period for $1,229,499 deferred cash.
11. Additional Consideration for the ticking fee of approximately 4.5 cents per month, accruing on a daily basis from 1 December 2023.

Key Dates

Event	Time and Date
First Court Date	18 October 2023
Date of this Scheme Booklet	18 October 2023
Special Dividend announcement date Origin will announce whether a Special Dividend will be paid	Before the Scheme meeting
Latest time and date for receipt of proxy forms or powers of attorney by the Origin Share Registry for the Scheme Meeting	2.00pm, 21 November 2023
Time and date for determining eligibility to vote at the Scheme Meeting	7.00pm, 21 November 2023
Scheme Meeting	2.00pm, 23 November 2023

If the Scheme is approved by Origin Shareholders

Court hearing to approve the Scheme (Second Court Date)	27 November 2023
Effective Date Court order lodged with ASIC and announcement to ASX Last day of trading in Origin Shares – Origin Shares will be suspended from trading on ASX from close of trading	28 November 2023
Special Dividend Record Date (for determining entitlements to the Special Dividend if the Origin Directors decide to pay a Special Dividend)	7.00pm, 30 November 2023
Election Time (time by which Election Form must be received by the Origin Share Registry for a valid Currency Election)	7.00pm, 4 December 2023
Special Dividend Payment Date (if the Origin Directors decide to pay a Special Dividend)	8 December 2023
Scheme Record Date (for determining entitlements to the Scheme Consideration)	7.00pm, 11 December 2023
Implementation Date Provision of Scheme Consideration	18 December 2023

All times and dates in the above timetable are references to the time and date in Sydney, Australia and all such times and dates are subject to change. Certain times and dates are conditional on the approval of the Scheme by Origin Shareholders and by the Court. Any changes will be announced by Origin to the ASX.

1. Key considerations relevant to your vote

Section 1.1 provides a summary of some of the reasons why the Origin Board unanimously recommends that Origin Shareholders vote in favour of the Scheme, in the absence of a Superior Proposal and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin Shareholders, alongside reasons why you may consider voting against the Scheme. The reasons you might vote for the Scheme outlined in section 1.2 should be read in conjunction with section 1.3, which sets out reasons why you may wish to vote against the Scheme.[1]

The Scheme has a number of advantages and disadvantages, which may affect Origin Shareholders in different ways, depending on their individual circumstances. Origin Shareholders should seek professional advice on their particular circumstances, as appropriate.

You should read the Scheme Booklet in full, including the Independent Expert's Report, before deciding how to vote at the Scheme Meeting.

1.1 Summary of reasons why you might vote for or against the Scheme

Why you should vote in favour of the Scheme

✓	Your Origin Directors unanimously recommend that you vote in favour of the Scheme Resolution subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of the Origin Shareholders and there being no Superior Proposal
✓	The Independent Expert has concluded that the Scheme is fair and reasonable and therefore is in the best interests of Origin Shareholders, in the absence of a Superior Proposal. The Total Cash Payment of approximately $8.81 per Origin Share falls within the Independent Expert's assessed underlying value of an Origin Share of between $8.45 and $9.48
✓	The Implied Scheme Consideration at March 2023 represents a significant premium to Origin's trading prices prior to the initial announcement of the Consortium's proposal
✓	If the Special Dividend is paid, you may be able to realise the benefit of the franking credits attached to the Special Dividend
✓	The Scheme Consideration is 100 per cent cash, providing Origin Shareholders with the ability to accept cash for their Origin Shares now for the Scheme Consideration, rather than be exposed to continuing and future risks and uncertainties associated with Origin's business
✓	Since the announcement of the indicative, conditional and non-binding proposal from the Consortium on 10 November 2022, no Superior Proposal has emerged, and the Origin Board is not aware, as at the date of this Scheme Booklet, of any Superior Proposal that is likely to emerge
✓	The Origin share price may fall if the Scheme does not proceed and in the absence of a Superior Proposal
✓	Brokerage charges will not apply to the transfer of your Origin Shares under the Scheme

1. Origin Shareholders should, in considering this recommendation, note that (as detailed in section 9.2 of this Scheme Booklet), if the Scheme becomes Effective, the following will occur in relation to the equity incentives and deferred cash awards held by Frank Calabria (Managing Director and Chief Executive Officer): full vesting and exercise of 992,212 unvested share rights, lifting of restrictions on 472,417 restricted Origin Shares and waiving of the deferral period for $1,229,499 deferred cash.

Why you may consider voting against the Scheme

✗	You may disagree with the Origin Directors' unanimous recommendation, which in accordance with the Scheme Implementation Deed is subject to there being no Superior Proposal and to the Independent Expert's conclusion that the Scheme is in the best interests of Origin Shareholders
✗	You may disagree with the Independent Expert's conclusion or formed your own view on the value of Origin Shares which may be outside the Independent Expert's valuation range (or positioned higher within the range)
✗	You may prefer to have the opportunity to participate in Origin's business into the future, including its continuing investment in the energy transition and any potential future value creation associated with being an Origin Shareholder
✗	You may believe it is in your best interests to maintain your current investment and risk profile
✗	You may believe that there is potential for a Superior Proposal to emerge in the future
✗	You may consider that the tax consequences of the Scheme are not beneficial for you

1. Key considerations relevant to your vote *continued*

1.2 Reasons to vote in favour of the Scheme

a) Your Origin Directors unanimously recommend that you vote in favour of the Scheme Resolution subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of the Origin Shareholders and there being no Superior Proposal

Your Origin Directors unanimously recommend that you vote in favour of the Scheme Resolution at the Scheme Meeting, subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin Shareholders and there being no Superior Proposal. In reaching this recommendation, your Origin Directors have assessed the Scheme having regard to the reasons to vote in favour of, or against, the Scheme, as set out in this Scheme Booklet.[2]

Subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin Shareholders and there being no Superior Proposal, each of the Origin Directors intends to vote or cause to be voted all Origin Shares in which they have a Relevant Interest in favour of the Scheme Resolution. The interests of Origin Directors are set out in section 9.1.

b) The Independent Expert has concluded that the Scheme is fair and reasonable and therefore is in the best interests of Origin Shareholders, in the absence of a Superior Proposal. The Total Cash Payment of approximately $8.81 per Origin Share falls within the Independent Expert's assessed underlying value of an Origin Share of between $8.45 and $9.48

Origin appointed Grant Samuel as the Independent Expert to prepare an Independent Expert's Report setting out its opinion as to whether the Scheme is in the best interests of Origin Shareholders.

The Independent Expert has concluded that the Scheme is fair and reasonable and therefore is in the best interests of Origin Shareholders, in the absence of a Superior Proposal.

The Independent Expert has assessed the full underlying value of an Origin Share to be between $8.45 and $9.48. The Total Cash Payment of approximately $8.81 per share is within this range.

Further details on how the Independent Expert arrived at this valuation range and why it reached these conclusions are set out in the Independent Expert's Report (including the Independent Technical Specialist's Report), a copy of which is included in Annexure 1. The Origin Directors encourage you to read this report in its entirety.

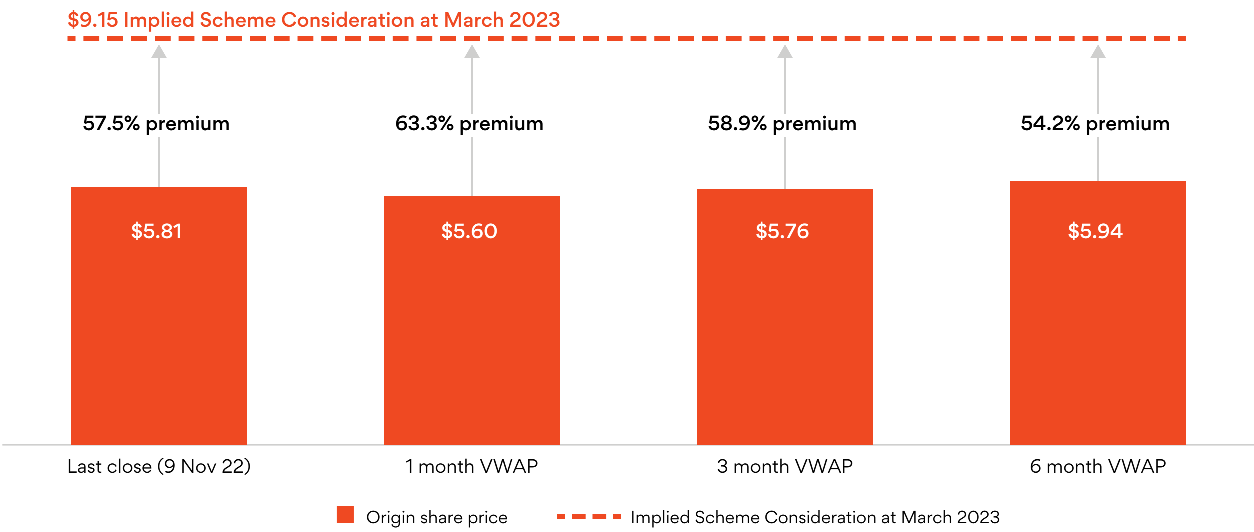
c) The Implied Scheme Consideration at March 2023[3] represents a significant premium to Origin's trading prices prior to the initial announcement of the Consortium's proposal

The Implied Scheme Consideration at March 2023 of $9.15 per Origin Share represents a:

- 57.5 per cent premium to Origin's closing price of $5.81 per share on 9 November 2022;
- 63.3 per cent premium to the 1-month VWAP of an Origin Share to 9 November 2022 of $5.60 per share;
- 58.9 per cent premium to the 3-month VWAP of an Origin Share to 9 November 2022 of $5.76 per share; and
- 54.2 per cent premium to the 6-month VWAP of an Origin Share to 9 November 2022 of $5.94 per share.

2. Origin Shareholders should, in considering this recommendation, note that (as detailed in section 9.2 of this Scheme Booklet), if the Scheme becomes Effective, the following will occur in relation to the equity incentives and deferred cash awards held by Frank Calabria (Managing Director and Chief Executive Officer): full vesting and exercise of 992,212 unvested share rights, lifting of restrictions on 472,417 restricted Origin Shares and waiving of the deferral period for $1,229,499 deferred cash.
3. Implied Consideration at March 2023 of $9.15 per Origin Share represents the implied consideration of $8.91 per Origin share announced by Origin on 27 March 2023 following execution of the Scheme Implementation Deed, adjusted to reflect the current mix of Australian dollar and US dollar consideration, and the current spot AUD/USD exchange rate of 0.64 as at 5.00pm on 10 October 2023.

Premium of 'Implied Scheme Consideration at March 2023' to Origin's trading prices prior to the initial announcement of the Consortium's proposal on 9 November 2022:



Source: VWAPs based on IRESS data. IRESS has not consented to the use of this information in the Scheme Booklet.

Origin notes the significant passage of time and change in market circumstances since 9 November 2022, meaning the share price on that date may no longer be representative of where Origin Shares may trade today if the Scheme does not proceed. The above premia reflect the attractiveness of the Implied Scheme Consideration at March 2023 of $9.15 compared to the price of Origin Shares in the period prior to first announcing the proposed transaction with the Consortium.

Origin notes, as at the date of this Scheme Booklet, following receipt of ACCC authorisation on 10 October 2023, the Origin Share price has continued to trade above the Total Cash Payment payable under the Scheme. The Origin Share price at the Last Practicable Date of 10 October 2023 was $9.21, and as such the Total Cash Payment of $8.81 is a discount of 4.3% to the Origin Share price. Origin Shareholders should however note that the trading price of Origin Shares is impacted by the proposed Scheme and that the Origin Share price may not necessarily trade at these levels in the absence of the proposed Scheme.

It is not possible to predict what Origin's share price would be now if the Scheme had not been proposed or what the premia would be (if any). Origin Shareholders should note the risk of Origin's share price falling below the Total Cash Payment if the Scheme is unsuccessful.

d) If the Special Dividend is paid, you may be able to realise the benefit of the franking credits attached to the Special Dividend

The Origin Board intends to pay a fully franked Special Dividend of 39 cents per Origin Share but has not made a final decision.

The final decision on whether or not to pay a Special Dividend will be made by the Origin Directors in their absolute discretion and will be announced by Origin ahead of the Scheme Meeting. Any such decision is subject to a number of factors, including satisfaction of the following conditions:

- the Scheme having been approved by Origin Shareholders and the Court and having become Effective;
- Origin having received a draft class ruling (or other indicative confirmation) from the Australian Tax Office (**ATO**) in a form acceptable to Origin;
- Origin being able to pay the Special Dividend in cash before the Implementation Date (with the Special Dividend Record Date being before the Scheme Record Date);
- Origin having available franking credits and its franking account not being in deficit; and
- compliance with relevant legislative requirements under the Corporations Act and Income Tax Assessment Act 1997 in respect of the Special Dividend.

1. Key considerations relevant to your vote *continued*

The final decision of the Origin Directors will be communicated to Origin Shareholders by way of an ASX announcement before the Scheme Meeting.

If Origin pays a Special Dividend of 39 cents per Origin Share, then, in addition to the Total Cash Payment, eligible Origin Shareholders that are able to realise the benefit of the franking credits attached to the Special Dividend may be entitled to an Australian tax offset of approximately 16.7 cents per Origin Share, provided certain requirements are met (as set out in further detail in section 8).

In assessing the value to them of any Special Dividend, Origin Shareholders should seek independent professional taxation advice as to whether or not the receipt of any Special Dividend and any entitlement to franking credits attached thereto is beneficial to them based on their own particular circumstances. Refer to section 8 for further details on the potential tax implications of the Scheme.

e) The Scheme Consideration is 100 per cent cash, providing Origin Shareholders with the ability to accept cash for their Origin Shares now for the Scheme Consideration, rather than be exposed to continuing and future risks and uncertainties associated with Origin's business

The 100 per cent cash consideration provides Origin Shareholders with the opportunity to realise their investment in full for the Total Cash Payment.

In particular, the Total Cash Payment provides certainty against the risks associated with the execution of Origin's long-term strategy.

As Origin embarks upon the significant transition of its wholesale generation portfolio, there is risk associated with development and construction of large-scale, complex infrastructure projects. Development of new generation capacity is expected to be capital intensive and in certain circumstances could impact dividends able to be paid to shareholders, or funding capacity to invest in other growth initiatives more generally.

There is also a risk that the earnings generated by the business today are adversely impacted in the future given the potential for market, regulatory and other factors to impact the financial performance and prospects of the business.

If the Scheme does not proceed, Origin's share price and the level of future dividends will necessarily be uncertain and subject to a number of risks, including those noted above and outlined in section 7. However, you may choose to weigh these risks against the potential to share in value that may be generated by Origin in the future.

The Scheme removes these risks and uncertainties for Origin Shareholders and allows Origin Shareholders to realise their investment in Origin.

f) No Superior Proposal has emerged as at the date of this Scheme Booklet

Since the announcement of the indicative, conditional and non-binding proposal from the Consortium on 10 November 2022, the subsequent revised proposal on 22 February 2023 and the signing of the Scheme Implementation Deed on 27 March 2023, no Superior Proposal has emerged.

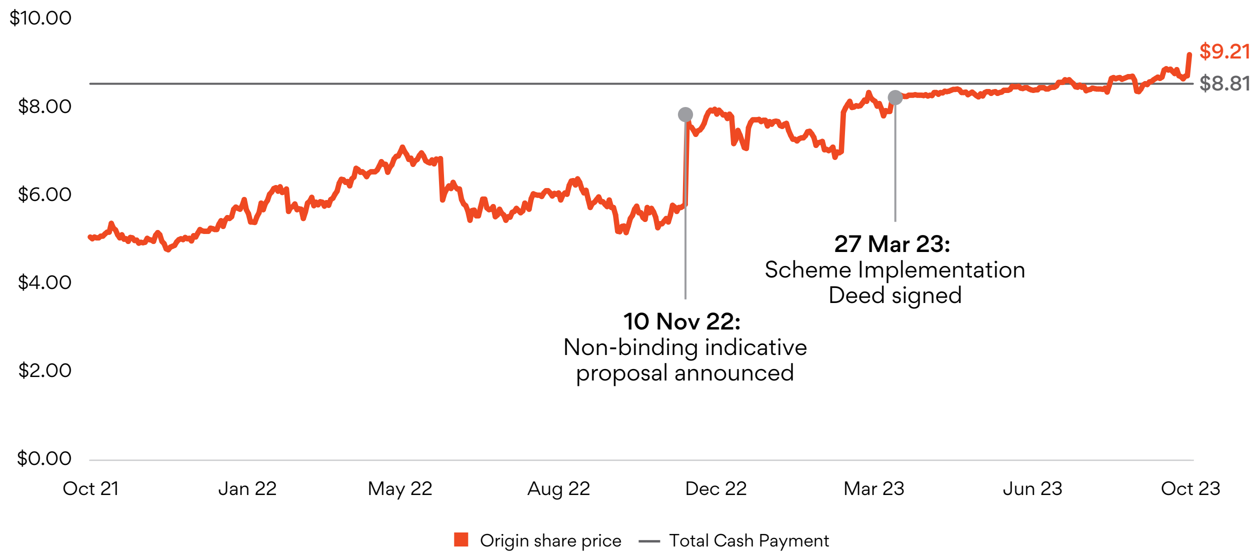
The Origin Board is not aware, as at the date of this Scheme Booklet, of any Superior Proposal that is likely to emerge.

g) The Origin share price may fall if the Scheme does not proceed and in the absence of a Superior Proposal

If the Scheme does not proceed, Origin Shares will remain quoted on the ASX and will continue to be subject to the volatility of both the general stock market, including the demand for listed shares, the volatility of underlying energy markets and general economic conditions, the regulatory environment, and other operational factors which influence the market value of Origin Shares.

As a result, if the Scheme does not proceed and no Superior Proposal is received by the Origin Board, the Origin Share price may fall below the Scheme Consideration.

The below chart shows Origin's Share price over the 24 months to 10 October 2023 (being the Last Practicable Date), compared to the Total Cash Payment of approximately $8.81 per share.



h) Brokerage charges will not apply to the transfer of your Origin Shares under the Scheme

You will not incur any brokerage charges on the transfer of your Origin Shares to Bidder under the Scheme.

It is possible that such brokerage charges (and, potentially GST on those charges) would be incurred if you dispose of your Origin Shares other than under the Scheme.

1.3 Reasons to vote against the Scheme

The Origin Board recommends that you vote in favour of the Scheme, subject to no Superior Proposal emerging and the Independent Expert continuing to conclude that the Scheme is in the best interests of the Origin Shareholders.

However, there may be reasons which lead you to consider voting against the Scheme, including the following:

a) You may disagree with the Origin Directors' unanimous recommendation, which in accordance with the Scheme Implementation Deed is subject to there being no Superior Proposal and to the Independent Expert's conclusion that the Scheme is in the best interests of Origin Shareholders

Despite the unanimous recommendation of the Origin Directors to vote in favour of the Scheme subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of the Origin Shareholders and there being no Superior Proposal, you may believe that the Scheme is not in your best interests.

b) You may disagree with the Independent Expert's conclusion or formed your own view on the value of Origin Shares which may be outside the Independent Expert's valuation range (or positioned higher within the range)

The Independent Expert, Grant Samuel, has valued Origin to be in the range of $8.45 to $9.48 per share as at 30 June 2023 and concluded that the Scheme is fair and reasonable and therefore is in the best interests of Origin shareholders, in the absence of a Superior Proposal.

You may disagree with the conclusion of the Independent Expert that the Scheme is fair and reasonable and therefore is in the best interests of Origin Shareholders, in the absence of a Superior Proposal.

The Independent Expert's conclusion as to whether the Scheme is in the best interests of Origin Shareholders depends on whether, not where, the Scheme falls in the Independent Expert's valuation range.

In concluding that the Scheme is fair and reasonable and therefore is in the best interests of Origin Shareholders, in the absence of a Superior Proposal, the Independent Expert has made assumptions and judgements based on future conditions and events which cannot be predicted with certainty.

1. Key considerations relevant to your vote *continued*

The Independent Expert has also noted that while a valuation as at the Implementation Date of 18 December 2023 cannot be reliably determined in advance, a 'roll forward' of the valuation to that date assuming a return on equity of, say, 10 per cent could theoretically increase Origin's value by approximately 40 cents per share (to the low end of the valuation range), and a 6 per cent rate in line with the ticking fee[4] would add approximately 24 cents, assuming the business achieves its FY2024 budget, pays no dividends and there is no change to long-term cash flows or economic conditions.

You may believe that the Scheme Consideration insufficiently compensates for the value of Origin Shares, taking into account the Independent Expert's valuation range and any potential adjustment that you consider appropriate for time value given the proposed December 2023 Implementation Date.

Further detail on how the Independent Expert arrived at its valuation range and why it reached its conclusions are set out in the Independent Expert's Report (including the Independent Technical Specialist's Report), a copy of which is included in Annexure 1. The Origin Directors encourage you to read this report in its entirety.

c) You may prefer to have the opportunity to participate in Origin's business into the future, including its continuing investment in the energy transition and any potential future value creation associated with being an Origin Shareholder

If the Scheme is implemented, you will no longer be an Origin Shareholder and will forgo any benefits that may result from being an Origin Shareholder.

This will mean that you will not participate in the future performance of Origin or retain any exposure to Origin's business or assets, including Octopus Energy, or have the potential to share in the value that could be generated by Origin in the future.

The energy transition presents many opportunities for Origin to capture value for its shareholders. With its customer base, portfolio of assets and management team, Origin is well positioned to lead and benefit from the energy transition through providing cleaner energy and customer solutions. Origin is building its pipeline of renewable and storage projects and has confidence in the ability to deliver its strategy as the energy transition accelerates.

You may consider that the Scheme Consideration does not adequately reflect the opportunities for Origin to benefit from the energy transition or your perspective on Origin's long-term value. As a result, you may decide that it is better for you to retain your Origin Shares.

The potential for upside returns arising from an investment in Origin should be weighed against the risks of an ongoing investment in Origin (as set out in section 7). There is no guarantee as to Origin's future performance, as is the case with all investments.

d) You may believe it is in your best interests to maintain your current investment and risk profile

You may prefer to keep your Origin Shares to preserve your investment in a listed company with the specific characteristics of Origin.

In particular, you may consider that, despite the risk factors relevant to Origin's future operations (including those set out in section 7), Origin may be able to return greater value by remaining a standalone entity or by seeking alternative corporate transactions in the future.

Origin notes that, as at the date of this Scheme Booklet, following receipt of ACCC authorisation on 10 October 2023, the Origin share price has continued to trade above the Total Cash Payment payable under the Scheme. Origin Shareholders should however note that the trading price of Origin Shares is impacted by the proposed Scheme and that the Origin Share price may not necessarily trade at these levels in the absence of the proposed Scheme.

You may also consider that it would be difficult to identify or invest in alternative investments that have a similar investment profile to that of Origin or may incur transaction costs in undertaking any new investment.

4. Additional Consideration for the ticking fee of approximately 4.5 cents per month, accruing on a daily basis from 1 December 2023.

e) You may believe that there is potential for a Superior Proposal to emerge in the future

You may consider that a Superior Proposal could emerge in the future. The Origin Directors are, as at the date of this Scheme Booklet, not aware of, and have not received, any Superior Proposal.

f) You may consider that the tax consequences of the Scheme are not beneficial for you

The tax consequences of the Scheme will depend on your personal situation. In particular, Origin Shareholders should note that, depending on the timing of and price at which they acquired their Origin Shares, there may be differences in the tax consequences. You may consider that the tax consequences of transferring your Origin Shares to Bidder pursuant to the Scheme are not attractive to you.

Origin Shareholders should read the tax implications of the Scheme outlined in section 8. However, section 8 is general in nature, and Origin Shareholders should consult with their own independent taxation advisers regarding the tax implications of the Scheme.

1.4 Risks associated with continuing to hold Origin Shares

As set out in further detail in section 7, there are a number of risk factors, both general and specifically relating to Origin and the Scheme, which may affect the future operating and financial performance of Origin and the price and/or value of Origin Shares.

These risks are non-exhaustive and additional unknown risks and uncertainties may have a material adverse impact on Origin's financial and operational performance.

Risks relating to the business and operations of Origin	
Strategic	• Competition • Technological developments/disruption • Changes in demand for energy • Regulatory policy
Climate	• Policy and legal • Technology • Market • Reputation • Physical risks
Financial risks	• Commodity • Foreign exchange and interest rates • Liquidity and access to capital markets • Credit and counterparty
Operational risks	• Safe and reliable operations • Capital investment in development projects • Environmental and social • Cyber security • APLNG gas reserves, resources and deliverability • Conduct and compliance • Joint venture
APLNG litigation	• Tri-Star litigation

1. Key considerations relevant to your vote *continued*

Risks relating to the Scheme	
Implementing the Scheme	• Conditions precedent • Court approval • Regulatory approvals and delay
If the Scheme is not implemented	• Shareholders will not receive the Scheme Consideration or Special Dividend • Shareholders will continue to be subject to the risks currently associated with an investment in Origin • No certainty as to the timing and quantum of any future dividends • The Origin share price may fall if the Scheme does not proceed and in the absence of a Superior Proposal
Risks relating to the Special Dividend	
Payment of a Special Dividend is not assured	• There is no assurance that any Special Dividend will be paid to Origin Shareholders
Benefit of franking credits attached to the Special Dividend	• Ability to realise the benefit of the franking credits attached to any Special Dividend will depend on your personal circumstances, whether a favourable class ruling is obtained from the ATO, and the potential impact of legislative changes as described in section 7.5(b)

2. Frequently asked questions

This section 2 answers some frequently asked questions relating to the Scheme. It is not intended to address all relevant issues for Origin Shareholders. This section 2 should be read together with all other parts of this Scheme Booklet.

QUESTION	ANSWER	MORE INFORMATION
Overview of the Scheme		
Why have I received this Scheme Booklet?	This Scheme Booklet has been sent to you because you are registered as an Origin Shareholder and you are being asked to vote on the Scheme. This Scheme Booklet is intended to help you to consider and decide on how to vote on the Scheme at the Scheme Meeting.	**Section 4**
What is the Scheme?	The Scheme is a scheme of arrangement between Origin and the Scheme Shareholders. A 'scheme of arrangement' is a statutory procedure in the Corporations Act that is commonly used in transactions in Australia to effect a change of ownership or control of a company. In addition to requiring Court approval, schemes of arrangement require a shareholder vote in favour of a resolution to implement the scheme of arrangement by the Requisite Majorities. If the Scheme becomes Effective, Bidder will acquire all of the Scheme Shares for the Scheme Consideration. Origin will be delisted from the ASX and become a wholly owned subsidiary of Bidder.	**Section 4 and Annexure 2**
Who is the Consortium?	The Consortium is the consortium of investors comprising Brookfield Asset Management Inc. (together with its affiliates and their managed funds) and MidOcean Energy, LLC, which is managed by EIG, who made a non-binding proposal on 10 November 2022 and a revised proposal on 22 February 2023 for the acquisition of Origin. The members of the Consortium's affiliates and managed funds or entities, being Bidder and entities owned by Brookfield LP, will ultimately acquire Origin and its business if the Scheme is implemented.	**Section 6**
Who is Bidder?	Bidder is MidOcean Reef Bidco Pty Ltd (ACN 665 950 318), an Australian proprietary company, which is an indirectly held wholly-owned subsidiary of MidOcean Energy, LLC (a limited liability company incorporated in Delaware, USA), which is managed by EIG, a US-headquartered investment firm and an institutional investor in the global energy sector. Bidder will acquire 100% of the Origin Shares under the Scheme. As part of the transaction, there is a related Sale Transaction that involves the sale of the Brookfield EM Business (including Origin's investment in Octopus Energy) to entities owned by Brookfield LP (see below). Bidder will retain ownership of all of the issued shares in Origin and the MidOcean IG Business.	**Section 6**

2. Frequently asked questions *continued*

QUESTION	ANSWER	MORE INFORMATION
Who are the BGTF Consortium and Brookfield LP?	The BGTF Consortium comprises the Brookfield-managed Brookfield Global Transition Fund I, the Brookfield-managed Brookfield Renewable Partners L.P. and a syndicate of passive institutional investors to be managed by Brookfield, together with their institutional partners Buckland Investment Pte. Ltd. (an indirectly wholly-owned subsidiary of GIC (Ventures) Pte. Ltd.) and Davis Investments Pte. Ltd. (an indirect wholly-owned subsidiary of Temasek Holdings (Private) Limited). Brookfield LP is a newly established Bermudan limited partnership that was established for the purposes of holding the BGTF Consortium's investment in the Brookfield EM Business for the long term. Brookfield GP, a Brookfield-controlled entity, is the general partner of Brookfield LP. It is expected that, on completion of the Sale Transaction, the limited partnership interests in Brookfield LP will be held (directly or indirectly) by the BGTF Consortium.	**Section 6**
Recommendations and intentions		
What do the Origin Directors recommend?	The Origin Directors unanimously recommend that you vote in favour of the Scheme, in the absence of a Superior Proposal and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin Shareholders.[1] The reasons for this recommendation and other relevant considerations are set out in section 1. The Origin Directors encourage you to seek independent legal, financial, taxation or other appropriate professional advice.	**Letter from the Chair of the Origin Board and Section 1.**
What are the intentions of the Origin Directors?	Each Origin Director intends to vote, or procure the voting of, all Origin Shares held or controlled by him or her at the time of the Scheme Meeting in favour of the Scheme at the Scheme Meeting in the absence of a Superior Proposal and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin Shareholders.	**Letter from the Chair of the Origin Board and section 1.2(a)**
What is the conclusion of the Independent Expert?	The Independent Expert has concluded that the Scheme is fair and reasonable and therefore is in the best interests of Origin Shareholders, in the absence of a Superior Proposal. You should read the Independent Expert's Report, which is contained in Annexure 1, carefully and in its entirety.	**Annexure 1**

1. Origin Shareholders should, in considering this recommendation, note that (as detailed in section 9.2 of this Scheme Booklet), if the Scheme becomes Effective, the following will occur in relation to the equity incentives and deferred cash awards held by Frank Calabria (Managing Director and Chief Executive Officer): full vesting and exercise of 992,212 unvested share rights, lifting of restrictions on 472,417 restricted Origin Shares and waiving of the deferral period for $1,229,499 deferred cash.

QUESTION	ANSWER	MORE INFORMATION
Overview of the Scheme Consideration		
What will I receive for my Origin Shares?	If the Scheme is implemented, Origin Shareholders will receive the Scheme Consideration for each Origin Share owned on the Scheme Record Date. The Scheme Consideration is comprised of both an Australian dollar and US dollar amount and is adjusted to deduct the amount of any Special Dividend that is paid to Origin Shareholders prior to Implementation.	**Section 4.2**
What is the Total Cash Payment that I will receive?	If the Scheme is implemented on 18 December 2023, the cash amount that Origin Shareholders will receive is the Total Cash Payment of approximately $8.81 per Origin Share, comprising the following: • AUD Scheme Consideration of $6.25 per Origin Share held on the Scheme Record Date (less the Special Dividend of 39 cents that may be determined and paid by Origin before the Scheme is implemented);[2] and • USD Scheme Consideration of US$1.64 per Origin Share held on the Scheme Record Date, which will be paid in Australian dollars (unless you make a valid Currency Election to receive US dollars), converted by Bidder shortly before Implementation in accordance with the Scheme, with an implied value of $2.56 based on the exchange rate as at the Last Practicable Date[3]. The Australian dollar value of the USD Scheme Consideration may increase or decrease based on the AUD/USD rate at the time of conversion; and • a fully franked Special Dividend of 39 cents for each Origin Share held on the Special Dividend Record Date, that may be determined and paid by Origin prior to Implementation.	**Section 4.2**
Why is the total consideration offered as a combination of Australian dollars and US dollars and why has this consideration mix changed?	Under the terms of the Scheme Implementation Deed, Bidder pays a certain portion of the Scheme Consideration in Australian dollars and a certain portion in US dollars. The consideration mix between Australian dollars and US dollars has changed since the date of the Scheme Implementation Deed so the proportion of the Scheme Consideration payable in Australian dollars has increased. This is because certain US dollar amounts received by Origin have been converted into Australian dollars, and Bidder elected to convert an additional fixed amount of US dollar consideration to Australian dollars in accordance with the terms of the Scheme Implementation Deed.	**Section 4.2(d)(1)**

2. The AUD Scheme Consideration reflects adjustments in accordance with the Scheme Implementation Deed to deduct the Permitted Dividends of 36.5 cents per Origin Share paid to Origin Shareholders prior to the date of this Scheme Booklet; and add the Additional Consideration of 2.7 cents per Origin Share (assuming an Implementation Date of 18 December 2023), which accrues at a rate of approximately 0.15 cents per Origin Share per day from (and including) 1 December 2023 to (and including) the Implementation Date.
3. Using the spot AUD/USD foreign exchange rate of 0.64 as at 5.00pm on 10 October 2023. Refer to section 4.2(e)(1) for further detail regarding the process for conversion to Australian dollars under the Scheme.

2. Frequently asked questions *continued*

QUESTION	ANSWER	MORE INFORMATION
Why is the Total Cash Payment different to the amount announced on signing of the SID?	The Total Cash Payment is an approximate amount as it reflects a number of variables. As announced by Origin at the time of entry into the Scheme Implementation Deed, a number of potential changes to the consideration payable were outlined (each of which has impacted the amount of the Total Cash Payment): • the consideration mix between Australian dollars and US dollars was subject to change; • the consideration payable could vary due to currency fluctuations (impacting the conversion of the USD Scheme Consideration); • the consideration payable would be reduced by any dividends paid by Origin prior to Implementation of the Scheme; and • additional consideration of approximately 4.5 cents per month, accruing on a daily basis, would be payable by Bidder if implementation of the Scheme is delayed beyond 30 November 2023. The impact of these changes, and the impact on the Total Cash Payment estimated to be payable on Implementation of the Scheme, is set out in more detail in section 4.2.	**Section 4.2(d)**
Why is the current share price different to the Scheme Consideration?	Origin notes that, as at the date of this Scheme Booklet, following receipt of ACCC authorisation on 10 October 2023, the Origin Share price has continued to trade above the Total Cash Payment payable under the Scheme. Origin Shareholders should however note that the trading price of Origin Shares is impacted by the proposed Scheme and that the Origin Share price may not necessarily trade at these levels in the absence of the proposed Scheme or if the Scheme is unsuccessful.	**Section 1.2(c)**
Do I need to make a Currency Election?	If you do not make a Currency Election (or you make a Currency Election that is not valid), you are deemed to have made an automatic election to receive all of the Scheme Consideration in Australian dollars under the terms of the Scheme. If you wish, you may make a Currency Election to receive the Scheme Consideration for all of your Origin Shares in the form of a combination of Australian dollars and US dollars (comprising, the AUD Scheme Consideration in Australian dollars and the USD Scheme Consideration in US dollars).	**Section 4.4**
How do I make a Currency Election?	You may make a Currency Election for all of your Origin Shares by lodging an Election Form with the Origin Share Registry. You can request an Election Form from www.investorserve.com.au or by contacting the Origin Shareholder Information Line on 1300 540 303 (within Australia) or +61 2 9066 4083 (outside Australia), between 8.30am and 5.30pm (Sydney time), Monday to Friday (excluding public holidays).	**Section 4.4**

QUESTION	ANSWER	MORE INFORMATION
How do I make a Currency Election? continued	For a Currency Election to be valid: • you must complete and sign the Election Form in accordance with the instructions set out in the Scheme Booklet and in the Election Form (including providing valid US dollar banking account details); • the Election Form must be received by the Origin Share Registry before the Election Time (expected to be 7.00pm on 4 December 2023) in accordance with the instructions on the Election Form; and • it must be made in respect of all (not just some) of your Origin Shares.	**Section 4.4**
When and how will I receive my Total Cash Payment?	If the Scheme is implemented: • Scheme Shareholders will be paid the Scheme Consideration on the Implementation Date (currently expected to be 18 December 2023); and • if the Origin Directors decide to pay a Special Dividend, Origin Shareholders on the Origin Share Register as at the Special Dividend Record Date will be paid the Special Dividend on the Special Dividend Payment Date (currently expected to be 8 December 2023). Origin Shareholders who have validly registered their bank account details with the Origin Share Registry before the relevant record date will have these payments deposited directly to their bank account(s). Otherwise, Origin Shareholders will have their Scheme Consideration sent by cheque to their address shown on the Origin Share Register.	**Section 4.5**
How do I nominate a bank account or change my bank account details?	You can nominate a bank account or update your bank account details on the website of the Origin Share Registry at www.investorserve.com.au. Scheme Shareholders who make a Currency Election to receive their USD Scheme Consideration in US dollars will need to provide valid US dollar bank account details in their Election Form.	**Section 4.5**
Will I have to pay brokerage?	You will not have to pay brokerage on the transfer of your Origin Shares to Bidder under the Scheme.	**Section 1.2(h)**
What are the taxation implications of the Scheme?	The taxation implications of the Scheme will depend on your particular circumstances. In particular, you should note that, depending on the timing of and price at which you acquired your Origin Shares, there may be differences in the tax consequences for you. Section 8 provides a general description of the Australian taxation consequences for Scheme Shareholders. You should seek independent professional taxation advice with respect to your particular circumstances. Origin has applied to the ATO requesting a class ruling to confirm the key taxation implications of the Scheme and any Special Dividend. The class ruling has not been finalised as at the date of this Scheme Booklet. Origin expects that the ATO will provide a draft of the class ruling prior to the Scheme Meeting. Origin will make an announcement to the ASX if it receives a draft of the class ruling before the Scheme Meeting or the Second Court Hearing. When the final class ruling is published by the ATO, it will be available on the ATO's website at www.ato.gov.au.	**Section 8**

2. Frequently asked questions *continued*

QUESTION	ANSWER	MORE INFORMATION
Special Dividend		
What is the Special Dividend?	The Origin Board intends to pay a fully franked Special Dividend of 39 cents per Origin Share prior to implementation of the Scheme but has not made a final decision. The final decision on whether or not to pay a Special Dividend will be made by the Origin Directors in their absolute discretion. Any such decision is subject to a number of factors, including satisfaction of the following conditions: • the Scheme having been approved by Origin Shareholders and the Court and having become Effective; • Origin having received a draft class ruling (or other indicative confirmation) from the ATO in a form acceptable to Origin; • Origin being able to pay the Special Dividend in cash before the Implementation Date (with the Special Dividend Record Date being before the Scheme Record Date); • Origin having available franking credits and its franking account not being in deficit; and • compliance with relevant legislative requirements under the Corporations Act and ITAA 1997 in respect of the Special Dividend. The final decision of the Origin Directors will be communicated to Origin Shareholders by way of an ASX announcement before the Scheme Meeting.	**Letter from the Chair of the Origin Board and section 4.3**
Will any Special Dividend be franked?	The Origin Directors currently intend that, if any Special Dividend is to be paid, it will be fully franked. The franking credits attached to a Special Dividend of 39 cents per share are approximately 16.7 cents per Origin Share and may be of value to those Origin Shareholders who are able to realise the benefit of franking credits. In assessing the value to you of any Special Dividend or franking credits, you should seek independent professional taxation advice as to whether or not the receipt of any Special Dividend and any entitlement to franking credits attached to the dividend is beneficial to you based on your own particular circumstances.	**Sections 4.4 and 8**
Conditions to the Scheme		
Are there any conditions to the Scheme?	Yes. The outstanding conditions to the Scheme are summarised in section 4.6. As at the date of this Scheme Booklet, the Origin Directors are not aware of any circumstances which would cause any condition to the Scheme not to be satisfied.	**Section 4.6**

QUESTION	ANSWER	MORE INFORMATION
What is required for the Scheme to become Effective?	The Scheme will become Effective if: • the Scheme is approved by the Requisite Majorities of Origin Shareholders at the Scheme Meeting to be held on 23 November 2023; • the Court approves the Scheme at the Second Court Hearing; and • all of the other conditions precedent to the Scheme are satisfied or waived (as applicable).	**N/A**
When and where will the Scheme Meeting be held?	The Scheme Meeting will be held at 2.00pm (Sydney time) at the Swissôtel Sydney, 68 Market Street, Sydney, NSW on 23 November 2023.	**Annexure 4**
What will Origin Shareholders be asked to vote on at the Scheme Meeting?	At the Scheme Meeting, Origin Shareholders will be asked to vote on whether to approve the Scheme.	**Annexure 4**
What is the Origin Shareholder approval threshold for the Scheme?	In order to become Effective, the Scheme must be approved by the Requisite Majorities, being: • unless the Court orders otherwise, a majority in number (more than 50 per cent) of Origin Shareholders present and voting at the Scheme Meeting (either in person or by proxy, attorney or, in the case of corporate Origin Shareholders, body corporate representative); and • at least 75 per cent of the total number of votes cast on the Scheme Resolution at the Scheme Meeting by Origin Shareholders present and voting (either in person or by proxy, attorney or, in the case of corporate Origin Shareholders, body corporate representative). Even if the Scheme is approved by the Requisite Majorities of Origin Shareholders at the Scheme Meeting, the Scheme is still subject to the approval of the Court.	**Section 4.8**
Am I entitled to vote at the Scheme Meeting?	If you are registered as an Origin Shareholder on the Origin Share Register as at 7.00pm (Sydney time) on 21 November 2023, you will be entitled to attend and vote at the Scheme Meeting.	**Annexure 4**
How can I vote if I can't attend the Scheme Meeting?	If you would like to vote but cannot attend the Scheme Meeting in person, you can vote by appointing a proxy or attorney to attend and vote on your behalf. You may also vote by corporate representative if that option is applicable to you.	**Annexure 4**
When will the results of the Scheme Meeting be known?	The results of the Scheme Meeting are expected to be available shortly after the conclusion of the Scheme Meeting and will be announced to the ASX (www.asx.com.au) once available.	**N/A**

2. Frequently asked questions *continued*

QUESTION	ANSWER	MORE INFORMATION
What happens to my Origin Shares if I do not vote, or if I vote against the Scheme, and the Scheme becomes Effective and is implemented?	If you do not vote, or vote against the Scheme, and the Scheme becomes Effective and is implemented, any Scheme Shares held by you on the Scheme Record Date (currently expected to be 7.00pm (Sydney time) on 11 December 2023) will be transferred to Bidder and you will receive the Scheme Consideration, despite not having voted or having voted against the Scheme.	**Section 4.8(a)**
Other questions		
What happens if a Competing Proposal is received?	If a Competing Proposal is received, the Origin Directors will carefully consider it. Origin must notify Bidder of that Competing Proposal in accordance with the Scheme Implementation Deed. Origin Shareholders should note that Origin has agreed to certain exclusivity provisions in favour of Bidder under the Scheme Implementation Deed, which includes a matching right in favour of Bidder in the event of a Competing Proposal. The Origin Directors are, as at the date of this Scheme Booklet, not aware of, and have not received, any Superior Proposal.	**Section 9.4(e)**
Can I sell my Origin Shares now?	You can sell your Origin Shares on-market at any time before the close of trading on the ASX on the Effective Date at the then prevailing market price (which may vary from the Scheme Consideration). Origin intends to apply to the ASX for Origin Shares to be suspended from trading on the ASX from close of trading on the Effective Date. You will not be able to sell your Origin Shares on-market after this date. If you sell your Origin Shares on-market, you may pay brokerage on the sale, you will not receive the Scheme Consideration and there may be different tax consequences compared to those that would arise if you retain those shares until the Scheme is implemented.	**N/A**
What if I have further questions about the Scheme?	For further information, please contact the Origin Shareholder Information Line on 1300 540 303 (within Australia) or +61 2 9066 4083 (outside Australia), between 8.30am and 5.30pm (Sydney time), Monday to Friday (excluding public holidays). If you are in doubt about anything in this Scheme Booklet, please contact your financial, legal, taxation or other professional adviser immediately.	**N/A**

3. What should you do?

3.1 Step 1: Read this Scheme Booklet

You should carefully read this Scheme Booklet in its entirety before deciding whether to vote in favour of the Scheme.

If you have any questions, please contact the Origin Shareholder Information Line on 1300 540 303 (within Australia) or +61 2 9066 4083 (outside Australia), between 8.30am and 5.30pm (Sydney time), Monday to Friday (excluding public holidays).

If you are in any doubt as to what you should do, please consult your legal, financial, tax or other professional adviser without delay.

3.2 Step 2: Vote on the Scheme

a) Your vote is important

For the Scheme to proceed, it is necessary that sufficient Origin Shareholders vote in favour of the Scheme.

b) Who is entitled to vote?

If you are registered on the Origin Share Register at 7.00pm on 21 November 2023, you will be entitled to vote on the Scheme.

c) Details of the Scheme Meeting

The Scheme Meeting to approve the Scheme is scheduled to be held in person at the Swissôtel Sydney, 68 Market Street, Sydney, NSW at 2.00pm, on 23 November 2023.

Origin Shareholders and their proxies, attorneys or corporate representatives will be able to participate in person.

Origin Shareholders who are unable to attend in person can view the Scheme Meeting via live webcast at https://originenergy.com.au/scheme2023. Shareholders watching online will not be able to vote, ask questions or make comments via the webcast.

Further information about attending the Scheme Meeting can be found in the Notice of Scheme Meeting in Annexure 4.

d) How to vote?

You may vote:

- **in person**, by attending the Scheme Meeting in person at the Swissôtel Sydney, 68 Market Street, Sydney, NSW;
- **by proxy**, by completing and submitting a proxy form for the Scheme Meeting (which accompanies this Scheme Booklet) in accordance with the instructions set out on the form. To be valid, your proxy form must be received by the Origin Share Registry by 2.00pm on 21 November 2023;
- **by attorney**, by appointing an attorney to attend and vote at the Scheme Meeting on your behalf and providing a duly executed power of attorney to the Origin Share Registry by 2.00pm on 21 November 2023; or
- **by corporate representative**, in the case of a body corporate which is an Origin Shareholder, by appointing a corporate representative to attend and vote at the Scheme Meeting on behalf of that Origin Shareholder and providing a duly executed 'Appointment of Corporate Representative' form (in accordance with section 250D of the Corporations Act) prior to the Scheme Meeting.

Further details on how to vote are contained in the Notice of Scheme Meeting in Annexure 4.

4. Overview of the Scheme

4.1 Background to the Scheme

In August 2022, Origin was approached by the Consortium with a confidential non-binding indicative proposal to acquire all of Origin's issued shares at a price of $7.95 per share. The Origin Board rejected this, and a subsequent proposal, before deciding to engage with the Consortium and provide access to due diligence following a further indicative proposal from the Consortium of $9.00 per share.

Following a three-month period of due diligence, Origin and the Consortium (through Bidder and Brookfield Renewable Group Australia Pty Ltd) entered into the Scheme Implementation Deed, as announced on 27 March 2023, with an implied consideration of $8.91[1] per Origin Share, consisting of Australian dollar consideration of $5.78 per share and US dollar consideration of US$2.19 per share. The Consortium has noted that the inclusion of the US dollar consideration reflects the underlying exposure of Origin's Integrated Gas assets, and specifically cash distributions from its 27.5 per cent interest in Australia Pacific LNG.

Following adjustments to the mix of Australian dollar and US dollar consideration in accordance with the Scheme Implementation Deed and accounting for changes to the AUD/USD exchange rate since that time,[2] the current implied consideration on a like-for-like basis with the implied consideration in March 2023 is approximately $9.15 per share.

Deducting the total of 36.5 cents per share of ordinary dividends paid to shareholders in March and September 2023, as required under the Scheme, and adding 2.7 cents per share for an agreed ticking fee results in a Total Cash Payment to shareholders of approximately $8.81 per share as described further in section 4.2.[3] This figure represents the approximate cash amount you will be paid if the Scheme is implemented in accordance with the timetable set out in this Scheme Booklet and may increase or decrease based on the AUD/USD rate at the time of conversion.

A full copy of the Scheme Implementation Deed was attached to Origin's announcement to the ASX relating to the Scheme on 27 March 2023. A full copy of the Scheme Implementation Deed can be obtained from the ASX website (www.asx.com.au).

4.2 Overview of the Scheme Consideration

a) Entitlement to Scheme Consideration

If the Scheme is implemented, each Scheme Shareholder will be entitled to receive the Scheme Consideration per Origin Share held by them on the Scheme Record Date.

b) Payment to Origin Shareholders if the Scheme is implemented

The Scheme Consideration is comprised of both an Australian dollar and US dollar amount and is adjusted to deduct the amount of any Special Dividend that is paid to Origin Shareholders prior to Implementation.

If the Scheme is implemented, Origin Shareholders will receive a total cash payment of approximately $8.81 per Origin Share, comprising the following (together the **Total Cash Payment**):[4]

- AUD Scheme Consideration of $6.25 per Origin Share held on the Scheme Record Date (less the Special Dividend of 39 cents that may be determined and paid by Origin before the Scheme is implemented); and

1. Based on the conversion of US$2.19 per share assuming an AUD/USD exchange rate of 0.70. As outlined in the ASX announcement on 27 March 2023, this is equivalent to $9.077 per share at the AUD/USD spot exchange rate of 0.665 at 5.00pm on 24 March 2023.
2. From a rate of 0.665 at the signing of the Scheme Implementation Deed to a spot AUD/USD exchange rate of 0.64 as at 5.00pm on 10 October 2023.
3. Based on the spot AUD/USD foreign exchange rate of 0.64 as at 5.00pm on 10 October 2023.
4. The amount of the Total Cash Payment:
   - assumes an Implementation Date of 18 December 2023;
   - is an implied value, based on the spot AUD/USD exchange rate of 0.64 as at 5.00pm on 10 October 2023;
   - for Origin Shareholders that do not submit a Currency Election to receive a US dollar payment, will depend on the AUD/USD exchange rate shortly prior to Implementation, and the actual Total Cash Payment paid to Origin Shareholders may be lower (or higher) than this amount; and
   - assumes 1,728,724,644 Origin Shares on issue at the Scheme Record Date.

- USD Scheme Consideration of US$1.64 per Origin Share held on the Scheme Record Date, which will be converted to Australian dollars by Bidder shortly before Implementation in accordance with the Scheme and paid in Australian dollars (unless they make a valid Currency Election to receive US dollars), with a current Australian dollar implied value of $2.56 based on the AUD/USD exchange rate of 0.64 as at the Last Practicable Date.[5] The Australian dollar value of the USD Scheme Consideration may increase or decrease based on the AUD/USD exchange rate at the time of conversion;[6] and
- a fully franked Special Dividend of 39 cents per Origin Share held on the Special Dividend Record Date, which the Origin Board intends to pay subject to certain conditions being met.

The AUD Scheme Consideration of $6.25 reflects adjustments that have been made in accordance with the Scheme Implementation Deed to deduct the ordinary Permitted Dividends of 36.5 cents per Origin Share that have been paid to Origin Shareholders prior to the date of this Scheme Booklet, and to add in the Additional Consideration of 2.7 cents (assuming an Implementation Date of 18 December 2023). If Implementation is delayed beyond this date, the Additional Consideration would increase by approximately 0.15 cents for each additional day that elapses after 18 December 2023 to (and including) the date on which Implementation occurs.

The Total Cash Payment may change at the time the Scheme is implemented as described further below.

Refer to section 4.3 for further detail regarding the Special Dividend and applicable conditions.

c) Total Cash Payment

At the time Origin announced the signing of the Scheme Implementation Deed, Origin outlined that there were a number of potential changes that could occur to the consideration payable because:

- the consideration mix between Australian dollars and US dollars was subject to change;
- the consideration payable to shareholders could vary due to currency fluctuations (impacting the conversion of the USD Scheme Consideration);
- the consideration payable would be reduced by any dividends paid by Origin prior to implementation of the Scheme; and
- additional consideration of approximately 4.5 cents per month, accruing on a daily basis, would be payable by Bidder if implementation of the Scheme was delayed beyond 30 November 2023.

Each of these items have combined to alter the consideration amount originally announced by Origin at the time of entry into the Scheme Implementation Deed, as summarised in section 4.2(d) below. These changes explain the difference between the price announced on signing the Scheme Implementation Deed and the Total Cash Payment of approximately $8.81 per Origin Share.

While those items described in section 4.2(d) are unlikely to change between the date of this Scheme Booklet and the Implementation Date (currently expected to be 18 December 2023), there are a number of other items that will continue to impact on the amount of the Total Cash Payment following the date of this Scheme Booklet to Implementation, as summarised in section 4.2(e) below.

These potential future changes primarily relate to future movements in the US dollar to Australian dollar exchange rate.

There is also the possibility of an increase in the quantum of Additional Consideration if there is a delay in the Implementation Date beyond 18 December 2023 given that this accrues at a rate of approximately 0.15 cents per share per day.

Origin will also provide an updated calculation of the approximate amount of the Total Cash Payment, including the Origin Board's final decision in relation to the payment of a Special Dividend, by way of ASX announcement prior to the Scheme Meeting.

5. Using the spot AUD/USD foreign exchange rate of 0.64 as at 5.00pm on 10 October 2023.
6. Refer to section 4.2(e)(1) for further detail regarding the process for conversion to Australian dollars under the Scheme.

4. Overview of the Scheme *continued*

d) Update to the consideration since entry into the Scheme Implementation Deed

At the time of entry into the Scheme Implementation Deed on 27 March 2023, Origin announced a consideration mix of $5.78 per Origin Share and US$2.19 per Origin Share, implying an Initial Consideration value of $8.91 per Origin Share based on an assumed AUD/USD exchange rate of 0.70.[7]

Since then, there has been a number of adjustments to the Initial Consideration, set out in further detail below, resulting in an update to the amount payable to Origin Shareholders, and ultimately reflected in the Total Cash Payment. These adjustments are summarised in the table below, and primarily comprise of:

- adjustments to the AUD and USD consideration mix, as a certain amount of USD consideration has been converted to Australian dollars in accordance with the Scheme Implementation Deed, increasing the AUD Scheme Consideration with corresponding decrease in the USD Scheme Consideration;
- deductions for Permitted Dividends which have been paid to Origin Shareholders of 36.5 cents per share; and
- Additional Consideration payable of approximately 2.7 cents based on the expected Implementation Date of 18 December 2023.

$ per share (local currency)	Original announcement (27 March 2023)		Total Cash Payment (excluding any Special Dividend)	
	AUD Scheme Consideration	USD Scheme Consideration	AUD Scheme Consideration	USD Scheme Consideration
i) AUD/USD Consideration mix	$5.78	US$2.19	$6.59	US$1.64
Implied like-for-like total consideration (pre adjustments)	**$8.91** at assumed 0.70 AUD/USD exchange rate[8]		**$9.15** at AUD/USD spot rate of 0.64 on 10 October 2023[9]	
ii) Less Permitted Dividends paid			-$0.365	
iii) Plus Additional Consideration			+$0.027	
Total amounts payable			**$6.25**	**US$1.64**
Total Cash Payment			**$8.81 at AUD/USD exchange rate of 0.64 on 10 October 2023**	

Origin Shareholders that hold Origin Shares on both the Scheme Record Date and the Special Dividend Record Date will receive the same Total Cash Payment regardless of whether a Special Dividend is paid. This is because the AUD Scheme Consideration included in the Total Cash Payment will be reduced by the cash amount of any Special Dividend paid by Origin before the Implementation Date.

Assuming an Implementation Date of 18 December 2023, each Origin Shareholder will receive a Total Cash Payment of approximately $8.81, which is the sum of $6.25 plus US$1.64 per Origin Share, as converted based on an AUD/USD foreign exchange rate of 0.64 as at the Last Practicable Date.

The basis of these changes is described in further detail below:

1) AUD Scheme Consideration and USD Scheme Consideration mix

The Scheme Consideration is comprised of the AUD Scheme Consideration and the USD Scheme Consideration, as determined in accordance with the Scheme.

Assuming an Implementation Date of 18 December 2023, the Total Cash Payment includes AUD Scheme Consideration of $6.25 (as outlined in the table above, and to be adjusted for the Special Dividend of 39 cents that may be determined and paid by Origin before the Scheme is implemented) and USD Scheme Consideration of US$1.64, in each case per Origin Share held on the Scheme Record Date.

7. As also noted in that announcement, the implied offer value based on the spot exchange rate of 0.665 USD per AUD at the time of the announcement was $9.077 per Origin Share.
8. As outlined in the ASX announcement on 27 March 2023, this is equivalent to $9.077 at the AUD/USD spot exchange rate of 0.665 at 5.00pm on 24 March 2023.
9. Spot AUD/USD foreign exchange rate as at 5.00pm on 10 October 2023. This implied total consideration provides a like-for-like comparison with the consideration as announced at the time of signing the Scheme Implementation Deed (prior to adjustments).

This reflects a change from the $5.78 and US$2.19 per Origin Share announced at the time of the Scheme Implementation Deed.

This is because there has been an increase in the AUD Scheme Consideration (and a corresponding decrease in the USD Scheme Consideration) in accordance with the terms of the Scheme for:

- Australia Pacific LNG distributions (including any gains or losses from related commodity hedge transactions) received by Origin (or that Origin will receive at least 5 Business Days prior to the Scheme Meeting) in US dollars, which have been converted to Australian dollars at the relevant hedge rate;
- Australia Pacific LNG distributions in Australian dollars that were unhedged at the time of the signing of Scheme Implementation Deed;
  - received by Origin in US dollars, and converted by Origin to Australian dollars; and
  - that are expected to be received by Origin prior to the Implementation Date, as agreed between Origin and Bidder; and
- an additional fixed amount of approximately US$640 million consideration converted to Australian dollars at a rate of US$0.70 to A$1.00 elected by Bidder. It should be noted that, since the signing of the Scheme Implementation Deed, Bidder has elected to convert this amount into Australian dollars.

2) Ordinary dividends paid by Origin prior to Implementation

The AUD Scheme Consideration reflects an adjustment in accordance with the Scheme to deduct the Permitted Dividends of 36.5 cents per Origin Share that have been paid to Origin Shareholders, being:

- the interim $0.165 per share fully franked dividend paid to shareholders on 24 March 2023; and
- the final $0.20 per share fully franked dividend paid to shareholders on 29 September 2023.

e) Factors that will continue to impact the Total Cash Payment

In addition to the items set out in section 4.2(d) above, there may be further changes to the Total Cash Payment due to ongoing currency fluctuations and, if Implementation is delayed beyond 18 December 2023, increases in the Additional Consideration.

1) Changes in AUD/USD exchange rate

Unless they make a valid Currency Election, Origin Shareholders will have the total Scheme Consideration paid in Australian dollars, with the USD Scheme Consideration converted to Australian dollars by Bidder shortly before Implementation in accordance with the Scheme.

Under the terms of the Scheme, the aggregate USD Scheme Consideration payable to Origin Shareholders in Australian dollars (being the portion of aggregate USD Scheme Consideration in respect of which no valid Currency Election is received) will be converted to Australian dollars in accordance with the following:

- Bidder will use reasonable endeavours to obtain at least 3 quotes from independent foreign exchange brokers for US dollar to Australian dollar exchange rates;
- Bidder will in its discretion select the best rate or rates (resulting in the highest value of Australian dollars) to convert the US dollars; and
- Bidder will convert the US dollars over at least 2 Business Days, being completed by 6.00am (Sydney time) on the date that is two Business Days prior to the Implementation Date (or such other time as agreed between Origin and Bidder).

The Total Cash Payment of approximately $8.81 includes an implied Australian dollar amount of $2.56, based on the USD Scheme Consideration of US$1.64, converted at the AUD/USD exchange rate of 0.64 as at the Last Practicable Date.[10]

Origin Shareholders can elect to have the USD Scheme Consideration paid in US dollars by making a valid Currency Election. Section 4.4 provides further detail regarding the Currency Election.

For Origin Shareholders who do not make a valid Currency Election, the Total Cash Payment may vary depending on fluctuations in the AUD/USD exchange rate between the date of this Scheme Booklet and implementation of the Scheme.

10. Using the spot AUD/USD foreign exchange rate of 0.64 as at 5.00pm on 10 October 2023. Refer to section 4.2(e)(1) for further detail regarding the process for conversion to Australian dollars under the Scheme.

4. Overview of the Scheme *continued*

The below table illustrates the potential impact on the USD Scheme Consideration based on an FX rate conversion to AUD.[11]

AUD/USD FX Rate	Converted US$1.64/sh USD Scheme Consideration (A$/sh)	AUD Scheme Consideration (A$/sh)	Total Cash Payment (A$/sh)
0.50	3.28	6.25	**9.53**
0.55	2.98	6.25	**9.23**
0.60	2.73	6.25	**8.99**
0.64	2.56	6.25	**8.81**
0.65	2.52	6.25	**8.78**
0.70	2.34	6.25	**8.60**
0.75	2.19	6.25	**8.44**
0.80	2.05	6.25	**8.30**

As shown in the above table, if the Australian dollar rises against the US dollar (compared to the exchange rate of 0.64 used to calculate the implied value of the USD Scheme Consideration in this Scheme Booklet), the Australian dollar amount of the USD Scheme Consideration (when converted) will fall and the Total Cash Payment (as expressed in Australian dollars) will be lower.

Conversely, if the Australian dollar declines against the US dollar (compared to the exchange rate of 0.64 used to calculate the implied value of the USD Scheme Consideration in this Scheme Booklet), the Australian dollar amount of the USD Scheme Consideration (when converted) will increase and the Total Cash Payment (as expressed in Australian dollars) will be higher.

The below chart shows historical FX movements of the AUD/USD exchange rate relevant to the offer over the 24-months to the Last Practicable Date.

Source: IRESS data. IRESS has not consented to the use of this information in the Scheme Booklet.

11. Amounts in this table have been rounded to two decimal places so there may be discrepancies between totals due to the effects of rounding.

2) Additional Consideration

Under the terms of the Scheme, Bidder has agreed to pay additional consideration of $0.001479 (approximately 0.15 cents) for each day that has elapsed from (and including) 1 December 2023 to (and including) the Implementation Date.

Based on the Implementation Date of 18 December 2023, the Total Cash Payment of approximately $8.81 includes Additional Consideration of approximately 2.7 cents.

If the Scheme is implemented after this date, the Additional Consideration (and consequently the Total Cash Payment) will continue to increase by $0.001479 (approximately 0.15 cents) for each additional day that elapses after 18 December 2023 to (and including) the date on which Implementation occurs.

4.3 Special Dividend

a) Introduction

The Origin Board intends to pay a fully franked Special Dividend of 39 cents per Origin Share prior to the Implementation Date but has not made a final decision.

The final decision on whether or not to pay a Special Dividend will be made by the Origin Directors in their absolute discretion. Any such decision is subject to a number of factors, including satisfaction of the following conditions:

- the Scheme having been approved by Origin Shareholders and the Court and having become Effective;
- Origin having received a draft class ruling (or other indicative confirmation) from the Australian Tax Office in a form acceptable to Origin;
- Origin being able to pay the Special Dividend in cash before the Implementation Date (with the Special Dividend Record Date being before the Scheme Record Date);
- Origin having available franking credits and its franking account not being in deficit; and
- compliance with relevant legislative requirements under the Corporations Act and *Income Tax Assessment Act 1997* (Cth) in respect of the Special Dividend.

b) Corporations Act requirements

Under section 254T of the Corporations Act, dividends may only be paid by a company if:

- the company's assets exceed its liabilities immediately before the dividend is declared and the excess is sufficient for the payment of the dividend;
- the payment of the dividend is fair and reasonable to the company's shareholders as a whole; and
- the payment of the dividend does not materially prejudice the company's ability to pay its creditors.

In addition, section 260A of the Corporations Act enables a company to financially assist a person to acquire shares in the company or a holding company only if certain conditions are satisfied. Financial assistance of this kind would be permitted if the giving of assistance does not materially prejudice:

- the interests of the company;
- the interests of its shareholders; or
- the company's ability to pay its creditors.

The Corporations Act specifically contemplates that financial assistance (of the kind that is regulated under section 260A of the Corporations Act) may take the form of paying a dividend which may be given before the acquisition of shares. Origin will only pay a Special Dividend if it can do so in compliance with section 260A.

The Origin Directors will determine (in their absolute discretion) whether or not to pay a Special Dividend after assessing the financial position of the Origin Group and the expected impact on creditors. However, based on the information currently available, the Origin Directors expect they may be able to determine that paying a Special Dividend of 39 cents per Origin Share is in the best interests of Origin and does not materially prejudice the interests of Origin or Origin Shareholders and does not materially prejudice Origin's ability to pay its creditors.

c) Announcement regarding any Special Dividend

The final decision of the Origin Directors regarding the payment of any Special Dividend will be communicated to Origin Shareholders by way of an ASX announcement before the Scheme Meeting.

4. Overview of the Scheme *continued*

d) Impact of any Special Dividend

The Total Cash Payment includes AUD Scheme Consideration of $6.25 per Origin Share held on the Scheme Record Date, which will be adjusted to deduct the Special Dividend of 39 cents that may be determined and paid by Origin before the Scheme is implemented.

If a Special Dividend of 39 cents per Origin Share is paid by Origin, the Total Cash Payment of approximately $8.81 per Origin Share payable to Origin Shareholders will comprise the following:

- AUD Scheme Consideration of $5.86 per Origin Share held on the Scheme Record Date (payable by Bidder); and
- USD Scheme Consideration of US$1.64 per Origin Share held on the Scheme Record Date (payable by Bidder), as converted to Australian dollars by Bidder shortly before Implementation in accordance with the Scheme (unless the Scheme Shareholder makes a valid Currency Election to receive US dollars), with an implied value of $2.56[12]; and
- a fully franked Special Dividend of 39 cents for each Origin Share held on the Special Dividend Record Date (payable by Origin).

If a Special Dividend is not paid, the Total Cash Payment of approximately $8.81 per Origin Share payable to Origin Shareholders will comprise the following (payable by Bidder):

- AUD Scheme Consideration of $6.25 per Origin Share held on the Scheme Record Date; and
- USD Scheme Consideration of US$1.64 per Origin Share held on the Scheme Record Date (payable by Bidder), as converted to Australian dollars by Bidder shortly before Implementation in accordance with the Scheme (unless the Scheme Shareholder makes a valid Currency Election to receive US dollars), with an implied value of $2.56.[13]

If the Scheme is implemented and you hold Origin Shares on both the Scheme Record Date and the Special Dividend Record Date, the Total Cash Payment you receive will be the same regardless of whether a Special Dividend is paid. This is because the AUD Scheme Consideration included in the Total Cash Payment will be reduced by the cash amount of any Special Dividend paid by Origin before the Implementation Date.

The franking credits associated with a Special Dividend of 39 cents per Origin Share are approximately 16.7 cents per Origin Share, which may be of value to Origin Shareholders who are able to realise the benefit of franking credits.

4.4 Currency Election

a) How to make a Currency Election

The Scheme Consideration comprises both Australian dollars and US dollars and each Origin Shareholder is deemed (unless they elect otherwise) to have made an automatic election to receive the Scheme Consideration in Australian dollars under the terms of the Scheme.

As an alternative, an Origin Shareholder may elect to receive the Scheme Consideration for all of their Origin Shares in the form of a combination of Australian dollars and US dollars (comprising, the AUD Scheme Consideration in Australian dollars and the USD Scheme Consideration in US dollars) (**Currency Election**). In order to make a Currency Election and receive the USD Scheme Consideration in US dollars, Origin Shareholders must provide valid US dollar bank account details.

Origin Shareholders may make a Currency Election for all of their Origin Shares through lodging the Election Form with the Origin Share Registry. An Origin Shareholder can request an Election Form from www.investorserve.com.au or by contacting the Origin Shareholder Information Line on 1300 540 303 (within Australia) or +61 2 9066 4083 (outside Australia), between 8.30am and 5.30pm (Sydney time), Monday to Friday (excluding public holidays).

For a Currency Election to be valid:

- the Origin Shareholder must complete and sign the Election Form in accordance with the instructions set out in the Scheme Booklet and in the Election Form (including providing valid US dollar banking account details);
- the Election Form must be received by the Origin Share Registry before 7.00pm on 4 December 2023 or such other time as agreed in writing by Bidder and Origin (**Election Time**) at the address specified on the Election Form; and
- it must be made in respect of all (not just some) of your Origin Shares.

12. Using the spot AUD/USD foreign exchange rate of 0.64 as at 5.00pm on 10 October 2023. Refer to section 4.2(e)(1) for further detail regarding the process for conversion to Australian dollars under the Scheme.
13. Using the spot AUD/USD foreign exchange rate of 0.64 as at 5.00pm on 10 October 2023. Refer to section 4.2(e)(1) for further detail regarding the process for conversion to Australian dollars under the Scheme.

b) Currency Election applies to all your Origin Shares

Except in respect of separate parcels held by nominees and custodians noted below, a Currency Election will be deemed to apply in respect of the Origin Shareholder's entire registered holding of Origin Shares on the Scheme Record Date, regardless of whether the Origin Shareholder's holding of Origin Shares on the Scheme Record Date is greater or less than the Origin Shareholder's holding at the time it made its Currency Election.

Nominees or custodians which are noted on the Origin Share Register as holding one or more parcels of Origin Shares as trustee or nominee for, or otherwise on account of, another person may make separate Currency Elections for each of those parcels. A Currency Election made in respect of any such parcel will not be taken to extend to any other parcels held by the nominee or custodian. For further information, contact the Origin Shareholder Information Line on 1300 540 303 (within Australia) or +61 2 9066 4083 (outside Australia), between 8.30am and 5.30pm (Sydney time), Monday to Friday (excluding public holidays).

c) What happens if the Currency Election is invalid?

If an Origin Shareholder does not make a valid Currency Election, the Origin Shareholder will receive the Scheme Consideration in Australian dollars for all their Origin Shares.

d) Can a Currency Election be withdrawn?

An Origin Shareholder may withdraw or revoke a Currency Election in accordance with the instructions on the Election Form before the Election Time.

4.5 Provision of Scheme Consideration

The Scheme Consideration will be paid to Scheme Shareholders on the Implementation Date (currently expected to be 18 December 2023). Scheme Shareholders who have validly registered their bank account details with the Origin Share Registry before the Scheme Record Date will have their Scheme Consideration paid directly to their bank account(s). Otherwise, Scheme Shareholders will have their Scheme Consideration sent by cheque in Australian dollars to their address shown on the Origin Share Register.

You can nominate a bank account or update your bank account details on the website of the Origin Share Registry at www.investorserve.com.au.

Scheme Shareholders who make a Currency Election to receive their USD Scheme Consideration in US dollars will need to provide valid US dollar bank account details in their Election Form.

It is important to note that you will only receive the Scheme Consideration if you are a Scheme Shareholder. You will be a Scheme Shareholder if you hold Origin Shares at the Scheme Record Date (currently expected to be 7.00pm (Sydney time) on 11 December 2023) or such other time and date as Origin, Bidder and Brookfield Renewable Group Australia Pty Ltd agree in writing).

If the Origin Directors decide to pay a Special Dividend, Origin Shareholders on the Origin Share Register as at the Special Dividend Record Date will be paid the Special Dividend on the Special Dividend Payment Date (currently expected to be 8 December 2023).

4.6 Conditions to the Scheme

Implementation of the Scheme is subject to the following outstanding conditions precedent, which are set out in full in clause 3.1 of the Scheme Implementation Deed:

a) **FIRB**: notice is received by or on behalf of the Treasurer of the Commonwealth of Australia advising the FIRB Applicants that the Commonwealth of Australia has no objections to the Scheme, Sale Transaction or Internal Restructure.

b) **NOPTA Approval**: Bidder receives approval from the National Offshore Petroleum Titles Administrator required under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.

c) **Shareholder approval**: Origin Shareholders approve the Scheme at the Scheme Meeting by the Requisite Majorities.

d) **Independent Expert**: the Independent Expert does not change its conclusion that the Scheme is in the best interests of Origin Shareholders, or withdraw its Independent Expert's Report, before 8.00am on the Second Court Date.

e) **Court approval**: the Court approves the Scheme in accordance with paragraph 411(4)(b) of the Corporations Act at the Second Court Hearing.

4. Overview of the Scheme *continued*

f) **Restraints**: as at 8.00am on the Second Court Date, there is not in effect any temporary, preliminary or final order, injunction, decision or decree or other material legal restraint or prohibition issued by a court of competent jurisdiction or Government Agency that would prevent, make illegal or prohibit the implementation of the Transaction.

g) **No Origin Prescribed Occurrence**: no Origin Prescribed Occurrence occurs between (and including) the date of the Scheme Implementation Deed and 8.00am on the Second Court Date.

h) **No Origin Regulated Event**: no Origin Regulated Event occurs between (and including) the date of Scheme Implementation Deed and 8.00am on the Second Court Date.

i) **No Origin Material Adverse Change**: no Origin Material Adverse Change occurs between (and including) the date of Scheme Implementation Deed and 8.00am on the Second Court Date.

j) **Foreign Investment Clearance**: as at 8.00am on the Second Court Date, each Foreign Investment Clearance (being relevant foreign investment approvals in France and Spain) required to implement the Transaction has been obtained (unconditionally or subject only to conditions acceptable to Bidder and Brookfield Renewable Group Australia Pty Ltd, acting reasonably).

As at the date of this Scheme Booklet, the condition precedent that ACCC approval be obtained (as set out in clause 3.1(b) of the Scheme Implementation Deed) has been satisfied. Certain Brookfield entities, AusNet Pty Ltd and Australian Energy Holdings No 1 Pty Ltd and MidOcean Energy Holdings Pty Ltd and MidOcean Energy Parent Pty Ltd have provided undertakings to the ACCC in connection with the authorisation granted by the ACCC in relation to the Scheme, Sale Transaction and Internal Restructure. Full copies of these undertakings are available on the ACCC's website (www.accc.gov.au).

The Scheme will not proceed unless all of the conditions precedent to the Scheme are satisfied or waived (as applicable) in accordance with the Scheme Implementation Deed. The conditions precedent must be satisfied or waived prior to the Second Court Hearing. If any of the regulatory approval conditions precedent (being FIRB approval, NOPTA approval and the Foreign Investment Clearances) remain outstanding shortly prior to the Scheme Meeting and are not expected to be satisfied before the Second Court Hearing, it may be appropriate to defer the Scheme Meeting until such time as the outstanding regulatory approvals have been obtained (or there is certainty that they will be obtained prior to the Second Court Hearing). Any changes to the current timetable will be announced by Origin to the ASX.

As at the date of this Scheme Booklet, none of the Origin Directors are aware of any circumstances which would cause any condition precedent not to be satisfied.

4.7 Implications if the Scheme does not become Effective

If the Scheme is not implemented:

- unless Origin Shareholders choose to sell their Origin Shares, for example on the ASX, Origin Shareholders will continue to hold Origin Shares and will be exposed to general risks as well as risks specific to Origin, including those set out in section 7, as well as potential future benefits in retaining exposure to Origin's business and assets;
- Origin Shareholders will not receive the Scheme Consideration;
- a break fee of $151,004,098 may be payable by Origin to Bidder under certain circumstances (detailed in section 9.4(f)). These circumstances do not include where the Scheme Implementation Deed is terminated because the Conditions Precedent are not satisfied (including failure by Origin Shareholders to approve the Scheme at the Scheme Meeting);
- Origin will continue as an ASX-listed entity with management continuing to implement Origin's business plan and financial and operating strategies; and
- the price of an Origin Share will continue to be subject to market volatility and may fall in the absence of a Superior Proposal.

4.8 Key steps in the Scheme

a) Scheme Meeting and Scheme approval requirements

The Court has ordered Origin to convene the Scheme Meeting at which Origin Shareholders will be asked to approve the Scheme.

The terms of the Scheme Resolution to be considered at the Scheme Meeting are contained in the Notice of Scheme Meeting in Annexure 4.

The Scheme will only become Effective and be implemented if:

- it is approved by the Requisite Majorities of Origin Shareholders at the Scheme Meeting to be held on 23 November 2023;
- it is approved by the Court at the Second Court Hearing; and
- the other conditions precedent to the Scheme outlined in section 4.6 are satisfied or waived (as applicable).

The Requisite Majorities of Origin Shareholders to approve the Scheme are:

- unless the Court orders otherwise, a majority in number (more than 50 per cent) of Origin Shareholders present and voting at the Scheme Meeting (either in person or by proxy, attorney or, in the case of corporate Origin Shareholders, body corporate representative); and
- at least 75 per cent of the total number of votes cast on the Scheme Resolution at the Scheme Meeting by Origin Shareholders present and voting (either in person or by proxy, attorney or, in the case of corporate Origin Shareholders, body corporate representative).

The Court has the power to waive the first requirement.

The entitlement of Origin Shareholders to attend and vote at the Scheme Meeting is set out in the Notice of Scheme Meeting in Annexure 4.

Voting is not compulsory. However, the Origin Directors unanimously recommend that Origin Shareholders vote in favour of the Scheme in the absence of a Superior Proposal, and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin Shareholders.[14]

You should be aware that even if you do not vote, or vote against the Scheme, the Scheme may still be implemented if it is approved by the Requisite Majorities of Origin Shareholders and the Court. If this occurs, your Origin Shares will be transferred to Bidder and you will receive the Scheme Consideration even though you did not vote on, or voted against, the Scheme.

The results of the Scheme Meeting will be available as soon as possible after the conclusion of the Scheme Meeting and will be announced to the ASX (www.asx.com.au) once available.

b) Court approval of the Scheme

In the event that:

- the Scheme is approved by the Requisite Majorities of Origin Shareholders at the Scheme Meeting; and
- all other conditions precedent to the Scheme (except Court approval of the Scheme) have been satisfied or waived (as applicable),

then Origin will apply to the Court for orders approving the Scheme.

Each Origin Shareholder has the right to appear at the Second Court Hearing.

c) Effective Date

If the Court approves the Scheme, the Scheme will become Effective on the Effective Date, being the date an office copy of the Court order from the Second Court Hearing approving the Scheme is lodged with ASIC. Origin will, on the Scheme becoming Effective, give notice of that event to the ASX.

Origin intends to apply to the ASX for Origin Shares to be suspended from trading on the ASX from close of trading on the Effective Date.

14. Origin Shareholders should, in considering this recommendation, note that (as detailed in section 9.2 of this Scheme Booklet), if the Scheme becomes Effective, the following will occur in relation to the equity incentives and deferred cash awards held by Frank Calabria (Managing Director and Chief Executive Officer): full vesting and exercise of 992,212 unvested share rights, lifting of restrictions on 472,417 restricted Origin Shares and waiving of the deferral period for $1,229,499 deferred cash.

4. Overview of the Scheme *continued*

d) Special Dividend Record Date, entitlement to any Special Dividend and Special Dividend Payment Date

If the Origin Directors decide to pay a Special Dividend, those Origin Shareholders who are recorded on the Origin Share Register on the Special Dividend Record Date (currently expected to be 7.00pm (Sydney time) on 30 November 2023) will be entitled to receive the Special Dividend in respect of the Origin Shares they hold at that time and will be paid the Special Dividend on the Special Dividend Payment Date (currently expected to be 8 December 2023).

e) Scheme Record Date and entitlement to Scheme Consideration

Those Origin Shareholders who are recorded on the Origin Share Register on the Scheme Record Date (currently expected to be 7.00pm (Sydney time) on 11 December 2023 or such other time and date as the parties agree in writing) will be entitled to receive the Scheme Consideration in respect of the Origin Shares they hold at that time.

1) Dealings on or prior to the Scheme Record Date

For the purposes of determining which Origin Shareholders are eligible to participate in the Scheme, dealings in Origin Shares will be recognised only if:

- in the case of dealings of the type to be effected using CHESS, the transferee is registered on the Origin Share Register as the holder of the relevant Origin Shares before the Scheme Record Date; and
- in all other cases, registrable transfer or transmission applications in respect of those dealings, or valid requests in respect of other alterations, are received by the Origin Share Registry before the Scheme Record Date (and the transferee remains registered as at the Scheme Record Date).

For the purposes of determining entitlements under the Scheme, Origin will not accept for registration or recognise any transfer or transmission applications in respect of Origin Shares received after the Scheme Record Date.

2) Dealings after the Scheme Record Date

For the purpose of determining entitlements to the Scheme Consideration, Origin must maintain the Origin Share Register in its form as at the Scheme Record Date until the Scheme Consideration has been paid to the Scheme Shareholders. The Origin Share Register in this form will solely determine entitlements to the Scheme Consideration.

After the Scheme Record Date:

- all statements of holding for Origin Shares (other than statements of holding in favour of Bidder) will cease to have effect as documents relating to title in respect of such Origin Shares; and
- each entry on the Origin Share Register (other than entries on the Origin Share Register in respect of Bidder) will cease to have effect except as evidence of entitlement to the Scheme Consideration in respect of the Origin Shares relating to that entry.

f) Implementation Date

By no later than the Business Day before the Implementation Date (currently expected to be 18 December 2023), Bidder will deposit (or will procure the deposit) into the following Origin operated trust accounts with an authorised deposit taking institution in Australia as trustee for the Scheme Shareholders:

- into an Australian dollar denominated account, an amount equal to the aggregate Scheme Consideration to be provided to Scheme Shareholders in Australian dollars, being all AUD Scheme Consideration and the USD Scheme Consideration in respect of which valid Currency Elections are not received; and
- into a US dollar denominated account, an amount equal to the aggregate Scheme Consideration to be provided to Scheme Shareholders in US dollars, being the USD Scheme Consideration in respect of which valid Currency Elections are received.

Scheme Shareholders will be paid the Scheme Consideration on the Implementation Date. Immediately after the Scheme Consideration is paid to Scheme Shareholders on the Implementation Date, the Scheme Shares will be transferred to Bidder.

g) Deed Poll

As at the date of this Scheme Booklet, a Deed Poll has been entered into by Bidder in favour of the Scheme Shareholders, to:

- provide the aggregate amount of the Scheme Consideration (excluding any Special Dividend payable by Origin) payable to all Scheme Shareholders under the Scheme, subject to the Scheme becoming Effective; and
- undertake all other actions attributed to Bidder under the Scheme.

A copy of the Deed Poll is contained in Annexure 3.

4.9 Warranties by Scheme Shareholders

Under the terms of the Scheme, each Scheme Shareholder is taken to have warranted to Origin and Bidder, and appointed and authorised Origin as its attorney and agent to warrant to Bidder, on the Implementation Date, that:

- all their Origin Shares (including any rights and entitlements attaching to those shares) which are transferred under the Scheme will, at the date of transfer, be fully paid and free from all mortgages, charges, liens, encumbrances, pledges, security interests (including any 'security interests' within the meaning of section 12 of the *Personal Property Securities Act 2009* (Cth)) and interests of third parties of any kind, whether legal or otherwise, and restrictions on transfer of any kind; and
- they have full power and capacity to transfer their Scheme Shares to Bidder together with any rights attaching to those shares.

4.10 Internal Restructure and Sale Transaction

Origin notes the request from Bidder regarding the Internal Restructure and the Sale Transaction set out in further detail in section 6.1. The Origin Board has yet to consider this request.

4.11 Delisting of Origin

Origin will apply for the termination of the official quotation of Origin Shares on the ASX and for Origin to be removed from the official list of the ASX, each to occur on a date after the Implementation Date.

5. Information about Origin

5.1 Business overview

Origin is a leading integrated energy company with over 4.5 million customer accounts across electricity, gas, LPG[1] and broadband in Australia. Origin has an owned and contracted generation portfolio of 7,835 MW, which includes 1,755 MW of contracted renewables and storage. Origin owns a 27.5 per cent shareholding in Australia Pacific LNG, which produces and exports LNG to overseas customers and is a significant contributor to the East Coast gas market. Origin also holds a 20 per cent interest in the energy retail and technology company Octopus Energy headquartered in the UK.

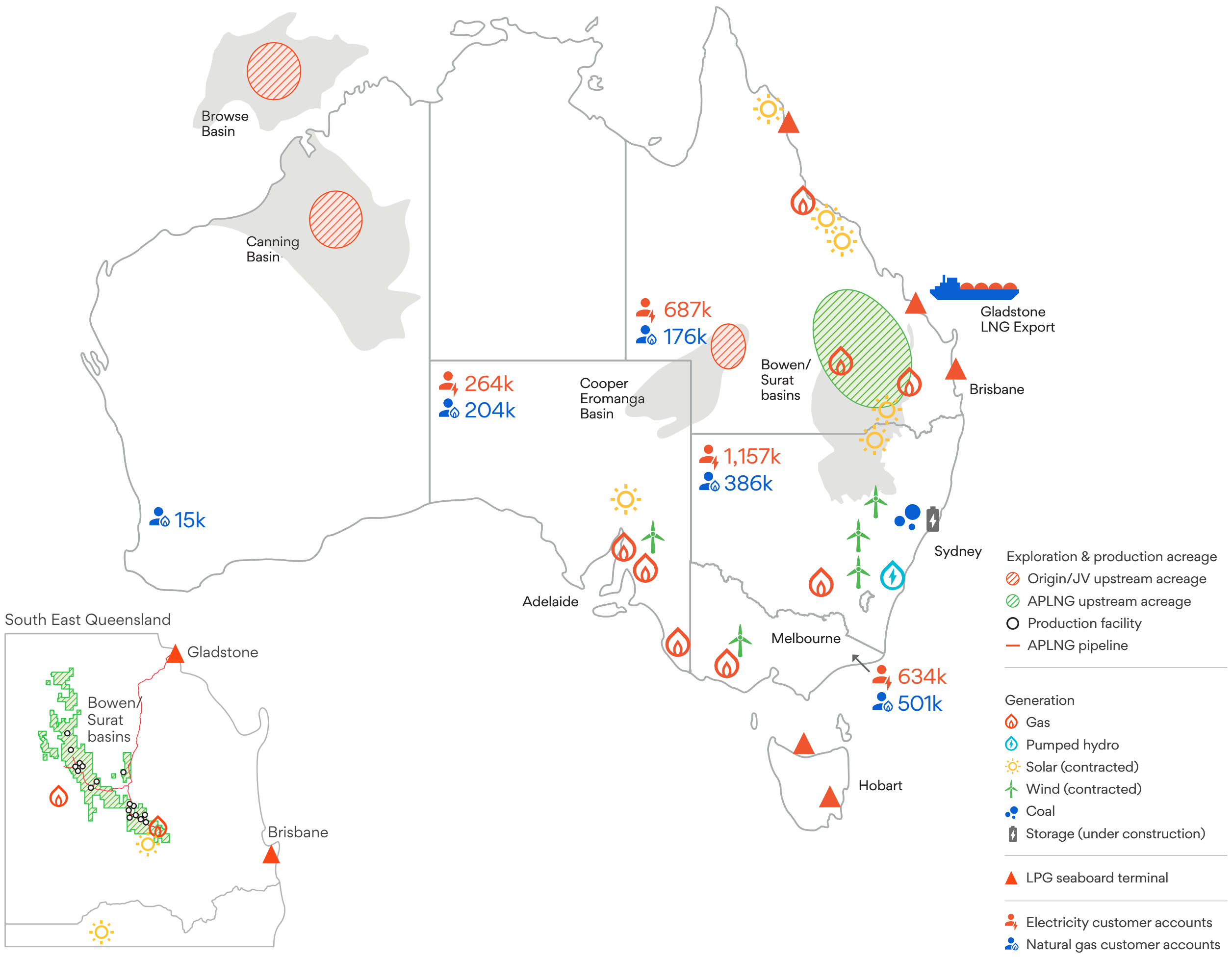
Origin services its customers and markets across three operating segments:

a) **Energy Markets:** As described further in section 5.3, this includes Retail and Energy Supply and Operations.

b) **Share of Octopus Energy:** As described further in section 5.4, Origin owns a 20 per cent interest in the UK-based energy retail and technology company.

c) **Integrated Gas:** As described further in section 5.5, this includes Origin's investment in Australia Pacific LNG (and Australia Pacific LNG service provider roles), interests in legacy exploration permits, growth initiatives in hydrogen and carbon offset projects, LNG trading and commodity hedging.

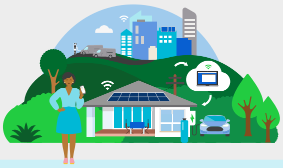
Origin operates in the following geographic areas:[2,3]

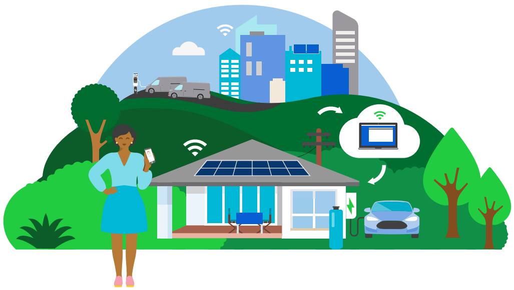


1. On 8 November 2022, Origin entered into an agreement to sell Origin's LPG business in the Pacific with the sale subsequently completed in September 2023. Origin retains its Australian LPG business.
2. Customer numbers as at 30 June 2023.
3. An agreement has been executed with Buru Energy Limited to exit Origin's interest in Canning Basin, and with Bridgeport Energy (Qld) Pty Ltd to exit Origin's joint venture interests in the Cooper Eromanga Basin.

5.2 Origin’s ambition and strategy

Origin’s ambition to lead the energy transition through cleaner energy and customer solutions is supported by the following strategic pillars to drive decarbonisation and evolve the portfolio.

Our purpose	Getting energy right for our customers, communities and planet		
Our ambition	Lead the energy transition through cleaner energy and customers solutions		
			
Our strategic pillars	Unrivalled customer solutions	Accelerate renewable and cleaner energy	Deliver reliable energy through the transition
Our decarbonisation priorities	**Enable** customers to decarbonise	**Grow** our portfolio of renewables and cleaner energy	**Reduce** emissions from our existing operations



Unrivalled customer solutions

Origin has a leading retail business with 4.5 million customer accounts, with low cost and churn lower than Tier 1 competitors, aiming to deliver a superior customer experience.

Origin’s strategy to increase the value of the retail business and enhance customer experience involves:

- adopting a new operating model and migrating customers to the Kraken platform, delivering a superior customer experience, lower costs, a leaner operation and lower churn. Origin is targeting a $200 – 250 million cash cost reduction from FY2018 baseline by FY2025. As at FY2023 Origin has realised ~$150 million in cost savings, excluding the impact of rising bad and doubtful debt expenses;
- increasing the breadth of products offered including broadband, solar, batteries, connected solutions and E-mobility; and
- using strong data analytics capability to enable personalised and segmented offers and experiences for customers.

For larger business customers, Origin is working to simplify the energy transition, providing tailored energy and decarbonisation solutions through Origin Zero. These solutions can include elements such as renewable energy, demand response, solar, batteries, energy management and EV fleet management.

Through its strategic partnership with Octopus Energy, Origin has licensed the industry-leading retail platform, Kraken, to further improve customer experience and cost to serve for its growing customer base, while also benefiting from Octopus Energy’s global growth and innovation.

5. Information about Origin *continued*

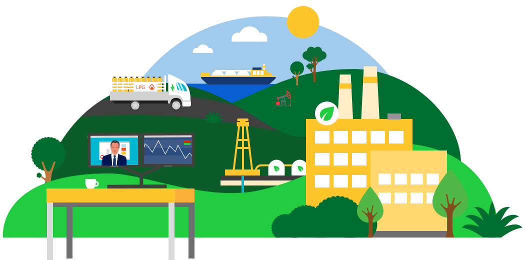
Accelerate renewables and cleaner energy

Origin intends to invest in cleaner energy positions to support customers' demand for energy and decarbonisation solutions. Origin intends to increase renewable energy supply through new investments, partnerships, and projects, targeting multi-GW renewable growth opportunities through a staged and disciplined investment and/or contracting approach.

In addition to Origin's significant thermal peaking generation portfolio, Origin plans to invest in growing 'firming capacity' such as batteries and our Virtual Power Plant (**VPP**) to support the growth of renewables during periods of peak demand and lower renewable generation.

Origin has developed a proprietary VPP platform to connect and use artificial intelligence to orchestrate distributed assets. Origin is growing our battery storage portfolio, including taking a final investment decision on the first stage of a battery project at Eraring.

Origin is investigating opportunities to invest in cleaner fuels for harder-to-abate sectors, including domestic and export green hydrogen projects, targeting domestic hydrogen supply from the mid 2020s and export supply from the late 2020s.



Deliver reliable energy through the transition

Origin believes its portfolio of assets can play a critical role in providing customers with reliable and affordable energy while it transitions to a low-carbon future. Origin believes gas will remain a key part of the energy mix during the transition.

Through our 27.5 per cent interest in Australia Pacific LNG, Origin continues to be a low cost supplier of gas, for domestic and export customers.

The Eraring coal fired power station continues to support the reliability and security of the electricity market. Origin has announced the early retirement of Eraring potentially as early as August 2025 as the portfolio and the market transitions to cleaner sources of energy and new sources of supply enter the market.

Origin expects its existing thermal peaking generation will continue to play a critical role in providing capacity and firming as coal generators such as Eraring retire and are replaced by intermittent renewables.

Origin has a leading domestic wholesale gas position with the ability to transport gas across the east coast to support the gas fired generation fleet as well as residential, business and wholesale customers.

5.3 Energy Markets

Origin's Energy Markets business comprises Australia's largest energy retail businesses by customer accounts,[4] Australia's largest fleet of gas-fired peaking power stations supported by a substantial contracted fuel position, a growing supply of contracted renewable energy and Australia's largest power station, the black coal-fired Eraring Power Station.

Origin's Energy Markets segment activities include the generation of electricity and the procurement of electricity and gas, and the sale of these products to customers, as well as focusing on emerging products such as solar, batteries, connected solutions and e-mobility. These are set out in more detail below.

Retail					Energy Supply and Operations			
Electricity and Natural Gas – Mass Market (residential and small to medium business)	Origin Zero	LPG	Solar and Community Energy Services	Growth Businesses	Thermal Generation	Renewables Portfolio and Energy Storage	Electricity Wholesale Trading	Wholesale Gas Portfolio

a) Retail

Origin is Australia's largest energy retailer by customer accounts[5] with approximately 4.5 million customer accounts across electricity, natural gas, LPG and broadband.

Origin retail customers include residential customers, small and medium-sized businesses, and commercial and industrial customers, principally across electricity, gas and LPG.

Electricity and Natural Gas – Mass Market

Origin supplies electricity and natural gas to around 3.5 million residential and small to medium-sized customer accounts. The majority of Origin's customers are located in New South Wales, Victoria, Queensland and South Australia. Origin aims to be Australia's most loved retailer helping customers embrace smart, connected and low carbon solutions as they decarbonise their homes and businesses.

In 2020, Origin acquired a 20 per cent interest in Octopus Energy, a UK-based fast-growing energy transition and technology company, and licensed Octopus Energy's Kraken platform to further transform Origin's retail operations to deliver superior customer experience, lower churn, enable a material reduction in operating costs, and accelerate future growth opportunities. The migration of mass market electricity and natural gas customers to the Kraken platform was successfully completed in early May 2023. Origin is targeting a cash cost reduction of $200 million to $250 million by FY2025 from FY2018 baseline.

Origin offers a range of products and services to customers with rewards and benefits valued by the customers. The level of competition in retail markets in Australia is high with customers able to choose their energy retailer. Customers consider price, brand, experience and overall value when selecting their energy retailer. Origin's customer churn, the rate which customers leave Origin, has consistently been lower than the market average.

The prices charged for electricity to those mass market customers that have not entered into a market contract with Origin (i.e. standing offer contracts) are regulated by the Default Market Offer by the Australian Energy Regulator in New South Wales, Queensland and South Australia, and the Victorian Default Offer by the Essential Services Commission in Victoria. The prices charged for electricity to mass market customers who have entered into a market contract with Origin are set by agreement between Origin and the customer.

The prices charged for gas to mass market customers are set in a competitive market and reflect the cost of procuring the energy and distribution of that energy to customers.

In FY2023, Origin's mass market electricity load totalled 15.6 TWh and Origin delivered 45.2 PJ of natural gas to its mass market customers.

4. As at 30 June 2023.
5. As at 30 June 2023.

5. Information about Origin *continued*

Origin Zero

Origin supplies electricity and natural gas to large customers through the Origin Zero business. Origin Zero's mission is to accelerate large businesses to net zero through a range of products and services from four key categories; decarbonising grid energy, reducing carbon and costs at sites, replacing fossil fuel assets with electric assets, and offsetting residual carbon emissions. The business is gaining momentum with more than 200 MW of flexible large business customer demand enrolled into Origin's Virtual Power Plant, and the number of large customers engaging in non-commodity products doubled to approximately 4 per cent of large customers during FY2023.

In FY2023, Origin Zero's load totalled 18.6 TWh and Origin delivered 39 PJ of natural gas to its large customers.

Through Origin 360 EV, the business also provides a full suite of end-to-end electric vehicle (**EV**) solutions to both commercial and residential customers. Origin continues to accelerate its growth by scaling its EV Fleet, Car Share and Charging solutions as well as launching new products including the EV Energy Plan, a salary packaging EV subscription for Origin and third parties and charging solutions for body corporates and residents of apartment buildings. Origin has more than 400 EVs under management through a range of e-mobility solutions and continues to offer smart charging solutions to customers by enrolling EV chargers onto Loop.

LPG

Origin is one of Australia's largest LPG and propane suppliers, procuring and distributing LPG to residential and business locations across Australia. As at 30 June 2023, Origin serviced 368,000 customers.

On 8 November 2022, Origin entered into an agreement to sell Origin's LPG business in the Pacific, with the sale subsequently completed in September 2023. Origin retains its Australian LPG business.

Solar and Community Energy Services

Origin provides various services to residential and business customers including the installation of solar photovoltaic systems and batteries, and ongoing support and maintenance services.

The Community Energy Services (**CES**) business provides serviced hot water, natural gas and electricity via embedded networks and other related services such as communal solar and battery systems to apartment blocks. As at 30 June 2023, Origin serviced 442,000 CES customer accounts.

Growth businesses

Origin's growth businesses include early stage initiatives from the incubation phase to commercial scale. These initiatives include the Origin broadband business, Origin Loop (Origin's in-house Virtual Power Plant), Spike (Origin's behavioural demand response program for customers) and Origin 360 EV (Origin's electric vehicle business).

Origin's broadband business provides internet services through a partnership with Aussie Broadband. Origin was awarded both the 2023 Canstar Blue Best-Rated Bundled Energy and Telecommunications Provider and the 2022 Canstar Blue Best-rated NBN provider awards. In FY2023, Origin's broadband business grew by 35,000 to 96,000 customer accounts, with over 100,000 customers accounts by September 2023.

Origin Loop provides connected solutions to customers across multiple products and services. An increasing variety of distributed assets such as hot water, solar, batteries, electric vehicles and smart appliances are aggregated, controlled and managed in response to fluctuating market demand, improving customer engagement while reducing energy costs for both customers and Origin over time. Assets connected to Loop grew by approximately 216 per cent, from 258 MW to 815 MW over FY2023.

Spike, Origin's behavioural demand response program that rewards customers for reducing energy usage during periods of peak market demand, continues to grow with 137,000 customers signed up as at 30 June 2023. Spike utilises a new platform that provides more advanced and engaging digital experiences and insights for Origin customers. Origin continues to grow its connected home footprint with Loop-connected products including bundled solar and battery offerings, a BYO (bring your own) battery offer to integrate with customers' existing assets, and a trial of EV charging tariffs.

b) Energy Supply and Operations

A key part of Origin's business involves procuring wholesale supply of electricity, managing our wholesale gas portfolio, and managing the associated volatility in wholesale electricity market prices. Origin seeks to manage these risks using a combination of its owned and contracted generation capacity, as well as wholesale electricity market purchases and financial contracts.

Origin owns a diverse portfolio of generation assets across multiple fuel sources and geographical regions. Origin's owned generation portfolio includes gas, liquid fuel, a coal fired power station, cogeneration plants and a pumped storage hydro-electric power station. Origin has also contracted generation through long-term PPAs with solar, wind and gas fired generation. Origin has an ambition to grow its portfolio of renewables and storage to 4 GW by 2030 and in April 2023, took a final investment decision on the first stage of a large-scale battery at the Eraring Power Station.

Origin's generation portfolio totals 7,835 MW of owned and contracted generation capacity and is summarised below (as at 30 June 2023).

Electricity supply	Nameplate capacity (MW)	Type[1]
Eraring	2,922	
Units 1 – 4	2,880	Black coal
Gas turbine	42	OCGT
Darling Downs	644	CCGT
Osborne[2]	180	CCGT
Uranquinty	692	OCGT
Mortlake	584	OCGT
Mount Stuart	423	OCGT
Quarantine	235	OCGT
Ladbroke Grove	80	OCGT
Roma	80	OCGT
Shoalhaven	240	Pumped hydro
Internal generation	**6,080**	
Pelican Point (contracted)	240	CCGT
Renewable PPAs	1,515	Solar/Wind
Owned and contracted generation	**7,835**	

1. OCGT stands for open cycle gas turbine; CCGT stands for combined cycle gas turbine.
2. Origin has a 50% interest in the 180MW plant and contracts 100% of the output.

5. Information about Origin *continued*

Thermal Generation

Origin's Eraring Power Station is the largest black coal-fired power station in Australia with four 720 MW units and total combined capacity of 2,922 MW, including a 42 MW gas turbine. Eraring currently continues to support the reliability and security of the electricity market. In February 2022, Origin notified the Australian Energy Market Operator of the early retirement of coal-fired generation at Eraring potentially as early as August 2025.

In September 2023, in response to the 'NSW Electricity Supply and Reliability Check Up' report prepared by Marsden Jacob, the NSW State Government advised that it would engage with Origin to clarify its plans for Eraring. Origin continues to assess the market and engage with the NSW Government to manage any risk to the reliability of electricity supply and the economic viability of the Eraring Power Station. As at the date of this Scheme Booklet no agreement has been reached between Origin and the NSW State Government to extend the early retirement of Eraring Power Station beyond August 2025.

The coal supply for Eraring has been historically sourced from coal mines close to Eraring under long-term supply contracts. As part of a strategy to diversify coal supply arrangements, coal supplies are now increasingly delivered by rail from other mines. Origin benefited from intervention by the NSW Government to cap coal supply costs to Eraring at $125/t in FY2023 and this will continue in FY2024.

Origin owns Australia's largest fleet of peaking gas-fired generators, which is expected to play an increasingly important role in providing back up capacity to support intermittent renewable energy sources which are dependent on wind and solar conditions, as well as supplying energy in times of critical peak demand arising from extreme weather events or baseload power supply shortages.

Procurement of gas is supported by Origin's Wholesale Gas portfolio with portfolio strength underpinned by fixed price supply contracts and transport flexibility.[6]

Renewables Portfolio and Energy Storage

Origin is investing to support customers' demand for energy and decarbonisation solutions. Origin is accelerating the development of renewables and storage within its portfolio and intends to increase renewable energy supply through new investments, partnerships and projects, targeting multi-GW renewable growth opportunities through a staged and disciplined investment and/or contracting approach. On top of the 1,515 MW of contracted renewables and 240 MW of owned storage already in Origin's portfolio, Origin also has an ambition to grow its renewables and storage portfolio to 4 GW by 2030 and in April 2023, took a final investment decision on the first stage of a large-scale battery at the Eraring Power Station (460 MW with two hour dispatch duration). Origin has the option to increase the battery to 700 MW and four hours dispatch duration in the future.

Electricity Wholesale Trading

In addition to utilising its generation portfolio to manage electricity price risk, Origin manages the risk associated with volatile wholesale electricity prices through various cash settled financial contracts with third parties. However, it is not commercially practical to mitigate or hedge all risks associated with Origin's exposure to wholesale electricity prices.

The contractual risk management arrangements entered into by Origin include long-term power purchase contracts, swaps and cap contracts with third party generators. Financial limits are set by the Origin Board to manage the overall exposure Origin is prepared to take, and commodity risk management systems are in place to monitor and report performance against these financial limits.

In addition, Origin delivered 1.7 TWh of electricity to wholesale customers in FY2023.

6. Fixed price contracts are subject to CPI adjustments.

Wholesale Gas Portfolio

Origin sources gas for customer demand and power generation from the competitive eastern Australian gas market and customarily enters into medium and long-term gas supply agreements to manage its wholesale gas procurement costs.

Origin sources gas from a range of suppliers, including purchases under long-term contracts from Australia Pacific LNG, Beach Energy (which owns the assets sold by Origin in FY2018), and other third-party gas producers. Some of this supply, including gas sourced from Australia Pacific LNG, is set at legacy prices that are materially lower than prices currently observed in the market. Origin's diverse gas supply arrangements provide flexibility, which is further enhanced through a number of mechanisms including gas swaps, gas storage, gas transportation and park and loan arrangements.

Origin also has access to major gas pipelines across the eastern States, which enables it to manage swings in gas market supply and demand and connect resources to electricity and gas markets.

Origin's procured gas is then sold to its retail customers, large corporate and industrial customers through Origin Zero, trading counter parties and used as fuel for its gas generation assets.

Origin delivered 102.3 PJ of natural gas to wholesale customers during FY2023.

5.4 Share of Octopus Energy

Origin holds a 20 per cent interest in Octopus Energy, a UK-based global energy transition and technology business, which is the second-largest energy retailer in the UK. As at 30 June 2023, Octopus Energy had 9.7 million customer accounts.

Octopus Energy owns and licenses (including to Origin) its market-leading Kraken technology platform. This has accelerated Origin's ambition to deliver superior customer service at lower cost and further differentiate its energy retail offering to customers.

On 1 September 2023, Octopus Energy announced that it had entered into an agreement to acquire Shell Energy's retail business in the United Kingdom and Germany (**Shell Energy Retail**). Shell Energy Retail has 1.4 million household energy customers and 500,000 broadband customers in the United Kingdom and 110,000 household energy customers in Germany. Following the completion of the Shell Energy acquisition (described below), Octopus Energy will have over 12 million customer accounts including 300,000 customers in Germany. As part of the agreement, Shell and Octopus Energy have also signed a memorandum of understanding to explore a potential international electric vehicle charging partnership. The transaction is subject to regulatory approvals and is expected to complete in the fourth quarter of 2023. Financial details of the transaction have not been disclosed.

Octopus Energy continues to experience significant growth in the licensing of its Kraken platform to other energy retailers, with more than 40 million accounts now contracted to be on the software platform globally following two new material licensing agreements announced recently with Tokyo Gas for 3 million electricity accounts and UK utility Severn Trent for 4.6 million accounts. There is also the potential to add a further 10 million gas accounts with Tokyo Gas. This would take total Kraken accounts to 50 million and halfway towards the target of 100 million customers on Kraken by 2027.

Octopus Energy has been very successful in efficiently migrating customers from competing platforms to the Kraken platform. All of EON's UK customers and Origin's mass market electricity and natural gas customer accounts have been successfully migrated to the Kraken platform. Migration has begun for EDF UK's customers.

Kraken earns recurring revenue from licensing the platform to utilities as well as one-off fees earned through the period of customer account migration.

Origin's share of Octopus Energy underlying EBITDA in FY2023 was $240 million, up from a loss of $36 million in the prior year. Octopus Energy's increased earnings in FY2023 reflects an increase in customer accounts and a lag in the reset of tariffs. Customer accounts in the UK retail business increased by 56 per cent during the year, while Kraken achieved a 25 per cent growth in accounts contracted to the platform in the same period.

5. Information about Origin *continued*

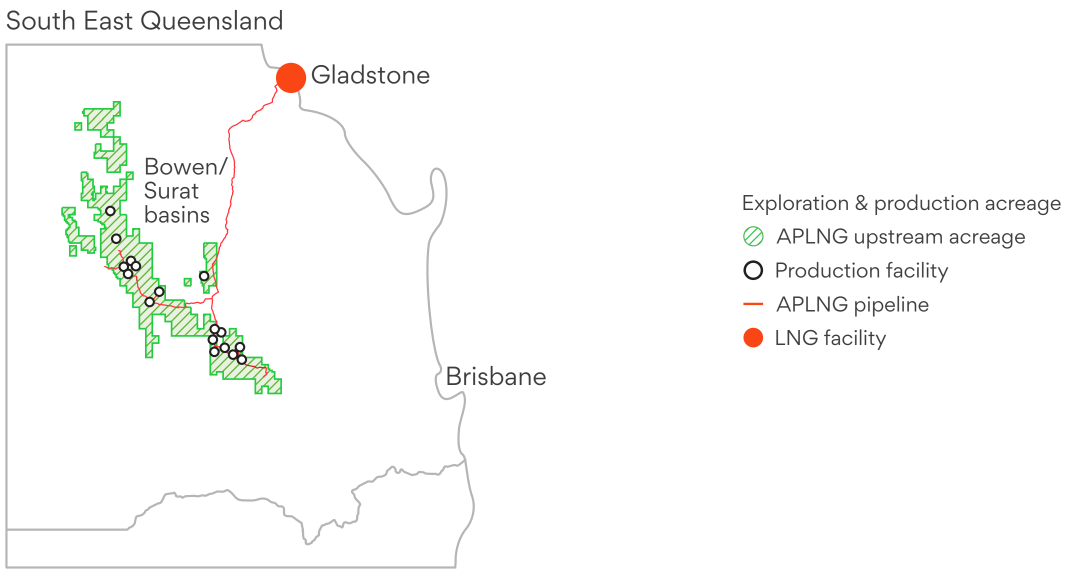
5.5 Integrated Gas

a) Australia Pacific LNG

Origin has a 27.5 per cent shareholding in Australia Pacific LNG, an equity accounted incorporated joint venture. Australia Pacific LNG operates Australia's largest Coal Seam Gas (**CSG**) to LNG export project (by nameplate capacity), with the country's largest 2P (proved plus probable) CSG reserves[7]. Australia Pacific LNG is also a major supplier of gas to the Australian east coast domestic market.

The other shareholders in Australia Pacific LNG are ConocoPhillips Australia Pacific LNG Pty Ltd (which owns 47.5 per cent) and Sinopec Australia Pacific LNG Pty Limited (which owns the remaining 25 per cent).

The below map illustrates Australia Pacific LNG's area of operations:



Origin is currently responsible for operation of the gas fields and gas transmission pipeline (upstream assets) on behalf of Australia Pacific LNG. This includes operation of the upstream CSG exploration, appraisal, development and production activities. Transportation of the CSG to the Australia Pacific LNG liquefaction facility occurs via a gas pipeline operated by Origin.

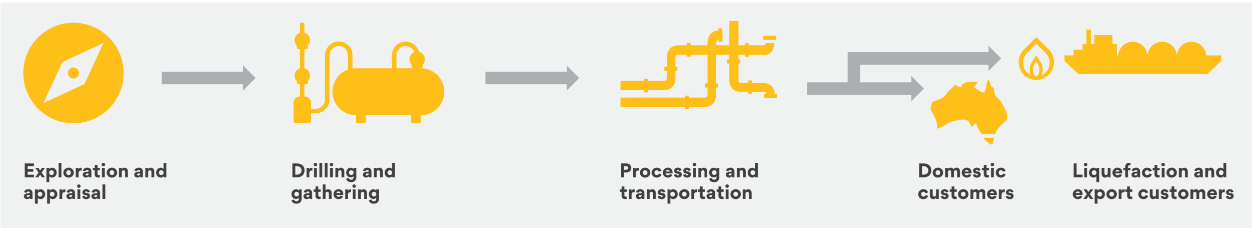
ConocoPhillips is currently responsible for the operations of the Australia Pacific LNG liquefaction facility, a 9 mtpa two-train LNG liquefaction facility at Gladstone in Queensland.

Australia Pacific LNG supplies gas to both the export and domestic markets. Origin is currently responsible for marketing of domestic gas and Australia Pacific LNG is responsible for LNG export marketing with the assistance of ConocoPhillips.

Australia Pacific LNG's export business comprises long-term LNG sales contracts with Sinopec,[8] a major Chinese energy company, and Kansai Electric Power Co. Inc., a major Japanese energy company for a total volume of approximately 8.6 mtpa until 2035 and spot export LNG cargo sales when available. Australia Pacific LNG's domestic business supplies gas to power stations for the generation of electricity, as well as to industrial customers throughout southeast Queensland. Australia Pacific LNG also supplies gas to Origin under a long-term contract.

7. As per EnergyQuest EnergyQuarterly, June 2023.
8. Sinopec refers to China Petroleum & Chemical Corporation which has appointed Unipec Asia Co. Ltd. to act on its behalf under the LNG sale contract.

The below diagram illustrates the broader operational stages of Australia Pacific LNG:



Australia Pacific LNG acquired various CSG interests from Tri-Star in 2002 that are subject to reversionary rights and an ongoing royalty interest in favour of Tri-Star. These interests represent approximately 19 per cent of Australia Pacific LNG's 2P (proved plus probable) CSG reserves and approximately 18 per cent of 3P (proved plus probable plus possible) CSG reserves (as at 30 June 2023). Please refer to section 8 of Origin's Annual Report (which was filed with the ASX on 17 August 2023) for further information relating to Tri-Star's litigation against Australia Pacific LNG in relation to these CSG interests.

As Australia Pacific LNG is an equity accounted joint venture, Origin reports its share of Australia Pacific LNG earnings in its Integrated Gas segment.

b) Other Integrated Gas activities

Origin's Integrated Gas activities that are separate from Australia Pacific LNG include a hydrogen development business, including an interest in the Hunter Valley Hydrogen Hub Project on Kooragang Island, a carbon offset development business, as well as gas exploration operations, including a royalty interest in the Beetaloo Basin and interests in legacy exploration permits (which are all in the process of being divested, except for interests in the Browse Basin).

Hunter Valley Hydrogen Hub (New South Wales) and Other Growth Projects

The Hunter Valley Hydrogen Hub (**HVHH**), which is being assessed in collaboration with Orica, aims to support a reliable and commercial scale hydrogen supply chain in the Newcastle industrial and port precinct.

The first stage of the potential HVHH consists of a 50-60 MW electrolyser, which is expected to produce up to 5,500 tonnes of hydrogen per year. The intention is for the hydrogen to be generated using recycled water and grid-connected electricity, supported by the surrender of large-scale renewable certificates. The majority of the hydrogen will be delivered to Orica, and also made available to transport customers.

In September 2023, Origin announced $45 million in funding from the NSW Government's hydrogen hubs initiative to progress the proposed Hunter Valley Hydrogen Hub on Kooragang Island. This follows Origin's announcement in July 2023 of a $70 million grant Funding Agreement with the Commonwealth Government for the implementation of the Hunter Valley Hydrogen Hub project.

Origin is also evaluating other hydrogen and carbon offset projects to support the energy transition.

Legacy exploration permits

Origin has interests in the following legacy exploration permits:

- **Beetaloo Basin (Northern Territory):** In November 2022 Origin completed the sale of its interest in the Beetaloo Basin and received upfront consideration of $60 million. Origin will receive a 5.5 per cent royalty based on wellhead revenues produced from the three Beetaloo permits, if they are developed. Origin has also executed an agreement to purchase gas from the Beetaloo project, which is conditional on a final investment decision being made and future development occurring.
- **Cooper-Eromanga Basin (Queensland):** Origin executed an agreement to transfer its 75 per cent interest and operatorship of five permits back to Bridgeport, which is expected to complete in the first half of FY2024, and has already surrendered the other twelve permits in the Cooper-Eromanga Basin.
- **Canning Basin (Western Australia):** An agreement has been executed with Buru Energy Limited to exit Origin's interest in the Canning Basin and the transaction is now expected to complete in the first half of FY2024. The terms of the sale provide for Origin to provide Buru with up to $4 million to fund a seismic survey and for Buru to provide Origin with future reimbursement payments of up to $34 million, conditional on the achievement of key development and production milestones.

5. Information about Origin *continued*

- **Browse Basin (Offshore Western Australia):** Origin holds a potential development resource with a 40 per cent interest in five permits in the offshore Browse Basin. The joint venture partners in these permits are Santos (operator) and PetroChina. No current activity is being undertaken.

c) Commodity and Currency Hedging Arrangements

Origin enters into oil hedging instruments to manage its share of Australia Pacific LNG oil price risk in order to support Origin's investment grade credit rating and cash flows during volatile market periods. Please refer to section 6.3.2 of Origin's Annual Report (which was filed with the ASX on 17 August 2023) for further information relating to these hedging arrangements.

d) LNG Trading

Origin's Integrated Gas segment also includes an LNG trading portfolio, which includes LNG purchase and sale contracts and derivative hedge contracts that manage the price risk associated with these physical LNG contracts.

In 2013, Origin established a Henry Hub linked contract to purchase 0.25 mtpa of LNG per year from Cameron LNG for a period of 20 years, with the first cargo delivered to Origin in June 2020. In 2016, Origin established a medium term contract with ENN LNG Trading Company Limited to sell ~0.28 mtpa of LNG per year commencing in FY2019. A significant proportion of the exposure over FY2024 – FY2025 has been hedged by Origin, with FY2026 in the process of being progressively hedged. Please refer to section 6.3.2 of Origin's Annual Report (which was filed with the ASX on 17 August 2023) for further information relating to these contracts.

5.6 Origin Board and senior management

a) Origin Board

As at the date of this Scheme Booklet, the Origin Board comprises the following directors:

Name	Position
Scott Perkins	Independent Non-Executive Chair
Frank Calabria	Managing Director and Chief Executive Officer
Ilana Atlas	Independent Non-Executive Director
Maxine Brenner	Independent Non-Executive Director
Greg Lalicker	Independent Non-Executive Director
Mick McCormack	Independent Non-Executive Director
Steven Sargent	Independent Non-Executive Director
Nora Scheinkestel	Independent Non-Executive Director
Joan Withers	Independent Non-Executive Director

b) Origin senior management

As at the date of this Scheme Booklet, Origin's senior management comprises the following members:

Name	Position
Frank Calabria	Managing Director and Chief Executive Officer
Jon Briskin	Executive General Manager, Retail
Greg Jarvis	Executive General Manager, Energy Supply and Operations
Kate Jordan	General Counsel and Executive General Manager, Company Secretariat, Risk, Governance and Compliance
Tony Lucas	Executive General Manager, Future Energy and Technology
James Magill	Executive General Manager, Origin Zero
Sharon Ridgway	Executive General Manager, People and Culture
Samantha Stevens	Executive General Manager, Corporate Affairs
Andrew Thornton	Executive General Manager, Integrated Gas
Lawrie Tremaine	Chief Financial Officer

5.7 Historical financial information

a) Basis of preparation

This section 5.7 sets out a summary of historical financial information in relation to Origin for the purpose of this Scheme Booklet. The financial information has been derived from Origin's financial statements and Operating and Financial Review for the financial years ended 30 June 2021, 30 June 2022 and 30 June 2023. The financial statements were audited by Ernst & Young.

The historical financial information of Origin presented in this Scheme Booklet is in an abbreviated form and does not contain all the disclosures, presentations, statements or comparatives that are usually provided in an annual report prepared in accordance with the Corporations Act 2001. Origin considers that, for the purposes of this Scheme Booklet, the historical financial information presented in an abbreviated form is appropriate.

Further detail on Origin's financial performance can be found in:

- the financial statements for the year ended 30 June 2023 (included in the Annual Report released to the ASX on 17 August 2023);
- the financial statements for the year ended 30 June 2022 including prior year restatements for the year ended 30 June 2021 (included in the Annual Report released to the ASX on 18 August 2022); and
- the financial statements for the year ended 30 June 2021 (included in the Annual Report released to the ASX on 17 September 2021),

each of which can be found on Origin's website (https://www.originenergy.com.au) or the ASX website (www.asx.com.au).

5. Information about Origin *continued*

b) Historical Consolidated Income Statement

Statutory Results	Restated 2021 $m	2022 $m	2023 $m
Revenue	12,097	14,461	16,481
Other income	43	150	45
Expenses	(14,158)	(16,315)	(16,229)
Results of equity accounted investees	185	959	1,324
Interest income	109	61	51
Interest expense	(242)	(190)	(194)
Profit/(loss) before income tax	**(1,966)**	**(874)**	**1,478**
Income tax expense	(313)	(551)	(420)
Profit/(loss) for the year	**(2,279)**	**(1,425)**	**1,058**
Profit/(loss) for the year attributable to:			
Members of the parent entity	(2,281)	(1,429)	1,055
Non-controlling interests	2	4	3
Profit/(loss) for the year	**(2,279)**	**(1,425)**	**1,058**

c) Historical Consolidated Statement of Financial Position

	Restated 2021 $m	2022 $m	2023 $m
Current assets			
Cash and cash equivalents	472	620	463
Trade and other receivables	2,298	3,371	2,548
Inventories	113	182	180
Derivatives	769	3,174	1,100
Other financial assets	503	860	467
Assets classified as held for sale	–	–	101
Income tax receivable	7	–	–
Other assets	121	90	120
Total current assets	**4,283**	**8,297**	**4,979**
Non-current assets			
Trade and other receivables	14	45	60
Derivatives	366	3,075	1,576
Other financial assets	1,465	243	341
Investments accounted for using the equity method	6,939	6,245	6,255
Property, plant and equipment	3,291	3,255	3,169
Exploration and evaluation assets	245	286	–
Intangible assets	4,658	2,523	2,493
Other assets	47	51	75
Total non-current assets	**17,025**	**15,723**	**13,969**
Total assets	**21,308**	**24,020**	**18,948**
Current liabilities			
Trade and other payables	2,407	3,485	2,152
Payables to joint ventures	169	131	136
Interest-bearing liabilities	2,004	316	192
Derivatives	741	1,590	901
Other financial liabilities	344	727	418
Provision for income tax	–	59	455
Employee benefits	231	242	277
Provisions	43	378	229
Liabilities classified as held for sale	–	–	15
Total current liabilities	**5,939**	**6,928**	**4,775**
Non-current liabilities			
Interest-bearing liabilities	3,224	3,074	3,066
Derivatives	1,395	1,744	1,174
Other financial liabilities	15	–	–
Deferred tax liabilities	5	1,359	386
Employee benefits	36	37	50
Provisions	1,219	856	586
Total non-current liabilities	**5,894**	**7,070**	**5,262**
Total liabilities	**11,833**	**13,998**	**10,037**
Net assets	**9,475**	**10,022**	**8,911**
Equity			
Contributed equity	7,138	6,877	6,901
Reserves	525	3,109	1,492
Retained earnings	1,792	11	498
Total parent entity interest	**9,455**	**9,997**	**8,891**
Non-controlling interests	20	25	20
Total equity	**9,475**	**10,022**	**8,911**

5. Information about Origin *continued*

d) Historical Consolidated Statement of Cash Flows

	2021 $m	2022 $m	2023 $m
Cash flows from operating activities			
Receipts from customers	12,954	14,663	18,972
Payments to suppliers and employees	(12,021)	(14,105)	(19,596)
Government grants received	–	–	184
Cash (used in)/from operations	**933**	**558**	**(440)**
Income tax (paid)/received, net of refunds received	31	(27)	(193)
Net cash (used in)/from operating activities	**964**	**531**	**(633)**
Cash flows from investing activities			
Acquisition of property, plant and equipment	(124)	(162)	(372)
Acquisition of exploration and evaluation assets	(47)	(65)	(11)
Acquisition of other assets	(168)	(109)	(92)
Investment in Octopus Energy	–	(268)	(173)
Acquisition of other investments	(161)	(124)	(32)
Interest received from other parties	3	2	43
Net proceeds from sale of non-current assets	7	6	72
Australia Pacific LNG (APLNG) investing cash flows			
Divestment of ten per cent share in APLNG	–	1,957	–
Receipt of Mandatorily Redeemable Cumulative Preference Shares (MRCPS) interest	110	50	–
Receipt of unfranked dividends	–	433	1,783
Proceeds from APLNG buy-back of MRCPS	599	1,112	–
Net cash from investing activities	**219**	**2,832**	**1,218**
Cash flows from financing activities			
Proceeds from borrowings	–	2,896	1,050
Repayment of borrowings	(1,042)	(4,752)	(1,265)
Joint venture operator cash call movements	(90)	(70)	66
Settlement of foreign currency contracts	(65)	(46)	(48)
Australian Energy Market Operator (AEMO) cash deposits	–	(290)	290
Interest paid	(234)	(191)	(163)
Repayment of lease principal	(76)	(73)	(71)
Dividends paid to shareholders of Origin Energy Ltd, net of Dividend Reinvestment Plan (DRP)	(341)	(313)	(568)
Dividends paid to non-controlling interests	(2)	(1)	(8)
Repayment of Debt Service Reserve Account (DSRA) loan to equity accounted investees	(3)	(51)	–
Buy back of shares on-market	–	(250)	–
Purchase of shares on-market (treasury shares)	(96)	(75)	(4)
Net cash used in financing activities	**(1,949)**	**(3,216)**	**(721)**
Net (decrease)/increase in cash and cash equivalents	**(766)**	**147**	**(136)**
Cash and cash equivalents at the beginning of the year	**1,240**	**472**	**620**
Effect of exchange rate changes on cash	(2)	1	(1)
Cash and cash equivalents held for sale at the end of the year	–	–	(20)
Cash and cash equivalents at the end of the year	**472**	**620**	**463**

e) Underlying financials

Underlying EBITDA and EBIT as included in the table below are non-statutory (non-IFRS) measures. The objective of this underlying financial information is to provide a more meaningful and consistent representation of financial performance by removing items that distort performance or are non-recurring in nature. These items are determined after consideration of the nature of the item, the significance of the amount and the consistency in treatment from period to period. A reconciliation and description of the items that contribute to the difference between Statutory Profit and Underlying Profit is provided in the Operating and Financial Review in Section 5.1 for the financial years ended 30 June 2022 and 30 June 2023 and Section 4.1 for the financial year ended 30 June 2021.

Further detail regarding the nature of the items excluded from underlying EBITDA and EBIT is set out in Origin's financial statements (note A1) and Operating and Financial Review in Section 5 for the financial years ended 30 June 2022 and 30 June 2023 and Section 4 for the financial year ended 30 June 2021.

	Restated 2021 $m	2022 $m	2023 $m
Energy Markets	982	401	1,038
Share of Octopus Energy	(3)	(36)	240
Integrated Gas – Share of APLNG	1,145	2,134	2,246
Integrated Gas – Other	(10)	(297)	(327)
Corporate	(78)	(88)	(90)
Underlying EBITDA	**2,036**	**2,114**	**3,107**
Underlying depreciation and amortisation (D&A)	(541)	(449)	(527)
Underlying share of ITDA of equity accounted investees	(956)	(1,138)	(1,163)
Underlying EBIT	**539**	**527**	**1,417**

In FY2023, Origin's Energy Markets business' Underlying EBITDA increased by $637 million to $1,038 million.

Energy Markets benefited in FY2023 as the extreme market conditions of FY2022 eased, and the higher wholesale cost of energy flowed into customer tariffs. Origin's retail business performed strongly in FY2023 – through increased customer numbers, and recorded significant growth in the Community Energy Services business. All mass market electricity and natural gas customers have been successfully migrated to the Kraken platform. Origin continues to focus on growing its portfolio of renewables and cleaner energy projects, commencing early works on the first stage of the Eraring battery and progressing other renewable and storage projects, and growing the Origin Zero business.

Australia Pacific LNG continued to deliver strong cash flow in challenging operating conditions with the three year La Niña weather cycle restricting access to well sites during H1 FY2023 due to wet weather and ground conditions, affecting production. Australia Pacific LNG benefited from higher realised global oil and LNG prices across FY2023 and a rebound in production in 2H FY2023 following drier weather.

Origin's share of Octopus Energy EBITDA increased to $240 million in FY2023, reflecting an increase in customer accounts and the lag in reset of regulated tariffs in the UK retail business. The result includes a six-month contribution from Bulb Energy earnings following the December 2022 acquisition, which added ~2.5 million customer accounts.

5.8 Material changes in financial position (since 30 June 2023)

So far as the Origin Directors are aware, there have been no material changes to the financial position of Origin and the Origin Group since 30 June 2023.

5. Information about Origin *continued*

5.9 Equity Capital structure

As at the Last Practicable Date, the equity capital structure of Origin was:

Type of security	Number on issue
Origin Shares	1,722,747,671
Origin Equity Incentives	2,455,873 Performance Share Rights 3,114,057 Restricted Share Rights 306,830 Matching Share Rights

Additional details about Origin Equity Incentives are set out in section 9.2.

5.10 Substantial holders of Origin Shares

As extracted from filings released on the ASX on or before the Last Practicable Date, the following persons were substantial holders of Origin Shares:

Substantial holder	Number of Origin Shares	Voting power in Origin[1]
AustralianSuper Pty Ltd	235,588,746	13.68%
Vanguard Group	88,061,736	5.00%

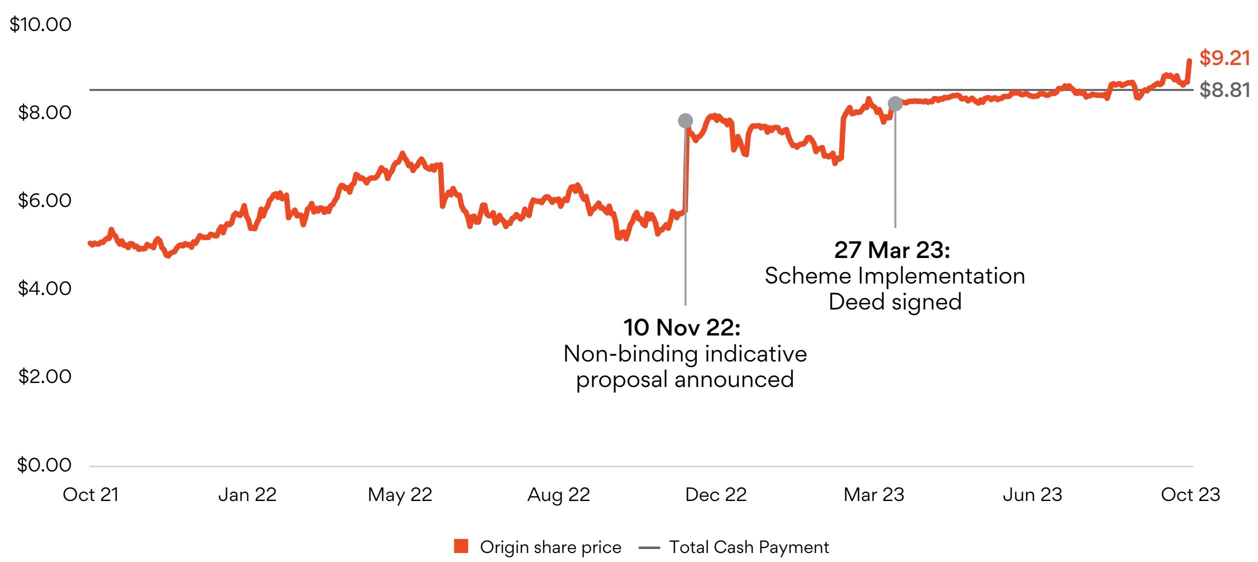
1. Rounded to 2 decimal places.

5.11 Origin Share price history

Origin Shares are listed on the ASX under the trading symbol 'ORG'.

On 10 November 2022, Origin announced its receipt of a non-binding indicative proposal from the Consortium to acquire 100 per cent of the Shares of Origin. The closing price of Origin Shares on 9 November 2022 (being the last trading day prior to the announcement of the non-binding indicative proposal) was $5.81 per Origin Share.

On 27 March 2023, Origin announced that it had entered into a Scheme Implementation Deed with Bidder and Brookfield Renewable Group Australia Pty Ltd under which Bidder will acquire 100 per cent of the issued shares of Origin by way of a scheme of arrangement. The closing price of Origin Shares on 27 March 2023 (being the last trading day prior to the announcement of the Scheme) was $8.17 per Origin Share.



The chart above shows the closing Origin Share price during the 24 months ended 10 October 2023 (being the Last Practicable Date).

Up to and including the Last Practicable Date:

- the last recorded Origin Share price on 10 October 2023 was $9.21;
- the 30-day VWAP of Origin Shares was $8.75;
- the 90-day VWAP of Origin Shares was $8.59; and
- the lowest and highest closing Origin Share prices during the preceding twenty four months was $4.78 and $9.21, respectively.

5.12 Publicly available information about Origin

Origin is a listed disclosing entity for the purpose of the Corporations Act and as such is subject to regular reporting and disclosure obligations. Specifically, as a company listed on ASX, Origin is subject to Listing Rules which require (subject to some exceptions) continuous disclosure of any information that Origin has that a reasonable person would expect to have a material effect on the price or value of Origin Shares.

ASX maintains files containing publicly disclosed information about all entities listed on ASX. Information disclosed to ASX by Origin is available on ASX's website at www.asx.com.au.

In addition, Origin is required to lodge various documents with ASIC. Copies of documents lodged with ASIC by Origin may be obtained from an ASIC office.

Origin Shareholders may obtain a copy of Origin's 2023 Annual Report from ASX's website (www.asx.com.au), from Origin's website (https://www.originenergy.com.au) or by calling the Origin Shareholder Information Line on 1300 540 303 (within Australia) or (+61 2) 9066 4083 (outside Australia), between 8.30am and 5.30pm (Sydney time), Monday to Friday (excluding public holidays).

6. Information about Bidder and Brookfield

This section 6 has been prepared by Bidder and Brookfield LP. The information concerning Bidder and its intentions, views and opinions contained in this section 6 are the responsibility of Bidder. The information concerning Brookfield LP, the BGTF Consortium and their intentions, views and opinions contained in this section 6 are the responsibility of Brookfield LP. Origin and its officers and advisers do not assume any responsibility for the accuracy or completeness of this information.

This section 6 is intended to provide additional information on Bidder and the BGTF Consortium and it contains:

a) Introduction to Bidder, the BGTF Consortium and the Proposed Transactions (as defined in section 6.1 below);

b) Overview of Bidder;

c) Bidder's intentions following Implementation of the Scheme;

d) Overview of the BGTF Consortium;

e) BGTF Consortium's intentions following completion of the Sale Transaction; and

f) Interests in Origin Shares.

6.1 Introduction

On 27 March 2023, Origin, Brookfield Renewable Group Australia Pty Ltd and Bidder entered into the Scheme Implementation Deed, which governs the conduct of the Scheme. The Scheme Implementation Deed contemplates that Bidder, an indirectly wholly owned subsidiary of MidOcean Energy, LLC, which is managed by EIG, will acquire Origin (which will hold the MidOcean IG Business) and that a Brookfield-led consortium of investors, the BGTF Consortium, will acquire the Brookfield EM Business from Origin, subject to Implementation of the Scheme.

EIG is a US-headquartered investment firm and a leading institutional investor to the global energy sector.

The investors of the Brookfield-led consortium that will acquire the Brookfield EM Business currently comprise the Brookfield Global Transition Fund I (**BGTF**), Brookfield Renewable Partners L.P. (**BEP**) and syndicate of passive institutional investors to be managed or advised by Brookfield (collectively, the **Brookfield Managed Co-Investors**), together with their institutional partners, Buckland Investment Pte. Ltd. (**Buckland Investment**) (an indirectly wholly-owned subsidiary of GIC (Ventures) Pte. Ltd.) and Davis Investments Pte. Ltd. (**Davis Investments**) (an indirect wholly-owned subsidiary of Temasek Holdings (Private) Limited (**Temasek**)) (collectively, the **BGTF Consortium**).

Brookfield is a leading global asset manager with over US$850 billion assets under management. Its operations involve 200,000 employees across over 30 countries. The BGTF Consortium will invest in a limited partnership, Brookfield LP, which will be managed by its general partner, Brookfield GP.

The key steps in the above-mentioned acquisition of Origin and the MidOcean IG Business and the acquisition of the Brookfield EM Business are as follows.

Transaction abbreviation	Transaction overview
Scheme Transaction	Bidder, an Australian proprietary company, currently an indirectly held wholly-owned subsidiary of MidOcean Energy, LLC, which is managed by EIG will acquire 100% of the Origin Shares from Origin Shareholders pursuant to the Scheme.
Internal Restructure	Prior to completion of the Sale Transaction described below, the shares of various Origin subsidiaries and certain Origin assets will be re-organised, with the result that the Origin Group is divided into two separate businesses being the MidOcean IG Business and the Brookfield EM Business.
Sale Transaction	Subject to and following completion of the Internal Restructure, the securities of various Origin subsidiaries and trusts and certain Origin assets which collectively comprise the Brookfield EM Business will be transferred to various Australian entities which are wholly-owned (directly or indirectly) by Brookfield LP.

Bidder has requested that documentation giving effect to the Internal Restructure and the Sale Transaction be entered into by the relevant parties shortly before the implementation of the Scheme Transaction and has requested that consideration payable in respect of the Internal Restructure and Sale Transaction be paid prior to Implementation. Bidder has also requested that steps to complete the Internal Restructure and the Sale Transaction commence prior to implementation of the Scheme Transaction. If the Sale Transaction is entered into before Implementation, the Scheme Transaction being implemented will be a condition precedent to the formation of the contract for the Sale Transaction. If the conditions precedent to implementation of the Scheme are not satisfied, neither the Scheme Transaction nor the Sale Transaction will occur.

For the purposes of this section 6, the Scheme Transaction, the Internal Restructure and the Sale Transaction are collectively referred to as the **Proposed Transactions**.

As a result of the Proposed Transactions, it is intended that Bidder will own 100 per cent of the MidOcean IG Business via its ownership of 100 per cent of the shares in Origin and entities owned by Brookfield LP will own 100 per cent of the Brookfield EM Business. However, Bidder intends to immediately sell 2.49 per cent of Origin's 27.5 per cent shareholding in Australia Pacific LNG (resulting in Origin having a 25.01 per cent shareholding) to current 47.5 per cent Australia Pacific LNG shareholder ConocoPhillips.

Bidder notes that ConocoPhillips has also indicated its intention to assume the roles of Australia Pacific LNG upstream operator, corporate services provider and CSG marketing agent. Bidder is supportive of ConocoPhillips' intentions and is working collaboratively to ensure a safe and smooth transfer of these roles. This is separate to and is not contingent on the sale of a 2.49 per cent shareholding in Australia Pacific LNG to ConocoPhillips but is subject to the Scheme being Implemented.

The upstream corporate structure of each of Bidder and Brookfield LP may be adjusted to cater for the parties' respective equity funding requirements, including that upstream investors may hold their interests through one or more investment vehicles, though as at the Last Practicable Date, the intended structure is as set out in this section 6.

6.2 Overview of Bidder

a) Introduction

Bidder is an Australian proprietary company incorporated on 22 February 2023, which is currently an indirectly held wholly-owned subsidiary of MidOcean Energy, LLC, which is managed by EIG.

Bidder was incorporated for the purpose of acquiring the Scheme Shares, and as such, it currently holds no assets of its own.

If the Scheme becomes Effective and is implemented, Bidder will acquire all Scheme Shares on the Implementation Date.

b) EIG

EIG is a Delaware limited liability company and a US-headquartered investment firm. EIG is a leading institutional investor to the global energy sector specialising in private investments in energy and energy-related infrastructure on a global basis. As at 30 June 2023 it had US$22.9 billion in funds under management. During its 41-year history, EIG has committed US$45.0 billion to the energy sector through over 400 projects or companies in 42 countries on six continents. EIG's clients include many of the leading pension plans, insurance companies, endowments, foundations and sovereign wealth funds in the US, Asia and Europe.

EIG is headquartered in Washington, DC and operates from offices in Houston, London, Sydney, Hong Kong, Rio de Janeiro and Seoul.

Further information on EIG can be found at www.eigpartners.com.

c) MidOcean Energy

On 28 June 2022, EIG announced the formation of MidOcean Energy, an EIG-managed LNG company seeking to create a diversified pure play integrated portfolio of high-quality operating LNG projects. EIG also announced the hiring of De la Rey Venter as CEO of MidOcean. Mr Venter, a 25-year industry veteran, most recently served as EVP of Integrated Gas Ventures and Global Head of LNG for Royal Dutch Shell. MidOcean Energy currently does not own any assets in Australia. On 7 October 2022, EIG announced that MidOcean Energy had entered into definitive documentation to acquire interests in a portfolio of LNG projects from Australian subsidiaries of Tokyo Gas Co., Ltd (**Tokyo Gas**) for US$2.15 billion. This transaction remains subject to regulatory approvals and other customary conditions, and the potential exercise of pre-emptive/buy-out rights. MidOcean Energy intends to employ a team of people in Australia and to open offices in Brisbane and Perth in connection with the proposed ownership of Origin and the MidOcean IG Business and the assets to be acquired from Tokyo Gas.

6. Information about Bidder and Brookfield *continued*

MidOcean Energy and EIG believe that LNG will be a critical enabler of the energy transition and is of growing importance as a geopolitically strategic energy source. MidOcean Energy is seeking to build a diversified, resilient, cost competitive and carbon competitive LNG portfolio. The acquisition of Origin and the MidOcean IG Business, including in particular its shareholding in Australia Pacific LNG, will create a strong foundation for the newly established company.

6.3 Bidder's intentions following Implementation of the Scheme

a) Introduction

If the Scheme is implemented, Bidder:

1) will become the holder of all Origin Shares and accordingly, Origin will become wholly-owned by Bidder; and
2) will own 100 per cent of the MidOcean IG Business via its ownership of 100 per cent of the shares in Origin (though Bidder intends to immediately sell 2.49 per cent of Origin's 27.5 per cent shareholding in Australia Pacific LNG (resulting in a 25.01 per cent shareholding) to current 47.5 per cent Australia Pacific LNG shareholder ConocoPhillips, and it is expected that ConocoPhillips will replace Origin as upstream operator, corporate services provider, and CSG marketing agent of Australia Pacific LNG); and
3) intends to complete the Internal Restructure and the Sale Transaction shortly after implementation of the Scheme.

This section 6.3 sets out the current intentions of Bidder with respect to Origin if the Scheme is implemented based on information known to Bidder at the time of the preparation of this Scheme Booklet (including certain non-public information made available by Origin to Bidder prior to entry into the Scheme Implementation Deed). It is important to recognise that the statements set out in this section 6.3 are statements of current intentions only and may change as new information becomes available or circumstances change.

b) Rationale of Scheme Transaction

The acquisition by Bidder of Origin and the MidOcean IG Business, including in particular its shareholding in Australia Pacific LNG, will create a strong foundation for MidOcean Energy.

The acquisition of Origin and the MidOcean IG Business represents an opportunity for MidOcean Energy to acquire an interest in a world class, operating LNG project that sells the significant majority of its LNG under long-term contracts to investment grade counterparties. Bidder intends, through completion of the Internal Restructure and Sale Transaction, to sell the Brookfield EM Business to entities owned by Brookfield LP. The rationale for the Sale Transaction is set out in section 6.5(a).

c) Funding of the Scheme Consideration

1) Overview

If the Scheme is implemented, Scheme Shareholders will receive the Scheme Consideration for each Scheme Share they hold as at the Scheme Record Date. Refer to section 4.2 for further detail regarding the Scheme Consideration.

The proceeds available to Bidder under the debt and equity commitments (detailed below) are in excess of the maximum aggregate amount of cash payable on implementation of the Scheme.

In broad terms and as described in further detail in sections 6.3(c)(2)-(3), Bidder's acquisition funding for the Scheme will be sourced from:

- equity funding under a binding equity commitment letter issued by EIG Management Company, LLC (which will ultimately source its funding from MidOcean Energy's investors);
- debt funding under a term loan facility with various banks being well-known international banks who are active in the debt market for transactions of this nature;
- a loan from Eos Finco, an affiliate of Brookfield and a wholly-owned subsidiary of Brookfield LP, to Bidder via a loan note for an amount equal to the agreed purchase price for the Brookfield EM Business under the Sale Transaction (the **EMB Loan Note**); and
- a loan from ConocoPhillips via a loan note for an amount equal to the agreed purchase price for a sale of a 2.49 per cent shareholding in Australia Pacific LNG following the Scheme Transaction (the **CoP Funding Note**).

The Scheme is not subject to any financing condition precedent.

2) Equity funding

Bidder has received legally binding equity commitment letters (each, a **Commitment Letter**) in relation to its obligation to pay the relevant portion of the Scheme Consideration, as set out in the table below. The Commitment Letters funded by Brookfield or its affiliates (as reflected in the table below) form part of the funding to be satisfied by way of the EMB Loan Note (as defined in section 6.5(b) below).

Document	Funding Party	Commitment
Equity Commitment Letter	EIG Management Company, LLC	US$1,629,000,000
Funding Commitment Letter	Brookfield Global Transition Fund GP, L.P. (in its capacity as general partner of Brookfield Global Transition Fund-A, L.P.; Brookfield Global Transition Fund-B, L.P.; and Brookfield Global Transition Fund-C, L.P.) and Brookfield Global Transition Fund GP S.A r.l. (in its capacity as general partner of Brookfield Global Transition Fund (ER) SCSp)	A$4,906,898,843
Funding Commitment Letter	Brookfield Corporation	A$3,097,830,102

Under each Commitment Letter, the relevant Funding Party (as set out in the second column of the above table) commits, on a several basis, to cause Bidder to receive the amount of its commitment in cash by procuring that those funds are on-loaned or otherwise contributed to Bidder in immediately available Australian dollar-denominated or US dollar-denominated funds (as applicable), for the purpose of enabling Bidder to pay the relevant portion of the aggregate Scheme Consideration when due in accordance with the terms of the Scheme. The funding commitment of each Funding Party is subject only to the Scheme becoming Effective (and is otherwise unconditional).

3) Debt funding

Debt financing

Bidder has entered into a legally binding Debt Commitment Letter dated 26 March 2023 under which Deutsche Bank, Royal Bank of Canada, Société Générale, Standard Chartered Bank, Sumitomo Mitsui Banking Corporation, UBS and Westpac Banking Corporation (collectively, the Mandated Lead Arrangers and Bookrunners (**MLAUBs**)) have severally agreed to provide certain secured debt facilities (**Debt Acquisition Facilities**) in an aggregate amount of no less than US$2,649,900,000.00 and A$500,100,000.00 to Bidder.

Bidder is permitted to use the proceeds of borrowings under the Debt Acquisition Facilities to fund part of the aggregate Scheme Consideration payable by Bidder under the Scheme and to pay fees, costs and expenses (including indirect taxes and stamp duty) related to the Debt Acquisition Facilities or the Scheme.

The availability of the Debt Acquisition Facilities provided by the MLAUBs on a customary 'certain funds' basis is subject to the satisfaction of certain customary conditions precedent, including:

- certification that consummation of the acquisition of the Origin Shares by Bidder under the Scheme will occur in accordance with the terms of the Scheme Implementation Deed (and related documentation);
- confirmation that there has been no termination of or amendment to, or a waiver of any Condition Precedent or subsequent granted under, the Scheme Implementation Deed which would be adverse to the interests of the MLAUBs, taken as a whole, unless they have provided their prior written consent (not to be unreasonably withheld or delayed);
- execution of definitive long form syndicated facility documentation (and related definitive financing documentation) as described below; and
- the accuracy of certain representations identified in the Debt Commitment Letter made with respect to Bidder prior to funding of the Debt Acquisition Facilities.

It is expected that as of the Second Court Date, the Debt Commitment Letter will be superseded by a definitive long form syndicated facility agreement and related definitive financing documentation required to be entered into as a condition precedent to initial borrowings under the Debt Acquisition Facilities among the parties thereto, the material terms and conditions of which are specified in the Debt Commitment Letter.

6. Information about Bidder and Brookfield *continued*

It is expected that the conditions to the Debt Acquisition Facilities will be satisfied on or before the Second Court Date (other than certain procedural conditions which are intended to be satisfied concurrently with, or prior to, the initial borrowings under the Debt Acquisition Facilities, including the payment of fees, costs and expenses). As at the Last Practicable Date, Bidder is not aware of any reason why, and has no basis to believe that, the conditions to the Debt Acquisition Facilities will not be satisfied so as to enable the relevant Debt Acquisition Facilities to be drawn for the purpose of funding part of the aggregate Scheme Consideration.

EMB Loan Note

See section 6.5(b) below for further detail on the EMB Loan Note.

CoP Funding Note

Bidder has entered into the CoP Funding Note with ConocoPhillips Australia Pacific LNG Pty Ltd (**CAPLNG**)[1] where that party has agreed to provide Bidder an unsecured loan note, which represents its purchase price (being US$511 million, subject to customary adjustment mechanisms) for the acquisition of a further 2.49 per cent shareholding in Australia Pacific LNG (**APLNG Sale Shares**) from Origin. This sale is expected to occur shortly after Implementation. The CoP Funding Note includes agreed terms for the acquisition of the APLNG Sale Shares.

Bidder is permitted to use the funds advanced under the CoP Funding Note only to fund part of the aggregate Scheme Consideration.

The availability of the funding provided by CAPLNG is subject to mechanical requirements for drawing, the correctness of certain standard representations in relation to Bidder and the Scheme Implementation Deed, and the non-occurrence of certain standard events of default or certain events giving rise to a right to terminate the Scheme Implementation Deed.

It is expected that the conditions to the CoP Funding Note will be satisfied on or before the Second Court Date (other than certain procedural conditions which are intended to be satisfied concurrently with, or prior to, the drawings under the CoP Funding Note).

As at the Last Practicable Date, Bidder is not aware of any reason why, and has no basis to believe that, the conditions to receiving funding under the CoP Funding Note will not be satisfied so as to enable the relevant funds to be drawn for the purpose of funding part of the Scheme Consideration.

4) Conclusion

On the basis of the arrangements described above, Bidder is of the opinion that it has a reasonable basis for holding the view, and holds the view, that it will be able to satisfy funding commitments described in this section 6.3.

d) Directors

As at the date of this Scheme Booklet, the board of directors of Bidder comprises the following:

Name	Position	Profile
R. Blair Thomas	CEO, EIG	Mr Thomas is the Chief Executive Officer of EIG and chairs the firm's Investment and Executive Committees. EIG was formerly part of Trust Company of the West, where he was a group Managing Director and a member of the Board of Directors of TCW Asset Management Company. Prior to joining EIG in 1998, he was a senior investment officer with the Inter-American Development Bank, a project finance attorney at the law firm of Brown and Wood in New York, and served in the administration of President George HW Bush as an advisor on energy and budget policy. He is the Chairman of Prumo Logistica SA, a private company. He is also the Chairman of Harbour Energy plc (HBR.L), a London Stock Exchange listed global independent oil and gas company, and is a member of the Board of Directors of Avantus and HIF Global. Blair holds a BA from the University of Virginia, a JD from New York Law School and an LLM from Georgetown University Law Center.

1. See section 5.5(a) for further information regarding ConocoPhillips.

Name	Position	Profile
De la Rey Venter	CEO, MidOcean Energy	Mr Venter is the CEO of MidOcean Energy and a Managing Director of EIG. He joined EIG in 2022 after 20 years with Shell where he was, amongst other roles, the Global Head of LNG and a member of the leadership teams of Shell's Upstream and Integrated Gas and New Energies directorates. He started his career in the mining industry with a variety of strategy, sales, marketing and distribution roles with Samancor and Billiton. Over the course of his career the Venter family has lived in South Africa, the Netherlands, the UK, Switzerland, the United Arab Emirates, Qatar and the USA. Mr Venter holds a Bachelor degree in Finance and Accounting from the Northwest University in South Africa, an Honours Degree in Investment Management from the University of Johannesburg and an MBA from the Institute for Management Development (IMD) in Lausanne, Switzerland.
David Edgar	Senior Vice President, EIG	Mr Edgar is a Senior Vice President and member of the investment team of EIG. Since joining EIG in 2014, Mr Edgar has worked across a variety of energy, LNG, and related infrastructure transactions both within Australia and on a global basis. Prior to EIG, Mr Edgar was in the Investment Banking Division of Barclays Capital where he worked on a variety of natural resources transactions including mergers and acquisitions, commodity hedging, as well as bank and capital markets financings. Mr Edgar graduated from the University of Western Australia with Bachelors of Laws (Hons) and Commerce.
Benjamin Lee	Senior Vice President, EIG	Mr Lee is a Senior Vice President and a member of the investment team of EIG. Prior to joining EIG in 2014, Mr Lee was an Analyst in the Corporate & Investment Banking division at Bank of America Merrill Lynch. There, he worked on a number of mergers and acquisitions, bank and capital markets financings and strategic advisory assignments for major international and ASX listed companies in the energy and resources sectors. Prior to that, Mr Lee worked in the Risk Consulting practice at PricewaterhouseCoopers and led process improvement engagements for entities in the financial services industry. Mr Lee graduated from the University of Melbourne with a Bachelor of Commerce majoring in both Accounting and Finance.

e) Head office

Bidder currently intends to open offices in Brisbane and Perth in connection with the proposed ownership of Origin and the MidOcean IG Business and the assets to be acquired from Tokyo Gas. Bidder has also been advised that EIG, as manager of Bidder, intends to continue to maintain an office in Sydney.

f) Origin's removal from the ASX

If the Scheme is implemented, it is intended that the quotation of Origin Shares on ASX will be terminated and Origin will be removed from the official list of ASX on or around the Business Day immediately following the Implementation Date. Bidder then intends to convert Origin into a proprietary company limited by shares.

g) Business and employees

In respect of the MidOcean IG Business, Bidder intends to continue the current strategic direction of the MidOcean IG Business, whereby it plays an important role in facilitating Australia's energy transition and decarbonisation.

While ensuring that the focus is on the current operations and performance, Bidder also intends to evaluate future management and employment requirements as appropriate and with regard to the future operation of the MidOcean IG Business.

6. Information about Bidder and Brookfield *continued*

Bidder notes that ConocoPhillips has indicated its intention to assume the roles of Australia Pacific LNG upstream operator, corporate services provider and CSG marketing agent. Bidder is supportive of ConocoPhillips' intentions and is working collaboratively to ensure a safe and smooth transfer of these roles. Assumption by ConocoPhillips of the above mentioned roles could involve changes to the current operations of the MidOcean IG Business. Whether and when the transition of those roles occurs is not yet confirmed.

h) Changes to Constitution

Bidder intends to replace Origin's constitution with a constitution appropriate for a proprietary company limited by shares (consistent with the intention expressed in section 6.3(f) above to convert Origin into a proprietary company limited by shares following implementation of the Scheme).

i) Other intentions

Other than as set out in this section 6.3, including any changes in connection with or as a result of the anticipated transfer of the Australia Pacific LNG upstream operator, corporate services provider and CSG marketing agent roles to ConocoPhillips noted in section 6.1 above, or as otherwise disclosed by Origin, it is the present intention of Bidder, on the basis of the facts and information concerning the MidOcean IG Business that are known to Bidder and the existing circumstances affecting the assets and operations of the MidOcean IG Business at the date of this Scheme Booklet, that Bidder will:

- generally continue the business of the MidOcean IG Business;
- not make any major changes to the business of the MidOcean IG Business nor redeploy any of the fixed assets of the MidOcean IG Business;
- to the extent relevant to Bidder, comply with all applicable obligations in the undertaking given to the ACCC by MidOcean Energy Holdings Pty Ltd and MidOcean Energy Parent Pty Ltd; and
- continue the employment of the MidOcean IG Business' present employees.

j) Limitation on intentions

This section 6.3 sets out the current intentions of Bidder with respect to the MidOcean IG Business if the Proposed Transactions are implemented based on information known to Bidder at the time of the preparation of this Scheme Booklet (including certain non-public information made available by Origin to affiliates of Bidder prior to entry into the Scheme Implementation Deed).

Bidder does not currently have full knowledge of all material information, facts and circumstances that are necessary to assess all of the operational, commercial, tax and financial implications of its current intentions. Final decisions in relation to these matters will only be reached after Bidder has had an opportunity to undertake a detailed review of the MidOcean IG Business and material information, facts and circumstances at the relevant time following implementation of the Proposed Transactions. It is important to recognise that the statements set out in this section 6.3 are statements of current intentions only and may change as new information becomes available or circumstances change.

The intentions and statements of future conduct, and the ability of Bidder to implement its intentions, set out in this section 6.3 must be read as being subject to:

- the law (including the Corporations Act);
- the legal obligation of Bidder's directors at the time to act in good faith in the best interests of Bidder and for proper purposes and to have regard to the interests of all Bidder's shareholders; and
- the outcome of any review undertaken by Bidder upon acquisition of Origin, which may alter or prevent the achievement of certain intentions set out above.

6.4 Overview of the BGTF Consortium

a) Introduction

Brookfield LP is a newly established Bermudan limited partnership that has been established for the purpose of acquiring and holding the investment in the Brookfield EM Business for the long term. Brookfield LP will be managed by its general partner, Brookfield GP, a Brookfield-controlled entity.

It is expected that on completion of the Sale Transaction, the limited partnership interests in Brookfield LP will be directly or indirectly held by the BGTF Consortium as follows:

- 67.6 per cent held or controlled by Brookfield and Brookfield-managed investors including BGTF, BEP and the Brookfield Managed Co-Investors;
- 22.5 per cent held or controlled by Buckland Investment; and
- 9.9 per cent held or controlled by Davis Investments.

b) BGTF Consortium

The BGTF Consortium is a consortium of investors comprising entities associated with BGTF, BEP and the Brookfield Managed Co-Investors, together with their institutional partners, Buckland Investment and Davis Investments.

1) BGTF

BGTF is the world's largest private institutional investment fund dedicated specifically to investing in the transition to renewable energy globally. BGTF seeks to create value for investors by making investments that accelerate the global transition to a net zero carbon economy. This involves transforming carbon-intensive businesses, including by reducing their greenhouse gas emissions and increasing low-carbon energy capacity.

Launched in 2021, BGTF is a new type of investment fund with a mandate to invest multiple billions of dollars in the global transition to a net zero carbon economy. To achieve this mandate, BGTF also draws on Brookfield's long-standing experience as one of the world's largest investors in renewable power and climate transition assets. BGTF is the largest investor in Brookfield LP. BGTF has a dual objective: to achieve attractive financial returns and to generate measurable environmental change by integrating a focused impact management approach throughout its investment process.

The general partner for BGTF is an affiliate of Brookfield Asset Management ULC, the holding company for Brookfield's asset management business, and is responsible for the day-to-day management of BGTF and its investments. BGTF also has a number of limited partners, who are passive investors and do not take part in the day-to-day management of BGTF.

2) BEP

BEP is a Bermudan limited partnership listed on the New York Stock Exchange (NYSE: BEP) and the Toronto Stock Exchange (TSE: BEP.UN).

BEP is BGTF's cornerstone investor and is Brookfield's flagship listed renewable power company. BEP operates one of the world's largest publicly traded, pure-play renewable power platforms, with a portfolio consisting of hydroelectric, wind, solar and distributed energy and sustainable solutions across five continents.

BEP is a long standing owner, operator, developer and acquirer of renewable power and is increasingly focused on providing decarbonisation and energy transition as a service, helping businesses and governments globally to advance their sustainability goals. It has a leading presence across all major clean energy technologies globally, with more than 166,000 MW of operating and development capacity worldwide.[2]

3) Brookfield

Brookfield is a leading global alternative asset manager with over US$850 billion assets under management. Brookfield invests in sectors such as renewable power and transition, infrastructure, real estate, private equity and credit. Its operations involve 200,000 employees across over 30 countries. Brookfield offers a range of alternative investment products to investors globally. These include public and private pension plans, endowments and foundations, sovereign wealth funds, financial institutions, insurance companies and private wealth channels.

Brookfield comprises Brookfield Corporation, Brookfield Asset Management Ltd. and their respective affiliates.

2. As at 30 June 2023.

6. Information about Bidder and Brookfield *continued*

Each of Brookfield Corporation (NYSE: BN and TSX: BN) and Brookfield Asset Management Ltd. (NYSE: BAM and TSX: BAM) are listed on the New York Stock Exchange and the Toronto Stock Exchange.

Brookfield is acting as the manager of many of the funds that form part of the BGTF Consortium. Brookfield will manage BGTF, BEP and certain other passive co-investors. Brookfield acts as a manager for a range of investment products.

Further information about Brookfield can be found at: https://www.brookfield.com.

4) Brookfield Managed Co-Investors

The Brookfield Managed Co-Investors are a syndicate of passive institutional investors whose investment in Brookfield LP will be managed by Brookfield. The Brookfield Managed Co-Investors do not have any governance rights (other than customary minority rights) in respect of the Brookfield EM Business. It is expected that no more than 20% of the limited partnership interests in Brookfield LP will be directly or indirectly held or controlled by the Brookfield Managed Co-Investors.

5) Buckland Investment and GIC

Buckland Investment is an investment holding company incorporated under the laws of Singapore. It is indirectly wholly owned by GIC (Ventures) Pte. Ltd. and managed by GIC Special Investments Private Limited, the private equity and infrastructure investment arm of GIC Private Limited (**GIC**).

GIC is a leading global investment firm established in 1981 to manage Singapore's foreign reserves. GIC invests across a wide range of asset classes, including real estate, infrastructure, private equity, equities and fixed income. GIC is among the world's largest fund management companies.

6) Davis Investments and Temasek

As an indirect wholly-owned investment holding subsidiary of Temasek, the financial position of Davis Investments is consolidated with that of Temasek and its subsidiaries.

Incorporated in 1974, Temasek is an investment company based in Singapore. Supported by 13 offices globally, Temasek owns an SG$382 billion investment portfolio as at 31 March 2023, mainly in Singapore and the rest of Asia. Temasek owns and manages its assets based on commercial principles. Temasek's investment, divestment and other business decisions are directed by its board and management. The majority of the Temasek board members are non-executive independent private sector business leaders.

6.5 BGTF Consortium's intentions following completion of the Sale Transaction

a) Rationale for the Sale Transaction

As set out in section 6.4(b)(1), BGTF is the world's largest private institutional investment fund dedicated specifically to investing in the transition to renewable energy globally. BGTF seeks to make investments that accelerate the global transition to a net zero carbon economy as part of its mandate to "go where the emissions are". BGTF's purpose in acquiring the Brookfield EM Business is to further this investment mandate.

Origin's Energy Markets Business and the interest in Origin Energy which is to be sold as the Brookfield EM Business is a leading integrated energy company. The Energy Markets Business is Australia's largest retailer by customer accounts with approximately 24 per cent share of customer accounts in the NEM,[3] low customer turnover and industry leading cost to serve. However, the business still relies on carbon intensive electricity sourced from both owned generation and power that is purchased from Australia's electricity grid.

Investment in the Brookfield EM Business will involve facilitating an accelerated transition of the business to one that is materially decarbonised. In particular, the BGTF Consortium's objective is to facilitate the Energy Markets Business developing up to 13.7 GW of new renewable generation and storage capacity by 2033. This investment provides a scale opportunity for the BGTF Consortium to make a meaningful contribution to accelerating the decarbonisation of Australia's energy system and helping Australia progress towards its net zero goals.

In February 2022, Origin notified the Australian Energy Market Operator of the early retirement of coal-fired generation at Eraring potentially as early as August 2025. Implementing this change will depend on a range of market factors, including there being sufficient replacement generation and firming capacity (e.g. batteries and pumped hydro). Furthermore, Origin is structurally short of electricity (i.e. it generates significantly less electricity than it

3. As at March 2023.

sells) even before the planned closure of Eraring. This creates an opportunity for BGTF to invest in significantly more renewable generation and storage than Origin is planning to develop over the next decade to meet customer demand of Origin's Energy Markets business 'in house'.

In addition to bringing access to necessary capital, the BGTF Consortium has access to Brookfield's significant expertise in renewable power development, global relationships with suppliers and a track record of success. Brookfield is one of the world's largest owners, operators and developers of renewable power, with more than 40 years' experience in scaling large renewable developments globally.

The Sale Transaction provides an opportunity to make a significant contribution to Australia's net zero objectives, as well as generating value for BGTF's investors.

b) Funding of Sale Transaction consideration

On 27 March 2023, EIG, Brookfield Corporation and Bidder entered into the Bid Conduct Deed and a Commitment Deed which set out the terms on which the parties agreed to work towards implementation of the Proposed Transactions. Under the Bid Conduct Deed, Brookfield Corporation must procure that Eos Finco (an affiliate of Brookfield and a wholly-owned subsidiary of Brookfield LP) contributes an amount equal to the agreed purchase price for the Brookfield EM Business under the Sale Transaction (the **Brookfield Funding Commitment**). The Brookfield Funding Commitment is issued through a loan note funded by Brookfield LP (**EMB Loan Note**).

The EMB Loan Note will be funded from a combination of debt and equity, commitments in respect of which are detailed below.

1) EMB Loan Note – debt funding

Eos Finco has entered into a legally binding Debt Commitment Letter originally dated 27 March 2023, as amended from time to time, under which Australia and New Zealand Banking Group Limited, BNP Paribas, acting through its Australia branch, Bank of China Limited, Sydney branch, Commonwealth Bank of Australia, Citibank, N.A., Sydney branch, Mizuho Bank, Ltd., MUFG Bank, Ltd., Natixis, Singapore branch, Société Generale, Sydney branch and Sumitomo Mitsui Banking Corporation, Sydney branch (collectively, the Mandated Lead Arrangers (**Brookfield MLAs**)) have severally agreed to provide certain unsecured debt facilities in connection with the Proposed Transactions in an aggregate amount of up to $3,500,000,000 to Eos Finco (**Brookfield Debt Acquisition Facilities**).

The availability of the Brookfield Debt Acquisition Facilities provided by the Brookfield MLAs is subject to the satisfaction of certain customary conditions precedent, including:

- certification that implementation of the Sale Transaction under the Scheme will occur in accordance with the terms of the Scheme Implementation Deed;
- confirmation that there has been no termination, amendment, or a waiver of any condition granted under, the Scheme Implementation Deed (and related documentation) which would be adverse to the interests of the Brookfield MLAs without their prior written consent (not to be unreasonably withheld or delayed);
- execution of definitive long form syndicated facility documentation; and
- the accuracy of certain representations identified in the Debt Commitment Letter.

It is expected that as of the Second Court Date, the Debt Commitment Letter will be superseded by a definitive long form syndicated facility agreement and related definitive financing documentation required to be entered into as a condition precedent to initial borrowings and that the conditions to the Brookfield Debt Acquisition Facilities will be satisfied (other than certain procedural conditions which are intended to be satisfied concurrently with, or prior to, the initial borrowings under the Brookfield Debt Acquisition Facilities, including the payment of fees, costs and expenses). As at the Last Practicable Date, Eos Finco is not aware of any reason why, and has no basis to believe that, the conditions to the Brookfield Debt Acquisition Facilities will not be satisfied so as to enable the relevant Brookfield Debt Acquisition Facilities to be drawn for the purpose of funding part of the Brookfield Funding Commitment.

The BGTF Consortium is currently in the process of putting in place long-term debt facilities under which it is proposed that certain of the Brookfield MLAs, certain other existing lenders to the Origin Group and a subset of other Brookfield relationship lenders will provide unsecured debt facilities to Eos Finco (**Additional Brookfield Facilities**), which may be drawn for the purpose of funding part of the Brookfield Funding Commitment. The BGTF Consortium expects that the terms of the Additional Brookfield Facilities will be substantially similar to the terms of the Brookfield Debt Acquisition Facilities and, to the extent any amounts drawn under the Additional Brookfield Facilities will be used to fund part of the Brookfield Funding Commitment and may offset some or all of the amounts already committed under the Brookfield Debt Acquisition Facilities, definitive long form documentation in respect of the Additional Brookfield Facilities will be entered into prior to the Second Court Date.

6. Information about Bidder and Brookfield *continued*

2) EMB Loan Note – equity funding

The equity component of the funding to be satisfied by the EMB Loan Note (and by extension, the Sale Transaction consideration) is comprised of the Commitment Letters which are funded by Brookfield (as identified in section 6.3(c)(2) above).

In light of the arrangements described above, the BGTF Consortium is of the opinion that it has a reasonable basis for holding the view, and holds the view, that it will be able to satisfy funding commitments described in this section 6.5.

c) Directors

It is intended that the BGTF Consortium via Brookfield GP will be governed by a board of directors to comprise of nine directors (who will represent the investors of the BGTF Consortium). It is intended that board meetings will be held in Bermuda.

d) Head office

The head office, and the principal place of business, of the Brookfield GP will be in Bermuda. Following implementation of the Scheme and subject to completion of the Sale Transaction, it is intended that the head office of the Brookfield EM Business would be located in Sydney, New South Wales.

e) Business and employees

In respect of the Brookfield EM Business, the BGTF Consortium intends to continue but accelerate the current strategic direction of the Brookfield EM Business, whereby it plays an important role in facilitating Australia's energy transition. As noted above, the BGTF Consortium's intention is to ensure the implementation of its 'green build-out' plan, involving the responsible decommissioning of Origin's existing coal generation asset and facilitating the Brookfield EM Business developing up to 13.7 GW of new renewable generation and storage assets by 2033.

While continuing to optimise the current operations and performance of the Brookfield EM Business, the BGTF Consortium will maintain a heavy focus on the green build-out plans, which are critical to achieving the investment objectives of the BGTF Consortium. With these objectives in mind, the BGTF Consortium also intends to evaluate future management and employment requirements as appropriate having regard to the operation of the Brookfield EM Business in the future as well as the 'green build-out'.

The BGTF Consortium will be in a position to undertake a full review of the Brookfield EM Business and its business, operations, assets and employees following the implementation of the Sale Transaction to determine how best to execute its strategy and develop and grow the Brookfield EM Business. Final decisions regarding future business operations will be made following the completion of that review and in light of circumstances at the relevant time.

f) Other intentions

Other than as set out in this section 6.5 or as otherwise disclosed by Origin, it is the present intention of the BGTF Consortium, on the basis of the facts and information concerning the Brookfield EM Business that are known to the BGTF Consortium and the existing circumstances affecting the assets and operations of the Brookfield EM Business at the date of this Scheme Booklet, that the BGTF Consortium:

- will generally continue the business of the Brookfield EM Business;
- will not make any major changes to the business of the Brookfield EM Business nor redeploy any of the fixed assets of the Brookfield EM Business;
- to the extent relevant to the BGTF Consortium, will comply with all applicable obligations in the undertaking given to the ACCC by Brookfield LP, Brookfield Asset Management ULC (and its subsidiary, Brookfield Investment Management Australia Pty Ltd, jointly and severally) and Brookfield Corporation; and
- intends to evaluate future management and employment requirements as appropriate and with regard to the operation of the Brookfield EM Business in the future.

g) Limitation on intentions

This section 6.5 sets out the current intentions of the BGTF Consortium with respect to the Brookfield EM Business if the Proposed Transactions are implemented based on information known to Brookfield LP and the BGTF Consortium at the time of the preparation of this Scheme Booklet (including certain non-public information made available by Origin to affiliates of Brookfield prior to entry into the Scheme Implementation Deed).

Brookfield LP and the BGTF Consortium do not currently have full knowledge of all material information, facts and circumstances that are necessary to assess all of the operational, commercial, tax and financial implications of its current intentions. Final decisions in relation to these matters will only be reached after Brookfield LP and the BGTF Consortium have had an opportunity to undertake a detailed review of the Brookfield EM Business and material information, facts and circumstances at the relevant time following implementation of the Sale Transaction. It is important to recognise that the statements set out in this section 6.5 are statements of current intentions only and may change as new information becomes available or circumstances change.

The intentions and statements of future conduct, and the ability of the BGTF Consortium to implement its intentions, set out in this section 6.5 must be read as being subject to:

- the law (including the Corporations Act);
- the legal obligations and any fiduciary duties of the Brookfield GP directors at the time; and
- the outcome of any review undertaken by BGTF Consortium upon acquisition of the Brookfield EM Business, which may alter or prevent the achievement of certain intentions set out above.

6.6 Bidder's interests in Origin Shares

a) Interests in Origin Shares

As at the Last Practicable Date, none of Bidder or any of its associates had any Relevant Interest or voting power in any Origin Shares.

b) No dealings in Origin Shares in previous four months

None of Bidder, or to Bidder's knowledge, any of its associates has provided, or agreed to provide, consideration for Origin Shares under any purchase or agreement during the four months before the date of this Scheme Booklet.

c) No inducing benefits to Origin Shareholders given during previous four months

During the period of four months before the date of this Scheme Booklet, none of Bidder or any of its associates gave, or offered to give, or agreed to give a benefit to another person which was likely to induce the other person, or an associate of the other person, to:

- vote in favour of the Scheme; or
- dispose of Origin Shares,

where the benefit was not offered to all Origin Shareholders, otherwise contemplated by the Scheme.

d) No benefits to current Origin officers

None of Bidder or any of its associates will be making any payment or giving any benefit to any current director, secretary or executive officer of Origin or any of its related bodies corporate as compensation or consideration for, or otherwise in connection with, their resignation from their respective offices if the Scheme is implemented.

6. Information about Bidder and Brookfield *continued*

6.7 BGTF Consortium's interests in Origin Shares

a) Interests in Origin Shares

As at the Last Practicable Date, none of the BGTF Consortium Members or any of their associates had any Relevant Interest or voting power in any Origin Shares, other than an aggregate interest of approximately 0.098 per cent in Origin Shares arising from dealings by or on behalf of business units, investment teams or external investment managers of the BGTF Consortium Members or their respective associates whose ordinary course business involves dealing in, trading, or holding listed securities (**Listed Equities Teams**).

b) No dealings in Origin Shares in previous four months

None of the BGTF Consortium Members, or to the BGTF Consortium's knowledge, any of their associates has provided, or agreed to provide, consideration for Origin Shares under any purchase or agreement during the four months before the date of this Scheme Booklet (other than pursuant to the Scheme Implementation Deed or ordinary course transactions undertaken by or on behalf of the Listed Equities Teams described in section 6.7(a)).

c) No inducing benefits to Origin Shareholders given during previous four months

During the period of four months before the date of this Scheme Booklet, none of BGTF Consortium Members or any of their associates gave, or offered to give, or agreed to give a benefit to another person which was likely to induce the other person, or an associate of the other person, to:

- vote in favour of the Scheme; or
- dispose of Origin Shares,

where the benefit was not offered to all Origin Shareholders, otherwise contemplated by the Scheme, or offered pursuant to ordinary course transactions undertaken by or on behalf of the Listed Equities Teams described in section 6.7(a).

d) No benefits to current Origin officers

None of the BGTF Consortium Members or any of their associates will be making any payment or giving any benefit to any current director, secretary or executive officer of Origin or any of its related bodies corporate as compensation or consideration for, or otherwise in connection with, their resignation from their respective offices if the Scheme is implemented.

6.8 No other material information

Other than as disclosed in this section 6, there is no information regarding Bidder, or its intentions regarding Origin, that is material to the making of a decision by an Origin Shareholder on whether or not to vote in favour of the Scheme that is within the knowledge of any director of Bidder as at the date of this Scheme Booklet that has not been previously disclosed to Origin Shareholders.

7. Risks

7.1 Introduction

In considering the Scheme, Origin Shareholders should be aware that there are a number of risk factors, both general and specifically relating to Origin or which may affect the future operating and financial performance of Origin and the price and/or value of Origin Shares.

If the Scheme proceeds, Origin Shareholders will receive the Scheme Consideration, will cease to hold Origin Shares and will also no longer be exposed to the risks set out in this section 7 (and other risks to which Origin may be exposed).

If the Scheme does not proceed, Origin Shareholders will continue to hold Origin Shares and continue to be exposed to risks associated with investment in Origin.

In deciding whether to vote in favour of the Scheme, Origin Shareholders should read this Scheme Booklet carefully and consider the following risk factors. These risk factors do not take into account the individual investment objectives, financial situation, position or particular needs of Origin Shareholders. In addition, this section 7 is a summary only and does not purport to list every risk that may be associated with an investment in Origin now or in the future. There also may be additional risks and uncertainties not currently known to Origin which may have a material adverse effect on Origin's operating and financial performance and the value of Origin Shares.

Whilst the Origin Directors unanimously recommend that Origin Shareholders vote in favour of the Scheme in the absence of a Superior Proposal and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin Shareholders, Origin Shareholders are encouraged to make their own independent assessment as to whether to vote in favour of the Scheme.[1]

7.2 General risks

Origin is exposed to a number of general risks that could have a material adverse impact on its assets and liabilities, financial position, profits, prospects and potential to make further distributions to Origin Shareholders, and the price and/or value of Origin Shares. General risks that may impact on Origin or the market for Origin Shares include:

- changes in general business, industry cycles and economic conditions, which could impact both supply and demand dynamics relevant to Origin's business;
- changes in laws or regulations which impact Origin's industry and operations, which could impact on Origin's ability to conduct its business as currently conducted and potentially lead to higher costs of doing business or impact the prices at which Origin could sell its products and services to customers;
- variations in Origin's operating results, which could negatively impact investor perceptions of Origin;
- acts of war and hostilities, acts of terrorism, civil disturbance, and other force majeure risks, which could impact both supply and demand dynamics relevant to Origin's business including the prices at which Origin procures inputs for its business or is able to sell its products and services to customers, or could otherwise interfere with Origin's operations;
- changes in investor sentiment, recommendations from securities analysts, overall performance of comparable listed companies and Australian dollars and international stock markets, which could negatively impact investor perception of Origin, the price at which Origin Shares trade or the ability of Origin to raise further capital from investors in the future;
- Origin's ability to attract, retain and develop high quality employees;, as failure to do so could lead to higher costs and poorer operational outcomes which could negatively impact Origin's operations and performance of its business; and
- changes to accounting standards and reporting standards, which could impact Origin's reported financial results and investor perception of Origin's performance.

Some of these factors could affect Origin's share price regardless of Origin's underlying operating performance.

1. Origin Shareholders should, in considering this recommendation, note that (as detailed in section 9.2 of this Scheme Booklet), if the Scheme becomes Effective, the following will occur in relation to the equity incentives and deferred cash awards held by Frank Calabria (Managing Director and Chief Executive Officer): full vesting and exercise of 992,212 unvested share rights, lifting of restrictions on 472,417 restricted Origin Shares and waiving of the deferral period for $1,229,499 deferred cash.

7. Risks *continued*

7.3 Risks relating to the business and operations of Origin

a) Strategic risks

1) Competition

Origin operates in a highly competitive retail environment which can result in pressure on margins and customer losses.

Competition also impacts Origin's wholesale business, with generators competing for capacity and fuel and the potential for gas markets to be impacted by new domestic gas resources, LNG imports and the volume of gas exports.

2) Technological developments/disruption

Origin is exposed to risks and opportunities relating to new digital and low-carbon technologies.

Distributed generation is empowering consumers to own, generate and store electricity, which results in less energy consumption from the grid. Technology is allowing consumers to understand and manage their power usage through smart appliances, which could potentially disrupt the existing utility relationship with consumers.

Technology also allows customers to have increased awareness of the impact of when they consume energy and the source of that energy.

Advances in technology and the abundance of low-cost data acquisition, communication and control has the potential to create new business models and introduce new competitors.

3) Changes in demand for energy

The volume or source of energy demanded by customers could change due to price, consumer behaviour, community expectations, energy efficiency schemes, Government policy, weather and other factors.

Demand for energy is also expected to grow due to increased electrification; for example, hydrogen, e-mobility and distributed infrastructure as a service, providing new market opportunities.

The current global energy market environment may impact the supply and cost of energy to customers, and this could have an adverse impact on Origin or its reputation with customers and the community.

Any change in demand for energy could impact Origin's revenues and future financial performance.

4) Regulatory policy

Origin has broad exposure to regulatory policy change and risks of government interventions which can impact financial outcomes and, in some cases, alter the commercial viability of existing or proposed projects or operations. Specific areas subject to review and development include wholesale and retail prices, government subsidies for building new generation and transmission capacity, direct government investment in generation, energy market design, domestic and international climate change policies, domestic gas market interventions, consumer protection regulation, and royalties and taxation policy.

As it relates to Origin's investment in Australia Pacific LNG, the Australian Federal Government has introduced the Mandatory Gas Code of Conduct (**Code of Conduct**) that applies to large gas producers in the Australian East Coast gas market, including Australia Pacific LNG. The Code of Conduct imposes a $12/GJ price cap on new producer domestic supply agreements, which is expected to remain in place until at least July 2025 at which point it is set to be reviewed. Producers can also apply for exemptions from the price cap where they enter enforceable domestic supply commitments.

Under the Australian Domestic Gas Security Mechanism (**ADGSM**), the Federal Government has the power to restrict gas exports where it considers this will help to prevent a forecast supply shortfall in the domestic market. The ADGSM is a measure of last resort and is only intended to be used if market-based solutions and other interventions fail to provide sufficient gas. There are also provisions in the ADGSM aimed at safeguarding sufficient gas exports that would enable LNG projects to meet minimum commitments under their long-term foundational supply agreements. If the Federal Government declares a supply shortfall in the domestic market in a period, the volume of LNG that Australia Pacific LNG could export in that period could be reduced.

b) Climate risks

1) Policy and legal

Changes to government policy and regulation in relation to, and resulting from, climate change may present risks and opportunities for Origin, including:

- regulatory intervention in the national electricity and gas markets;
- carbon pricing (including carbon markets, border adjustment and taxes);
- the emergence of new climate-related legislation or reporting requirements;
- government investment in energy infrastructure and generation including partnerships;
- government grants and subsidies to innovate and incentivise market development; and
- development approvals and planning and zoning laws.

These changes may impact Origin's asset values, operating costs, or investment decisions.

There is an increased risk of climate change-related litigation globally and in Australia. Any litigation would incur legal costs and potential penalties, compensation payments or settlement costs and may directly or indirectly influence future operational strategy.

2) Technology

The development of new technologies may be required to assist Origin to meet its medium to long-term emissions reduction targets and ambitions, however there is uncertainty regarding the efficacy, timing, cost and availability of those technologies.

The growth of low emissions technologies, distributed generation, and demand management enabled by technologies could result in lower demand (and revenue) for existing products. However these also present new market opportunities and potential revenue streams.

3) Market

The energy transition represents a period of significant change and volatility which presents both risks and opportunities for Origin. The ongoing decarbonisation of energy markets and lower demand for fossil fuels in some markets could result in:

- the reduced lifespan of existing carbon-intensive assets and potential for stranded assets;
- the continued electrification of some sectors that currently depend on fossil fuels, with potential to increase overall demand for electricity;
- a change in the competitive landscape and the development of new markets and business models that Origin can participate in, as cleaner fuels, renewables, storage, and distributed generation markets evolve; and
- energy market price volatility, as both the volume and source of energy supply and demand shift.

Origin's response to these market changes may have a positive or negative influence on its future financial prospects including its earnings, asset values, and investments.

Origin's financial performance during the energy transition will also be influenced by the timely and affordable access to:

- capital to support its strategy and growth aspirations;
- land and infrastructure, including the necessary network transmission capacity to enable investment in renewables and other third-party infrastructure; and
- the necessary inputs (including skills, commodities, and other supplies) to develop renewable and cleaner energy assets in an ethical manner.

4) Reputation

Origin's strategy, emissions reduction targets and ambitions may fail to meet stakeholder expectations. This includes the timing and alignment of our portfolio decisions, and how we set, measure and report on climate change targets. This could result in:

- increased cost of, or restricted access to, debt and equity capital and insurance;
- adverse impacts to our social licence to operate and our reputation among our communities, customers, suppliers and other stakeholders; and
- challenges attracting and retaining talent.

7. Risks *continued*

Origin's path through the energy transition will have an impact on its people, communities and customers as its business changes, including the planned closure of the Eraring coal-fired power station potentially as early as August 2025. There is a risk Origin fails to meet stakeholder expectations in relation to a 'just energy transition'.

5) Physical risks

Changing weather patterns may influence the demand for energy, which could impact Origin's revenues and future financial performance.

Changing and more frequent and severe weather conditions, including floods, droughts, bushfires, and extreme temperature events could also disrupt Origin's operations or impact the efficacy of its assets, and supporting distribution and transmission infrastructure. This could lead to increased operating costs, increased maintenance and capital expenditure, the risk of environmental incidents and higher insurance costs or restrictions on accessing insurance.

c) Financial risks

1) Commodity

Origin has a long-term exposure to international oil, LNG and gas prices through the sale and purchase of domestic gas, LNG and LPG, and its investment in Australia Pacific LNG. Pricing can be volatile and driven by global macroeconomic events. Downward price movements can impact cash flow, financial performance, reserves and asset carrying values. Some of Origin's long-term domestic gas purchase agreements and Australia Pacific LNG's LNG sale agreements contain periodic price reviews. Following each review, pricing may be adjusted upwards or downwards, or remain unchanged.

The prices and volumes for wholesale electricity that Origin sources to on-sell to customers are volatile and influenced by many factors, including generation availability, the pricing of generation fuels (coal and gas), and weather. Fluctuations in coal and gas prices also impact the margins of Origin's own generation portfolio. In particular, the Energy Markets business has exposure to the price of coal when recontracting supply for FY2025, with the $125/t coal price cap to expire on 30 June 2024. The Energy Markets business also has exposures to contracted volumes of coal not being delivered which could result in lower output or higher costs to meet customer demand.

Different commodity prices that have historically moved in a correlated fashion may see that correlation break down. It would be disadvantageous for Origin if the domestic wholesale energy costs incurred by the Energy Markets business were high, but the international oil and LNG prices obtained by Australia Pacific LNG were low.

Origin also has an investment in Octopus Energy in the United Kingdom. Octopus Energy has a sizeable retail customer base in the UK and limited physical supply of wholesale generation. As such, Octopus Energy is a major buyer of wholesale energy via over-the-counter contracts and various derivative trading positions. This has the potential to leave the Octopus Energy business vulnerable to extreme fluctuations in wholesale pricing which may negatively impact financial performance.

2) Foreign exchange and interest rates

Origin has exposures through principal debt and interest payments associated with foreign currency and Australian dollar borrowings, through the sale and purchase of gas, LNG and LPG, capital expenditure commitments, and through its investments in Australia Pacific LNG and Octopus Energy. Interest rate and foreign exchange movements could lead to a decrease in revenues or an increase in payments in Australian dollar terms.

3) Liquidity and access to capital markets

Origin's business, prospects and financial flexibility could be adversely affected by a failure to appropriately manage its liquidity position, or if markets are not available at the time of any financing or refinancing requirement.

4) Credit and counterparty

Some counterparties may fail to fulfil their obligations (in whole or part) under major contracts.

d) Operational risks

1) Safe and reliable operations

Origin is exposed to reliability or major accident events that may cause harm to people or damage assets, impacting its licence to operate and or its financial prospects. This includes loss of containment, cyber-attack and security incidents, unsafe operations, and natural hazards and other events that may cause harm to Origin's people, environmental damage, additional costs, production loss, property damage, third party impacts, and reputational impacts.

A production outage or constraint, network or IT systems outage, would affect Origin's ability to deliver electricity and gas to customers.

A serious incident or a prolonged outage may also damage Origin's financial prospects and reputation.

2) Capital investment in development projects

As outlined in Origin's Climate Transition Action Plan in 2022, Origin has an ambition to grow its renewables and storage capacity within its generation portfolio to 4 GW by 2030. With the retirement of the Eraring Power Station potentially as early as August 2025, and to support Origin's retail position and manage its portfolio risk, Origin may invest in further capacity in excess of this 4 GW to transition its generation fleet over the period to 2030.

As Origin embarks upon the significant transition of its wholesale generation portfolio and seeks to invest in new generation capacity, there is risk associated with execution of this strategy which involves development and construction of large-scale, complex infrastructure projects which could cost more and take longer to develop than planned.

Development of new generation capacity, including renewable generation and energy storage assets, is expected to be capital intensive. Origin could support the development of some of these projects through off balance sheet contracting. However, Origin may also need to consider the funding of some of these projects utilising its own balance sheet and funding sources and as such, there is a risk that this could impact debt levels, dividends able to be paid to shareholders, or funding capacity to invest in other growth initiatives more generally.

3) Environmental and social

An environmental incident or failing to consider and adequately mitigate environmental, social and socio-economic impacts on communities and the environment has the potential to cause environmental impact, community action, regulatory intervention, legal action, reduced access to resources and markets, impacts to Origin's licence to operate and reputation and increased operating costs.

Community concerns regarding environmental and social impacts associated with Origin's activities may also give rise to unrest amongst community stakeholder groups and activism which may impact its reputation. A third party's actions may also result in delay in Origin carrying out its approved development and operational activities. NGOs, landholders, community members and other affected parties can seek to prevent or delay Origin's activities through court litigation, preventing access to land and extending approval pathway time frames.

4) Cyber security

A cyber security incident could lead to a breach of privacy, loss of and/or corruption of commercially sensitive data, and/or a disruption of critical business processes. This may adversely impact customers, Origin's business activities and reputation and brand.

5) Australia Pacific LNG gas reserves, resources and deliverability

There is uncertainty about the productivity, and therefore economic viability, of resources and developed and undeveloped reserves. As a result, there is a risk that actual production may vary from that estimated, and in the longer term, that there will be insufficient reserves to supply the full duration and volumes to meet contractual commitments.

As at 30 June 2023 Australia Pacific LNG's identified reserves and resources are estimated to be greater than its contractual supply commitments on a volume basis. However, given the inherent uncertainty in forecasting future production rates, there is a risk that the rate of gas delivery required to meet Australia Pacific LNG's committed gas supply agreements may not be able to be met for the later years in the life of existing contracts.

7. Risks *continued*

6) Conduct and compliance

Unlawful, unethical or inappropriate conduct that falls short of community expectations could result in penalties, reputational/brand damage, loss of customers and adverse financial impacts.

Origin's financial prospects and operations are underpinned by its licence to operate which requires compliance with stakeholder commitments, regulations, and laws. For example, requirements for dealing with vulnerable customers, privacy, and insider trading.

Origin is and from time to time may be involved in regulatory investigations, third party disputes or legal proceedings, including in respect of breaches of retail regulatory requirements. Involvement in such investigations, disputes or legal proceedings could potentially disrupt Origin's operations, result in enforcement action and adversely affect Origin's reputation and financial position.

7) Joint venture

Third party joint venture operators may have economic or other business interests that are inconsistent with Origin's own and may take actions contrary to the Company's objectives, interests or standards. This may lead to potential financial, reputational and environmental damage in the event of a serious incident.

e) Litigation risk relating to Australia Pacific LNG

Australia Pacific LNG acquired various CSG interests from Tri-Star in 2002 that are subject to reversionary rights and an ongoing royalty interest in favour of Tri-Star. These interests represent approximately 19 per cent of Australia Pacific LNG's 2P (proved plus probable) CSG reserves and approximately 18 per cent of 3P (proved plus probable plus possible) CSG reserves (as at 30 June 2023). Please refer to section 8 of Origin's Annual Report (which was filed with the ASX on 17 August 2023) for further information relating to Tri-Star's litigation against Australia Pacific LNG in relation to these CSG interests.

f) Unknown risks

The information set out in this section 7.3 is non-exhaustive and additional unknown risks and uncertainties may have a material adverse impact on Origin's financial and operational performance.

7.4 Risks relating to the Scheme

a) Implications relating to implementing the Scheme

The Scheme is subject to certain conditions precedent that must be satisfied or waived (if capable of waiver) in order for the Scheme to be implemented. These conditions precedent are outlined in section 4.6 of this Scheme Booklet and set out in full in clause 3.1 of the Scheme Implementation Deed. The failure of a condition precedent to be satisfied or waived (if capable of waiver) may also give rise to a right of either Origin or Bidder to terminate the Scheme Implementation Deed.

The conditions precedent include approval by the Court and Origin Shareholders. There is the risk that the Origin Shareholders or the Court may not approve the Scheme, or that the Court may only be willing to approve the Scheme subject to conditions that Origin or Bidder are not prepared to accept.

There is also a risk that some or all of the aspects of the Origin Shareholder and Court approvals required for the Scheme to proceed may be delayed – including, for example, as a result of delays in the receipt of regulatory approvals that are conditions precedent to the Scheme (refer to section 4.6 of this Scheme Booklet).

b) Implications for Origin and Origin Shareholders if the Scheme is not implemented

If the Scheme is not implemented, Origin Shareholders will retain their Origin Shares and will not receive the Scheme Consideration or the Special Dividend. Origin will remain listed on the ASX and continue to operate as a standalone entity. In these circumstances, Origin will continue to be subject to the risks currently associated with an investment in Origin (and to which Origin Shareholders are currently exposed), including those set as out in sections 7.2 and 7.3.

If the Scheme is not implemented, there will be no certainty as to the timing and quantum of any future dividends. The Origin Board will continue to consider the payment of dividends in light of the funding needs of Origin at the relevant time, its current policy of delivering sustainable shareholder returns through the business cycle and will target a payout range of 30 per cent to 50 per cent of Free Cash Flow per annum in the form of ordinary dividends and/or on-market share buy-backs.

The Origin share price will remain subject to market volatility and, if the Scheme is not implemented and no Superior Proposal emerges, the trading price of Origin Shares may fall below current levels, to the extent that the current market price reflects an assumption that the Scheme will be implemented and/or that a Superior Proposal might emerge.

7.5 Risks relating to the Special Dividend

a) Payment of a Special Dividend is not assured

There is no assurance that any Special Dividend will be paid to Origin Shareholders. The final decision on whether or not to pay a Special Dividend will be made by the Origin Directors and will depend upon a number of factors, including satisfaction of the following conditions:

- the Scheme having been approved by Origin Shareholders and the Court and having become Effective;
- Origin having received a draft class ruling (or other indicative confirmation) from the ATO in a form acceptable to Origin;
- Origin being able to pay the Special Dividend in cash before the Implementation Date (with the Special Dividend Record Date being before the Scheme Record Date);
- Origin having available franking credits and its franking account not being in deficit; and
- compliance with relevant legislative requirements under the Corporations Act and ITAA 1997 in respect of the Special Dividend.

If these requirements for payment of a Special Dividend cannot be fulfilled, including if the Scheme does not become Effective, Origin Shareholders will not receive the Special Dividend nor any franking credits attached to such dividend.

The final decision of the Origin Directors will be communicated to Origin Shareholders by way of an ASX announcement before the Scheme Meeting.

b) Ability to realise the benefit of the franking credits attached to the Special Dividend

If a Special Dividend is paid, certain Origin Shareholders may be able to realise the benefit of franking credits that will attach to the Special Dividend.

Whether you will be able to receive the full benefit of the franking credits attached to any Special Dividend will depend on your personal circumstances and whether a favourable class ruling is obtained from the ATO.

The Commissioner of Taxation has certain powers under Australian taxation law to deny an Origin Shareholder the benefit of the franking credits attaching to any Special Dividend. Origin has sought a class ruling on behalf of Origin Shareholders to confirm, among other things, that the Commissioner of Taxation will not use these powers to deny access to the franking credits. However, the final class ruling has not been issued as at the date of this Scheme Booklet and will not be issued prior to the Special Dividend Payment Date.

In addition, the *Treasury Laws Amendment (2023 Measures No.1) Bill 2023* currently before the Commonwealth Parliament contains a rule that proposes to limit the availability of franking credits attached to dividends which are funded by the issue of shares or other equity interests in certain circumstances (the **Proposed Equity-Funded Dividend Rule**). This Bill has not been enacted as at the Last Practicable Date of 10 October 2023. If the Proposed Equity-Funded Dividend Rule is enacted as law prior to Implementation, Origin proposes to seek confirmation from the Commissioner of Taxation that the proposed rule will not apply to treat the Special Dividend as unfrankable, however a final confirmation may not be received before the Origin Directors decide whether to pay the Special Dividend.

You should consult your own taxation adviser to determine the tax consequences relevant to your specific circumstances. Refer to section 8 of this Scheme Booklet for further information regarding tax implications in respect of the Special Dividend.

8. Tax implications

8.1 Introduction

The following is a general description of the Australian tax consequences of the Scheme (assuming it becomes Effective) and the Special Dividend (if paid) and Permitted Dividends (referred to collectively as the **Dividends**) for Origin Shareholders. It does not constitute tax advice and should not be relied upon as such. The comments set out below are relevant only to those Origin Shareholders who hold their Origin Shares on capital account for tax purposes.

The description is based upon the Australian law and administrative practice in effect at the date of this Scheme Booklet, but it is general in nature and is not intended to be an authoritative or complete statement of the laws applicable to the particular circumstances of an Origin Shareholder. Origin Shareholders should seek independent professional advice in relation to their own particular circumstances.

The description does not address the Australian tax consequences for Origin Shareholders who:

- hold their Origin Shares for the purposes of speculation or in carrying on a business dealing in securities (for example, as trading stock or on revenue account for tax purposes);
- acquired their Origin Shares pursuant to an employee share, option or rights plan;
- are subject to the taxation of financial arrangement rules in Division 230 of the ITAA 1997 in relation to gains and losses on their Origin Shares;
- may be under a legal disability (e.g. under the age of 18 at 30 June 2023 or 2024 (as applicable), bankrupt or declared legally incapable due to a mental condition) or subject to certain special tax rules, including insurance companies, partnerships, tax-exempt organisations or entities subject to the Investment Manager Regime under Subdivision 842-1 of the ITAA 1997 in respect of their Origin Shares; or
- who are not Australian tax residents and who hold their shares at or through an Australian permanent establishment;
- made a choice under Subdivision 960-D of the ITAA 1997 to use a functional currency other than Australian dollars to calculate their Australian taxable income; or
- are taken to have acquired their Origin Shares before 20 September 1985.

Origin Shareholders who are tax residents of a country other than Australia (whether or not they are also residents, or are temporary residents, of Australia for tax purposes) should take into account the tax consequences of the Scheme under the laws of their country of residence, as well as under Australian law.

8.2 ATO class ruling

Origin has applied to the ATO requesting a class ruling to confirm the key taxation implications of the Scheme and the Dividends for Origin Shareholders as noted below (**Class Ruling**).

The Class Ruling has not been finalised as at the date of the Scheme Booklet. Origin anticipates that the ATO will provide a draft of the Class Ruling prior to the Scheme becoming Effective. Origin will make an announcement to the ASX if it receives a draft of the Class Ruling before the Scheme Meeting or the Second Court Hearing.

When the final Class Ruling is published by the ATO, it will be available on the ATO website www.ato.gov.au. It is anticipated that the Commissioner's views in the Class Ruling will be generally consistent with the description of the Australian tax consequences in this summary. However, it is possible that the Commissioner may reach a different conclusion. Accordingly, it is important that this summary be read in conjunction with the Class Ruling.

8.3 Origin Shareholders that are Australian residents

a) Capital gains tax (CGT)

Under the Scheme, Origin Shareholders will dispose of their Origin Shares to Bidder in exchange for the Scheme Consideration. This disposal will constitute a CGT event A1 for Australian CGT purposes for Origin Shareholders.

The time of the CGT event will be the Implementation Date.

b) Calculation of capital gain or capital loss

Origin Shareholders will make a capital gain on the disposal of Origin Shares to the extent that the capital proceeds from the disposal of the Origin Shares are more than the cost base of those Origin Shares. Conversely, Origin Shareholders will make a capital loss to the extent that the capital proceeds are less than their reduced cost base of those Origin Shares.

1) Cost base

The cost base of the Origin Shares generally includes the cost of acquisition and certain non-deductible costs of their acquisition and disposal. The reduced cost base of the Origin Shares is usually determined in a similar, but not identical, manner.

If the Origin Shares were acquired at or before 11.45am on 21 September 1999, an Origin Shareholder who is an individual, a complying superannuation entity or the trustee of a trust may choose to adjust the cost base of their Origin Shares to include indexation by reference to changes in the consumer price index from the calendar quarter in which their Origin Shares were acquired until the quarter ended 30 September 1999. Origin Shareholders that are companies will include that indexation adjustment if their Origin Shares were acquired at or before 11.45am on 21 September 1999. Indexation adjustments are taken into account only for the purposes of calculating capital gains; they are ignored when calculating capital losses.

Any Origin Shareholders that participated in the Boral/Origin demerger in February 2000 will need to reduce the cost base of their Origin Shares by the $3.16 per share capital reduction made to facilitate the demerger.

2) Capital proceeds

The capital proceeds received in respect of the disposal of each Origin Share should be the amount of the Scheme Consideration.

If an Origin Shareholder does not make a valid Currency Election, the Origin Shareholder will receive the Scheme Consideration in Australian dollars for all their Origin Shares. The capital proceeds for such an Origin Shareholder will be the amount of the Scheme Consideration in Australian dollars.

If an Origin Shareholder makes a valid Currency Election, the Origin Shareholder will receive the Scheme Consideration for all of their Origin Shares in the form of a combination of Australian dollars and US dollars (comprising, the AUD Scheme Consideration in Australian dollars and the USD Scheme Consideration in US dollars). The capital proceeds for such an Origin Shareholder will include the sum of the amount of AUD Scheme Consideration in Australian dollars and the amount of the USD Scheme Consideration in Australian dollars, translated into Australian dollars using the exchange rate applicable on the Implementation Date.

The capital proceeds for the disposal of Origin Shares should not include the Dividends. However, the ATO may reach a different conclusion and include the Dividends in the capital proceeds. The ATO has not finalised its position as at the date of this Scheme Booklet.

If the ATO concludes the Dividends should be included in the capital proceeds, Origin Shareholders should take this into account in calculating any capital gain or capital loss. An 'anti-overlap' rule applies to reduce any capital gain made by an Origin Shareholder to the extent the Dividends are otherwise included in assessable income.

However, if an Origin Shareholder makes a capital loss, the 'anti-overlap' rule does not restore the capital loss that would otherwise have been made if the Dividends did not form part of the capital proceeds. Similarly, if an Origin Shareholder makes a capital gain because the Dividends are included in the capital proceeds and that capital gain is less the amount of the Dividends, the 'anti-overlap' rule will reduce the capital gain to zero but will not provide a capital loss for the difference between the capital proceeds and the Dividends.

3) Other issues

Origin Shareholders who are individuals, complying superannuation entities or trustees that have held (or are deemed to have held) their Origin Shares for at least 12 months before the Implementation Date (not counting the day of acquisition or disposal) (but have not chosen to index their cost base – refer above) may be entitled to reduce the amount of the capital gain (after application of carry forward and current year capital losses, if any) by the applicable CGT discount. If eligible, the applicable CGT discount for Origin Shareholders who are individuals or trustees is 50 per cent and 33⅓ per cent for complying superannuation entities. The ultimate availability of the CGT discount for beneficiaries of a trust will depend on the particular circumstances of the beneficiaries.

There is no CGT discount available for Origin Shareholders that are companies or Origin Shareholders who have held their Origin Shares for less than 12 months.

8. Tax implications *continued*

Capital gains (prior to any CGT discount) and capital losses of a taxpayer in an income year are aggregated to determine whether there is a net capital gain. Any net capital gain (as reduced by the CGT discount, if applicable) is included in assessable income and is subject to income tax. Capital losses may not be deducted against other income for income tax purposes, but may be carried forward to offset against future capital gains (subject to satisfaction of loss recoupment tests for certain taxpayers).

c) Taxation consequences of the Dividends

Origin Shareholders who are Australian tax residents and who receive the Dividends should include the amount of the Dividends in their assessable income. It is expected that the Dividends will be fully franked.

If certain requirements are met, the Origin Shareholders who receive the Dividends will also be:

- required to include the amount of the attached franking credits in their assessable income; and
- entitled to a tax offset equal to the amount of franking credits attached to the Dividends.

These requirements include:

- the Origin Shareholder being a 'qualified person' in relation to the Dividends; and
- whether certain dividend franking integrity measures apply.

In order for an Origin Shareholder to be a 'qualified person' they must hold their Origin Shares 'at-risk' for a continuous period of not less than 45 days (not including the day of the share's acquisition or disposal) during a prescribed period in relation to the Dividends.

Origin Shareholders will not be treated as holding their Origin Shares 'at-risk' on any days on which Origin Shareholders held positions that reduced their exposure to gains and losses below 30 per cent, although those days do not break the continuity of the 'at-risk' period.

Origin Shareholders will cease to be considered to hold their shares 'at-risk' from the Scheme Record Date.

As the Dividends are taken into account in determining the amount of the Scheme Consideration, the so-called 'related payments' rule will apply to Origin Shareholders. Accordingly, the prescribed periods within which Origin Shareholders must hold their shares 'at risk' for a continuous period of 45 days are expected to be:

- from 16 January 2023 to 16 April 2023 (inclusive) in respect of the interim Permitted Dividend;
- from 24 July 2023 to 22 October 2023 (inclusive) in respect of the final Permitted Dividend; and
- from 17 October 2023 to 10 December 2023 (inclusive) in respect of the Special Dividend.

The Class Ruling is expected to contain the ATO's views as to when an Origin Shareholder will satisfy the relevant holding period test with respect to the Dividends.

If you are an individual or complying superannuation entity and your tax liability for the income year is less than the amount of the franking credits attached to the Dividends, you may be entitled to a refund for the excess franking credits. This does not extend to companies.

Additional commentary has been made in relation to the Special Dividend under the 'Risks relating to the Special Dividend' in section 7.5 above.

8.4 Origin Shareholders that are non-residents of Australia

a) General

An Origin Shareholder who is not an Australian resident for Australian income tax purposes should only be subject to Australian CGT on the disposal of their Origin Shares if:

- the Origin Shareholder holds or held 10 per cent or more (together with its associates) of the Origin Shares (i.e. a 'non portfolio interest') at the time of the CGT event or throughout a 12 month period within 2 years preceding the CGT event; and
- more than 50 per cent of Origin's value is due to direct or indirect interests in 'taxable Australian real property' (as defined in the ITAA 1997). Taxable Australian real property generally refers to Australian land that is owned or leased.

Unless the above two conditions are satisfied, non-resident Origin Shareholders should disregard any Australian capital gain or loss from the disposal of their Origin Shares.

If you are a non-resident who holds a 'non-portfolio interest' in Origin, you should obtain independent advice as to the tax implications of sale, and whether any protection will be available under a relevant double tax treaty.

A non-resident Origin Shareholder who has previously been a resident of Australia and chose to disregard a capital gain or loss on ceasing to be a resident will be subject to Australian CGT consequences on disposal of the Origin Shares as set out in section 8.3.

Origin Shareholders who are not residents of Australia should not be subject to income tax in Australia in respect of the Dividends. As the Dividends (including the Special Dividend, if paid) will be fully franked, such shareholders should receive the full amount of the Dividends free of any dividend withholding tax.

b) Foreign resident capital gains withholding tax

The capital gains withholding tax regime may apply to the Origin Shareholders whose Origin Shares are subject to Australian CGT because they satisfy the two conditions outlined above at section 8.4(a).

Bidder, in cooperation with Origin, may seek to clarify the status of particular Origin Shareholders and require these Origin Shareholders to provide Bidder with either:

- a declaration that they are an Australian tax resident or that their Origin Shares are not an 'indirect Australian real property interest' (**Declaration Form**); or
- a notice of variation granted by the ATO varying the amount or rate of tax to be withheld (**Variation Notice**).

Unless a signed Declaration Form or Variation Notice is provided to Bidder for these particular Origin Shareholders, Bidder may withhold 12.5 per cent of the Scheme Consideration payable to the Origin Shareholder and pay that amount to the Commissioner of Taxation. Bidder has advised Origin that it expects to only contact a very limited number of non-resident Origin Shareholders and that if Bidder does not contact a non-resident Origin Shareholder then it will not withhold any amount under these provisions.

Non-resident Origin Shareholders should consult with a professional tax adviser regarding their particular circumstances.

8.5 GST

Origin Shareholders should not be liable to GST in respect of a disposal of those Origin Shares.

Origin Shareholders may be charged GST on costs they incur (such as adviser fees relating to their participation in the Scheme) that relate to the Scheme. Origin Shareholders may be entitled to input tax credits or reduced input tax credits for such costs, but should seek independent advice in relation to their individual circumstances.

8.6 Stamp duty

Origin Shareholders should not be liable for any Stamp Duty on the disposal of their Origin Shares.

9. Additional information

9.1 Interests of Origin Directors in Origin Shares and Origin Equity Incentives

a) Interests in Origin Shares

As at the Last Practicable Date, the Origin Directors have the following Relevant Interests in Origin Shares:

Origin Director	Number of Origin Shares
Scott Perkins	80,000
Frank Calabria	1,623,434 (including 472,417 Restricted Shares held as part of Origin's short term and long term equity incentives, as detailed in section 9.1(b) below)
Ilana Atlas	50,000
Maxine Brenner	28,367
Greg Lalicker	100,000
Mick McCormack	100,000
Steven Sargent	41,429
Nora Scheinkestel	33,365
Joan Withers	29,980

Origin Directors who hold Origin Shares, or entities who hold Origin Shares on behalf of Origin Directors, will be entitled to vote at the Scheme Meeting and, if the Scheme is implemented, will receive the Scheme Consideration for their Origin Shares along with the other Scheme Shareholders.

Each Origin Director intends to vote, or procure the voting of, any Origin Shares held or controlled by them at the time of the Scheme Meeting in favour of the Scheme at the Scheme Meeting in the absence of a Superior Proposal and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin Shareholders.

No Origin Director acquired or disposed of a Relevant Interest in any Origin Shares during the four months before the date of this Scheme Booklet, other than Frank Calabria who acquired 273,721 ordinary Origin Shares on 21 August 2023 on vesting of 61,138 Restricted Share Rights and 183,416 Performance Share Rights and allocation of 29,167 Dividend Equivalent Restricted Shares.

b) Interests in Origin Equity Incentives

As at the Last Practicable Date, none of the Origin Directors have a Relevant Interest in any Origin Equity Incentives, other than the Managing Director and Chief Executive Officer, Frank Calabria.

As at the Last Practicable Date, Frank Calabria holds the following Origin Equity Incentives:

- **Long-term incentives:** As part of the Origin LTIP (described in section 9.2(a) below), 434,969 Performance Share Rights and 557,243 Restricted Share Rights, which are subject to performance and service conditions; and 273,721 Restricted Shares which are subject to transfer restrictions and included in Mr Calabria's indirect interest in Origin Shares disclosed in section 9.1(a) above; and
- **Short-term incentives:** As part of the Origin STIP (described in section 9.2(a) below), 198,696 Restricted Shares, which are included in Mr Calabria's indirect interest in Shares disclosed in section 9.1(a) above.

As at the Last Practicable Date, Frank Calabria also holds the following deferred cash:

- $1,229,499, representing the deferred component of the STIP awarded in September 2023 in respect of the FY2023 performance period in the form of deferred cash (deferred for two years) rather than in Restricted Shares, and
- $1,838,700 representing 75 per cent of the CY2023 LTIP awarded in September 2023 in the form of deferred cash (deferred for three years) rather than in share rights.

Further information about Origin's equity incentive arrangements for employees, and their proposed treatment should the Scheme become Effective, is set out in section 9.2 below.

If the Scheme becomes Effective, Mr Calabria's equity incentives (and deferred cash) will be dealt with on the basis described in section 9.2(b) below. Specifically:

- all of the Performance Share Rights and Restricted Share Rights held by Mr Calabria will vest and be exercised in full;
- all of the Restricted Shares held by Mr Calabria will have their trading restrictions lifted;
- all deferred cash granted to Mr Calabria under the STIP will have the deferral period waived and be paid in full (less applicable tax and superannuation); and
- all deferred cash granted under the LTIP will remain subject to the deferral period as defined and set out in the original terms and conditions, and will not be brought forward prior to Implementation.

No Origin Director acquired or disposed of a Relevant Interest in any Origin Equity Incentives during the four months before the date of this Scheme Booklet, other than Frank Calabria who disposed of 61,138 Restricted Share Rights and 183,416 Performance Share Rights on vesting of those incentives into Restricted Shares on 21 August 2023, as noted in section 9.1(a) above.

9.2 Origin equity incentive arrangements

a) Overview of arrangements

As detailed in Origin's annual report for the year ended 30 June 2023, Origin operates incentive plans under which Origin Equity Incentives and deferred cash entitlements are provided to senior management and other employees.

Short-Term Incentive Plan

Awards granted under the terms of Origin's Short-Term Incentive Plan (**STIP**) are paid to most eligible employees entirely in unrestricted and undeferred cash. However, senior management receive a deferred element as follows:

- the executive leadership team receives 50 per cent of the award in Restricted Shares with a deferral period of 2 years (and for awards made in September 2023 in respect of the FY2023 STIP performance period completed, these deferred elements were in the form of deferred cash instead of Restricted Shares); and
- other senior management receive 20 per cent of the award in Restricted Shares with a deferral period of one year (and for awards made in September 2023 in respect of the FY2023 STIP performance period completed, these deferred elements were in the form of deferred cash instead of Restricted Shares).

Restricted Shares are Origin Shares that are on issue, and therefore carry dividend entitlements and voting rights, but are subject to trading restrictions which means they cannot be disposed of by the holder (and may be forfeited if relevant service conditions are not maintained) prior to the expiry of the relevant deferral period.

Long-Term Incentive Plan

Under the terms of Origin's Long-Term Incentive Plan (**LTIP**), Origin executives receive an award of two approximately equal deferred elements:

- Performance Share Rights, each of which will vest into one Restricted Share after 3 years, subject to satisfaction of a financial performance condition, with the Restricted Shares subject to a further 2 year deferral period;
- Restricted Share Rights, which vest in 3 equal tranches subject to a review of underpinning non-financial conditions: 1/3rd vesting to an equivalent number of Restricted Shares after 3 years (with those Restricted Shares subject to a further 2 year deferral period), 1/3rd vesting to an equivalent number of Restricted Shares after 4 years (with those Restricted Shares subject to a further one year deferral period) and 1/3rd vesting to an equivalent number of unrestricted Origin Shares after 5 years; and
- Dividend equivalent share rights accrue in respect of each Performance Share Right and Restricted Share right that ultimately vests.

LTIP awards granted in September 2023 were in the form of deferred cash, to be paid in July 2026.

9. Additional information *continued*

Other employee share plans

As also detailed in Origin's annual report for the year ended 30 June 2023, Origin also operates an Employee Share Plan in which all eligible full-time and part-time employees can choose to participate in the following:

- awards of up to $1,000 worth of Origin Shares annually, under the General Employee Share Plan, where Restricted Shares are issued with a deferral period of the earlier of three years or cessation of employment; or
- the Matching Share Plan (**MSP**) under which participants can acquire up to $4,800 in Restricted Shares annually, which are subject to a deferral period of the earlier of two years or cessation of employment, and for every two Restricted Shares acquired (within a 12-month cycle), participants are granted one Matching Share Right at no cost, which vest after 2 years into an equivalent number of Origin Shares (provided the participant remains employed by Origin or is a 'good leaver').

Both the General Employee Share Plan and the Matching Share Plan are currently suspended. The Managing Director and Chief Executive Officer is not eligible to participate in either Plan.

Non-Executive Director Share Plan

Origin also has a Non-Executive Director Share Plan (**NEDSP**) under which each non-executive Origin Director may sacrifice up to 50 per cent of their annual base fees to acquire Share Rights. The number of allocated Share Rights is determined based on the VWAP of Origin Shares traded on the ASX over the 5 day trading period ending on the day before the relevant Grant Date of the Share Rights. Share Rights are granted twice a year following the announcement of Origin's half year and full year results, and vest into Restricted Shares after the end of the following 'closed period' under Origin's Dealing Securities Policy (i.e. Share Rights granted in February following the release of the half year results will vest in late August after the end of the closed period following the release of Origin's full year results). The restriction on the Restricted Shares allotted under the NEDSP ends on the earliest of the Origin Director ceasing to be a director of Origin, the end of the restriction time nominated by the Origin Director (up to 15 years), or when determined by the Origin Board. There is currently one non-executive Origin Director in the NEDSP, Joan Withers, who holds 3,980 Restricted Shares, and no new participant has entered the NEDSP since FY2022.

Current Origin Equity Incentives

As at the Last Practicable Date, Origin had on issue:

- 4,268,058 Restricted Shares;
- 2,455,873 Performance Share Rights;
- 3,114,057 Restricted Share Rights; and
- 306,830 Matching Share Rights.

b) Implications of the Scheme for Origin Equity Incentives and deferred cash

Under the Scheme Implementation Deed, Origin must procure that no performance rights, options, warrants or any other securities or rights to receive shares, other than Origin Shares, are in existence on the Scheme Record Date.

In order to satisfy this requirement, and recognising the importance of the contribution of Origin Group employees, including those holding Origin Equity Incentives, and of retaining their services during the Scheme process, the Origin Board currently proposes and has determined in principle to treat outstanding Origin Equity Incentives as follows, subject in each case to the Scheme becoming Effective:

- All unvested Performance Share Rights, Restricted Share Rights and Matching Share Rights granted under the LTIP and MSP that remain outstanding will vest and be exercised in full and be satisfied through either the transfer of existing unallocated Origin Shares held in the Origin Employee Share Trust, new shares issued or acquired on-market by Origin or cash settlement prior to the Special Dividend Record Date, subject to ASX granting the waiver referred to in section 9.6 below;
- All Restricted Shares will have their trading restrictions lifted prior to the Implementation Date;
- All deferred cash granted under the STIP will have the deferral period waived and be paid in full prior to the Implementation Date; and
- All deferred cash granted under the LTIP will remain subject to the deferral period as defined and set out in the original terms and conditions, and not brought forward prior to Implementation.

9.3 Other benefits and agreements

a) Interests of Origin Directors in Bidder Group securities

No Origin Director has a Relevant Interest in any securities in a Bidder Group Member.

No Origin Director has acquired or disposed of a Relevant Interest in any securities in a Bidder Group Member during the four months before the date of this Scheme Booklet.

b) Interests of Origin Directors in contracts with Bidder Group

No Origin Director has any interest in any contract entered into by a Bidder Group Member, or any of its related bodies corporate.

c) Benefits in connection with retirement from office

There is no payment or other benefit that is proposed to be made or given to any director, secretary or executive officer of Origin (or any of its related bodies corporate) as compensation for the loss of, or consideration for or in connection with his or her retirement from, office in Origin (or any of its related bodies corporate) in connection with the Scheme.

d) Deeds of indemnity, insurance and access

Origin has entered into deeds of indemnity, insurance and access with the directors of Origin, on customary terms (**D&O Deeds**). The D&O Deeds include terms that provide for Origin to indemnify each of its directors and officers against all liability arising as a result of such persons acting as a director or officer, to the extent permitted by law.

Origin also pays a premium in respect of a directors and officers insurance policy for the benefit of the directors and officers of Origin. If the Scheme is implemented, Origin will enter into an arrangement to provide run-off insurance coverage for all current Origin directors and officers for seven years from the Implementation Date. The entry into such arrangements by Origin is permitted by clause 8.3 of the Scheme Implementation Deed. In addition, under clause 8.3 of the Scheme Implementation Deed, Bidder must ensure that directors' and officers' run-off insurance cover is maintained for a period of seven years from the retirement of each director and officer.

e) Benefits from Bidder Group

No Origin Director has agreed to receive, or is entitled to receive, any benefit from any Bidder Group member, which is conditional on, or is related to, the Scheme.

f) Agreements connected with or conditional on the Scheme

Other than as disclosed in section 9.2, there are no agreements or arrangements made between any Origin Director and any other person in connection with, or conditional on, the outcome of the Scheme.

9.4 Scheme Implementation Deed

a) Introduction

On 27 March 2023, Origin, Bidder and Brookfield Renewable Group Australia Pty Ltd entered into the Scheme Implementation Deed, which governs the conduct of the Scheme.

A summary of the key terms of the Scheme Implementation Deed is set out below. A full copy of the Scheme Implementation Deed was released to ASX on 27 March 2023 and can be obtained from www.asx.com.au.

b) Origin Board recommendation

The Scheme Implementation Deed requires Origin to use its best endeavours to procure that each Origin Director, and the Origin Board collectively, does not adversely change, withdraw, adversely modify or adversely qualify its or their recommendation to vote in favour of the Scheme unless:

- the Independent Expert concludes that the Scheme is not in the best interests of Origin Shareholders;
- Origin has received a Superior Proposal and Origin has complied with its obligations under the exclusivity provisions in clause 11 of the Scheme Implementation Deed; or
- the change, withdrawal, modification or qualification occurs because of a requirement by a court, ASIC or the Takeovers Panel that one or more Origin Board Members abstain or withdraw from making a recommendation that Origin Shareholders vote in favour of the Scheme (**Abstain Requirement**).

9. Additional information *continued*

c) Conduct of business

The Scheme Implementation Deed requires that Origin carry on its business and operations in the ordinary and usual course (in all material respects).

In addition, Origin must also:

- perform its obligations under certain agreements between Origin and Australia Pacific LNG and comply with certain agreed obligations regarding joint ventures;
- maintain each of the applicable, necessary and material authorisations, accreditations, permits, approvals and licences of the Origin Group or Australia Pacific LNG and use reasonable efforts to renew them if necessary;
- keep Bidder informed of material developments regarding the Origin Group and Australia Pacific LNG business and provide Bidder with certain agreed information, and in relation to specified activities, keep Bidder informed and consult Bidder on decisions in respect of that activity;
- maintain material and necessary insurances held by the Origin Group and Australia Pacific LNG;
- not enter into new material line of business;
- use reasonable efforts to maintain the value of the business and assets of the Origin Group and Australia Pacific LNG and keep the services of the directors, officers and the executive leadership team of Origin and Australia Pacific LNG;
- use reasonable efforts to maintain and preserve Origin Group's and Australia Pacific LNG's relationship with Government Agencies, customers and suppliers, financiers, ratings agencies, property licensors and licensees, landlords and joint venturers;
- make reasonable efforts to procure that Origin Group Members do not enter into any new material contract, commitment or arrangement that does not relate to its relevant business (other than employee arrangements and arrangements which the Origin Group enters for the benefit of the group);
- not terminate or materially amend certain agreed material contracts relating to the Integrated Gas Business, or any other material contract where it would have a material adverse impact on the Integrated Gas Business or the Energy Markets Business (each as defined in the Scheme Implementation Deed); and
- procure that Australia Pacific LNG does not make certain changes to its work program and budgets and that it does not undertake certain activities requiring unanimous board approval.

The conduct of business obligations in the Scheme Implementation Deed only apply to Australia Pacific LNG to the extent that Origin is aware of the action (or should have reasonably been) and it is reasonably possible for Origin to require or prevent the action.

The restrictions and obligations listed above are subject to a number of exceptions, including exceptions which allow Origin to take any actions:

- required (or restricted) by any applicable law or regulation, or by a Government Agency, the Scheme Implementation Deed or the Scheme;
- required to give effect to the separation of the Energy Markets Business from the Integrated Gas Business (each as defined in the Scheme Implementation Deed);
- agreed to in writing by Bidder (not to be unreasonably withheld or delayed) or fairly disclosed to Bidder in certain due diligence materials;
- fairly disclosed in an announcement made by Origin in the three years prior to the date of the Scheme Implementation Deed;
- to reasonably and prudently respond to an emergency or disaster (subject to limitations);
- which is undertaken to respond to a Competing Proposal as permitted by the exclusivity provisions of the Scheme Implementation Deed; or
- in respect of Australia Pacific LNG, which conflicts with Australia Pacific LNG director's or other fiduciary duties or is reasonably likely to cause any Origin Group Member to breach any Australia Pacific LNG documentation.

d) Representations and warranties

The Scheme Implementation Deed contains customary representations and warranties given by each of Origin, Brookfield Renewable Group Australia Pty Ltd and Bidder to each other.

These representations and warranties are set out in Schedule 3 (in the case of Origin) and Schedule 2 (in the case of Brookfield Renewable Group Australia Pty Ltd and Bidder) of the Scheme Implementation Deed.

e) Exclusivity

The Scheme Implementation Deed contains the following customary exclusivity provisions in favour of Brookfield Renewable Group Australia Pty Ltd and Bidder during the Exclusivity Period:

- **No shop**: Origin must not solicit, encourage or initiate any offers, expressions of interest, proposals or transactions in relation to, or that may be reasonably expected to encourage or lead to, a Competing Proposal, or communicate with any person an intention to do so;
- **No talk**: Subject to a fiduciary exception on market standard terms, Origin must not enter into, continue or participate in any negotiations or discussions, or negotiate, accept or enter into any agreements, arrangements or understandings, in relation to a Competing Proposal (or which would reasonably be expected to encourage or lead to a Competing Proposal);
- **No due diligence**: Subject to a fiduciary exception on market standard terms, Origin must not grant access to material non-public information relating to the Origin Group to any person who has submitted, or might reasonably be expected to submit, a Competing Proposal;
- **Notification**: Origin must notify Bidder (within 24 hours) if Origin becomes aware of any communications (or attempts to initiate communications) or any proposals made to Origin in respect of any expression of interest, offer, proposal or discussion in relation to an actual, proposed or potential Competing Proposal, or if there are any requests for, or provision by Origin of, any material non-public information about the Origin Group to any other person in connection with an actual, proposed or potential Competing Proposal; and
- **Matching right**: Origin must not make a public statement endorsing, or enter into a binding agreement, arrangement or understanding to undertake or implement, a Competing Proposal, unless:
  - the Origin Board acting in good faith determines that the Competing Proposal is, or would reasonably likely be, a Superior Proposal;
  - the Competing Proposal did not arise out of a breach of Origin's 'No Shop', 'No Talk' or 'No Due Diligence' obligations;
  - Origin has provided Bidder with the material terms and conditions of the Competing Proposal and Bidder has had at least 5 Business Days after receiving this information to provide a matching or superior proposal to the Competing Proposal; and
  - the Origin Board determines that Bidder has not, by the expiry of that 5 Business Day period, provided a proposal that matches or is superior to the terms of the Competing Proposal.

f) Reimbursement Fee

The Scheme Implementation Deed contains customary provisions requiring Origin to, in specified circumstances, pay to Bidder a reimbursement fee (also referred to as a break fee) of $151,004,098 (which is approximately 1 per cent of the equity value of the Origin Group, determined by reference to the Scheme Consideration). The circumstances in which the reimbursement fee is payable do not include where the Scheme Implementation Deed is terminated because the Conditions Precedent are not satisfied (including failure by Origin Shareholders to approve the Scheme at the Scheme Meeting).

The obligation to pay the reimbursement fee will be triggered if during the Exclusivity Period:

- any member of the Origin Board fails to recommend or vote in favour of the Scheme as required by the Scheme Implementation Deed, or withdraws or adversely changes, modifies or qualifies their recommendation in relation to the Scheme, and Bidder has terminated the Scheme Implementation Deed, except where:
  - the Independent Expert concludes that the Scheme is not in the best interests of Origin Shareholders (except where that conclusion is due to the existence of a Competing Proposal);
  - the relevant Origin Director is subject to and is complying with an Abstain Requirement; or
  - Origin has given Bidder a termination notice due to a material breach of the Scheme Implementation Deed, or material breach of a warranty, by Bidder;
- any member of the Origin Board supports, or recommends that Origin Shareholders accept or vote in favour of, a Competing Proposal; or
- a Competing Proposal from a third party is announced during the Exclusivity Period and within 12 months of such announcement, that third party completes a Competing Proposal of a kind referred to in any of paragraphs 2, 3 or 4 of the definition of Completing Proposal, or acquires a Relevant Interest in, or Control of, more than 50 per cent of the Origin Shares or acquires substantially all of the assets of Origin.

9. Additional information *continued*

g) Termination

Each of Origin and Bidder may terminate the Scheme Implementation Deed:

- for material breach of the Scheme Implementation Deed (other than material breach of a warranty) which is not remedied within a specified period. In the case of a breach by Origin, this breach must be material in the context of the Integrated Gas Business or the Energy Markets Business (each as defined in the Scheme Implementation Deed);
- for failure of a condition precedent to the Scheme (as outlined in section 4.6);
- for a breach of warranty, which is not remedied within a specified period, where:
  - in the case of a breach by Origin, the relevant breach is material in the context of the Integrated Gas Business or Energy Markets Business (each as defined in the Scheme Implementation Deed); or
  - in the case of a breach by Bidder, the relevant breach is material in the context of the Scheme taken as a whole, or
- if agreed to in writing by Bidder and Origin.

Bidder may also terminate the Scheme Implementation Deed if any member of the Origin Board:

- fails to recommend the Scheme;
- withdraws or adversely changes or qualifies their recommendation in relation to the Scheme (excluding a statement that no action should be taken by Origin Shareholders pending assessment of a Competing Proposal by the Origin Board or the completion of the matching right process set out in clause 11.4 of the Scheme Implementation Deed); or
- makes a public statement to the effect that they no longer recommend the Scheme or recommending, supporting or endorsing another transaction,

other than where the relevant Origin Director is subject to or complies with an Abstain Requirement.

Origin may terminate the Scheme Implementation Deed if the Origin Board, or a majority of the Origin Board, has changed, withdrawn, modified or qualified its or their recommendation where permitted by the Scheme Implementation Deed and, if applicable, Origin has paid the reimbursement fee (described at section 9.4(f) above) to Bidder.

9.5 Consents, disclosures and fees

a) Consents

This Scheme Booklet contains statements made by, or statements said to be based on statements made by:

- Bidder and Brookfield in respect of the Bidder Information only;
- Grant Samuel as the Independent Expert;
- Gaffney, Cline & Associates as the Independent Technical Specialist; and
- Herbert Smith Freehills in respect of section 8 of this Scheme Booklet.

Each of those persons named above has consented to the inclusion of each statement it has made in the form and context in which the statements appear and has not withdrawn that consent at the date of this Scheme Booklet.

The following parties have given and have not, before the time of registration of this Scheme Booklet with ASIC, withdrawn their consent to be named in this Scheme Booklet in the form and context in which they are named:

- Barrenjoey and Jarden as financial advisers to Origin;
- Herbert Smith Freehills as legal adviser to Origin;
- PricewaterhouseCoopers as tax adviser to Origin in connection with the Scheme;
- Ernst & Young as the external auditor of Origin; and
- Boardroom Pty Limited as the Origin Share Registry.

b) Disclosures and responsibility

Each person named in section 9.5(a):

- has not authorised or caused the issue of this Scheme Booklet;
- does not make, or purport to make, any statement in this Scheme Booklet or any statement on which a statement in this Scheme Booklet is based, other than:
  - Bidder and Brookfield in respect of the Bidder Information only;
  - Herbert Smith Freehills in relation to the Taxation Information;
  - Grant Samuel in relation to its Independent Expert's Report; and
  - Gaffney, Cline & Associates in relation to its Independent Technical Specialist's Report; and
- to the maximum extent permitted by law, expressly disclaims all liability in respect of, makes no representation regarding, and takes no responsibility for, any part of this Scheme Booklet other than a reference to its name and the statement (if any) included in this Scheme Booklet with the consent of that party as specified in this section 9.5(b).

c) Fees

The fees set out in this section 9.5(c) only relate to fees paid or payable by Origin in connection with the Transaction and the preparation of this Scheme Booklet.

Each of the persons named in section 9.5(a) as performing a function in a professional, advisory or other capacity in connection with the preparation or distribution of this Scheme Booklet will be entitled to receive professional fees charged in accordance with their normal basis of charging.

In aggregate, if the Scheme is implemented, Origin expects to pay approximately $141 million (excluding GST) in external transaction costs and other payments that relate to the Transaction. This includes:

- advisory fees and expenses for professional services provided to Origin (including for financial, legal, tax, accounting and separation advisers), the Independent Expert's fees, court fees, Origin Share Registry fees, printing and mailing costs and expenses associated with convening and holding the Scheme Meeting; and
- retention payments, in an aggregate amount not exceeding $36.3 million, to certain Origin Group employees in order to retain their services during the Scheme process or to reflect the work that they have undertaken and will be required to undertake in connection with the Scheme process (in addition to the normal responsibilities of their roles).

In aggregate, if the Scheme is not implemented, Origin expects to pay approximately $77.7 million (excluding GST) in transaction costs, being costs (including retention payments) that have already been incurred as at the date of this Scheme Booklet or will be incurred even if the Scheme is not implemented (but excluding any break fee that may be payable).

9.6 Regulatory relief

Origin has applied for a waiver of ASX Listing Rule 6.23.4 and, if deemed necessary by the ASX, ASX Listing Rule 6.23.3 to the extent necessary to permit the treatment of the Origin Equity Incentives set out in section 9.2.

9.7 No unacceptable circumstances

The Origin Directors believe that the Scheme does not involve any circumstances in relation to the affairs of Origin that could reasonably be characterised as constituting 'unacceptable circumstances' for the purposes of section 657A of the Corporations Act.

9.8 No other material information

Except as disclosed elsewhere in this Scheme Booklet, so far as the Origin Directors are aware, there is no other information that is:

- material to the making of a decision by an Origin Shareholder whether or not to vote in favour of the Scheme; and
- known to any Origin Director at the date of lodging this Scheme Booklet with ASIC for registration,

which has not previously been disclosed to Origin Shareholders.

9. Additional information *continued*

9.9 Supplementary disclosure

Origin will issue a supplementary document to this Scheme Booklet if it becomes aware of any of the following between the date of this Scheme Booklet and the Second Court Date:

- a material statement in this Scheme Booklet is false or misleading in a material respect;
- a material omission from this Scheme Booklet;
- a significant change affecting a matter included in this Scheme Booklet; or
- a significant new matter has arisen and it would have been required to be included in this Scheme Booklet if it had arisen before the date of this Scheme Booklet.

Depending on the nature and timing of the changed circumstances, and subject to obtaining any relevant approvals, Origin may circulate and publish any supplementary document by:

- making an announcement to the ASX;
- placing an advertisement in a prominently published newspaper which is circulated generally throughout Australia;
- posting the supplementary document to Origin Shareholders at their address shown on the Origin Share Register; and/or
- posting a statement on Origin's website at https://www.originenergy.com.au/,

as Origin, in its absolute discretion, considers appropriate.

10. Glossary

10.1 Definitions

In this Scheme Booklet, unless the context otherwise appears, the following terms have the meanings shown below:

Term	Meaning
ACCC	Australian Competition and Consumer Commission.
Additional Consideration	where the Implementation Date has not occurred by 30 November 2023, an amount equal to an additional $0.001479 for each day that has elapsed from (and including) 1 December 2023 to (and including) the date on which Implementation occurs.
Affiliate	in respect of a person (the primary person), a person: 1) Controlled directly or indirectly by the primary person; 2) Controlling directly or indirectly the primary person; or 3) who is Controlled, directly or indirectly, by a person or persons who Control the primary person.
ASIC	the Australian Securities and Investments Commission.
Associate	has the meaning set out in section 12 of the Corporations Act, as if subsection 12(1) of the Corporations Act included a reference to the Scheme Implementation Deed and Origin was the designated body.
Assumed Origin Share Number	the lower of the number of Origin Shares on issue as at the Scheme Record Date and 1,728,724,644 Origin Shares.
ASX	ASX Limited ABN 98 008 624 691 and, where the context requires, the financial market that it operates.
ATO	the Australian Taxation Office.
AUD Scheme Consideration	the Australian dollar amount of the Scheme Consideration in respect of each Scheme Share determined in accordance with the Scheme, which, if the Scheme is implemented on or around 18 December 2023, is an amount equal to: 1) $11,391,211,919 divided by the Assumed Origin Share Number; *plus* 2) the amount of any Additional Consideration; *less* 3) the cash amount per Origin Share of the Permitted Dividends.
Australia Pacific LNG	Australia Pacific LNG Pty Limited (ABN 68 001 646 331).
Barrenjoey	Barrenjoey Advisory Pty Limited.
bbl	barrel of crude oil.
BEP	Brookfield Renewable Partners L.P.

10. Glossary *continued*

Term	Meaning
BGTF Consortium	the Brookfield-led consortium currently comprising the Brookfield Global Transition Fund I, Brookfield Renewable Partners L.P. and various passive institutional investors to be managed or advised by Brookfield, together with their institutional partners, Buckland Investment Pte. Ltd. (an indirectly wholly-owned subsidiary of GIC (Ventures) Pte. Ltd.) and Davis Investments Pte. Ltd. (an indirect wholly-owned subsidiary of Temasek Holdings (Private) Limited.
BGTF Consortium Member	a member of the BGTF Consortium.
Bid Conduct Deed	the bid conduct deed between EIG Management Company, LLC, Brookfield and Bidder dated 27 March 2023.
Bidder	MidOcean Reef Bidco Pty Ltd ABN 22 665 950 318.
Bidder Group	1) Bidder and each of its Related Bodies Corporate; 2) EIG and MidOcean Energy, LLC; 3) Brookfield LP and each BGTF Consortium Member; 4) each specified investor as agreed between Origin, Bidder and Brookfield Renewable Group Australia Pty Ltd; and 5) each Related Entity or Affiliate of the above, which for the avoidance of doubt includes: 6) Brookfield Corporation, Brookfield Asset Management Ltd. and any person Controlled directly or indirectly by Brookfield Corporation or Brookfield Asset Management Ltd.; and 7) EIG Asset Management, LLC and any person Controlled directly or indirectly by EIG Asset Management, LLC, and a reference to a **Bidder Group Member** or a member of the **Bidder Group** is to any of them.
Bidder Director	a member of the Bidder board of directors.
Bidder Information	information regarding Bidder and each Bidder Group Member provided by Bidder to Origin in writing for inclusion in the Scheme Booklet, including: 1) the entire content of section 6; 2) information about Bidder and other Bidder Group Members, their businesses, interests and dealings in Origin Shares, and funding for the Scheme; and 3) any other information required under the Corporations Act, Corporations Regulations or RG 60 to enable the Scheme Booklet to be prepared that the parties to the Scheme Implementation Deed agree is 'Bidder Information' and that is identified in this Scheme Booklet as such. For the avoidance of doubt, the Bidder Information excludes the Origin Information, the Independent Expert's Report and any description of the taxation effect of the Transaction on Scheme Shareholders prepared by an external adviser to Origin.
Brookfield	Brookfield Corporation, Brookfield Asset Management Ltd. and, where appropriate, also includes each of their respective Affiliates.

Term	Meaning
Brookfield Corporation	Brookfield Corporation (Ontario Corporation Number 1644037) of Suite 100, 181 Bay Street, Toronto, ON M5J 2T3.
Brookfield EM Business	the business to be acquired by entities owned by Brookfield LP following the Internal Restructure and in accordance with the Terms of the Sale Transaction, comprising Origin Group's operations in respect of: 1) the Origin Group's energy retailing business (including the Community Energy Services business), generating assets (including gas fired peaking power stations, renewable energy generators, coal fired power station and pumped hydro power station), energy wholesale and trading businesses (including PPAs and swap contracts), development assets relating to energy production and storage (including the Eraring battery project and certain future fuels development projects) in Australia, the Origin Group's investment in Octopus Energy, a nature based carbon fund managed by Climate Asset Management and the Origin Group's LPG business and domestic gas trading business (including related fuel supply and gas transportation arrangements); 2) certain future fuels and hydrogen development projects and the carbon offsets business that, prior to completion of the Internal Restructure, are part of the MidOcean IG Business; 3) any hedging, swap, derivative or analogous arrangements entered into by the Origin Group in connection with the Energy Markets Business as described in paragraph 1 of this definition; and 4) the remaining business of the Origin Group other than the EIG IG Business.
Brookfield GP	EOS Aggregator GP Limited.
Brookfield LP	EOS Aggregator (Bermuda) L.P.
Buckland Investment	Buckland Investment Pte. Ltd.
Business Day	a day that is not a Saturday, Sunday, public holiday or bank holiday in Sydney, Australia.

10. Glossary *continued*

Term	Meaning
Competing Proposal	any offer, proposal, agreement, arrangement or transaction (or expression of interest), whether existing before, on or after the date of the Scheme Implementation Deed, which, if entered into or completed, would result in a person (either alone or together with any associate), other than Bidder and its Associates: 1) directly or indirectly acquiring a Relevant Interest in, or having a right to acquire, a legal, beneficial or economic interest in, or control of, 20% or more of the shares of Origin (other than as a custodian, nominee or bare trustee); 2) acquiring control (within the meaning given in section 50AA of the Corporations Act) of Origin or any of its material Related Bodies Corporate; 3) directly or indirectly acquiring or becoming the holder of, or otherwise acquiring or having a right to acquire, a legal, beneficial or economic interest in, or control of, all or substantially all of the business or assets of: (a) Origin and its Related Bodies Corporate (as a whole); (b) the Integrated Gas Business; or (c) the Energy Markets Business; 4) otherwise directly or indirectly acquire, merge or amalgamate with, or acquire a controlling shareholding or economic interest in all or substantially all of: (a) Origin and its material Related Bodies Corporate (as a whole); (b) the Integrated Gas Business; or (c) the Energy Markets Business, or in all or substantially all of the assets or business of: (a) Origin and its material Related Bodies Corporate (as a whole); (b) the Integrated Gas Business; or (c) the Energy Markets Business; or 5) requiring Origin to abandon, or otherwise fail to proceed with, the Transaction, where Integrated Gas Business and Energy Markets Business are each as defined in the Scheme Implementation Deed.
ConocoPhillips	ConocoPhillips Australia Pacific LNG Pty Ltd and its subsidiaries.
Consortium	the consortium of investors comprising Brookfield Asset Management Inc., together with its affiliates and their managed funds, and MidOcean Energy, LLC, which is managed by EIG, who made a non-binding proposal on 10 November 2022 and revised proposal on 22 February 2023 for the acquisition of Origin.
Control	with respect to any person (other than an individual) the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such person whether through the ownership of voting securities, by agreement or otherwise, and for the avoidance of doubt, a general partner is deemed to Control a limited partnership of which it is the general partner and, solely for the purposes of the Scheme Implementation Deed, a fund advised or managed directly or indirectly by a person will also be deemed to be Controlled by such person.
Corporations Act	the *Corporations Act 2001* (Cth), as modified or varied by ASIC.
Court	the Supreme Court of New South Wales or such other court of competent jurisdiction under the Corporations Act agreed to in writing by Bidder and Origin.
CSG	coal seam gas.
Currency Election	has the meaning given in section 4.4.
Davis Investments	Davis Investments Pte. Ltd.

Term	Meaning
Deed Poll	a deed poll in the form of Annexure 3 under which Bidder covenants in favour of the Scheme Shareholders to perform the obligations attributed to Bidder under the Scheme.
Dividends	the Special Dividend (if paid) and the Permitted Dividends.
Effective	when used in relation to the Scheme, the coming into effect, under subsection 411(10) of the Corporations Act, of the order of the Court made under paragraph 411(4)(b) of the Corporations Act in relation to the Scheme.
Effective Date	the date on which the Scheme becomes Effective, currently expected to be 28 November 2023.
EIG	EIG Management Company, LLC.
Election Form	the election form that a Scheme Shareholder may request from the Origin Registry to make a Currency Election under which each Scheme Shareholder may elect to receive the USD Scheme Consideration in US dollars in respect of all of their Scheme Shares.
Election Time	7.00pm on 4 December 2023 or such other time as agreed in writing by Bidder and Origin.
End Date	30 April 2024, or such other date as agreed in writing by the parties.
Eos Finco	Eos Finco Pty Ltd (ACN 666 072 546).
Excluded Shareholder	any Origin Shareholder who is a member of the Bidder Group or any Origin Shareholder who holds any Origin Shares on behalf of, or for the benefit of, any member of the Bidder Group and does not hold Origin Shares on behalf of, or for the benefit of, any other person.
Exclusivity Period	the period from and including the date of the Scheme Implementation Deed to the earlier of: 1) the date of termination of the Scheme Implementation Deed; 2) the End Date; and 3) the Effective Date.
FIRB	the Foreign Investment Review Board.
FIRB Applicant	in the single FIRB application to be submitted by Bidder in respect of clause 3.1(a) of the Scheme Implementation Deed: 1) in respect of the Scheme Transaction – Bidder; 2) in respect of the Sale Transaction – any relevant entity acquiring the Brookfield EM Business that is agreed between Origin, Bidder and Brookfield; and 3) in respect of the Internal Restructure – each Origin Group Member acquiring an interest in an entity pursuant to the Internal Restructure where such acquisition constitutes a notifiable action and/or notifiable national security action under the *Foreign Acquisitions and Takeovers Act 1975* (Cth).

10. Glossary *continued*

Term	Meaning
First Court Date	the first day on which an application made to the Court for an order under subsection 411(1) of the Corporations Act convening the Scheme Meeting is heard, or, if the application is adjourned or subject to appeal for any reason, the day on which the adjourned application is heard.
Foreign Investment Clearance	each of the following: 1) the approval by the French Ministry for the Economy of the consummation of each of the Scheme and the Sale Transaction pursuant to articles L.151-3 and seq. and R.151-1 and seq. of the French *Code Monétaire et Financier* or written statement from the French Ministry for the Economy that no such approval is required for the consummation of each of the Scheme Transaction and the Sale Transaction pursuant to article R.151-4 of the French *Code Monétaire et Financier*; 2) either (a) the prior approval of the Scheme or the Sale Transaction to the extent each of them is deemed to constitute a restricted transaction within the scope of article 7.bis of Spanish Law 19/2003, of 4 July, on the legal regime of capital flows and economical transactions with foreign countries (*Law 19/2003*), by the Council of Ministers or the Director General of International Trade and Investments (or any authority that assumes their role for these purposes), or (b) the confirmation in writing by the Deputy Director General of Foreign Investment (or any authority that assumes their role for these purposes) that the Scheme or the Sale Transaction is not a restricted transaction within the scope of the provision mentioned above; and 3) any clearances, waivers, rulings, approvals, reliefs, confirmations, exemptions, consents or declarations, in any jurisdiction that are required by law, or by a Government Agency, to implement the Transaction as agreed by the parties in writing.
Government Agency	any foreign or Australian government or governmental, semi-governmental, administrative, fiscal or judicial body, department, commission, authority, tribunal, agency or entity (including any stock or other securities exchange), or any minister of the Crown in right of the Commonwealth of Australia or any State, and any other federal, state, provincial, or local government, whether foreign or Australian.
Grant Samuel	Grant Samuel & Associates Pty Limited.
GST	goods and services tax or similar value added tax levied or imposed in Australia under the GST Law or otherwise on a supply.
GST Act	the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).
GST Law	has the same meaning as in the GST Act.
GW	Gigawatt.
HY23 Interim Dividend	the interim dividend for the half year ending 31 December 2022, as announced by Origin on 16 February 2023.
Implementation	implementation of the Scheme.

Term	Meaning
Implementation Date	the fifth Business Day after the Scheme Record Date, or such other date after the Scheme Record Date as Origin, Brookfield Renewable Group Australia Pty Ltd and Bidder agree in writing, currently expected to be 18 December 2023.
Implied Scheme Consideration at March 2023	has the meaning given in the Letter from the Chair of the Origin Board.
Independent Expert	Grant Samuel, the independent expert in respect of the Scheme appointed by Origin.
Independent Expert's Report	the report issued by the Independent Expert in connection with the Scheme, as set out in Annexure 1.
Independent Technical Specialist	Gaffney, Cline & Associates.
Independent Technical Specialist's Report	the report of the Independent Technical Specialist prepared for inclusion in the Independent Expert's Report.
Initial Consideration	has the meaning given in section 1.2(c).
Internal Restructure	an internal restructure of the Origin Group, under which the Origin Group will be divided into two separate businesses being the MidOcean IG Business and the Brookfield EM Business.
ITAA 1997	*Income Tax Assessment Act 1997* (Cth).
Jarden	any entity within the Jarden Group of companies, where 'Jarden Group' means Jarden Australia Pty Ltd, Jarden Securities Limited and any of their subsidiaries, affiliates, ultimate holding company and any subsidiaries or affiliates of such holding company.
Last Practicable Date	10 October 2023, being the last practicable trading date prior to the date of this Scheme Booklet.
Listing Rules	the official listing rules of the ASX.
LPG	liquified petroleum gas.
LNG	Natural Gas which is in a liquid state, at or below its boiling point and at a pressure of approximately one atmosphere.
MidOcean Energy	MidOcean Energy, LLC and its Affiliates.

10. Glossary *continued*

Term	Meaning
MidOcean IG Business	the business to be held by Bidder following completion of the Internal Restructure and Sale Transaction, comprising the Origin Group's operations in respect of: 1) its shareholding in Australia Pacific LNG and associated arrangements, including upstream operator, CSG marketing agent and corporate service provider services provided to Australia Pacific LNG; 2) the commodity and foreign exchange hedging arrangements associated with Origin's shareholding in Australia Pacific LNG and LNG trading activity as set out in the hedging protocol agreed between Bidder and Origin; 3) its upstream gas exploration assets, including its interests in the Cooper-Eromanga Basin, conventional development resource in the offshore Browse Basin and residual rights and obligations in respect of the Canning Basin assets and the royalty agreement for the recently divested Beetaloo Basin assets; and 4) the sale and purchase of LNG as part of its LNG trading business and associated LNG hedging arrangements.
MMbbl	million barrels of oil.
MMboe	million of barrels of oil equivalent.
MMBtu	million British thermal units.
Mtpa	million tonnes per annum.
MW	megawatt = 10^6 watts.
Natural Gas	any hydrocarbon or mixture of hydrocarbons consisting essentially of methane, other hydrocarbons and non-combustible gases in a gaseous state, which is extracted from the subsurface of the earth in its natural state, separately or together with liquid hydrocarbons.
NEM	National Electricity Market.
Octopus Energy	Octopus Energy Group Limited.
Origin	Origin Energy Limited ACN 000 051 696.
Origin Board	the board of directors of Origin.
Origin Director	a member of the Origin Board.
Origin Equity Incentives	1) Origin share rights, being an entitlement to receive an Origin Share, or in certain circumstances a cash equivalent payment, subject to satisfaction of applicable vesting and/or service conditions; and 2) Origin restricted shares, being Origin Shares which are subject to any restrictions based on performance or service conditions (including vesting conditions, disposal restrictions, holding locks, forfeiting restrictions or service conditions).

Term	Meaning
Origin Group	Origin and each of its Subsidiaries, and a reference to an **Origin Group Member** or a **member of the Origin Group** is to Origin or any of its Subsidiaries.
Origin Material Adverse Change	has the meaning given to it in clause 1.1 of Schedule 1 of the Scheme Implementation Deed.
Origin Prescribed Occurrence	has the meaning given to it in clause 1.1 of Schedule 1 of the Scheme Implementation Deed.
Origin Regulated Event	has the meaning given to it in clause 1.1 of Schedule 1 of the Scheme Implementation Deed.
Origin Share	a fully paid ordinary share in the capital of Origin.
Origin Share Register	the register of members of Origin maintained in accordance with the Corporations Act.
Origin Share Registry	Boardroom Pty Limited.
Origin Shareholder	each person who is registered as the holder of an Origin Share in the Origin Share Register.
Permitted Dividend	any interim dividend (in respect of the financial half-year ending 31 December) or final dividend (in respect of the financial year ending 30 June), in each case paid by Origin in accordance with the Scheme Implementation Deed on or before the Implementation Date, including: 1) the interim dividend of 16.5 cents per Origin Share paid on 24 March 2023; and 2) the final dividend of 20 cents per Origin Share paid on 29 September 2023.
PJ	petajoule = 10^{15} joules.
PPA	Power Purchase Agreement.
Proposed Transactions	has the meaning given in section 6.1.
Related Body Corporate	has the meaning given in section 50 of the Corporations Act.
Related Entity	1) a Related Body Corporate; or 2) an Affiliate.
Related Person	in respect of a party or its Related Entities, each director, officer, employee, adviser, agent or representative of that party or Related Entity. For the purposes of this definition, Brookfield is a Related Entity of Bidder.
Relevant Interest	has the meaning given in sections 608 and 609 of the Corporations Act.

10. Glossary *continued*

Term	Meaning
Requisite Majorities	in relation to the Scheme Resolution, a resolution passed by: 1) unless the Court orders otherwise, a majority in number (more than 50%) of Origin Shareholders present and voting at the Scheme Meeting (either in person or by proxy, attorney or, in the case of corporate Origin Shareholders, body corporate representative); and 2) at least 75% of the total number of votes cast on the Scheme Resolution at the Scheme Meeting by Origin Shareholders present and voting (either in person or by proxy, attorney or, in the case of corporate Origin Shareholders, body corporate representative).
Sale Transaction	the sale and purchase of the Brookfield EM Business, being subject to and to occur following completion of the Internal Restructure, in accordance with the steps agreed between Brookfield and Bidder.
Scheme	the scheme of arrangement under Part 5.1 of the Corporations Act between Origin and the Scheme Shareholders, the form of which is attached as Annexure 2, subject to any alterations or conditions made or required by the Court under subsection 411(6) of the Corporations Act and agreed to in writing by Bidder, Brookfield and Origin.
Scheme Booklet	this document being the explanatory statement in respect of the Scheme, which has been prepared by Origin in accordance with section 412 of the Corporations Act.
Scheme Consideration	the consideration to be provided by Bidder in respect of each Scheme Share, determined in accordance with the Scheme, comprising: 1) the AUD Scheme Consideration, as adjusted in accordance with clause 4.3(b) of the Scheme Implementation Deed to deduct the Special Dividend of 39 cents if determined and paid by Origin; *plus* 2) the USD Scheme Consideration, which will be paid in Australian dollars, unless the Scheme Shareholder makes a valid Currency Election in which case it will be paid in US dollars.
Scheme Implementation Deed	the Scheme Implementation Deed dated 27 March 2023 between Origin, Bidder and Brookfield Renewable Group Australia Pty Ltd, a copy of which was released to the ASX on 27 March 2023.
Scheme Meeting	the meeting of Origin Shareholders (other than Excluded Shareholders) ordered by the Court to be convened under subsection 411(1) of the Corporations Act to consider and vote on the Scheme and includes any meeting convened following any adjournment or postponement of that meeting.
Scheme Record Date	7.00pm (Sydney time) on 11 December 2023 or such other time and date as Origin, Bidder and Brookfield Renewable Group Australia Pty Ltd agree in writing.
Scheme Resolution	the resolution to the terms of the Scheme, as set out in the Notice of Scheme Meeting in Annexure 4.
Scheme Shareholder	a holder of Origin Shares recorded in the Origin Share Register as at the Scheme Record Date (other than an Excluded Shareholder).
Scheme Shares	all Origin Shares held by the Scheme Shareholders as at the Scheme Record Date.

Term	Meaning
Scheme Transaction	the acquisition of the Scheme Shares by Bidder through implementation of the Scheme.
Second Court Date	the first day on which an application made to the Court for an order under paragraph 411(4)(b) of the Corporations Act approving the Scheme is heard, currently expected to be 27 November 2023, or, if the application is adjourned or subject to appeal for any reason, the day on which the adjourned application or appeal is heard.
Second Court Hearing	the hearing of the application made to the Court for an order pursuant to section 411(4)(b) of the Corporations Act approving the Scheme.
Special Dividend	a fully franked special dividend of 39 cents per Origin Share held by an Origin Shareholder as at the Special Dividend Record Date, which Origin may in its discretion determine to pay in accordance with the Scheme Implementation Deed.
Special Dividend Payment Date	the date of payment of the Special Dividend (if any), as determined by the Origin Directors in their sole discretion, currently expected to be 8 December 2023.
Special Dividend Record Date	the record date for the Special Dividend (if any), as determined by the Origin Directors in their sole discretion, currently expected to be 7.00pm (Sydney time) on 30 November 2023.
Stamp Duty	any stamp, transfer or transaction duty or similar charge imposed by the laws of an Australian state or territory.
Superior Proposal	a bona fide written Competing Proposal received by Origin that the Origin Board determines, acting in good faith: 1) is reasonably capable of being completed, taking into account all relevant aspects of the Competing Proposal (including its conditions, the identity and financial condition of the party or parties making the Competing Proposal, and all relevant legal, financial, regulatory and other matters); and 2) would, or would be reasonably likely to, if completed substantially in accordance with its terms, provide a superior outcome overall for Origin Shareholders than the Transaction (as the Transaction is amended or varied based on the most recent proposal provided to Origin from Bidder, including following application of the matching right set out in the SID, if applicable), taking into account all relevant factors, including the terms, conditions and other aspects of the Competing Proposal and the Transaction.
Subsidiary	has the meaning given in Division 6 of Part 1.2 of the Corporations Act.
Takeovers Panel	the Australian Takeovers Panel.
Taxation Information	the description of the taxation effect of the Transaction on Scheme Shareholders contained in this Scheme Booklet, including section 8 (which information has been prepared by Herbert Smith Freehills).
TBtu	Trillion British thermal units.
Total Cash Payment	has the meaning given in section 4.2(b).

10. Glossary *continued*

Term	Meaning
Transaction	each of the Scheme and the Sale Transaction.
TWh	terawatt hour = 10^9 kilowatt hours.
USD Scheme Consideration	the US dollar amount of the Scheme Consideration in respect of each Scheme Share determined in accordance with the Scheme, which, if the Scheme is implemented on or around 18 December 2023, is an amount equal to US$2,836,766,740 divided by the Assumed Origin Share Number.
VWAP	volume weighted average price.

10.2 Interpretation

In this Scheme Booklet, unless expressly stated or the context otherwise appears:

a) words and phrases have the same meaning (if any) given to them in the Corporations Act;

b) words importing a gender include any gender;

c) words importing the singular include the plural and vice versa;

d) an expression importing a natural person includes any company, partnership, joint venture, association, corporation or other body corporate and vice versa;

e) a reference to a section or annexure is a reference to a section of and an annexure to this Scheme Booklet as relevant;

f) a reference to any statute, regulation, proclamation, ordinance or by law includes all statutes, regulations, proclamations, ordinances, or by laws amending, varying, consolidating or replacing it and a reference to a statute includes all regulations, proclamations, ordinances and by laws issued under that statute;

g) headings and bold type are for convenience only and do not affect the interpretation of this Scheme Booklet;

h) a reference to time is a reference to time in Sydney, Australia;

i) a reference to writing includes facsimile transmissions; and

j) a reference to dollars, $, cents, ¢ and currency is a reference to the lawful currency of the Commonwealth of Australia.

Annexure 1.
Independent Expert's Report

GRANT SAMUEL

18 October 2023

The Directors
Origin Energy Limited
100 Barangaroo Avenue
Barangaroo NSW 2000

Dear Directors

Proposal from the BGTF Consortium and MidOcean

1 Introduction

On 27 March 2023, Origin Energy Limited ("Origin") announced that it had entered into a binding scheme implementation deed with Brookfield Renewable Group Australia Pty Ltd and MidOcean Reef BidCo Pty Ltd[1] ("MidOcean") for the acquisition by a Brookfield-led consortium of investors (the "BGTF Consortium") and EIG Management Company, LLC ("EIG") (together, the "Consortium")[2] of all the issued shares in Origin by way of a scheme of arrangement ("Scheme").

Under the Scheme, Origin shareholders will receive total consideration ("Scheme consideration") of[3]:

- $6.589 per share; plus
- US$1.641 per share.

Shareholders will have the Scheme consideration paid in Australian dollars unless they elect to have the US dollar component of the Scheme consideration paid in US dollars. If no election is made, the US dollar component of the cash consideration will be converted to Australian dollars based on the prevailing exchange rate shortly prior to implementation of the Scheme.

The Scheme consideration payable will be reduced by any dividends paid by Origin prior to implementation of the Scheme, including the interim $0.165 per share fully franked dividend paid to shareholders on 24 March 2023 and the final $0.20 per share fully franked dividend paid to shareholders on 29 September 2023. The reduction in the Scheme consideration due to the payment of dividends will reduce the Australian dollar component of the Scheme consideration.

In addition:

- a fully franked special dividend of $0.39 per share may be paid to shareholders subject to certain conditions. Any such special dividend will be considered by the Origin Board closer to the time, but prior to implementation, of the Scheme and will reduce the Australian dollar component of the cash consideration payable to shareholders; and

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1 An entity controlled by EIG (together with its affiliates).

2 The Consortium comprises entities that control or manage MidOcean and the BGTF Consortium, being those entities that will ultimately acquire Origin and its business if the Scheme is implemented. The BGTF Consortium currently comprises the Brookfield Global Transition Fund I, Brookfield Renewable Partners L.P. and various passive institutional investors to be managed or advised by Brookfield together with their institutional partners, Buckland Investment Pte. Ltd. (an indirectly wholly owned subsidiary of GIC (Ventures) Pte. Ltd. and Davis Investments Pte. Ltd. (an indirect wholly owned subsidiary of Temasek Holdings (Private) Limited).

3 On announcement of the Scheme, the Scheme consideration was $5.78 per share plus US$2.19 per share. The consideration mix between Australian dollars and US dollars changed as a result of certain US dollar payments received by Origin being converted to Australian dollars and elections by the Consortium to convert an additional fixed amount of US dollar consideration into Australian dollars.

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Annexure 1. Independent Expert's Report *continued*

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- the cash consideration payable to shareholders will be increased by approximately 4.5 cents per month (accruing on a daily basis)[4] to the extent that implementation of the Scheme is delayed beyond 30 November 2023. Based on the implementation date set out in the Scheme Booklet of 18 December 2023, shareholders will receive additional consideration of $0.027 per share.

As a result, at the date of this report, the cash consideration that will be received by shareholders (excluding any special dividend) will comprise:

- $6.251 per share (i.e. $6.589 per share reduced by the interim $0.165 per share dividend paid to shareholders on 24 March 2023 and the final $0.20 per share dividend paid to shareholders on 29 September 2023 and increased by the additional consideration of $0.027 per share); plus
- US$1.641 per share.

The Scheme followed a number of earlier change of control proposals from the Consortium, including an initial indicative proposal on 8 August 2022 at a cash consideration of $7.95 per share[5] and a further indicative proposal on 18 September 2022 at a cash consideration of $8.70-8.90 per share[5] (neither of which was announced to the market at the time they were received as they were confidential) as well as an indicative, conditional and non-binding proposal at a price of $9.00 cash per share[5] ("Indicative Proposal") announced to the market on 10 November 2022 and a revised conditional and non-binding proposal at a price of $8.90 per share[5] ("Revised Proposal") announced to the market on 22 February 2023.

The Scheme is subject to a number of conditions and regulatory approvals that are set out in Section 4.6 of the Scheme Booklet. Other elements of the Scheme include customary exclusivity and competing proposal notifications provided by Origin to the Consortium and a matching right in favour of the Consortium, the potential payment of a reimbursement fee by Origin ($151 million) in certain circumstances should the Scheme not proceed and an obligation for Origin to ensure that no Origin equity incentives are in existence on the Scheme record date.

The Origin Board has unanimously recommended that shareholders vote in favour of the Scheme, in the absence of a superior proposal and subject to an independent expert concluding that the Scheme is in the best interests of Origin shareholders. Subject to the same qualifications, each Origin director intends to vote all shares they hold or control in Origin in favour of the Scheme.

The directors of Origin have engaged Grant Samuel & Associates Pty Limited ("Grant Samuel") to prepare an independent expert's report setting out whether, in its opinion, the Scheme is in the best interests of Origin shareholders. A copy of the report (including this letter) will accompany the Scheme Booklet to be sent to shareholders by Origin. This letter contains a summary of Grant Samuel's opinion and main conclusions.

2 Opinion

Grant Samuel has concluded that the Scheme is fair and reasonable. Accordingly, in Grant Samuel's opinion, the Scheme is in the best interests of Origin shareholders in the absence of a superior proposal.

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4 The additional consideration is equal to $0.001479 per share for each day that has elapsed from (and including) 1 December 2023 to (and including) the date on which implementation occurs.

5 Reduced by the value of any dividends declared or paid by Origin prior to implementation of the proposed scheme of arrangement. The cash consideration under the Revised Proposal comprised $8.90 per share for the first 100,000 shares held by each Origin shareholder and for shares above that threshold, $4.334 per share plus US$3.194 per share.

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3 Key Conclusions

- **Valuation of Origin is both challenging and subject to considerable uncertainty**

  The past three and a half years have seen unprecedented upheaval in both Australian and global energy markets. Initially, COVID-19 disrupted the world economy. As COVID-19 concerns began to fall away, supply chain issues started to arise. Then, in early 2022, the Russia-Ukraine war caused energy supply shortages across Europe and dramatic shifts in global energy prices, which have been exacerbated by the recent conflict in Israel. Rampant inflation (caused in part by government responses to COVID-19) and the consequent sharp rises in interest rates have added further pressures.

  Even when some normality is restored (and it is now starting to happen), the energy industry will face even greater challenges going forward with a fundamental transformation over the next two decades that will see the phasing out of fossil-fuel based energy (initially coal and, more gradually, oil and gas) and replacement with renewable sources (primarily solar and wind, but also hydro and geothermal). However:

  - while the direction of the energy transition is clear, the precise form, timing and economics of market developments is far from certain;
  - closures of coal-fired power stations can cause material step changes in power supply volumes available to the market;
  - there are substantial logistical, financial and technological challenges in developing assets (such as long duration batteries) that can enable renewables to provide sufficient "firm" baseload power over extended periods; and
  - the net result is the prospect of (possibly sustained) periods of significant dislocation in energy markets with potential upsides and downsides for industry participants.

  Against this backdrop, valuation of Origin is both challenging and subject to considerable uncertainty.

- **The equity in Origin has been valued in the range $14.6-16.4 billion, which corresponds to a value of $8.45-9.48 per share**

  The valuation is summarised below:

ORIGIN - VALUATION SUMMARY ($ MILLIONS)

	FULL REPORT SECTION REFERENCE	VALUATION RANGE	
		LOW	HIGH
Energy Markets	6.4	9,000	10,000
Other Integrated Gas	6.5	13	26
Corporate costs (net of savings)	6.6	(460)	(495)
Wholly owned business operations		**8,553**	**9,531**
Investment in Octopus Energy (20% interest)	6.7	2,250	2,450
Investment in APLNG (27.5% interest)	6.8	6,894	7,506
Other assets and liabilities	6.9	427	427
Enterprise value		**18,124**	**19,914**
Adjusted net borrowings at 30 June 2023	6.10	(3,538)	(3,538)
Value of equity		**14,586**	**16,376**
Fully diluted shares on issue (millions)[6]	4.6	1,726.9	1,726.9
Value per share		**$8.45**	**$9.48**

[6] Fully diluted shares on issue assumes that the vesting of 2,455,873 performance share rights, 3,114,057 restricted share rights and 306,830 matching share rights is satisfied by the issue of new Origin shares, after allowing for the 1,746,760 treasury shares. The result is the issue of an additional 4,130,000 Origin shares, increasing the shares on issue from 1,722,747,671 to 1,726,877,671.

Annexure 1. Independent Expert's Report *continued*

GRANT SAMUEL

The valuation represents the estimated full underlying value of Origin assuming 100% of the company was available to be acquired and includes a premium for control. The valuation is on an ex dividend basis (i.e. after the final FY23 dividend of $0.20 per share that was paid on 29 September 2023).

The value exceeds the price at which, based on current market conditions, Grant Samuel would expect Origin shares to trade on the ASX in the absence of a takeover offer. Shares in a listed company normally trade at a discount of 15-25% to the underlying value of the company as a whole (but this discount does not always apply).

The principal approach to valuing Origin's business operations and its investments in Octopus Energy Group Limited ("Octopus Energy") and Australia Pacific LNG Pty Limited ("APLNG") was by DCF analysis. Regard was also had to the capitalisation of earnings valuation methodology (multiples of EBITDA and EBIT) and other measures commonly used in the relevant industries (i.e. value per retail energy supply customer for Octopus Energy and multiples of resources, reserves and production for APLNG) as well as recent transactions involving interests in Octopus Energy and APLNG.

The DCF analysis was based on Origin's Business Operation Cash Flow Models[7] adapted as appropriate by Grant Samuel. The financial models use as their starting point the balance sheet of Origin at 30 June 2023 and project ungeared after tax cash flows from 1 July 2023. The cash flows were discounted to a NPV using nominal after tax discount rates appropriate for each business operation and investment. A number of scenarios have been considered for each business operation and investment. The NPV outcomes for APLNG were estimated based on production scenarios developed in conjunction with, and reflecting the technical judgement of, the independent technical specialist, Gaffney, Cline & Associates Pty. Ltd. ("GaffneyCline"). Technical valuation assumptions (e.g. petroleum resource and reserve estimates, development and production profiles, expected future operating, capital and rehabilitation costs, reserve extensions and environmental factors) for each scenario were reviewed in detail, and estimated by, GaffneyCline. Grant Samuel determined key assumptions relating to commodity prices and exchange rates.

The value that Grant Samuel has attributed to Origin's business operations and its investments in Octopus Energy and APLNG are overall judgements having regard to the NPV outcomes of the various scenarios, the evidence from other methodologies (e.g. multiples of earnings and resources) and other factors such as parameters from recent transactions involving the business/investment. The value is not based on any one scenario or set of assumptions.

The valuation includes synergies that any acquirer of Origin would be able to achieve, including savings in listed company costs and other corporate overheads. These savings have been included in the negative valuation range attributed to corporate costs.

Other assets and liabilities include the LGC cash refund, equity, debt and other securities, the net after tax proceeds from the sale of Origin's LPG business in the Pacific, Origin's 25% interest in the Gaschem joint ventures and provisions that are not included in the cash flows for Energy Markets, Other Integrated Gas and corporate costs.

[7] The Business Operation Cash Flow Models are detailed cash flow models for Origin's Energy Markets and Other Integrated Gas business operations, Octopus Energy and APLNG prepared by Origin management which commence on 1 July 2023 and reflect Origin's assumptions for its 2023 Long Term Financial Plan.

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- **The DCF analysis generates NPVs that support the valuation ranges for Origin's Energy Markets business as well as its investments in Octopus Energy and APLNG**

  DCF models have been developed for Origin's Energy Markets business as well as Octopus Energy and APLNG. The DCF models are based on Origin's FY24 Budget and the Business Operation Cash Flow Models and use Origin's balance sheet at 30 June 2023 as their starting point[8]. Grant Samuel has considered a number of scenarios based on discussions with Origin management.

  The DCF analysis for each of the business operations and investments:

  - allows for the key drivers of revenue, earnings and capital expenditure to be modelled (and for each separate business within Energy Markets and Octopus Energy);
  - projects nominal after tax cash flows from 1 July 2023 to:
    - 30 June 2040 for Energy Markets (except generation assets which continue until 30 June 2058);
    - 30 June 2033 for Octopus Energy; and
    - 30 June 2064 for APLNG (the life of the project),

    assuming a long term inflation rate of 2.5% for revenue and costs denominated in Australian dollars and British pounds;
  - calculates terminal values at the end of the projection period to represent the value of cash flows in perpetuity for Energy Markets and Octopus Energy, assuming a terminal growth rate of:
    - 2.5% for Energy Markets (except generation which has no terminal value as it comprises a portfolio of finite life assets); and
    - ~2.5% for Octopus Energy (a blended rate reflecting a lower (~1%) terminal growth rate for Retail Energy Supply and a higher (>4%) terminal growth rate for Platform Licensing);
  - applies discount rates of:
    - 8.5-9.0% for Energy Markets;
    - 9.5-10.0% for Octopus Energy (a blended discount rate for Octopus Energy's business operations (Retail Energy Supply, Platform Licensing and Octopus Renewables); and
    - 10.0-11.0% for APLNG and Other Integrated Gas.

    Appendix 3 to the full report sets out a detailed analysis of the selection of these discount rates;
  - assumes a flat nominal US$/A$ exchange rate of 0.65 for the duration of the APLNG valuation model (i.e. this exchange rate has been used to translate the future revenue for APLNG to calculated Australian dollar denominated cash flows and NPVs for the DCF analysis). Origin's investment in Octopus Energy has been valued in British pounds and converted to Australian dollars at a £/A$ exchange rate of 0.50; and
  - considers a number of different scenarios. Sections 6.4.2, 6.7.2 and 6.8.2 of the full report set out a description of the assumptions underlying the scenarios for each business operation and investment.

  The NPV outcomes and the valuation ranges selected by Grant Samuel are depicted diagrammatically below:

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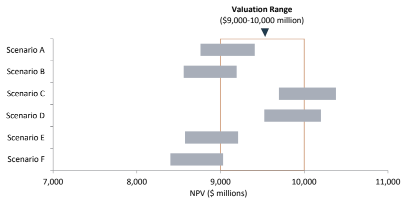
[8] Except for Octopus Energy, which has a Business Operation Cash Flow Model that projects cash flows based on Octopus Energy's April year end. Grant Samuel has converted these cash flows to a June year end (consistent with Origin's year end and the valuation date for Origin's other businesses).

Annexure 1. Independent Expert's Report *continued*

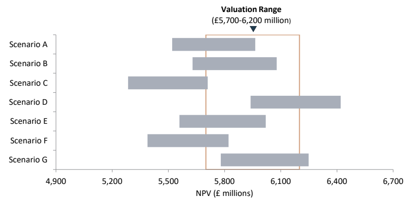
GRANT SAMUEL

ORIGIN'S BUSINESS OPERATIONS AND INVESTMENTS – NPV OUTCOMES AND VALUATION RANGES

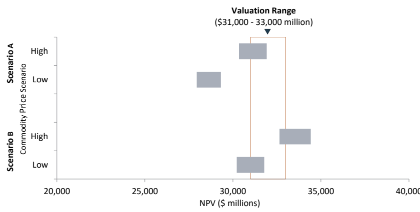
ENERGY MARKETS



OCTOPUS ENERGY (100% BASIS)



APLNG (100% BASIS)



NPV outcomes from DCF analysis are subject to significant limitations and should always be treated with considerable caution. The range of NPVs produced by the scenarios is wider than the valuation ranges that Grant Samuel has placed on each of Origin's business operations and investments. In this context, it should be noted that the NPV of APLNG is sensitive to the assumed US$/A$ exchange rate. Based on the assumptions set out in Section 6.8.2 of the full report, the NPV of APLNG (enterprise value, 100% basis) increases and decreases by circa $670 million for a 0.01 change in the US$/A$ exchange rate in either direction.

Grant Samuel has considered the outcome of all of the scenarios in determining its valuation ranges for each of Origin's business operations and investments and believes that the NPV outcomes from the DCF analysis support a range of values of $9,000-10,000 million for Energy Markets, £5,700-6,200 million for Octopus Energy (enterprise value, 100% basis) and $31,000-33,000 million for APLNG (enterprise value, 100% basis).

- **The valuations of Octopus Energy and APLNG are consistent with recent transactions and the multiples and other parameters implied by the valuations reflect the specific attributes and earnings outlook for of each of Origin's business operations and investments**

  The multiples and other parameters implied by the valuation of each of Origin's business operations and investments are summarised below:

ORIGIN'S BUSINESS OPERATIONS AND INVESTMENTS – IMPLIED VALUATION PARAMETERS

	RANGE OF PARAMETERS	
	LOW	HIGH
Energy Markets		
Business operations valuation range	**$9,000 million**	**$10,000 million**
FY23 EBITDA (historical)	*8.7x*	*9.6x*
FY23 EBIT (historical)	*16.8x*	*18.6x*
FY24 EBITDA (mid-point of company guidance)	*5.8x*	*6.5x*

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ORIGIN'S BUSINESS OPERATIONS AND INVESTMENTS – IMPLIED VALUATION PARAMETERS (CONT)

	RANGE OF PARAMETERS	
	LOW	**HIGH**
Octopus Energy (100% basis)		
Business operations valuation range	**£5,700 million**	**£6,200 million**
FY23 EBITDA (historical)	*8.8x*	*9.6x*
FY23 EBIT (historical)	*11.2x*	*12.2x*
Value per Retail Energy Supply customer	*£1,062*	*£1,156*
APLNG (100% basis)		
Business operations valuation range	**$31,000 million**	**$33,000 million**
FY23 EBITDA (historical)	*3.8x*	*4.0x*
FY23 EBIT (historical)	*4.8x*	*5.1x*
FY23 production (historical)	*$268/boe*	*$285/boe*
FY24 production (top end of company guidance)	*$254/boe*	*$270/boe*
2P reserves + 2C resources	*$12/boe*	*$13/boe*
2P reserves	*$16/boe*	*$18/boe*

Assessing appropriate multiples for the valuation of Energy Markets is not straightforward:

- its earnings profile (and value) is highly dependent on movements in wholesale electricity prices and fuel costs such as for domestic gas and coal. While some of these movements can be mitigated by the wholesale and trading activities of the business, EBITDA has fluctuated across a very wide range in recent years (from as low as around $401 million in FY22 to as high as $1.5 billion in FY20);
- the FY24 EBITDA guidance for Energy Markets includes some tailwinds that will not recur. It includes the EBITDA contributions from Eraring with the coal price capped at $125/t and benefits from the uplift in the DMO/VDO for FY24 and elevated cap prices compared to longer run expectations;
- FY25 EBITDA is expected to decline towards more sustainable levels. Origin has flagged downward pressure from higher coal costs as the coal caps expire and an anticipated moderation in market tariffs from FY24 levels;
- the EBITDA contribution from Eraring will cease from FY26, or possibly later if agreement is reached with the New South Wales government. When it does cease operations, Origin will incur most of the remediation and closure costs (with some incurred prior to closure); and
- medium term internal Origin projections show meaningful EBITDA growth but a significant amount comes from new storage (battery) and renewable generation projects which will require substantial capital expenditure (in excess of $3 billion) over future financial years, remain subject to construction and development risks and, with the exception of Eraring Battery Stage One, have yet to reach FID.

Accordingly, caution should be exercised when considering the implied multiples for Energy Markets relative to the transaction and trading evidence. Nevertheless, some broad conclusions can be drawn:

- the multiples for Energy Markets should be lower than much of the transaction evidence which sits broadly in the range of 9-11 times EBITDA. Most of that evidence is dated and occurred in a different market environment. More importantly, there are differences in the nature of the business. While the core retail component of the business may warrant a premium multiple, the overall multiple for Energy Markets needs to reflect the loss of EBITDA contribution from Eraring from FY26 (or maybe later), its significant remediation and closure costs (almost $250 million)

Annexure 1. Independent Expert's Report *continued*

and the substantial earnings contribution from the legacy gas contract with APLNG that expires in 2034; and

- the EBITDA multiple should be higher than AGL Energy (5.5 times FY24 EBITDA, excluding a premium for control) which has a very strong generation position (compared to Origin post Eraring). However, over 80% of AGL Energy's electricity production comes from coal-fired power. As a result, it faces much higher maintenance capital costs (around $500 million per annum), substantially higher rehabilitation costs albeit to be incurred over a longer period (Loy Yang A and Bayswater are scheduled to close between 2030 and 2035) and a monumental challenge to develop a pipeline of renewable projects to replace its coal-fired power generation capacity. It expects to deploy $3-4 billion in capital to develop 5GW by 2030 and another $5-6 billion to develop another 7GW by 2046.

The implied multiples for Energy Markets are consistent with these views, once earnings are "normalised" from FY24 levels.

Grant Samuel's valuation of Octopus Energy's business operations is consistent with value implied by a "roll forward" of the most recent capital raising in December 2021 (at the low end) with the DCF analysis supporting the high end of the valuation range (particularly following completion of the Shell Energy Retail acquisition).

While the historical multiples implied by Grant Samuel's valuation of Octopus Energy's business operations are reasonably consistent with the transaction evidence (of 7.5-8.5 times EBITDA and 11-12.5 historical EBIT), this is largely coincidental. Octopus Energy's FY23 earnings were inflated by the lagged recovery of the FY22 increase in wholesale energy prices through customer tariffs and the implied historical multiples would be higher based on "normalised" FY23 earnings. The implied multiples based on FY24 and FY25 EBITDA from the Octopus Energy Business Operation Cash Flow Model[9] are considerably higher, and well above comparable transaction and comparable trading multiples. In Grant Samuel's view, these high multiples are appropriate having regard to the growth potential of Octopus Energy's business operations.

The implied enterprise value per customer is much higher than most of the "pure" retail energy supply comparable transactions but generally towards the low end or below the enterprise value per customer implied by the trading prices of comparable companies. Implied enterprise value per customer is an imprecise measure of value and reflects the specific attributes of Octopus Energy's business operations including, in particular, its lower cost to serve and the value of its other integrated businesses, especially its Platform Licensing business.

Recent transactions involving interests in APLNG provide useful cross checks of the business operations valuation range adopted by Grant Samuel:

- ConocoPhillips' March 2023 agreement to acquire an additional 2.49% interest in APLNG from EIG for US$500 million (subject to successful completion of the Scheme) appears to value the equity in APLNG at 30 June 2023 (after adjustments) at ~$26.3 billion on a 100% basis, which equates to ~$7.25 billion for Origin's equity share. The value of Origin's interest in APLNG implied by the transaction falls within the range adopted by Grant Samuel even though there are some arguments for a discount to that value; and

- Origin's sale of a 10% interest in APLNG to ConocoPhillips which was completed in February 2022 implied a value for the equity in APLNG of ~$20 billion, which equates to a value for Origin's 27.5% equity interest of ~$5.5 billion. While this value is well below the range adopted by Grant Samuel, domestic gas, LNG and oil prices were lower when the transaction was announced in October 2021 relative to prices today and the US$/A$ exchange rate was higher (at ~0.75

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[9] Adjusted to a 30 June year end.

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compared to the current spot rate of ~0.65). At the same time, Australian 10 year bond rates were ~200 basis points (2%) lower than they are now and United States bond rates were ~300 basis points (3%) lower.

While Grant Samuel has also referenced other benchmarks in the form of other LNG related transactions and trading multiples of companies with interests in LNG projects, ultimately these cross checks are not particularly useful as benchmarks given differences in the underlying characteristics of these projects and the fact that LNG projects only form part of the broader oil and gas operations of the listed comparable companies.

- **In considering the valuation there are several important contextual factors that shareholders should take into account**
  - a number of positive events have occurred since the announcement of the Scheme on 27 March 2023. For example:
    - Origin has reported very strong FY23 results, with underlying EBITDA up 47% and underlying NPAT up 84%. Energy Markets is expected to increase EBITDA by a further 49% in FY24 (based on the mid-point of Origin's guidance);
    - Origin's primary competitor, AGL Energy, also reported strong FY23 results, with underlying EBITDA up 12% and underlying NPAT up 25% despite substantial losses from extended outages at Loy Lang A and the closure of the Liddel power station. AGL Energy's guidance for FY24 is for underlying EBITDA to grow by 49% (based on the mid-point pf AGL Energy's guidance); and
    - AGL Energy's share price has increased from $7.69 on 27 March 2023 to $10.95 on 13 October 2023, an uplift of 42%.

    While it is tempting to believe that the underlying value of Origin has therefore increased markedly since the Scheme was announced:

    - Origin has advised that in agreeing the terms with the Consortium, the directors had an expectation that performance would improve substantially. For example, the coal price cap had been announced on 22 December 2022 and the draft DMO/VDO for FY24 was announced on 15 March 2023. Hence, the very substantial premium for control (in the order of 60%). While the recovery has been faster than expected, the critical issue is whether the long term value drivers for Origin are now more positive than those already factored into the Scheme consideration;
    - EBITDA for Energy Markets in FY25 is expected to decline to more sustainable levels. The coal price cap expires in June 2024. A $30 per tonne increase in the coal price would reduce EBITDA by over $150 million in FY25. In any event, the earnings from Eraring will cease after FY25 unless operations are extended through agreement with the New South Wales Government. Even if that occurs, it will only be extended for a limited period. Tariffs (i.e. DMO/VDO) are currently expected to moderate in FY25 (and the incoming New South Wales Government has flagged a focus on reducing household electricity bills). A $5/MWh reduction in tariffs would reduce Origin's margins on its ~13.5 TWh of mass market load by ~$70 million per annum; and
    - AGL Energy's strong earnings and share price uplift appear to be largely due to the performance of its coal-fired generation assets which benefit from low cost, long term coal supply contracts and represent a substantially larger proportion of AGL Energy's demand compared to Origin (AGL Energy's coal-fired plants produced over 100% of its total customer demand in FY23). Accordingly, an uplift in wholesale electricity prices has a substantial

Annexure 1. Independent Expert's Report *continued*

positive impact on AGL Energy profitability. Origin does not benefit in the same way or to the same extent.

- Origin's Energy Markets business, with its leading market share and 3.8 million customer accounts, will be a central participant in the energy transition. Its strategic position will provide it with myriad opportunities to evolve and grow its business. However, at the same time it must be recognised that:
  - Eraring is scheduled to close in FY25. Any extension (which is yet to be agreed with the New South Wales government) is likely to be only for a limited window and probably on terms that constrain windfall profits to Origin. It is therefore not a contributor to long term value;
  - two significant contributors to Origin's value are its legacy gas supply contract with APLNG (but expiring 2034) and its fleet of gas peaking power plants. With the exception of these assets, post Eraring, the residual business essentially purchases electricity and gas from the wholesale markets (and third parties via PPAs) and sells them to customers, generating a wholesale/retail margin (albeit with a number of value add downstream businesses with meaningful growth opportunities). Retail margins should be relatively stable (once current price uplifts are absorbed) over the medium to longer term but will always be under pressure from regulators and competitors; and
  - while there is a wide array of potential investment and development opportunities that may become available to Origin and there are some that do not primarily involve capital investment (e.g. building out Origin Loop, growing Origin Zero), the reality is that the most significant opportunities will involve large amounts of capital expenditure, for example, building industrial scale batteries and developing new renewable energy assets (solar, wind, pumped hydro, hydrogen etc), although Origin can participate via long term PPAs instead of having direct ownership.

    Such future capital investments do not add value unless Origin can earn a return on capital in excess of its cost of capital. There are valid reasons as to why Origin may be able to do so (e.g. leveraging the size of its customer base, its purchasing power and its relationships, potential location advantages for some assets) but, at this point in time, only a small number of investments have been sufficiently well defined (for valuation purposes). For the rest, it is merely an aspiration to which no value can be ascribed at this stage.

- there is clearly a significant degree of upside potential in Octopus Energy. If its projections or targets are met over the next few years the future value of Origin's stake could be substantially higher than the $2,250-2,450 million) attributed by Grant Samuel. However, it is important to recognise that:
  - the DCF analysis incorporates significant growth over the explicit forecast period for the Retail Energy Supply business outside the United Kingdom and, more particularly, in the Platform Licensing business, where customer accounts are assumed to more than double to 64 million and revenue increases from ~£100 million in the year ended 30 April 2023 to in excess of £575 million by the year ending 30 April 2033. Moreover, the terminal value for the Platform Licensing business assumes a long term growth rate well above that normally assumed (typically around the inflation level);
  - the business (and the forecast growth) is not without risk. Gaining meaningful market share in Retail Energy Supply against powerful incumbents may prove more difficult than it has been in the United Kingdom (and aggressive retail growth by Octopus Energy in new markets could be seen negatively by potential Platform Licensing customers in the same markets); and

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- the most recent capital raising benchmark (rolled forward to reflect the Bulb Energy acquisition) provides a "reality check" on the growth assumptions that institutional investors are likely to be prepared to pay for at the current point in time.

- **The assessed value of the consideration under the Scheme is $8.78 per Origin share**

  The Scheme consideration will be paid to shareholders in Australian dollars. Based on a US$/A$ exchange rate of 0.65, the Australian dollar equivalent of the Scheme consideration is $9.11 per Origin share[10]. After allowing for payment of the interim and final FY23 dividends and the additional consideration, the cash consideration that will be received by shareholders if the Scheme is implemented is $8.78 per Origin share[10].

  Shareholders should note that:

  - the additional consideration compensates shareholders for Origin's earnings (or, alternatively, the time value of money) in the event that the Scheme is not implemented by 30 November 2023 (at a rate equivalent to approximately 6% per annum). The quantum of the additional consideration will increase if implementation of the Scheme is further delayed beyond 18 December 2023; and

  - the US dollar component of the cash consideration (US$1.641 per share) will be converted to Australian dollars based on the prevailing exchange rate shortly prior to implementation of the Scheme. Accordingly, the Australian dollar equivalent of the cash consideration will change depending on the US$/A$ exchange rate shortly prior to implementation of the Scheme.

- **The Scheme is fair and reasonable. Accordingly, the Scheme is in the best interests of Origin shareholders in the absence of a superior proposal**

  Grant Samuel has estimated the full underlying value in Origin to be in the range $14.6-16.4 billion, which corresponds to $8.45-9.48 per share.

  The cash consideration that will be received by shareholders if the Scheme is implemented of $8.78 per Origin share[10] falls within the valuation range. Accordingly, the Scheme is fair. The bottom of the valuation range represents the relevant threshold for fairness. Any price above the bottom of the range is, by definition, fair and it is irrelevant where in the range an offer falls.

  While the Australian dollar equivalent of the cash consideration will change with movements in the US$/A$ exchange rate, this would be largely offset by a corresponding movement in Grant Samuel's estimate of the underlying value per Origin share (as Origin's 27.5% interest in APLNG earns most of its revenue in US dollars).

  As the Scheme is fair, it is also reasonable and is therefore in the best interests of shareholders in the absence of a superior proposal.

- **The Scheme consideration provides Origin shareholders with a significant premium for control based on share prices prior to announcement of the Indicative Proposal, although this is probably attributable to the market perceptions of Origin and its business outlook at the time**

  The Scheme consideration at the time of announcement of the Scheme of $9.11 per share represents a 56.8% premium[11] to the price at which Origin shares last traded prior to announcement of the Indicative Proposal. The premium is slightly higher (up to ~63%) when compared to prices in up to the three months prior to announcement but slightly lower compared to prices over the longer term (~54-55%):

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[10] The value attributed by Grant Samuel to the Scheme consideration of $9.11 and the cash consideration that will be received by shareholders of $8.78 differs from the values set out in the Scheme Booklet of $9.15 and $8.81 respectively as the US$/A$ exchange rate adopted in the Scheme Booklet is 0.64.

[11] The premiums shown differ from those set out in the Scheme Booklet as the Scheme Booklet adopts a Scheme consideration of $9.15 based on a US$/A$ exchange rate of 0.64.

Annexure 1. Independent Expert's Report *continued*

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ORIGIN – PREMIUM OVER PRE-ANNOUNCEMENT PRICES

PERIOD	ORIGIN SHARE PRICE/VWAP	PREMIUM		
		ON ANNOUNCEMENT (HEDGED)[12]	ON ANNOUNCEMENT (SPOT)[13]	US$/A$ EXCHANGE RATE OF 0.65
9 November 2022 – closing price	$5.81	53.4%	56.2%	56.8%
1 month prior to 9 November 2022 – VWAP	$5.60	59.0%	62.0%	62.6%
3 months prior to 9 November 2022 - VWAP	$5.76	54.7%	57.6%	58.2%
6 months prior to 9 November 2022 – VWAP	$5.94	50.2%	52.9%	53.5%
12 months prior to 9 November 2022 – VWAP	$5.88	51.5%	54.3%	54.9%

The premiums are well above the level of premiums typically associated with takeovers in Australia (of 20-35%) particularly in view of the absence of strategic integration benefits or synergies (other than some savings in corporate costs). However, it is important to recognise that premiums for control are an outcome not a determinant of value and they vary widely depending on individual circumstances.

In this case, the extent of the premium is probably attributable to the subdued market perceptions of Origin and its business outlook at the time of announcement of the Indicative Proposal on 10 November 2022. For example:

- Origin's FY22 results announcement on 18 August 2022 reported consolidated statutory EBITDA of only $18 million and a net loss of $1.4 billion (following a $2.3 billion net loss in FY21) and underlying EBITDA for Energy Markets of $401 million, a ~60% reduction from FY21;
- the first of Origin's public upgrades of its earnings prospects for FY23 did not occur until 19 October 2022 when EBITDA guidance for Energy Markets was increased to $500-650 million (compared to an actual EBITDA of $1.04 billion);
- the overall energy market was still in a heightened state of disarray with volatile prices and threats to the viability of energy producers and retailers. The coal price cap (which had a major impact on Eraring's earnings) and the gas price cap were not announced until December 2022. The DMO/VDO for FY24 would not be released for some months; and
- Octopus Energy was still incurring losses at an EBITDA level.

In short, the path back to normality was fraught with uncertainty.

It is impossible to reliably determine what the "unaffected" Origin share price might have been at the end of March 2023 when the Scheme was announced or what it would be now. However, it is reasonable to assume it would be well above the $5.50-6.00 level that it was trading at prior to 10 November 2023. Accordingly, the effective implied premium for control is less than it appears in the table above.

▪ **While the status quo is an alternative, it is not without risk and an alternative offer from a third party, while conceivable, is unlikely**

In deciding whether to vote for or against the Scheme, shareholders need to have regard to the alternatives that are realistically available to them. In this regard:

- the status quo is a viable alternative for Origin but is not without risk or the possibility of shareholders having to invest further funds. The primary challenge for a standalone Origin is funding the potential pipeline of investment/development opportunities to participate in the

[12] As announced to the market by Origin on 27 March 2023, this amount differs from the $8.90 value contained in Origin's 22 February 2023 announcement due to certain hedging gains realised subsequent to that date. The effective US$/A$ exchange rate is 0.6992.

[13] At the spot US$/A$ exchange rate on 24 March 2023 of 0.6645.

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energy transition that is expected to occur over the next decade. In particular, it arguably needs to secure new generation capacity to replace Eraring (and ideally more). In this context:

- Origin is an investment grade borrower with relatively low gearing. There are no particular barriers (e.g. ESG issues) to bank and institutional debt funding of renewable assets (unlike funding new coal, oil or even gas developments);
- funding needs are likely to be spread over multiple years;
- renewable asset developments (e.g. solar, wind) do not need to be funded through direct investment. An alternative would be for Origin to underwrite long term PPAs that enable developers to secure funding for projects. However, it should be noted that, while this strategy does not directly use Origin's cash resources it does increase the level of fixed (long term) obligations and therefore does utilise "capital" or financial capacity; and
- Origin could, if necessary, obtain funding by monetising some portion of its other assets (Octopus Energy, APLNG).

Nevertheless, the potential quantum of investments is very large (particularly if Origin pursues its full ambition for renewables and storage) and it could well be that Origin will need to secure additional equity capital from shareholders.

Further, it is likely that the Origin share price would fall, at least in the short term (see below). At the same time, not implementing the Scheme would preserve the ability of Origin shareholders to realise a change of control premium in the future once the energy transition is further progressed, although there are relatively few potential acquirers that have the scale and financial capacity to acquire Origin (see below) and there is no guarantee that there would be a change of control event in the foreseeable future (or at least within a shareholder's investment horizon); and

- it is conceivable that a third party could make a higher offer for Origin:
  - the Scheme has highlighted the strategic value of Origin's business operations and investments. Origin could be an attractive acquisition for a number of parties; and
  - there are no structural impediments to an alternative acquirer. The Consortium has no shareholding in Origin. While there are the usual exclusivity provisions in the scheme implementation deed, there is a fiduciary carve out and Origin can respond to unsolicited proposals from other parties (subject to a disclosure obligation). The reimbursement fee of $151 million payable by Origin (under certain circumstances) is not material having regard to the standalone value of Origin.

  On the other hand:

  - the extent of the premium already offered under the Scheme may be a deterrent;
  - the Consortium has a matching right in respect of any superior proposal received by Origin;
  - the number of realistic acquirers of Origin is relatively limited because of the size (>$18 billion) and diverse asset base of Origin. There is unlikely to be a single party with a strong interest in acquiring Energy Markets, 20% of Octopus Energy and 27.5% of APLNG. It is more than likely that any alternative offer would need to take the form of some kind of consortium bid (similar to the Consortium) where each party is interested in a specific asset. However, successful consortium bids are relatively rare and there are typically considerable challenges to reaching agreement between multiple parties and significant complexities in execution;

Annexure 1. Independent Expert's Report *continued*

- it is not apparent that there are many obvious acquirers for a 27.5% interest in APLNG or the Energy Markets business. APLNG is a semi-passive stake in a mature asset. While the shareholding does bring with it upstream operatorship (and a board seat), ConocoPhillips has a 47.5% interest in the joint venture and control of downstream activities including LNG marketing. ConocoPhillips' recent purchase of a 2.49% interest from MidOcean (conditional on the Scheme being implemented) does not suggest it wants to materially increase its holding beyond 50%; and
- there are no local industry participants capable of acquiring the Energy Markets business. Acquirers are therefore limited to financial buyers interested in the sector or offshore industry participants (who have, in the past, acquired Energy Australia and Alinta Energy).

Since announcement of the Indicative Proposal on 10 November 2022, no superior proposal has been received and, at the date of this report, the Origin directors are not aware of any superior proposal that is likely to emerge. The meeting at which shareholders will vote on the Scheme is scheduled for 23 November 2023. This is ample time for an alternative offeror to come forward with a superior proposal.

In summary, while it is conceivable that a third party could make a higher offer for Origin, it is unlikely in the circumstances. In Grant Samuel's view, it would be imprudent for shareholders to vote against the Scheme in the hope of a higher offer subsequent to the Scheme meeting.

- **Origin shares are likely to trade below the cash consideration that will be received by shareholders in the absence of the Scheme**

Since late September 2023 (and particularly subsequent to the Consortium being granted ACCC authorisation on 10 October 2023), the Origin share price has traded at above the cash consideration that will be received by shareholders of $8.78 per share. Shareholders can, therefore, decide to sell their shares on market at a price in excess of the cash consideration. However shareholders who decide to sell their Origin shares on market will incur transaction costs (e.g. brokerage) and will not benefit from any subsequent increase in the consideration that may come from the Consortium (or a higher offer from a third party).

In the absence of the Scheme or a similar transaction, the share price would be expected to fall. It is likely that, under current market conditions (and current commodity prices) and in the absence of the Scheme or a similar transaction (or speculation as to one), Origin shares would trade at prices below the cash consideration that will be received by shareholders if the Scheme is implemented (of $8.78), at least in the short term.

Exactly where is speculative. As discussed above, there are good reasons for believing Origin shares would now trade at levels well above the $5.50-6.00 that they were trading in the months preceding the announcement on 10 November 2022. On the other hand, it is necessary to exercise a degree of caution:

- while AGL Energy's share price has risen by approximately 42% since November 2022 (and since March 2023) it has a very different exposure to generation assets. Its coal-fired plants, which have advantageous coal supply arrangements and are expected to continue operating for another decade (at least), produce over 100% of customer demand and AGL Energy sells excess electricity into the NEM. It is a prime beneficiary of higher wholesale electricity prices. Origin does not enjoy the same benefits so it is unlikely that its share price would have increased to the same extent;
- Origin's earnings have been materially assisted by the performance of APLNG but this may have peaked in FY23 (in the absence of a sustained uplift in oil prices); and

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- Origin has flagged a decline in electricity gross profits in FY25 as tariffs will reflect the lower wholesale prices in FY24 and generation earnings will be adversely impacted by the ending of the coal price cap in June 2024.

4 Other Matters

This report is general financial product advice only and has been prepared without taking into account the objectives, financial situation or needs of individual Origin shareholders. Accordingly, before acting in relation to their investment, shareholders should consider the appropriateness of the advice having regard to their own objectives, financial situation or needs. Shareholders should read the Scheme Booklet issued by Origin in relation to the Scheme.

Grant Samuel has not been engaged to provide a recommendation to shareholders in relation to the Scheme, the responsibility for which lies with the directors of Origin. In any event, the decision whether to vote for or against the Scheme is a matter for individual shareholders, based on their own views as to value and business strategy, their expectations about future economic and market conditions and their particular circumstances including risk profile, liquidity preference, investment strategy, portfolio structure and tax position. Shareholders who are in doubt as to the action they should take in relation to the Scheme should consult their own professional adviser.

Similarly, it is a matter for individual shareholders as to whether to buy, hold or sell shares in Origin. This is an investment decision upon which Grant Samuel does not offer an opinion and is independent of a decision on whether to vote for or against the Scheme. Shareholders should consult their own professional adviser in this regard.

Grant Samuel has prepared a Financial Services Guide as required by the Corporations Act, 2001. The Financial Services Guide is included at the beginning of the full report.

This letter is a summary of Grant Samuel's opinion. The full report from which this summary has been extracted is attached and should be read in conjunction with this summary.

The opinion is made as at the date of this letter and reflects circumstances and conditions as at that date.

Yours faithfully
GRANT SAMUEL & ASSOCIATES PTY LIMITED

Grant Samuel & Associates

Annexure 1. Independent Expert's Report *continued*

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FINANCIAL SERVICES GUIDE
AND
INDEPENDENT EXPERT'S REPORT
IN RELATION TO THE PROPOSAL BY
THE BGTF CONSORTIUM AND MIDOCEAN

GRANT SAMUEL & ASSOCIATES PTY LIMITED
ABN 28 050 036 372

18 OCTOBER 2023

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FINANCIAL SERVICES GUIDE

Grant Samuel & Associates Pty Limited ("Grant Samuel") holds Australian Financial Services Licence No. 240985 authorising it to provide financial product advice on securities and interests in managed investments schemes to wholesale and retail clients.

The *Corporations Act, 2001* (Cth) ("Corporations Act") requires Grant Samuel to provide this Financial Services Guide ("FSG") in connection with its provision of an independent expert's report ("Report") which is included in a document ("Disclosure Document") provided to members by the company or other entity ("Entity") for which Grant Samuel prepares the Report.

Grant Samuel does not accept instructions from retail clients. Grant Samuel provides no financial services directly to retail clients and receives no remuneration from retail clients for financial services. Grant Samuel does not provide any personal retail financial product advice to retail investors nor does it provide market-related advice to retail investors.

When providing Reports, Grant Samuel's client is the Entity to which it provides the Report. Grant Samuel receives its remuneration from the Entity. In respect of the Report for Origin Energy Limited in relation to the proposal from Brookfield Renewable Group Australia Pty Ltd and MidOcean Reef BidCo Pty Ltd ("the Origin Report"), Grant Samuel will receive a fixed fee of $2.25 million plus reimbursement of out-of-pocket expenses for the preparation of the Report (as stated in Section 8.3 of the Origin Report).

No related body corporate of Grant Samuel, or any of the directors or employees of Grant Samuel or of any of those related bodies or any associate receives any remuneration or other benefit attributable to the preparation and provision of the Origin Report.

Grant Samuel is required to be independent of the Entity to provide a Report. The guidelines for independence in the preparation of Reports are set out in Regulatory Guide 112 issued by the Australian Securities & Investments Commission on 30 March 2011. The following information in relation to the independence of Grant Samuel is stated in Section 8.3 of the Origin Report:

> ***"Grant Samuel and its related entities do not have at the date of this report, and have not had within the previous two years, any business or professional relationship with Brookfield Corporation, Brookfield Asset Management Ltd and each of their respective affiliates or MidOcean or any financial or other interest that could reasonably be regarded as capable of affecting its ability to provide an unbiased opinion in relation to the Scheme.***
>
> ***Grant Samuel had no part in the formulation of the Scheme. Its only role has been the preparation of this report.***
>
> ***Grant Samuel will receive a fixed fee of $2.25 million for the preparation of this report. This fee is not contingent on the conclusions reached or the outcome of the Scheme. Grant Samuel's out of pocket expenses in relation to the preparation of the report will be reimbursed. Grant Samuel will receive no other benefit for the preparation of this report.***
>
> ***Grant Samuel considers itself to be independent in terms of Regulatory Guide 112 issued by the ASIC on 30 March 2011."***

Grant Samuel has internal complaints-handling mechanisms and is a member of the Australian Financial Complaints Authority, No. 11929. If you have any concerns regarding the Origin Report, please contact the Compliance Officer in writing at Level 19, Governor Macquarie Tower, 1 Farrer Place, Sydney NSW 2000. If you are not satisfied with how we respond, you may contact the Australian Financial Complaints Authority at GPO Box 3 Melbourne VIC 3001 or 1800 931 678. This service is provided free of charge.

Grant Samuel holds professional indemnity insurance which satisfies the compensation requirements of the Corporations Act.

Grant Samuel is only responsible for the Origin Report and this FSG. Complaints or questions about the Disclosure Document should not be directed to Grant Samuel which is not responsible for that document. Grant Samuel will not respond in any way that might involve any provision of financial product advice to any retail investor.

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1 Details of the Scheme

On 27 March 2023, Origin Energy Limited ("Origin") announced that it had entered into a binding scheme implementation deed with Brookfield Renewable Group Australia Pty Ltd and MidOcean Reef BidCo Pty Ltd[1] ("MidOcean") for the acquisition by a Brookfield-led consortium of investors (the "BGTF Consortium") and EIG Management Company, LLC ("EIG") (together, the "Consortium")[2] of all the issued shares in Origin by way of a scheme of arrangement ("Scheme").

Under the Scheme:

- on announcement, the total consideration ("Scheme consideration") comprised $5.78 per share plus US$2.19 per share.

  The consideration mix between Australian dollars and US dollars was able to change as future US dollar receipts were converted into Australian dollars at the prevailing foreign exchange rate, and to the extent that the Consortium elected to convert an additional fixed amount of US dollar consideration to Australian dollars[3]. Any conversion from US dollars to Australian dollars would increase the Australian dollar component and reduce the US dollar component of the Scheme consideration.

  As set out in Section 4.2 of the Scheme Booklet to be sent by Origin to its shareholders ("Scheme Booklet"), as a result of certain US dollar payments received by Origin and converted to Australian dollars and elections by the Consortium to convert an additional fixed amount of US dollar consideration into Australian dollars, at the date of the Scheme Booklet:

  - the Australian dollar consideration has increased to $6.589 per share; and
  - the US dollar consideration has reduced to US$1.641 per share.

  Origin will advise shareholders periodically of any further changes to the currency mix between Australian dollars and US dollars prior to implementation of the Scheme.

  Shareholders will have the Scheme consideration paid in Australian dollars unless they elect to have the US dollar component of the Scheme consideration paid in US dollars. If no election is made, the US dollar component of the cash consideration will be converted to Australian dollars based on the prevailing exchange rate shortly prior to implementation of the Scheme.

  The Scheme consideration payable will be reduced by any dividends paid by Origin prior to implementation of the Scheme, including the interim $0.165 per share fully franked dividend paid to shareholders on 24 March 2023 and the final $0.20 per share fully franked dividend paid to shareholders on 29 September 2023. The reduction in the Scheme consideration due to the payment of dividends will reduce the Australian dollar component of the Scheme consideration;

- a fully franked special dividend of $0.39 per share may be paid to shareholders subject to certain conditions. Any such special dividend will:

  - reduce the Australian dollar component of the cash consideration payable to shareholders; and

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1 An entity controlled by EIG (together with its affiliates).

2 The Consortium comprises entities that control or manage MidOcean and the BGTF Consortium, being those entities that will ultimately acquire Origin and its business if the Scheme is implemented. The BGTF Consortium currently comprises the Brookfield Global Transition Fund I, Brookfield Renewable Partners L.P. and various passive institutional investors to be managed or advised by Brookfield together with their institutional partners, Buckland Investment Pte. Ltd. (an indirectly wholly owned subsidiary of GIC (Ventures) Pte. Ltd. and Davis Investments Pte. Ltd. (an indirect wholly owned subsidiary of Temasek Holdings (Private) Limited).

3 Origin owns 27.5% of the shares in Australia Pacific LNG Pty Limited ("APLNG"), an incorporated joint venture and receives dividends from APLNG. US$904 million of 2023 receipts from APLNG have been hedged to Australian dollars at an average rate of 0.69 and are included in the Australian dollar component of the cash consideration. The Consortium has also elected to convert an additional ~US$640 million included in the US dollar component of the consideration to Australian dollars at a rate of 0.70.

Annexure 1. Independent Expert's Report *continued*

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  - be considered by the Origin Board closer to the time, but prior to implementation, of the Scheme; and

- the cash consideration payable to shareholders will be increased by approximately $0.045 per month (accruing on a daily basis)[4] to the extent that implementation of the Scheme is delayed beyond 30 November 2023. Based on the implementation date set out in the Scheme Booklet of 18 December 2023, shareholders will receive additional consideration of $0.027 per share.

Consequently, at the date of this report, the cash consideration that will be received by shareholders (excluding any special dividend) will comprise:

- $6.251 per share (i.e. $6.589 per share reduced by the interim $0.165 per share dividend paid to shareholders on 24 March 2023 and the final $0.20 per share dividend paid to shareholders on 29 September 2023 and increased by the additional consideration of $0.027 per share); plus
- US$1.641 per share;

It is proposed that MidOcean will acquire Origin and that the BGTF Consortium will acquire Origin's Energy Markets business from Origin following implementation of the Scheme. MidOcean (through Origin) will retain the Integrated Gas business (other than the Future Fuels business, which will be acquired by the BGTF Consortium).

The Scheme followed a number of earlier change of control proposals from the Consortium:

- an initial indicative proposal on 8 August 2022 at a cash consideration of $7.95 per share[5] (equivalent to $7.785 per share following payment of the final FY22 dividend of $.165 per share on 30 September 2022) and a further indicative proposal on 18 September 2022 at a cash consideration of $8.70-8.90 per share[5] (equivalent to $8.535-8.735 per share following payment of the final FY22 dividend of $0.165 per share on 30 September 2022).

  Neither of these proposals was announced to the market at the time they were received as they were confidential. However, the Origin Board undertook a period of limited discussions and information sharing with the Consortium to address certain conditions and ascertain whether the Consortium could develop a proposal which was likely to be in the best interests of shareholders;

- an indicative, conditional and non-binding proposal at a price of $9.00 cash per share[5] ("Indicative Proposal") announced to the market on 10 November 2022. The consideration under the Indicative Proposal would be increased by $0.03 every month from 15 May 2023 if implementation of the proposed scheme of arrangement occurred after 15 May 2023. Origin entered into a confidentiality and exclusivity agreement with the Consortium to enable the Consortium to conduct due diligence for a period of eight weeks (although either party could terminate the exclusivity provisions after five weeks and four days with one weeks' notice).

  On 21 December 2022, Origin announced that it had agreed to extend the Consortium's exclusivity period to 16 January 2023 to enable it to finalise its due diligence. At the request of the Consortium, the exclusivity period was further extended to 24 January 2023. On 16 February 2023, in conjunction with the release of its 1HY23 results, Origin announced that the Consortium had substantially completed its due diligence and that active engagement continued on a non-exclusive basis in relation to finalising a binding scheme implementation agreement; and

- a revised conditional and non-binding proposal at a price of $8.90 per share[5] ("Revised Proposal") announced to the market on 22 February 2023. The consideration under the Revised Proposal would

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4 The additional consideration is equal to $0.001479 per share for each day that has elapsed from (and including) 1 December 2023 to (and including) the date on which implementation occurs.

5 Reduced by the value of any dividends declared or paid by Origin prior to implementation of the proposed scheme of arrangement (including, in the case of the Revised Proposal, the $0.165 per share fully franked dividend announced on 16 February 2023).

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be increased by approximately $0.045 per month (accruing on a daily basis) to the extent that implementation of the proposed scheme was delayed beyond 30 November 2023. The cash consideration of $8.90 per share comprised:

- $8.90 per share of the first 100,000 shares held by each Origin shareholder; and
- for shares above that threshold, $4.334 per share plus US$3.194 per share.

The inclusion of US dollar consideration was designed to reflect the underlying exposure of Origin's Integrated Gas assets, and specifically cash distributions from its 27.5% interest in Australia Pacific LNG Pty Limited ("APLNG").

The Revised Proposal was subject to a number of conditions, including Origin undertaking hedging of oil and JKM commodity exposure (in addition to what Origin might undertake in the ordinary course of business).

The Scheme is subject to a number of conditions that are set out in Section 4.6 of the Scheme Booklet to be sent by Origin to its shareholders ("Scheme Booklet"), including approval by Origin's shareholders under Section 411 of the Corporations Act ("Section 411"). The Scheme is also subject to a number of regulatory approvals, including approval by Australia's Foreign Investment Review Board (under the *Foreign Acquisitions and Takeovers Act 1975* (Cth)) and the National Offshore Petroleum Titles Administrator as well as certain other foreign investment approvals. The Australian Competition and Consumer Commission ("ACCC") granted authorisation for the Scheme on 10 October 2023.

Other elements of the Scheme include the following:

- Origin is subject to customary exclusivity obligations, including "no shop", "no talk" and "no due diligence" restrictions (subject to customary fiduciary exceptions). Origin also has notification obligations in relation to competing proposals and the Consortium has a matching right in respect of any superior proposal received by Origin. These provisions apply from 27 March 2023 to the earlier of termination of the scheme implementation deed and 30 April 2024 (or such other date as agreed in writing between Origin and the Consortium);
- Origin may be required to pay a $151 million reimbursement fee to the Consortium in certain circumstances should the Scheme not proceed; and
- Origin must ensure that no Origin equity incentives (i.e. performance rights, options, warrants or any other securities or rights to receive shares) are in existence on the Scheme record date. The Origin Board may exercise its discretion to, for example, accelerate the vesting of outstanding Origin equity incentives and/or make cash equivalent or substitute payments.

Consistent with the conditions of the Revised Proposal, Origin has undertaken incremental hedging of oil and JKM commodity exposures as set out below:

ORIGIN – HEDGING OF OIL AND JKM COMMODITY EXPOSURES

	CY24		CY25		CY26		TOTAL VOLUME
	VOLUME	PRICE	VOLUME	PRICE	VOLUME	PRICE	
Oil (Mbbl and US$/bbl)	5.9	76.6	4.4	72.3	1.5	70.0	11.7
JKM (Tbtu and US$/Mbtu)	3.5	15.7	3.1	12.3	1.6	9.4	8.2

Source: Origin

The Origin Board has unanimously recommended that shareholders vote in favour of the Scheme, in the absence of a superior proposal and subject to an independent expert concluding that the Scheme is in the best interests of Origin shareholders. Subject to the same qualifications, each Origin director intends to vote all shares they hold or control in Origin in favour of the Scheme.

Annexure 1. Independent Expert's Report *continued*

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2 Scope of the Report

2.1 Purpose of the Report

Under Section 411 the Scheme must be approved by a majority in number (i.e. more than 50%) of each class of shareholders present and voting (either in person or by proxy) at the meeting, representing at least 75% of the votes cast on the resolution. If approved by Origin shareholders, the Scheme will then be subject to approval by the Supreme Court of New South Wales.

Part 3 of Schedule 8 to the Corporations Regulations prescribes the information to be sent to shareholders in relation to schemes of arrangement pursuant to Section 411. Part 3 of Schedule 8 requires an independent expert's report in relation to a scheme of arrangement to be prepared when a party to a scheme of arrangement has a prescribed shareholding in the company subject to the scheme, or where any of its directors are also directors of the company subject to the scheme. In those circumstances, the independent expert's report must state whether the scheme of arrangement is in the best interests of shareholders subject to the scheme and must state reasons for that opinion.

Although there is no requirement in the present circumstances for an independent expert's report pursuant to the Corporations Act or the ASX Listing Rules, the directors of Origin have engaged Grant Samuel & Associates Pty Limited ("Grant Samuel") to prepare an independent expert's report setting out whether, in its opinion, the Scheme is in the best interests of Origin shareholders and to state reasons for that opinion.

This report is general financial product advice only and has been prepared without taking into account the objectives, financial situation or needs of individual Origin shareholders. Accordingly, before acting in relation to their investment, shareholders should consider the appropriateness of the advice having regard to their own objectives, financial situation or needs. Shareholders should read the Scheme Booklet issued by Origin.

Voting for or against the Scheme is a matter for individual shareholders based on their views as to value and business strategy, their expectations about future economic and market conditions and their particular circumstances including risk profile, liquidity preference, investment strategy, portfolio structure and tax position. Shareholders who are in doubt as to the action they should take in relation to the Scheme should consult their own professional adviser.

2.2 Basis of Evaluation

There is no legal definition of the expression "in the best interests". However, ASIC has issued Regulatory Guide 111 ("RG111") which establishes guidelines in respect of independent expert's reports. RG111 differentiates between the analysis required for control transactions and other transactions. In the context of control transactions (whether by takeover bid, by scheme of arrangement, by the issue of securities or by selective capital reduction or buyback), the expert is required to distinguish between "fair" and "reasonable". A proposal that was "fair and reasonable" or "not fair but reasonable" would be in the best interests of shareholders (being the opinion required under Part 3 of Schedule 8). For most other transactions the expert is to weigh up the advantages and disadvantages of the proposal for shareholders. If the advantages outweigh the disadvantages, a proposal would be in the best interests of shareholders.

The Scheme is economically the same as a takeover offer. Accordingly, Grant Samuel has evaluated the Scheme as a control transaction and formed a judgement as to whether the proposal is "fair and reasonable".

Fairness involves a comparison of the offer price with the value that may be attributed to the securities that are the subject of the offer based on the value of the underlying businesses and assets. For this

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comparison, value is determined assuming 100% ownership of the target and a knowledgeable and willing, but not anxious, buyer and a knowledgeable and willing, but not anxious, seller acting at arm's length.

Fairness is a more demanding criteria. A fair offer is one that reflects the full market value of a company's businesses and assets. A "fair" offer will always be "reasonable" but an offer could be considered "reasonable" if there were valid reasons to accept the offer notwithstanding that it was not "fair". For example, an offer that is in excess of the pre-bid market prices but less than full value will not be fair but may be reasonable if shareholders are otherwise unlikely in the foreseeable future to realise an amount for their shares in excess of the offer price. This is commonly the case where the bidder already controls the target company. In that situation the minority shareholders have little prospect of receiving full value from a third party offeror unless the controlling shareholder is prepared to sell its controlling shareholding.

Grant Samuel has determined whether the Scheme is fair by comparing the estimated underlying valuation range of Origin with the offer price. The Scheme will be fair if the offer price falls within the estimated underlying valuation range. In considering whether the Scheme is reasonable, the factors that have been considered include:

- the existing shareholding structure of Origin;
- the likelihood of an alternative offer and alternative transactions that could realise fair value;
- the likely market price and liquidity of Origin shares in the absence of the Scheme; and
- other advantages and disadvantages for Origin shareholders of approving the Scheme.

2.3 Sources of Information

The following information was utilised and relied upon, without independent verification, in preparing this report:

Publicly Available Information

- the Scheme Booklet (including earlier drafts);
- annual reports of Origin from FY20 to FY23;
- press releases, public announcements, media and analyst presentation material and other public filings by Origin including information available on its website;
- brokers' reports and recent press articles on Origin and the Australian and United Kingdom energy industries;
- sharemarket data and related information on Australian and international listed companies engaged in the energy industry and on acquisitions of companies and businesses in this industry (with a particular focus on generation and/or retail businesses and liquefied natural gas ("LNG") operators); and
- information relating to the Australian and international energy sectors including supply/demand forecasts and government and/or regulatory decisions and pronouncements (as appropriate).

Non Public Information provided by Origin

- budget for FY24 ("FY24 Budget") prepared by Origin management;
- detailed cash flow models for Origin's Energy Markets and Other Integrated Gas business operations, Octopus Energy Group Limited ("Octopus Energy") and APLNG prepared by Origin management ("Business Operation Cash Flow Models") which commence on 1 July 2023 and reflect Origin's assumptions for its 2023 Long Term Financial Plan ("LTFP23"); and

Annexure 1. Independent Expert's Report *continued*

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- other confidential documents, board papers, presentations and working papers.

In preparing this report, Grant Samuel has held discussions with, and obtained information from, senior management of Origin and its advisers. The discussions with senior management of Origin were conducted by way of management presentations to provide an overview of each of its business operations, historical financial performance, growth strategy and risks of the business. Separate sessions were also held with management teams for the individual businesses (i.e. Energy Markets, APLNG and Octopus Energy) to discuss specific issues relating to each of the businesses.

2.4 Limitations and Reliance on Information

Grant Samuel believes that its opinion must be considered as a whole and that selecting portions of the analysis or factors considered by it, without considering all factors and analyses together, could create a misleading view of the process employed and the conclusions reached. Any attempt to do so could lead to undue emphasis on a particular factor or analysis. The preparation of an opinion is a complex process and is not necessarily susceptible to partial analysis or summary.

Grant Samuel's opinion is based on economic, sharemarket, business trading, financial and other conditions and expectations prevailing at the date of this report. These conditions can change significantly over relatively short periods of time. If they did change materially, subsequent to the date of this report, the opinion could be different in these changed circumstances.

This report is also based upon financial and other information provided by Origin and its advisers. Grant Samuel has considered and relied upon this information. Origin has represented in writing to Grant Samuel that to its knowledge the information provided by it was then, and is now, complete and not incorrect or misleading in any material respect. Grant Samuel has no reason to believe that any material facts have been withheld.

The information provided to Grant Samuel has been evaluated through analysis, inquiry and review to the extent that it considers necessary or appropriate for the purposes of forming an opinion as to whether the Scheme is in the best interests of Origin shareholders. However, Grant Samuel does not warrant that its inquiries have identified or verified all of the matters that an audit, extensive examination or "due diligence" investigation might disclose. While Grant Samuel has made what it considers to be appropriate inquiries for the purposes of forming its opinion, "due diligence" of the type undertaken by companies and their advisers in relation to, for example, prospectuses or profit forecasts, is beyond the scope of an independent expert.

Accordingly, this report and the opinions expressed in it should be considered more in the nature of an overall review of the anticipated commercial and financial implications rather than a comprehensive audit or investigation of detailed matters.

An important part of the information used in forming an opinion of the kind expressed in this report is comprised of the opinions and judgement of management. This type of information was also evaluated through analysis, inquiry and review to the extent practical. However, such information is often not capable of external verification or validation.

Preparation of this report does not imply that Grant Samuel has audited in any way the management accounts or other records of Origin. It is understood that the accounting information that was provided was prepared in accordance with generally accepted accounting principles and in a manner consistent with the method of accounting in previous years (except where noted).

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Origin Forward Looking Information

The information provided to Grant Samuel included the:

- FY24 Budget; and
- Business Operation Cash Flow Models

Origin prepared, and is responsible for, the information contained in the FY24 Budget and the Business Operation Cash Flow Models (collectively the "forward looking information").

Grant Samuel has considered and, to the extent deemed appropriate, relied on the forward looking information for the purposes of its analysis. The major assumptions underlying the forward looking information were reviewed by Grant Samuel in the context of current economic, financial and other conditions. It should be noted that the forward looking information and the underlying assumptions have not been reviewed (nor is there a statutory or regulatory requirement for such a review) by an investigating accountant for reasonableness or accuracy of compilation and application of assumptions.

Subject to these limitations, Grant Samuel considers that, based on the inquiries it has undertaken and only for the purposes of its analysis for this report (which do not constitute, and are not as extensive as, an audit or accountant's examination), there are reasonable grounds to believe that the forward looking information has been prepared on a reasonable basis. In forming this view, Grant Samuel has taken the following factors into account that:

- the FY24 Budget was reviewed in detail and has been adopted by the Directors of Origin;
- the Business Operation Cash Flow Models are:
  - managed centrally but based on inputs from management teams with responsibility for each business operation;
  - used by Origin for general business planning and management purposes (e.g. budgeting, strategic planning, capital allocation and management, impairment testing valuation, etc); and
  - reviewed and updated annually; and
- Origin has sophisticated management and financial reporting processes. The forward looking information has been prepared through a detailed budgeting process involving preparation of "bottom-up" forecasts (i.e. on a business-by-business basis) by management and is subject to ongoing analysis and revision to reflect the impact of actual performance or assessments of likely future performance.

At the same time, it is important to recognise that:

- Origin's business operations are fundamentally exposed to movements in energy prices. In recent years, energy prices have seen a profound level of volatility arising from a number of factors (e.g. supply-demand uncertainty, the Russia-Ukraine war and the recent conflict in Israel and the push for renewable sources of energy);
- the transition to renewable energy over the next two decades will be dramatic and far reaching. However, it is unlikely to be smooth and there is a significant chance of (possibly extended) periods of dislocation which could have material impacts on Origin's earnings and cash flows (both up and down). However, such events are essentially unpredictable at this point in time;
- future price paths for energy prices (such as international oil prices and domestic wholesale energy prices) are extremely difficult (if not impossible) to estimate with confidence or precision; and
- the regulatory environment continues to evolve, often in unexpected ways. Recently introduced regulations on domestic coal and gas prices have added another layer of risk to the energy market in Australia.

Annexure 1. Independent Expert's Report *continued*

Accordingly, any forecast for a business such as Origin needs to be treated with considerable caution. The range of potential outcomes that could be considered realistic is extremely wide.

Grant Samuel has not relied on the Business Operation Cash Flow Models for the purposes of its report but has considered this information in its review of the future business strategy of Origin and its prospects and used this information in developing financial models for Origin's business operations as discussed in Section 6 of this report.

Grant Samuel has no reason to believe that the forward looking information reflects any material bias, either positive or negative. However, the achievability of the FY24 Budget is not warranted or guaranteed by Grant Samuel. Future profits and cash flows are inherently uncertain. They are predictions by management of future events that cannot be assured and are necessarily based on assumptions, many of which are beyond the control of the company or its management. Actual results may be significantly more or less favourable.

As part of its analysis, Grant Samuel has considered a range of different forecast outcomes based on alternative sets of assumptions and has reviewed the impact on net present values to changes in these assumptions. This analysis isolates a limited number of assumptions and shows the impact of variations to those assumptions. No opinion is expressed as to the probability or otherwise of those variations occurring. Actual variations may be greater or less than those modelled. In addition to not representing best and worst outcomes, the analysis does not, and does not purport to, show the impact of all possible variations. The actual performance of the business may be negatively or positively impacted by a range of factors including, but not limited to:

- changes to the assumptions other than those considered in the sensitivity analysis;
- greater or lesser variations to the assumptions considered in the sensitivity analysis than those modelled; and
- combinations of different assumptions may produce outcomes different to those modelled.

APLNG Forward Looking Information

The information provided to Grant Samuel also included life of asset (20+ year) development plans and forecasts for APLNG's key gas assets and detailed cash flow models including financial projections for each of the gas assets prepared by APLNG and Origin ("the APLNG forward looking information"), specifically the:

- upstream development plan (UDP23) prepared by Origin (as operator) but in conjunction with the other APLNG partners. This model is primarily used for impairment testing and covenant testing; and
- the Business Operation Cash Flow Model for APLNG.

Origin is responsible for the APLNG forward looking information.

Gaffney, Cline & Associates Pty. Ltd.("GaffneyCline") was appointed as technical specialist to review the producing and non-producing assets of APLNG for Grant Samuel and, using this information, develop two production scenarios. GaffneyCline also prepared valuations of APLNG's and Origin's exploration and non-producing interests. The report prepared by GaffneyCline is attached to and forms part of this report (see Appendix 4).

Accordingly, GaffneyCline conducted a detailed review of the significant assumptions and technical factors underlying the APLNG forward looking information. This process included reviews of the:

- basis on which petroleum resources and reserves have been estimated;
- development plans and future production profiles;
- expected future operating, capital and rehabilitation costs (e.g. abandonment expenditure);

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- potential for the conversion of resources to reserves (i.e. reserve extensions);
- environmental factors; and
- other factors as GaffneyCline deemed appropriate.

GaffneyCline relied on APLNG forward looking information but, based on its review, made independent judgements regarding the technical assumptions that can reasonably be adopted for the purposes of the valuation of Origin's interest in APLNG ("technical valuation assumptions") which may be different to those adopted by Origin.

Subject to these changes, on the basis of the information provided to, and reviewed by, Grant Samuel and GaffneyCline, it was concluded that the APLNG forward looking information was prepared appropriately and accurately based on the information available to management at the time and within the practical constraints and limitations of such forward looking information. However, the achievability of the forward looking information is not warranted or guaranteed by GaffneyCline or Grant Samuel. Future profits and cash flows are inherently uncertain. They are predictions by management of future events that cannot be assured and are not necessarily based on assumptions, many of which are beyond the control of the company or its management. Actual results may be significantly more or less favourable.

As part of its analysis, Grant Samuel has developed cash flow models based on the technical valuation assumptions deemed appropriate by GaffneyCline. Consistent with the approach undertaken with the Origin forward looking information, Grant Samuel has also reviewed the sensitivity of net present values for APLNG to changes in key variables but recognises that the analysis may not necessarily represent best and worst case outcomes and, in any event, does not purport to show all the possible variations to the business model. The actual performance of the business may be negatively or positively impacted by a range of factors.

Other Matters

In forming its opinion, Grant Samuel has also assumed that:

- matters such as title, compliance with laws and regulations and contracts in place are in good standing and will remain so and that there are no material legal proceedings, other than as publicly disclosed;
- the assessments by Origin and its advisers with regard to legal, regulatory, tax and accounting matters relating to the Scheme are accurate and complete;
- the information set out in the Scheme Booklet sent by Origin to its shareholders is complete, accurate and fairly presented in all material respects;
- the publicly available information relied on by Grant Samuel in its analysis was accurate and not misleading;
- the Scheme will be implemented in accordance with its terms; and
- the legal mechanisms to implement the Scheme are correct and will be effective.

To the extent that there are legal issues relating to assets, properties, or business interests or issues relating to compliance with applicable laws, regulations, and policies, Grant Samuel assumes no responsibility and offers no legal opinion or interpretation on any issue.

Annexure 1. Independent Expert's Report *continued*

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3 Industry Overview

3.1 Australian Energy Markets

Background

The past two decades has seen a significant shift in the makeup of Australia's energy mix but even more radical changes are expected over the next three decades to 2050. Coal and natural gas continue to meet the majority of the country's energy requirements although alternative sources, in particular renewables, have grown in importance. By 2050, coal is expected to be completely phased out. While gas is seen as a "transition" fuel as renewable energy sources are developed and built out, it will, in time, also come under pressure at least once sufficient "firming" capacity for renewables is in place (although in the absence of a complete solution, gas will continue to play a significant role for a considerable period of time).

Structure

The structure of the energy industry in Australia (which is also common across the world) can be depicted as shown below:

STRUCTURE OF THE ENERGY INDUSTRY

	GENERATION/WHOLESALE	TRANSMISSION	DISTRIBUTION	RETAIL
	ORIGIN'S BUSINESS OPERATIONS			ORIGIN'S BUSINESS OPERATIONS
ELECTRICITY	Power plants generate electricity from various sources (e.g. coal, gas, renewable energy sources) for supply to electricity markets	Transmission networks transport high voltage electricity from generators in regional or remote locations to population centres	Low voltage electricity is distributed via a network of poles and wires to consumer premises	Residential, commercial and industrial consumers buy electricity from retailers
GAS	Onshore and offshore gas fields are drilled to access gas reserves	Large high-pressure pipelines carry gas from the gas fields to key markets	Gas is distributed via a network of low pressure pipelines to consumer premises	Domestic consumers buy natural gas from retailers International consumers buy LNG from retailers
SERVICES	Design, construct, operate, maintain and manage electricity and gas infrastructure			

Source: Grant Samuel

Electricity generators are exposed to wholesale energy prices (which at times may be highly volatile) but often enter into financial contracts (e.g. derivatives) to hedge that exposure. Similarly, the retail market is exposed to wholesale energy prices, although retailers often mitigate this risk by owning generation assets and/or by entering into a portfolio of longer term supply agreements and financial hedging contracts.

While there are independent generators and retailers, the electricity industry often features "gentailers" such as Origin's Energy Markets business which operate in both the generation and retail segments of the energy industry (albeit with varying degrees of vertical integration) so as to more efficiently manage their risk exposure to energy price volatility. In contrast, the gas industry features retailers with more limited upstream gas production capacity (and a diverse range of independent gas producers).

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Transmission and distribution is highly capital intensive and multiple networks in a single market are generally considered to be an inefficient use of resources. Accordingly, they are often monopoly businesses subject to stringent regulation and managed independently of generation/wholesale and retail.

Regulatory Environment

As the management of energy resources, production and supply of energy and stability of energy markets are critical to the economy, the energy sector is subject to substantial regulation. From 2017, the Energy Security Board ("ESB") was responsible for whole of system oversight for energy security and reliability to drive better outcomes for consumers. It was tasked with coordinating between three energy market regulatory bodies including:

- Australian Energy Market Commission ("AEMC"), which is responsible for rule making and market development in the electricity and natural gas markets;
- Australian Energy Regulator ("AER"), which regulates wholesale and retail energy markets and energy networks, under national energy legislation and rules. The AER's functions primarily relate to energy markets in Queensland, New South Wales and South Australia. The Victoria Essential Services Commission ("ESC") is responsible for enforcing the rights and obligations of retailers in Victoria; and
- Australian Energy Market Operator ("AEMO"), which operates the National Electricity Market ("NEM") and the retail and wholesale gas markets of eastern and southern Australia[6].

However, in May 2023, the federal, state and territory energy ministers agreed to dissolve the ESB and establish a new Energy Advisory Panel ("EAP") with effect from 1 July 2023 to coordinate market body advice to governments on security, reliability and affordability of Australia's east coast energy system. As a result, development of energy policy is solely within the remit of the ministers and government departments. The EAP includes the heads of each of the three energy market regulatory bodies as well as the ACCC energy commissioner (to focus specifically on issues relating to gas supply, competition in retail markets and consumer protection).

Western Australia operates under a separate energy market from the rest of the East Coast of Australia and is therefore subject to a different regulations.

Electricity Market

OVERVIEW

Australia's electricity market can be segmented into three regional markets. The East Coast market is the largest of these markets and comprises Victoria, New South Wales, the Australian Capital Territory ("ACT"), South Australia, Queensland and Tasmania, which together form the NEM. Wholesale electricity in this interconnected region is sold through the NEM. Western Australia and the Northern Territory operate their own separate markets.

Origin's Energy Markets business principally operates in the NEM[7].

DEMAND IN THE NEM

Demand for electricity is underpinned by the evolving needs of approximately 10.6 million residential and business customers across the NEM[8]. The chart below illustrates the historical and forecast electricity consumption in the NEM:

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6 AEMO also operate the Wholesale Energy Market (WEM) in Western Australia.

7 Origin's presence in Western Australia includes natural gas and LPG retailing as well as its WINconnect business acquired in 2022.

8 Source: State of the Energy Market, 2022.

Annexure 1. Independent Expert's Report *continued*

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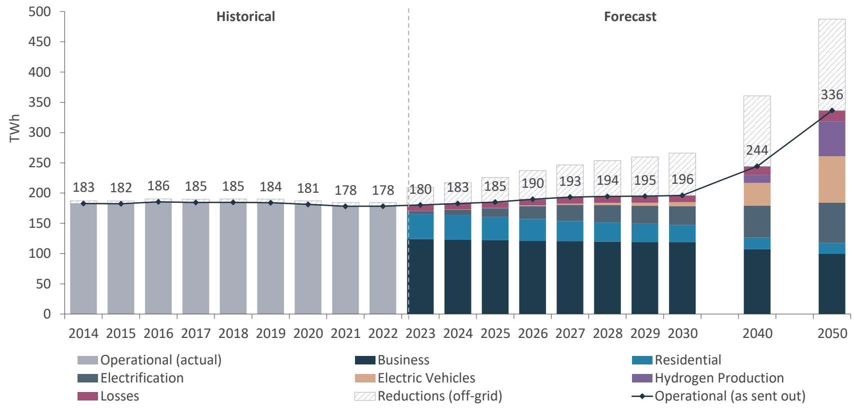
NEM – HISTORICAL AND FORECAST ELECTRICITY CONSUMPTION, CENTRAL SCENARIO



Source: AEMC, Annual Market Performance Review, 2022

Since 2000, grid demand in the NEM has closely tracked total electricity consumption. However, the accelerating adoption of rooftop solar (on both residential and commercial premises) in the past decade has driven an increasing share of consumption "off-grid". While initial uptake of rooftop solar began as early as 2006, rooftop solar capacity still had very low penetration levels in 2010. By 2015, total capacity had increased to approximately 3,600 MW and is projected to increase to 16,324 MW (or 21.5% of NEM generation capacity) by 2025. While rooftop solar uptake slowed in 2022, it is expected to continue to grow and potentially supply up to 50% of total residential households by 2050 (or anywhere from 40-75GW)[9]. The growing penetration of rooftop solar has allowed consumers (and businesses) to be more self sufficient with their energy needs.

Over the longer term, the drivers of electricity demand such as population growth, economic growth, electrification (e.g. EVs) and the shift away from gas appliances in households and more generally in industry are likely to continue have a large impact on total electricity consumption. At the same time, the pace of the energy transition and technological improvements (including its impact on efficiency and cost) are difficult to predict with any certainty. In addition, the proportion that will be generated off grid is also difficult to predict. Accordingly, long term projections for future electricity demand on the NEM vary across a very wide range. Based on the range of scenarios prepared by the AEMO, electricity demand could, at worst, be flat over the next 30 years, but a net-zero future presents an opportunity to drive a doubling of demand in the NEM by 2050[10] (and perhaps even more in their most ambitious scenario).

In any event, the recent shifts in energy consumption have several implications for the NEM (particularly for the supply of power):

- energy consumption will grow increasingly off-grid. While electricity consumption is expected to grow by an average of 3.5% per annum over the next decade, growth in grid consumption could be limited to as little as 1.5% per annum;
- the grid will remain vital for maintaining reliability of power. The discrepancy in growth outlooks suggest that the share of consumption on the grid is expected to decline from around 85% currently

9 Source: CSIRO, Small-Scale Solar PV and Battery Projections 2022, December 2022.

10 Source: AEMO, Electricity Statement of Opportunities 2022. The updated report was released in February 2023 to reflect material changes to the projected available capacity in the NEM.

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to around 70% over the next decade (still at levels substantial enough to reinforce the importance of the reliability and stability of the grid); and

- new generation capacity will need to be built to replace the production facilities slated for closure over the next two decades. While rooftop solar accounts for over 20% of NEM generation capacity, it only contributes around 10-15% of total consumption[11]. Industrial scale renewable energy sources (e.g. wind and solar) also contribute a smaller share of power generation than capacity (because neither solar nor wind can produce on a 24/7/365 basis). Investments in firming capacity and back-up power will become increasingly important in this environment but this does not change the essential capacity vs. output issue. Accordingly, more generation capacity will need to be built than was available from existing fossil fuel sources.

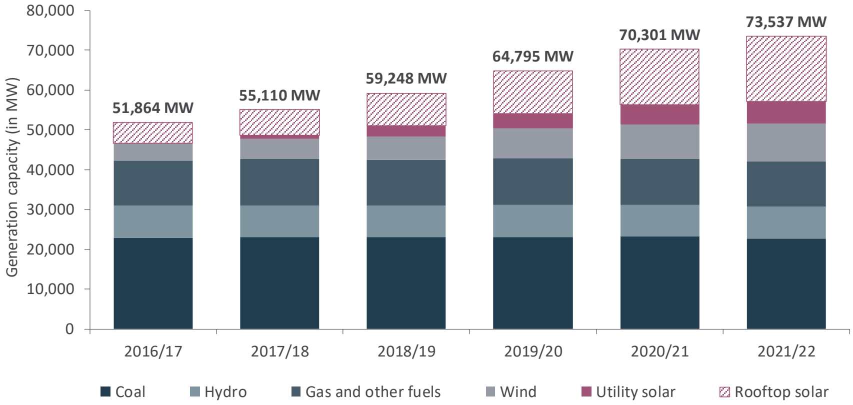
These issues are explored further below.

CURRENT STATE OF SUPPLY IN THE NEM

Between 2015 and 2022, total generation capacity in the NEM grew from 47.7 GW to 57.2 GW (excluding rooftop solar), or by approximately 3.1% per annum. The stable growth of the overall market masks the divergence in performance between coal-fired power generation (which saw capacity fall by around 8% over the period) and renewable energy capacity (which saw capacity almost double). This transition was partly fuelled by the federal government's Renewable Energy Target scheme, which incentivised new investments in renewable assets across large scale grid participants (e.g. new solar and wind farms) and smaller scale residential and commercial users (e.g. rooftop solar).

The shift in electricity generation capacity is depicted in the chart below:

HISTORICAL GENERATION CAPACITY IN THE NEM



Source: AEMC, Annual Market Performance Review, 2022

As a result of its scale and historically competitive cost profile, coal-fired power has traditionally been the backbone of baseload electricity supply. There are 15 coal-fired power stations across the NEM, with an average capacity of nearly 1,500 MW (whereas the capacity for wind and solar farms typically ranges from around 200 MW to 500 MW). The low operating costs for coal-fired power is premised on its ability to produce large volumes of energy at stable and predictable levels throughout the day.

As illustrated in the chart below, coal-fired power offers the most competitive combination of scale and low marginal cost across all generation sources in the NEM:

[11] As a result of limited hours of operation and variable weather patterns.

Annexure 1. Independent Expert's Report *continued*

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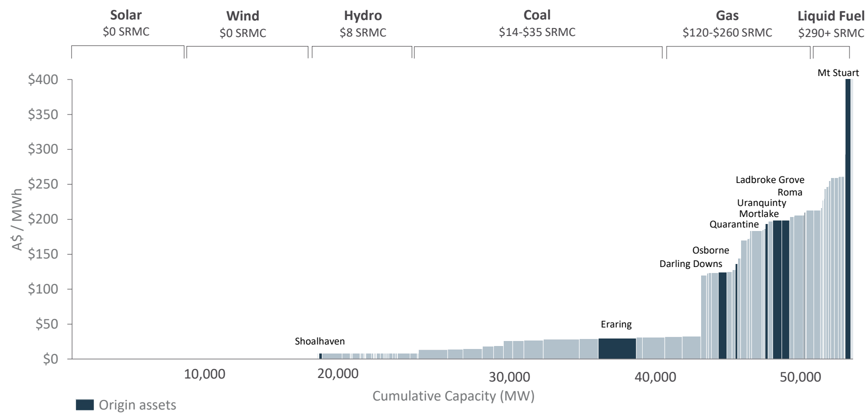
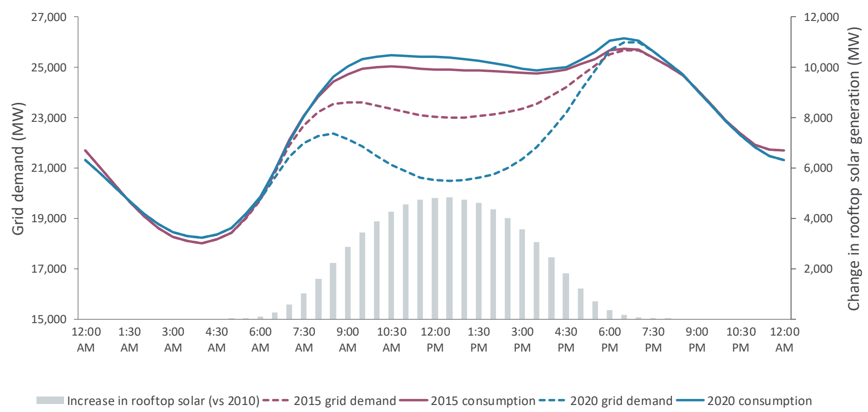
ELECTRICITY GENERATION CAPACITY, MARGINAL COST CURVE (2022)[12]



Source: AEMO

However, the operating model of coal fired power generation has come under increased pressures in recent years. As more users installed rooftop solar and migrated "off-grid", total grid demand declined over the past five years with coal-fired power bearing the brunt of the decline (from 27 GW to less than 23 GW in annual output between 2015 and 2022)[13] resulting in closures of several large scale coal-fired power stations. This shift towards "off-grid" sources has had profound consequences on the grid. Perhaps the most pressing of these has been the widening gap between minimum and maximum intraday grid demand. While overall consumption across all hours (including peak hours) has remained broadly stable over the past 10 years, intraday grid demand especially during the daylight hours has fallen substantially. The chart below illustrates the changing generation profiles by time of day:

ELECTRICITY CONSUMPTION VS GRID DEMAND IN THE NEM



Source: Australian Energy Market Commission. Based on latest reported data (2020).

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12 Includes operating and maintenance costs and fuel costs.

13 Source: AEMC, Annual Market Performance Review, 2022.

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The gap in intraday demand is expected to widen as the penetration of rooftop solar increases, but with the shape of the curve shifting as minimum demand gradually moves from the middle of the night to the middle of the day (in line with peak efficiency of rooftop solar). In time, the gap is expected to narrow as increased use of batteries allows more time shifting and as other technologies such as pumped hydro push up demand for off-peak power.

Accordingly, wholesale electricity prices have seen sharp declines at certain times of the day (at times declining below zero) as a result of significant imbalances in supply and demand on the grid for extended periods in a day (and expected to continue doing so if trends persist). Prior to FY19, the number of trading minute intervals[14] during which wholesale prices were negative averaged approximately 200 per year. This has surged to more than 9,000 and 10,100 in FY22 and FY23, respectively.

In this environment, generators need to maximise flexibility to "choose" when to sell energy into the NEM at commercially feasible prices. This has had diverging consequences for:

- renewable energy sources (e.g. wind and solar), which have become increasingly competitive given their very low marginal costs (in some cases, zero) and inherent design to respond adeptly to variable energy demand. These renewable alternatives are typically party to long term offtake contracts which require them to generate power for a fixed price and, at times, reduce their output when prices fall below a predetermined threshold; and
- coal-fired power stations, which have become increasingly onerous and unprofitable to operate. Coal-fired power stations are typically unable to "switch production on or off" at short notice (although there is a concerted effort to make them more flexible to mitigate some of these problems). As a result, these plants produce electricity through periods of low grid demand and forced to sell at a loss for extended periods throughout the day. The challenges are exacerbated by the maintenance requirements of the aging assets and their susceptibility to unplanned outages (prominently on display in June 2022 as nearly 5GW of coal-fired power capacity was offline for an extended period).

On the other hand, gas-fired power stations offer a balance between both options and are often considered a "transition" fuel. Gas-fired power can operate more flexibly than coal-fired power (as the operator can ramp up to full capacity in as little as five minutes) and carry substantially lower carbon emissions profile than coal. Moreover, they are less susceptible to changes in weather conditions (compared to wind and solar energy assets) and can provide "firming" capacity to the grid (which is typically used supply energy in times of "peak" demand for electricity). However, they typically have higher operating cost requirements and, consequently, are commonly used as "peaking" plants. Due to these attributes, gas-fired power is often considered an intermediate solution for the energy transition as a complement to renewable energy (which lacks the "firming" characteristics unless coupled with battery storage options and even then only for short periods of 2-4 hours).

Similarly, hydroelectric power sources are easily dispatchable given their readily available fuel source but are capital intensive and have low marginal costs to operate. However, they are exposed to risks in relation to the availability of water (particularly given the long lead times to replenish water storage capacity). Accordingly, they are often also used as a "peaking" plant alternative alongside gas-fired power.

The collective impact of these issues are placing immense pressure on the profitability of coal-fired power assets (a number of which were old and inefficient and uncompetitive relative to other power stations). Rising coal supply costs in the last 18 months have exacerbated these profitability issues. The last decade has seen the closures of a number of large scale coal power stations such as Alinta's Northern power station (2016), Engie's Hazelwood power station (2017) and AGL Energy Limited's ("AGL Energy") Liddell power station (2023). Despite recent measures implemented by federal and state governments to cap

[14] Since October 2021, trading activity in the NEM has been settled under a "five-minute settlement" regime, wherein wholesale electricity prices are determined by the available supply and demand in every five-minute period. For the purposes of comparison, the AER data is reported on a 30-minute trading interval.

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rising costs (e.g. temporary domestic coal reservation policy including a $125/t price cap in New South Wales and Queensland), the pressures have continued to weigh on coal-fired power stations.

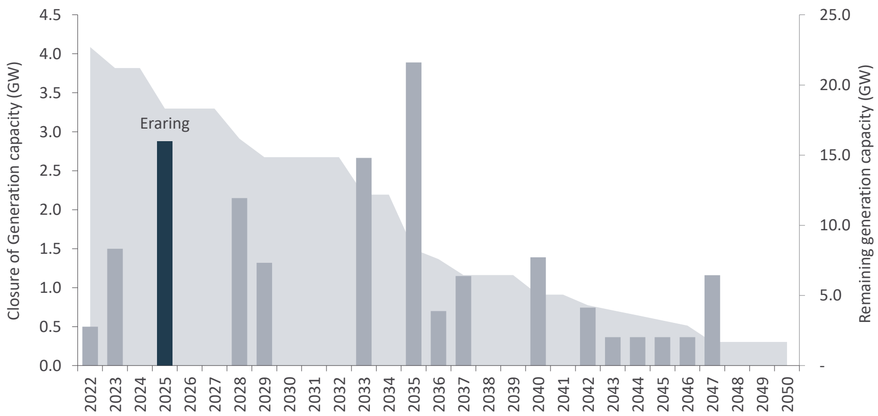
FUTURE SUPPLY IN THE NEM

Over the last two years, major participants in the NEM have flagged accelerated closures of their coal-fired power stations, including Origin (Eraring), AGL Energy (Bayswater and Loy Yang A) and EnergyAustralia (Mount Piper). These accelerated closure timelines reflect both:

- the pressures faced by coal-fired power, namely the "rapidly changing conditions in the NEM, which are increasingly not well suited to traditional baseload power stations and challenging their viability"; and
- the pressure from government and others to decarbonise the electricity generation supply chain.

In aggregate, nearly 20GW of capacity is scheduled to exit the NEM by 2050 (with the remaining two coal-fired power stations scheduled for retirement in 2051):

SCHEDULED RETIREMENTS OF COAL-FIRED POWER CAPACITY IN THE NEM



Source: AEMO

New sources of power generation will need to be developed in time to meet the growing demand in the NEM (and the exit of generation capacity) and to avoid potentially catastrophic energy shortages. New transmission infrastructure will also be required to connect the new generation assets to the grid. Timing and sequencing of closures of existing power stations and commissioning of new replacement generation capacity are crucial to maintaining the reliability of the grid. This is a monumental task for the NEM.

Approximately 10GW of projects (excluding battery storage which does not itself generate energy) are under development, of which around 7GW is expected to be operational by FY27. The vast majority are either solar or wind power assets. While there is a much larger pipeline of proposed projects (collectively in excess of 200GW), not all of this will necessarily come to fruition. In any event, these projects are subject to a variety of risks in relation to grid connection, permitting, funding and construction. Recent cost blowouts and delays of the Snowy 2.0 hydro project and the Kurri Kurri Power Station illustrate the potential magnitude of these risks. At the same time, delays in some of these new projects has provided additional economic incentive for existing baseload capacity to defer their closure dates and remain in operation for longer (e.g. Vales Point).

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In the near term, aggregate supply and demand in the NEM remains in a delicate balance. Recent estimates by AEMO indicate that potential shortfalls in electricity supply may begin to emerge by 2025 particularly in New South Wales (in line with the expected closure of Eraring)[10]. Unless more projects are approved and developed (or scheduled closures are deferred), this gap is expected to widen over the next ten years and may impede the NEM's ability to meet minimum network reliability requirements.

To this end, a number of measures are being investigated (and have been implemented to varying degrees) to address the potential supply gap, including:

- direct investments by state governments. The State Government of Victoria (through the State Electricity Commission) has committed an initial $1 billion investment to deliver 4.5GW of renewable and storage projects. The Queensland Government has committed $19 billion in capital investments to support new wind, solar and storage assets (as well as transmission infrastructure);
- capacity investment scheme, through which the Commonwealth Government will underwrite the revenue for eligible generation and storage projects (effectively setting an agreed revenue "floor" and "ceiling"). This program is expected to unlock around $10 billion of investment and add 6GW to the grid by 2030; and
- minimum price guarantees (or a form of "capacity payment"), which are paid to certain power plant operators to ensure the plants remain available as new renewable and flexible generation assets are brought online. These agreements reflect the acknowledgement of the role baseload power stations have in ensuring grid stability and reliability at least until variable generation sources such as renewable assets can be "firmed". In 2021, the State Government of Victoria signed a deal with EnergyAustralia in relation to minimum power price guarantees for its Yallourn power station and a similar deal with AGL for Loy Yang A power station in August 2023.

Following the release of a state government review on the decarbonisation roadmap (including the residual risks for the early closure of Eraring)[15], the New South Wales Government is actively assessing potential options to defer the retirement of Eraring and is expected to hold discussions with Origin on the operating and funding parameters of this extension.

WHOLESALE ELECTRICITY PRICES IN THE NEM

The collective impact of intraday grid prices and tightening supply (and uncertain future) of baseload power supply and rising input costs has translated to higher (and volatile) average wholesale electricity prices in recent years:

[15] Source: Marsden Jacob Associates. *NSW Electricity Supply and Reliability Check Up – Prepared for NSW Treasury – Office of Energy & Climate Change*, August 2023.

Annexure 1. Independent Expert's Report *continued*

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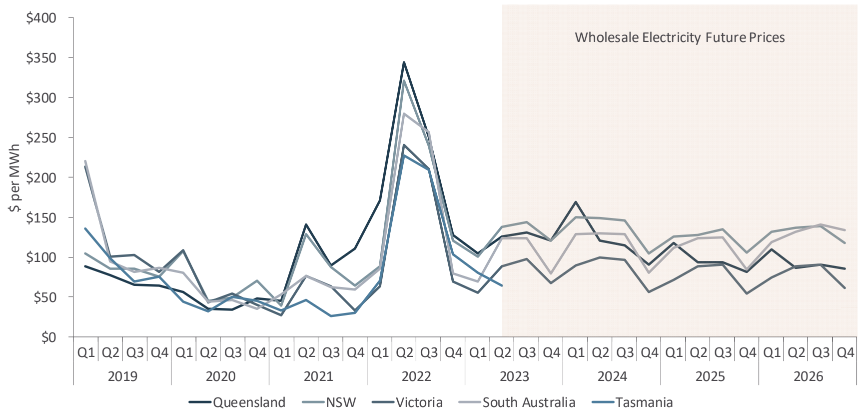
WHOLESALE ELECTRICITY PRICES, BY STATE

ANNUAL VOLUME WEIGHTED AVERAGE, 2019 TO 2026



Source: AER[16]

Electricity prices were historically in a range of $50-80/MWh but jumped to over $200/MWh in 2019 across Victoria and South Australia as new renewable energy projects had yet to fully replace the lost output from the closures of the Northern and Hazelwood Power Stations. Both power stations were scheduled for closure with relatively short notice periods, limiting the market's ability to respond with adequate and timely investments in new capacity.

While electricity prices broadly retreated over 2020 and 2021, a sharp reversal in 2022 saw electricity prices rise to unprecedented levels as a result of:

- significantly higher input costs, particularly from coal and gas due to global supply chain issues arising from the Russia-Ukraine war;
- unplanned outages, which pushed nearly a quarter of coal generation capacity offline as a number of power stations were impacted (Bayswater, Loy Yang A, Liddell and Callide Energy); and
- supply chain issues, which reduced the available generation capacity in the NEM (e.g. at Eraring which faced coal supply disruption due to production issues at Centennial Coal).

The volatility in the electricity markets was further exacerbated by a number of issues including a temporary price cap implemented by AEMO in mid-2022 and the decision of some generators to withdraw capacity from the market. As a result, the NEM was temporarily suspended by the AEMO to manage the supply of electricity within the market. The Federal Government's announced intervention (by way of price caps on domestic gas and coal) combined with increased coal supply contributed to further easing of electricity prices towards the end of 2022 and into the first half of 2023 (albeit still at historically high levels). In the second quarter of 2023, the average wholesale electricity price was approximately $108/MWh, which is 59% lower than the prior corresponding period, but still the second highest quarter two average price on record. Forward price paths are fraught with considerable uncertainty.

16 Data is based on the latest quarterly update published by the AER (through June 2023). Wholesale electricity future prices not available for Tasmania.

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Gas Market

OVERVIEW

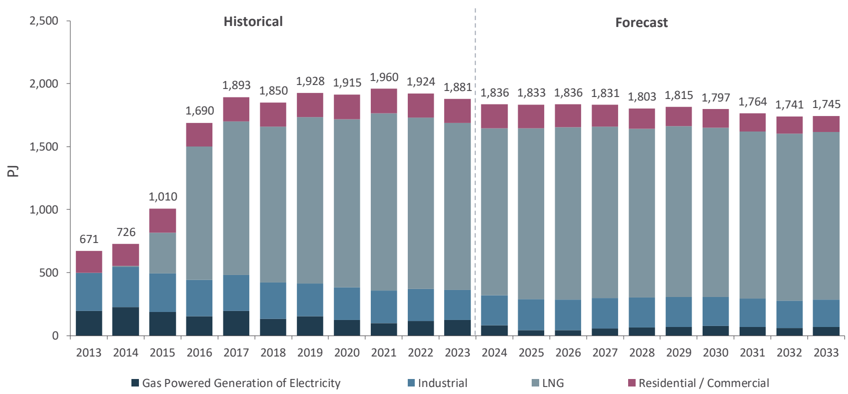
The Australian gas market can be segmented into three distinct regional markets, each supported by its own gas reserves and integrated processing as well as supply transmission and distribution infrastructure. The East Coast market is the largest of these markets and comprises an integrated network across Queensland, New South Wales, Victoria, the ACT, South Australia and Tasmania.

In contrast to the NEM (which is centrally coordinated), spot gas wholesale markets are operated at major hubs in Victoria, Sydney, Adelaide, Brisbane and Wallumbilla.

DEMAND IN THE EAST COAST MARKET

Natural gas is widely used across Australian households and is an important source of energy in Australia, accounting for over 25% of energy consumption in the country. Historically, gas demand has been evenly split across industrial customers, residential and commercial customers, and electricity generation. Gas consumption over historical and forecast ten year period are shown in the graph below:

EAST COAST MARKET – HISTORICAL AND FORECAST GAS CONSUMPTION, CENTRAL SCENARIO (PJ)



Source: AEMO, Gas State of Opportunities 2023

The shift towards electrification and net zero emission targets by 2050 are driving significant changes in Australia's gas markets. Governments have been encouraged to impose deadlines for ending gas use, leading to an overall decline in demand over the next few decades.

In January 2023, the ACT government legislated to end all gas connections to new builds, with the aim of switching off gas for good by 2045. Subsequently, Victoria has followed suit by enforcing that all new homes and residential subdivisions will only allow connections to all-electric networks from January 2024. This contrasts historical gas usage where Victoria is the highest user of residential gas, accounting for 65% of total Australian household gas use. While other states have ruled out similar bans, the increasing availability of renewable energy in the NEM, including electrification, is likely to reduce the demand for gas. In the longer term, gas consumption also faces the risk of displacement by hydrogen fuel (although studies for its applications at a commercial scale remain in very early stages).

These factors are offset to some extent by the expected reduction in generation capacity of coal-fired power and the use of gas as a "transition fuel" that can provide invaluable (yet expensive) firming capacity

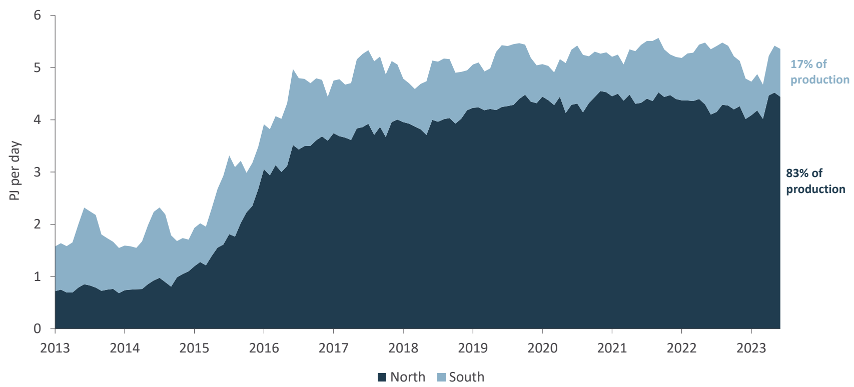
Annexure 1. Independent Expert's Report *continued*

to the grid especially during seasonal peaking electricity during hot summer months (i.e. high energy needs for cooling) and winter months (i.e. lower efficiency of renewable assets).

SUPPLY IN THE EAST COAST MARKET

The East Coast market is estimated to hold 33,660 PJ of 2P gas reserves and more than 40,000 PJ of 2C gas resources. Approximately 89% of available 2P reserves are located in coal seam gas fields in the Bowen and Surat Basins in Queensland[17], as mature conventional gas fields in the southern state gas basins (e.g. Bass Strait, Cooper Basin, Gippsland Basin and Otway Basin) have gradually been depleted over recent years. This geographical spread of reserves is broadly aligned with relative gas production across the states. Gas flows have generally become southbound as the Queensland gas fields are net exporters of gas into the southern states[18].

EAST COAST MARKET – HISTORICAL SOURCE OF SUPPLY BY REGION (PJ PER DAY)



Source: Australian Energy Regulator, *Wholesale Statistics*, 2023

The development of three LNG export facilities in Gladstone, Queensland[19], which in turn were based on the development of extensive coal seam gas fields in regional Queensland, have profoundly affected the demand/supply dynamics of the East Coast market. These LNG plants introduced an export alternative to selling gas into the domestic market and, at least in part, have integrated the eastern Australian gas market with international gas markets. Domestic gas customers now compete with international markets, where LNG prices, which have been directly or indirectly oil price linked, have historically been higher than East coast gas prices on a net-back basis. In the absence of any specific regulation, gas producers are incentivised to sell excess uncontracted gas into the domestic market only when local gas prices are competitively aligned with LNG export prices (as well as consider any practical or logistical constraints such as pipeline availability and market liquidity). Moreover, gas producers have initially focused on lower cost gas reserves. As these reserves are depleted, gas production costs have increased which has placed upwards pressure on domestic gas prices. There has also been a constraint on new supply with multiple

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[17] Source: ACCC, *Gas Inquiry 2017-2030 Interim Report*, January 2023.

[18] North includes Roma, Moomba and Ballera. South includes all other production in the East coast market.

[19] The three LNG export facilities are:

- APLNG (Australia Pacific LNG), owned by Conoco Philips, Origin and Sinopec;
- GLNG (Gladstone LNG), owned by Santos, Petronas, Total and KOGAS; and
- QCLNG (Queensland LNG), owned by Shell, CNOOC and Tokyo Gas.

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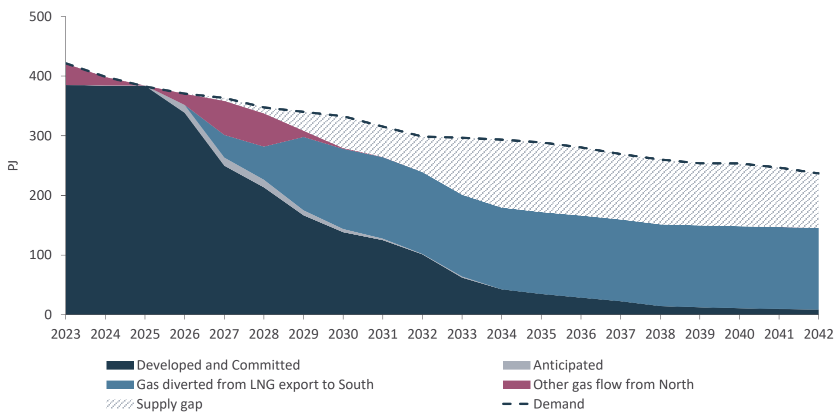
states such as Victoria and NSW limiting the development of new onshore supply. Collectively, these issues have contributed to significant rises in domestic gas prices.

Concurrently, an expected shortfall in gas supply from southern regions[20] has increased the demand for other sources of domestic gas. In 2024, southern states are expected to experience a 44 PJ shortfall due to declining gas reserves, project delays and high levels of residential gas demand during winter. In contrast to southern regions, Queensland is expected to have a surplus of uncontracted gas supply which, under market forces, would be exported in the LNG market or sold at export linked prices.

In response to the anticipated shortfalls, export restrictions have been implemented in the East coast market to secure gas supply to the domestic markets. The Australian Domestic Gas Security Mechanism ("ADGSM") was introduced by the Australian Government in 2017, to enable the Federal Government to directly intervene and impose LNG restrictions[21], addressing projected gas shortfalls. While the ADGSM has not been enacted since its introduction, the Federal Government has periodically entered into Heads of Agreements with LNG producers to safeguard Australia's domestic supplies. In September 2022, East Cost LNG exporters, APLNG, QCLNG and GLNG, entered into a Heads of Agreement, agreeing for uncontracted gas to be made available to the domestic market in the first instance before being marketed to international customers.

While the regulatory changes have provided a level of immediate supply certainty to the domestic market, in practice, it has also introduced some longer term uncertainty to investment decisions on the development of new gas reserves or extension reserve lives of existing assets. In any event, the supply gap in the southern region is expected to persist absent any new developments of gas supply:

SOUTHERN REGION – FORECAST GAS SUPPLY (PJ)



Source: GSOO 2023, using AEMO's Orchestrated Step Change (1.8°C) scenario

WHOLESALE GAS PRICES IN THE EAST COAST MARKET

Gas has historically been sold in Australia under confidential bilateral long term contracts between producers and downstream buyers, but in recent years there has been a move towards shorter term contracts, the inclusion of review provisions in contracts and the emergence of facilitated spot markets in

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20 Southern regions include New South Wales, Australian Capital Territory, Victoria, South Australia, and Tasmania.

21 The ADGSM does not apply to Western Australia. Western Australia has its own policy that mandates LNG producers to reserve 15% of their LNG production for domestic gas use. They are also required to develop the necessary infrastructure and market gas to fulfill domestic gas commitments.

Annexure 1. Independent Expert's Report *continued*

eastern Australia[22]. Wholesale gas prices reflect a range of factors including cost of production, contract volume, available reserves, length of contract, price escalations, flexibility and typically include some adjustment for inflation or periodic price reset. Contracted gas prices have generally been set at a premium over wholesale spot prices because of the need for supply certainty over the contract duration. Wholesale spot prices are subject to higher volatility since they reflect excess demand or supply at any given point in time and are typically for a smaller volume[23].

Australian gas prices have historically been low relative to international prices due to the abundant low cost natural gas reserves and geographic isolation. However, over the last decade, wholesale gas prices have risen materially reflecting:

- the run off of existing long term gas supply contracts;
- the commissioning of the three LNG export facilities in Gladstone in 2015/2016. As noted above, this has at least partially integrated the eastern Australian gas market with international gas markets. Domestic gas customers now effectively compete in international markets and gas prices are increasingly being shaped by LNG netback prices[24], which, in turn, are closely related to the oil price (albeit now moderated by government intervention);
- rising domestic gas production costs; and
- a demand/supply imbalance in eastern Australia resulting from:
  - a slower than expected CSG well development program for GLNG, which required GLNG to purchase gas for LNG export that would otherwise have been available to the domestic market;
  - the depletion of traditional sources of gas for the domestic market (e.g. the Gippsland, Otway and Bass Strait Basins in Victoria);
  - lower international oil prices, which have reduced the economic incentive for gas exploration and new project development; and
  - constraints on the exploration for, and development of, onshore gas resources as a result of government environmental restrictions in New South Wales, Victoria, Tasmania and (until recently) the Northern Territory. In some cases, there have been blanket prohibitions and in other cases there were more limited constraints (e.g. in relation to hydraulic fracturing processes ("fracking") used in production from some unconventional gas fields).

Spot gas prices increased dramatically in 2022 across the east coast gas market. Prices began rising in February and surged in July to close to $40/GJ. The underlying drivers of the surge in gas prices were the Russia-Ukraine war, high gas demand in southern states from cool weather conditions, outages at coal-fired power stations and restricted availability of coal for power generation.

Consequently, the Australian Government intervened through the establishment of its Energy Price Relief Plan in December 2022. Initially, an emergency price cap of $12 per gigajoule came into order on 23 December to ensure lower gas prices for domestic customers. In July 2023, these relief measures were superseded by the Mandatory Gas Code of Conduct which aims to regulate the east coast gas market and ensure lower gas prices and terms for users. As well as the price cap of $12/GJ for wholesale contract negotiations, the code also includes exemptions to encourage more gas supply, transparency obligations,

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22 Victoria operates a spot market in which approximately 5-15% of Victorian wholesale gas volume is traded. Short term trading markets commenced in Sydney and Adelaide in September 2010 and in Brisbane in December 2011. These markets provide a spot mechanism to manage contractual imbalances and not prices that would be agreed under longer term arrangements. AEMO has also established gas trading exchanges at Queensland's Wallumbilla gas pipeline hub (in March 2014) and at South Australia's Moomba gas pipeline hub (in June 2016), the aim of which is to promote transparent and efficient trading. However, trading at the hubs is relatively thin and pricing can be volatile. As a result, these market mechanisms sit alongside bilateral contracts rather than replacing them.

23 Source: Reserve Bank of Australia, Understanding the East Coast Gas Market, 2021.

24 LNG netback price is the LNG export price less shipping and liquefaction costs.

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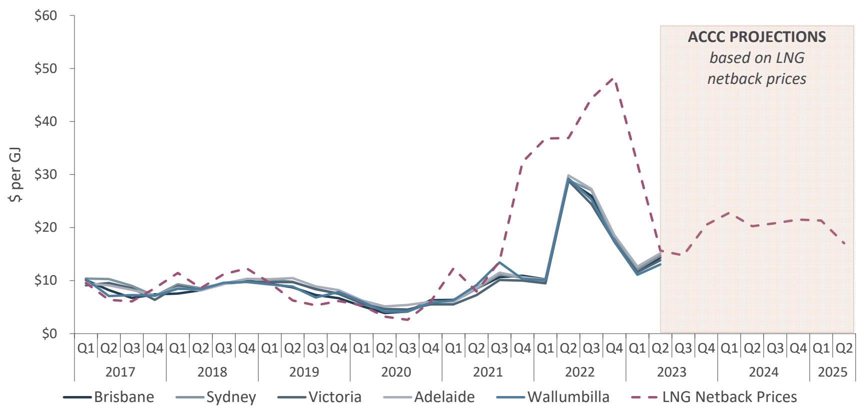
and conduct provisions to balance bargaining power. The price cap will extend until 1 July 2025, at which point a review will be conducted.

While policy changes have focused on energy affordability, producers have criticised the price cap, stating that it has made investment in new gas supply more challenging. Since the gas market intervention in mid-December, producers including Senex Energy, Beach Energy and Cooper Energy have stalled or put under review proposed investments in new gas supplies.

Additionally, the various exemptions applicable under the Code of Conduct limit the effectiveness of easing gas prices. Over the near term, wholesale gas prices are expected to remain heightened in line with LNG netback prices in eastern Australia.

Historical gas prices together with ACCC forecasts are shown in the chart below:

EAST COAST MARKET – HISTORICAL AND FORECAST DOMESTIC GAS PRICES ($/GJ)



Source: AER, *State of the energy market, 2022*

In the longer term, future gas prices in eastern Australia will depend on the interaction of a number of complex factors including:

- continuation of the growth in demand for energy in Asia;
- the global demand/supply balance for LNG (with LNG prices also closely related to the oil price);
- the growth in demand for energy in Australia (which is expected to moderate as the energy intensity of the economy decreases);
- the demand in Australia for gas to generate electricity, which will be affected by government energy and climate change policies and commercial investment decisions (e.g. further coal fired generation asset retirements, renewable energy targets, the level of renewable asset development and battery storage) and the balance between base load and intermittent sources of electricity; and
- the quantum and timing of new domestic gas supply, which will be affected by:
  - changes to state government environmental restrictions, that have impeded onshore exploration and development;
  - whether higher gas prices stimulate gas development projects (that are otherwise economically marginal);
  - the time required to bring new supply to market; and

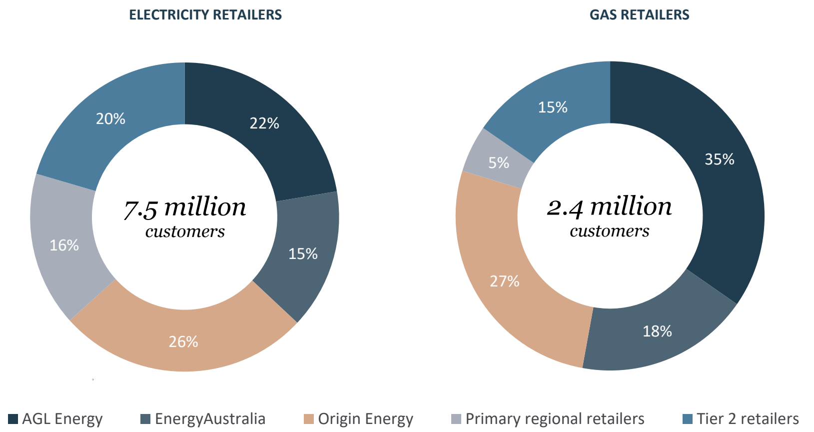
Annexure 1. Independent Expert's Report *continued*

- the development of LNG import terminals on the east coast which would increase the volume of gas in the domestic market and offer gas buyers an alternative source of supply.

Retail Market

The retail market is highly competitive due to low barriers to entry (i.e. low capital requirements and low regulatory hurdles). There are approximately 50 individual retail brands that compete in specific product markets, customer segments or geographies. However, the majority of the share remains concentrated in the top ten retailers (and particularly in the top three):

EAST COAST ENERGY RETAIL MARKET SHARE (%)



Source: State of the energy markets, 2022

Origin, AGL Energy and EnergyAustralia collectively account for around 63% of the electricity market and 80% of the gas market. These three retailers account for the majority of the market share in most locations except in the ACT, Tasmania and regional Queensland, where government-owned businesses typically hold the dominant share (e.g. ActewAGL in the ACT and Ergon Energy in regional Queensland). With the exception of Victoria (where households are more reliant on gas than in other states), the gas retail market is generally less competitive than the electricity retail market due to its smaller scale and the limited access to supply (or pipeline infrastructure).

Energy retailers typically sell electricity and/or gas to residential or industrial consumers at an agreed price. While most contracts can be short term (around a year), the larger contracts (e.g. for large industrial users) are typically longer term in nature (1-3 years).

For electricity markets, a retail price cap for default offers was introduced in 2019 to protect customers from high prices and to enable retailers to recover costs to service customers (e.g. wholesale, network, environmental and retail costs). In New South Wales, south east Queensland and South Australia the price cap is set by the AER on 1 July each year and is known as the default market offer ("DMO"). Similarly, a price cap is set annually in Victoria, albeit issued by the Essential Services Commission and known as the Victorian Default Offer ("VDO"). However, in the NEM around 10% of households and 18% of small businesses are on plans where the price cap applies[25]. Amidst volatile energy markets, the annual price determination has led to a lag in the policy's reaction to the recent surge in spot prices. Consequently, the

[25] Source: AER, Final Determination 2023-24 Factsheet, May 2023.

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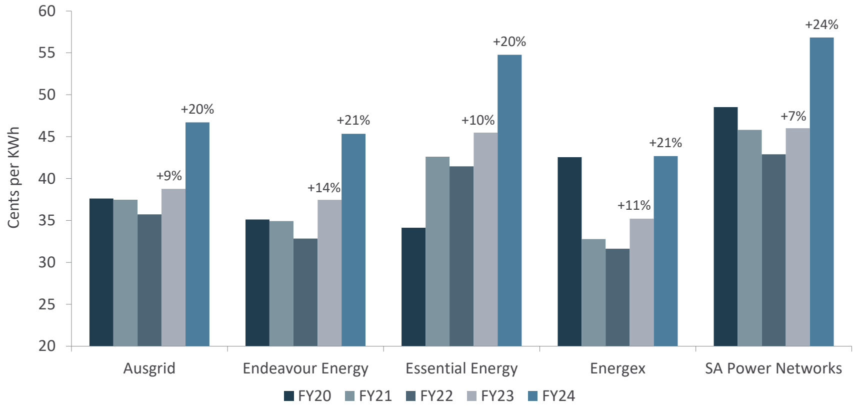
most recent DMO price determination saw a substantial increase of over 20% for customers without controlled load across each state (largely reflecting movements in wholesale prices):

DMO ANNUAL DETERMINED PRICE (CENTS PER KWH)[26]



In contrast, retail prices for gas have historically not been subject to any regulated price caps (although a temporary price cap currently applies for wholesale gas procured by gas retailers and other wholesale consumers).

To manage their exposure to price risk, retailers typically use a combination of vertical integration (albeit to a much lesser extent for gas), long term Power Purchase Agreements ("PPAs") and long term gas supply contracts together with hedging contracts to lock in a contracted price for certain volumes in advance (at the cost of a credit support margin that may increase during periods of higher wholesale price volatility). Hedging contracts are typically entered into via exchanges (e.g. the ASX) or over-the-counter contracts (which typically attract higher costs and exposes the buyer to higher volatility).

However, the unprecedented level of volatility in energy prices has placed retailers under immense pressure. The combination of high and volatile energy prices, high hedging costs, reduced access to hedging contracts and retail price caps has reduced the financial viability of retailers (particularly smaller retailers) which was exacerbated by the highly competitive market. Since May 2022, around 10 retailers have exited the market and their customers have been transferred to larger retailers in accordance with the Retailer of Last Resort provisions. In addition, some other retailers have chosen to exit the market, encouraging customers to switch to alternate retailers. These actions further concentrated market share in fewer participants.

While energy retailers still principally compete on price, the uncertain industry backdrop has urged energy retailers continue to differentiate their offering through other ways such as providing:

- price certainty (e.g. fixed rates and/or discounts);
- digital and analytical capabilities, which provide customers insight on their consumption patterns (and in turn flexibility and incentives to adjust how and when they consumer energy);
- multi-product essential services (i.e. bundling), including electricity, gas, telecommunications and broadband; and

[26] For residential customers without controlled load retail costs, inclusive of GST.

Annexure 1. Independent Expert's Report *continued*

- value add management services, which include energy orchestration offerings such as virtual power plants.

3.2 United Kingdom Retail Energy Sector

Background

The energy industry in the United Kingdom has a similar structure to the industry in Australia and is also impacted by global trends in a similar fashion.

Most of the electricity consumed in the United Kingdom is generated in the United Kingdom. Electricity is transported from power stations by transmission networks (the National Grid in England and Wales, SP Energy Networks in southern Scotland and Scottish and Southern Electricity Networks in northern Scotland) and transferred to local distribution networks that supply households.

In contrast to Australia, most of the gas consumed in the United Kingdom is imported from other countries. Gas is imported through pipelines from Europe (Norway, Netherlands and Belgium) and tankers of LNG from various countries (including Russia prior to its invasion of Ukraine but with the majority of supply currently from Qatar)[27]. Gas is transported across the United Kingdom by the National Transmission System, which supplies gas to the eight Gas Distribution Networks that cover different geographical regions and provide gas to households.

Suppliers (such as Octopus Energy) buy gas and electricity on the wholesale market and sell it to domestic consumers in the retail market. The wholesale market (between generators and suppliers) and the retail market (between suppliers and consumers) are competitive. Consumers can choose (or switch to) a supplier and a variety of tariffs and service levels are available.

Regulation

Similar to Australia, most of the energy market in the United Kingdom is privatised. Generation and supply are competitive, whereas transportation is regulated as the operators are monopolies.

Energy policy and legislation are the responsibility of the United Kingdom government's Department for Energy Security and Net Zero. The United Kingdom has a legally binding target to achieve net zero carbon emissions by 2050 and its energy policy has three objectives:

- sustainability (decarbonise electricity generation);
- security (ensure uninterrupted supply); and
- affordability (minimise the cost of energy to consumer).

Electricity and gas markets are licensed and regulated by Office of Gas and Electricity Markets ("Ofgem"). Ofgem is responsible for:

- industry governance (supply licences and industry codes, policy schemes, ensuring all suppliers treat customers fairly and have special regard for customers in, or at risk of, vulnerable situations);
- compliance and enforcement;
- competitive operation of markets; and
- networks regulation and price control.

In November 2022, Ofgem launched a statutory consultation in relation to a new package of reforms designed to increase consumer protection and ensure energy suppliers are more resilient to market shocks.

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[27] There are also pipelines that connect Northern Ireland to Scotland and Ireland (which enables Great Britain to supply Ireland with a large proportion of its total gas consumption and reinforces Northern Ireland's security of gas supply).

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Following a period of consultation, in April 2023, Ofgem announced its decision to proceed with ringfencing renewable obligation receipts and the introduction of an enhanced financial responsibility principle. As a result:

- there is a positive obligation on all suppliers to provide evidence that they have sufficient business-specific capital and liquidity so that their liabilities can be met on an ongoing basis; and
- suppliers are required to ringfence renewable obligation receipts attributable to domestic supply for the 2023/24 scheme year onwards.

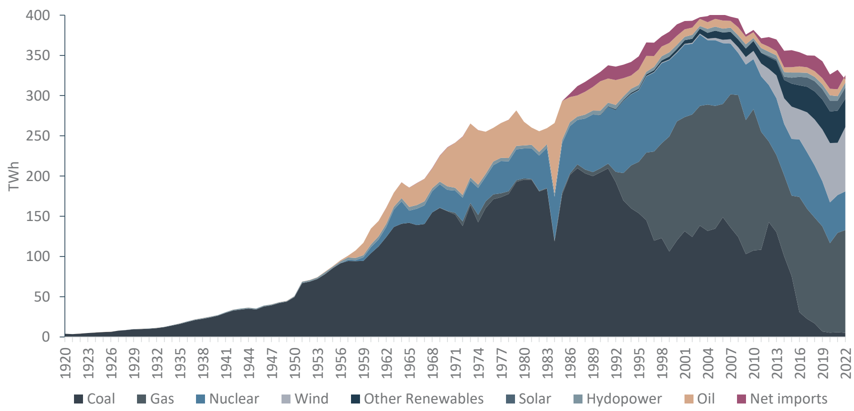
The proposals also included the introduction of a common minimum capital requirement and powers to direct ringfencing of customer credit balances. Ofgem sought further consultation on these matters and, in July 2023, announced its decision to introduce a common minimum capital requirement for domestic suppliers and the ringfencing of customer credit balances in certain circumstances. As a result:

- suppliers must meet a common minimum capital requirement comprising a capital floor of £0 and a capital target of £115 of adjusted net assets per domestic dual fuel equivalent customer by the end of March 2025. Adjusted net assets excludes intangible assets but includes permitted alternative sources of capital (such as undrawn working capital facilities or parent company guarantees); and
- Ofgem can direct suppliers to ringfence a portion of their customer credit balances when it deems it to be in the consumer interest (e.g. where suppliers are not meeting the capital target and where they do not have sufficient funds to refund customer balances in a sever but plausible switching event).

Generation and Consumption

The United Kingdom uses a mix of sources to generate energy. Electricity consumption in the United Kingdom by source since 1920 is illustrated below:

UNITED KINGDOM ELECTRICTY CONSUMPTION BY SOURCE



Source: ourworldindata.com, sourced from Energy Institute Statistical Review of World Energy (2023)
Note:
1. Other renewables includes geothermal biomass and waste energy.
2. An inefficiency factor (the "substitution" method) has been applied for fossil fuels so that the shares by each energy source give a better approximation of final energy consumption.

The contribution of different generation methods has changed dramatically over recent decades. Until the 1950s, most of the United Kingdom's electricity was supplied by coal, with oil making up the balance. The United Kingdom has had nuclear generating capacity since the 1950s and through the 1990s, gas-fuelled electricity generation increased as natural gas became cheaper (as production of gas in the North Sea

Annexure 1. Independent Expert's Report *continued*

increased) and more efficient. From the mid-1990s, renewable energy sources began to contribute to electricity generation (in addition to a small existing hydropower generating capacity) and since 2000, the contribution of fossil fuels has decreased while the contribution of renewables has increased significantly.

While there were concerns about an "energy gap" in generating capacity (due to the closure of a number of coal fired and nuclear power stations), a reduction in demand from the mid-2000s (initially due to a decline in industrial activity associated with the recession, but also attributed to a switch to more energy efficient lighting and appliances) eliminated these concerns. Electricity consumption has fallen by around 20% since 2005 and in 2022, was at its lowest level since the late 1980s, in part exacerbated by the exceptionally high prices during the early periods of the Russia-Ukraine war.

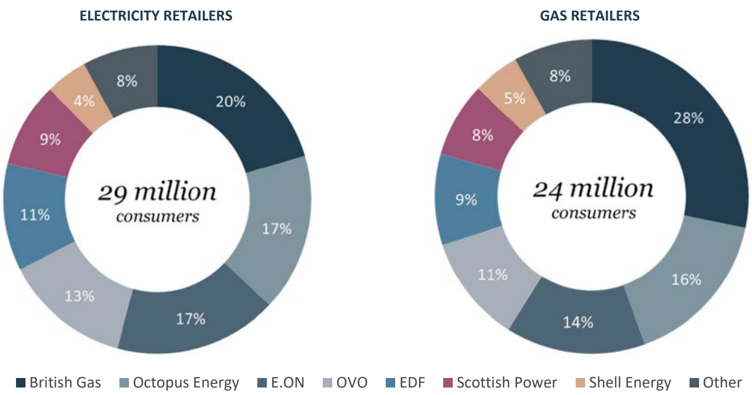
In 2022, renewable sources (including wind, solar and hydropower) provided 42% of total electricity generation, with the balance primarily provided by gas (at almost 40%) and nuclear (15%). Coal represents only 2% of electricity generation. The United Kingdom electricity network is also connected to networks in France, the Republic of Ireland, Belgium, Norway and the Netherlands which enables the import and export of electricity when it is most economical, during periods of high demand and/or system stress. The United Kingdom is usually a net importer of electricity (e.g. in 2021, 7% of the United Kingdom's electricity supply was imported from Europe), although it was a net export of electricity in 2022 (~5 TWh).

Looking forward, coal-fired generation is expected to be phased out by 2024. Large offshore wind projects are planned and while existing nuclear power stations (supplying around 15% of the United Kingdom's energy requirements) are scheduled for retirement over the period from 2024 to the 2030s, the United Kingdom government's aim is for around 25% of projected 2050 electricity demand to be generated from nuclear energy. Natural gas is expected to remain an important transition fuel for electricity as the energy system is decarbonised.

Retail Market

The United Kingdom has a competitive retail energy market. At March 2023, there were 21 active suppliers in the domestic gas and electricity market (19 providing both gas and electricity, one providing only gas and one providing only electricity) that compete based on price and service offering. The current market share of the largest retail energy suppliers is shown below:

UNITED KINGDOM ENERGY MARKET – RETAIL MARKET SHARE



Source: Ofgem, Retail Highlights July 2023
Note: Most domestic energy consumers have dual fuel accounts (i.e. they purchase electricity and gas from the same supplier).

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There were originally six large "legacy" companies that dominated the United Kingdom retail energy market following its privatisation in the late 1990s[28]. By 2008, these large legacy suppliers (British Gas, E.ON UK, EDF UK, npower, Scottish Power and Southern & Scottish Energy ("SSE")[29]) still had almost 100% of domestic and small business customers.

From 2010, smaller suppliers started entering the market and the total number of suppliers went from 12 in December 2010 to a peak of 70 suppliers in mid-2018. Over the period from 2010 to 2019, non-legacy suppliers were able to quickly grow their customer during a period where there was a large gap between the lowest tariffs available in the market and the standard variable tariff charged by legacy suppliers as well as high rates of consumer switching.

By the end of 2019, after efforts by Ofgem to promote competition, the combined share of the six large legacy companies had reduced to around 70% for electricity and gas. By 2020, the legacy companies had been reduced to four, with npower acquired by E.ON in 2019 as a result of an asset swap by their parent companies and SSE plc ("SSE") selling its retail business to OVO Group Limited ("OVO") in 2020. The combined market share of the legacy companies (excluding OVO) has now fallen to around 58% for electricity and 60% for gas.

While small energy suppliers periodically ceased trading or had to be taken over by others, supplier failures reached a peak following the market turbulence in mid-late 2021 (24 suppliers failed in the second half of 2022 alone), from a combination of rapidly rising wholesale prices and the price cap. The suppliers that failed had largely adopted risky business models and were poorly capitalised with minimal working capital and had either unhedged, or not substantively hedged, positions. The mismatch between the (unhedged) wholesale cost of energy and the price cap as wholesale prices rose exposed these suppliers to supply and demand shocks as they were unable to increase prices to match the speed and scale of input cost rises for customers on fixed tariffs or for customers on variable tariffs that were subject to the price cap (which, at that point, was only revised on a six month basis). High wholesale prices and supplier failures continued into 2022.

Pricing

WHOLESALE PRICES

Wholesale electricity prices are not regulated but are set using "marginal cost pricing" i.e. the most expensive type of energy used to generate electricity sets the price for all types of energy, including renewable energy. As gas is often the most expensive energy source, prices of electricity generated by gas effectively set the wholesale price for all generation.

Electricity generators bid to contribute to the electricity network on spot (or day ahead) wholesale markets and bids are accepted by the power exchange (Nord Pool in the United Kingdom) from the lowest to the highest price until demand is met. Renewable generation has the lowest marginal cost and is the first energy source used to meet demand (followed by nuclear, then coal and lastly gas generation).

Monthly average electricity prices since June 2010 are shown in the following chart:

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28 Prior to the late 1990s, British Gas and 14 regional electricity suppliers had a monopoly to supply all domestic gas and electricity to consumers.

29 British Gas is owned by Centrica plc, E.ON UK is owned by German multinational E.ON SE, EDF UK is owned by the French state-owned EDF SA, npower was owned by Innogy SE, Scottish Power is owned by Spanish-listed Iberdrola SA and SSE was owned by LSE-listed SSE plc.

Annexure 1. Independent Expert's Report *continued*

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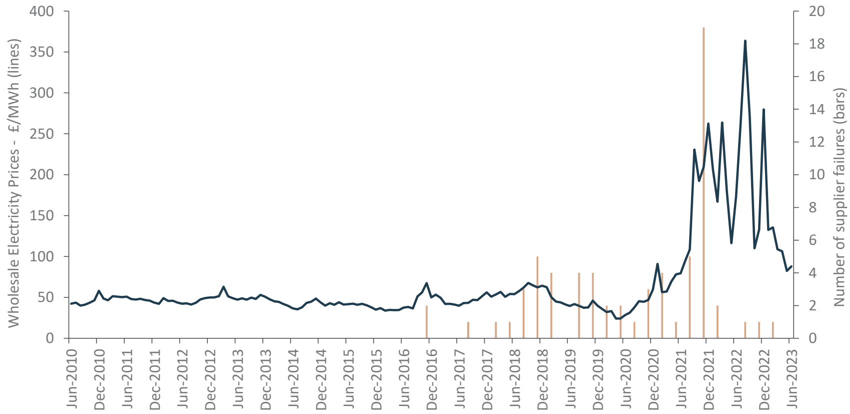
WHOLESALE ENERGY PRICE AND NUMBER OF SUPPLIER EXITS

DAY AHEAD BASELOAD CONTRACT PRICES, MONTHLY AVERAGE



Source: Ofgem, Wholesale market indicators, August 2023

Wholesale energy prices started to dramatically increase from mid-2021, globally and in the United Kingdom, after having been stable for a decade. The initial rise in energy prices was mostly because of rising demand after the COVID-19 pandemic restrictions were lifted (increased global demand, supply shortages, high Asian demand for LNG, fire at National Grid's interconnector link to France, low gas storage and supplier market exits) and were then exacerbated by Russia's invasion of Ukraine in early 2022.

Since late September 2021, wholesale gas prices have reached historic highs. Following the Russian invasion of Ukraine, gas flows from Russia to Europe decreased significantly causing high prices and high volatility. Wholesale electricity prices have followed a similar trend. The dramatic increase in wholesale gas and electricity prices created challenges in the energy supply market including higher energy bills, supplier failures and loss of competitors (as well as record profits for generators).

To protect against the volatility in spot prices on the wholesale market, energy suppliers hedge their energy purchasing through forward contracts (i.e. rather than buying energy on the spot market for immediate delivery and being exposed to whatever the price is, suppliers access the market continually, buying energy up to years in advance). Generally, hedging is focussed on protecting margins for the next quarter (where the price cap has been set) or the margins on fixed rate customers rather than longer term.

RETAIL PRICES

Tariffs are either fixed for a certain amount of time (typically one year or more) (a "fixed rate" tariff) or can go up or down according to the market (a "variable" or "default" tariff).

Pricing also differs by payment method. Customers paying by direct debit are generally offered the lowest tariffs, then standard credit customers (who receive a bill once a month or once a quarter) and those using prepaid meters.

Maximum prices (for each kWh of energy used) for customers on standard variable tariffs are determined by the "price cap" methodology, which was introduced in 2019. The price cap is set by Ofgem and was initially reviewed every six months to reflect changes in industry costs (e.g. wholesale costs, network costs, supplier operating costs and policy costs). However, in response to instability in the energy market, Ofgem has reviewed the price cap quarterly since August 2022. The current price cap (from 1 October 2023 to 31

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December 2023) is intended to allow an "efficient" energy supplier to cover its costs and make a margin of 1.4% of revenue plus £20 per customer (i.e. the EBIT margin has a variable and a fixed component), although the actual margin generated by suppliers will depend on their actual costs). The current Ofgem price cap also includes a headroom allowance of ~1.4%.

Prior to mid-2022, changes in the level of the price cap had been relatively small. However, due to higher wholesale prices, the price cap increased by 54% in mid-2022 and by 80% at the end of 2022. To reduce the impact of price increases for domestic customers, the Energy Price Guarantee ("EPG") was introduced between October 2022 and March 2024. Under the EPG, the government sets a maximum price for electricity and gas and compensates energy suppliers for providing gas and electricity at below cost prices. Maximum energy prices for customers on standard variable tariffs are set by the lower of the EPG or the price cap. The EPG was lower during the period from October 2022 to June 2023. Under EPG, energy bills increased by 27% in October 2022 and by a further 20% in July 2023.

From July 2023, the price cap fell below the level of the EPG. Consequently, the price cap and not the EPG will set the maximum price for domestic consumers paying by direct debit and standard credit on standard variable tariffs through to October 2023 (although the EPG remains in effect at a level of £3,000 until April 2024 to offer protection to consumers in the event that future price caps increase above this level).

Since April 2022, increases in wholesale prices have meant that the average standard variable tariff for all suppliers (legacy and others) has remained close to the price cap or the EPG. This has effectively reduced competition as there is no incentive to switch supplier (at least based on price).

The price cap includes "supplier of last resort" levy costs, or the costs faced by suppliers who have taken on customers whose suppliers have failed[30]. From July 2018 to May 2022, Ofgem transferred nearly 2.4 million customers of 28 failed suppliers to alternative providers through its supplier of last resort process. The other way to deal with the failed suppliers is by way of a court approved special administrative regime, where a temporary special administrator continues running the failed company until it is rescued, sold or has its customers transferred to other suppliers. The special administrative regime is only used where the supplier of last resort process is not feasible (and has only been used by Ofgem once, following the failure of Bulb Energy in November 2021, the largest supplier to fail due to rising wholesale prices).

Fixed rate tariffs are not covered by Ofgem's price cap or the EPG. Average fixed tariffs were typically priced between the price cap and the cheapest variable tariff on the market from 2019 to early 2021. However, they increased above the price cap in mid-2021 and have since increased rapidly. As a result, there has been a substantial fall in the number of customers on fixed price tariffs.

3.3 LNG

Background

Natural gas is often categorised as "conventional" or "unconventional" depending on its source. Conventional gas is typically found in underground reservoirs (both onshore and offshore), sometimes in association with oil. A hydrocarbon reservoir consists of hydrocarbon-rich porous rocks or sands, capped by overlying rock formations of lower permeability that effectively trap the hydrocarbons within the reservoir. Unconventional gas includes coal seam gas, (contained within coal seams), shale gas (contained within low permeability organic rich rocks), tight gas (contained in low permeability reservoir rocks) and gas from renewable sources such as biogas (landfill and sewage gas) and biomass (wood, wood waste and other plant-based material). Technological improvements have resulted in significant expansion in commercial unconventional gas resources. These now represent a substantial proportion of the world's estimated remaining technically recoverable gas resources and have been a major factor in the expansion

[30] The levy reflects the considerable costs associated with transferring customers to new suppliers, including the significantly higher cost of purchasing wholesale energy at a price capped below current spot prices.

Annexure 1. Independent Expert's Report *continued*

of global gas resources from around 50-60 years of supply to current estimates of more than 200 years of supply. The majority of identified unconventional gas is shale gas, located principally in North America.

While large scale liquefaction of natural gas has been undertaken since the early 20th century for industrial purposes, the growth in the use of LNG has been driven by the power needs of countries such as Japan and South Korea, which have limited natural gas resources and little or no access to international gas pipelines. LNG is produced by refrigerating natural gas using large turbines and cryogenic heat exchangers to temperatures below its condensing temperature of negative 160 degrees Celsius, thereby converting the gas into a liquid. LNG has a reduced volume relative to natural gas (by a factor of approximately 600 times), which makes it economic to transport over long distances. LNG is typically shipped in specially designed tankers for delivery to purpose built inbound terminals, where it is converted back into gas before being distributed as pipeline natural gas.

Australian LNG Industry

Historically, natural gas markets in Australia were disconnected from the rest of the world with all gas production consumed domestically. This changed when Woodside Energy discovered substantial conventional gas resources off the coast of Western Australia in the 1970's, with the vast amount of gas able to meet WA domestic demand as well as growing demand from Asian markets. The North West Shelf project commenced supply to the domestic market in 1984 and its first shipment of LNG was to Japan in 1989. Originally a two-train development, the project's processing facility has grown to five LNG trains and has annual production capacity of 16.9 Mt. Australia's second LNG project commenced exports in 2006 from the ConocoPhillips operated Darwin LNG project, which sourced gas from the Bayu-Undan conventional gas field located 500km north-west of Darwin. Over the next five years, FID was undertaken on several other conventional offshore LNG projects in WA, including Pluto, Gorgon, Wheatstone, Ichthys and Prelude, (which included the first floating LNG processing facility).

LNG exports from Australia's East Coast commenced in 2015 through the development of three major LNG export projects in Queensland – APLNG, GLNG and QCLNG. All three projects source gas from unconventional coal seam gas reserves in the Surat and Bowen basins which is transported via pipelines to liquefaction facilities on Curtis Island, offshore Gladstone, before being exported to international customers. LNG projects are characterised by substantial development costs and long project lead times. As a consequence, Australian LNG projects have typically been undertaken as joint ventures between several parties, with the industry attracting investment from large global oil and gas companies as well as LNG offtake customers, predominantly from Japan, South Korea and China. Australia's share of global LNG supply has increased substantially over the past decade as the Queensland and Western Australian projects came online. Total LNG exports in 2022 were approximately 81.4 Mt. Other major global producers of LNG include Qatar, the United States (largely from unconventional shale gas resources) and Russia.

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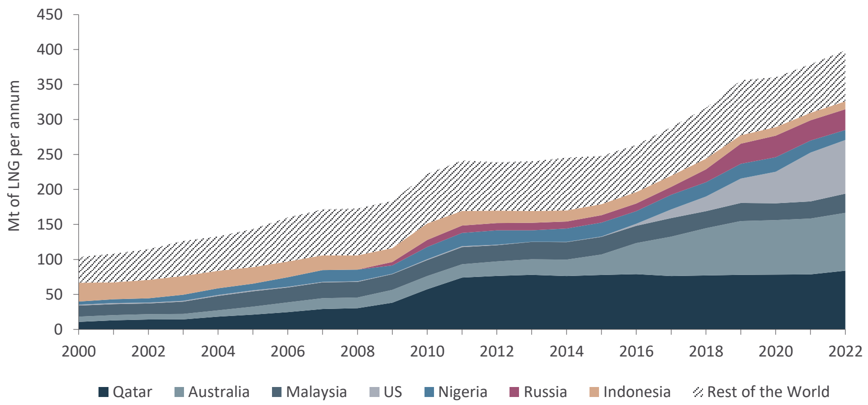
LNG EXPORTS



Source: Statistical Review of World Energy 2022, Energy Institute.

Pricing

LNG producers and consumers have historically generally entered into long term gas supply contracts of 15 to 20 years or more in duration, both to underpin the funding of the project developments and to provide certainty of supply to LNG consumers. More recently, however, the share of LNG sold on the spot market or under short term (less than two years) and medium term (two to five years) contracts has increased. This development has taken place in the context of rising liquefaction capacity and oil price volatility and is, in part, a result of growing demand, supply and price uncertainty.

LNG prices in most long term contracts are linked to an energy index, with different indices and methodologies used in different regions. Australian LNG suppliers participate principally in the North Asian market, where the major customers are Japan, China, South Korea and Taiwan. Contracts for supply in the North Asian market are generally priced relative to the Japan Customs-cleared Crude benchmark, also known as the Japanese Crude Cocktail ("JCC"). The JCC is the average price of customs-cleared crude oil imports into Japan and is calculated on a monthly basis. The JCC typically moves in line with benchmark oil prices, albeit with a time lag reflecting the timing of deliveries:

Annexure 1. Independent Expert's Report *continued*

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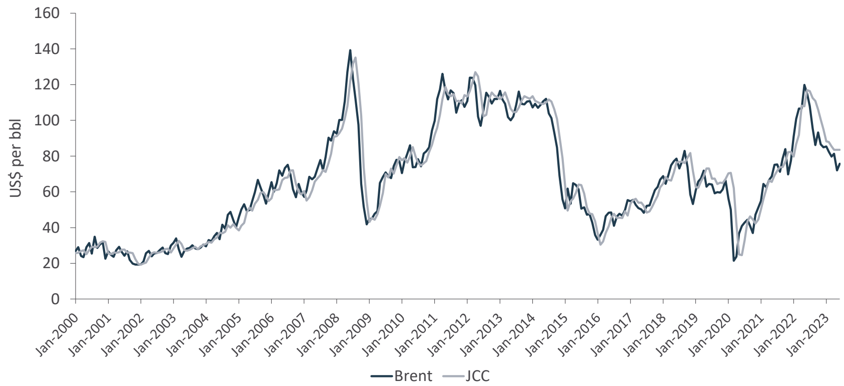
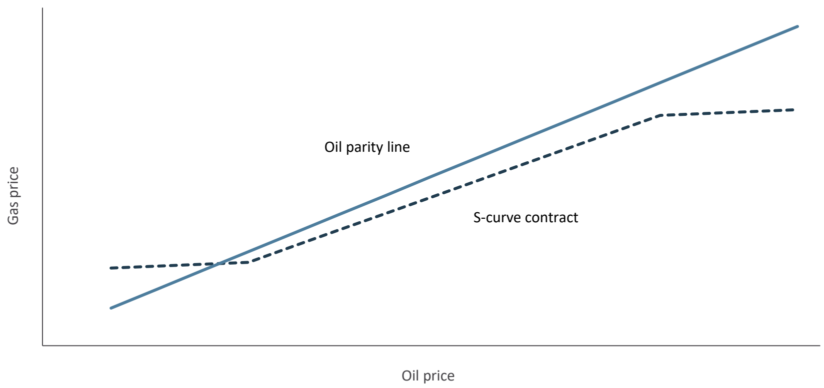
BENCHMARK OIL PRICES – BRENT AND JCC



Source: Bloomberg

LNG pricing in the North Asian market is commonly based on the energy relativities between natural gas and oil. One Mbtu of gas has approximately 17.2% of the energy content of a barrel of Brent oil[31]. The link between LNG and Oil prices is negotiated confidentially between producers and consumers, with Australian LNG slopes reportedly in the 12-15% pricing range reflecting general market demand and supply dynamics and allows for a small discount to account for shipping costs. Some contract arrangements, known as "S-curves", are more complex with flatter slopes at low prices (to protect the seller) and at high prices (to protect the buyer). The diagram below compares a typical S-curve arrangement with the oil parity line. The middle portion of the S-curve has a lower gradient than the oil parity line (12-15% vs 17.2%) and 'kinks' at high and low oil prices in order to lessen the impact of extreme prices on buyers and sellers.

LNG PRICING STRUCTURE



The linkage between oil and LNG prices is further illustrated by the charts below, which compare the historical LNG price for all imports into Japan, reflecting contract and spot sales, with the JCC price:

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[31] Source: BP plc, Approximate Conversion Factors.

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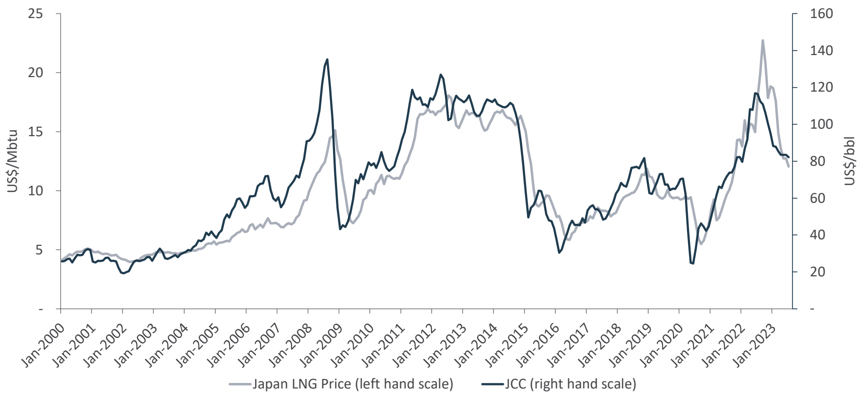
LNG PRICE ALL IMPORTS INTO JAPAN VS JCC PRICE



Source: Bloomberg

While the vast majority of LNG cargoes into north-east Asia continue to be supplied under long term oil-linked contracts, and new project developments are generally supported by such contractual arrangements, an increasingly liquid spot market for LNG has developed. Spot cargoes are generally priced by reference to the Platts Japan-Korea Marker ("JKM") index, first launched in 2009. The JKM index reflects the spot market value of cargoes delivered into Japan, South Korea, China and Taiwan. In recent years, JKM pricing has been highly correlated with European gas pricing, demonstrating the globalised nature of gas markets. JKM pricing has also been broadly (at least directionally) consistent with oil-based LNG pricing, although through 2021 and 2022 (and particularly September 2022) spot LNG prices spiked dramatically in response to energy shortfalls in both Asian and Europe. Outside of project finance requirements, the structure of longer term LNG contracts may ultimately migrate towards incorporating some direct pricing references to spot LNG, depending in part on the future role of oil in Asian energy systems.

Western Australia has its own policy that mandates LNG producers to reserve 15% of their LNG production for domestic use. They are also required to develop the necessary infrastructure and market gas to fulfill domestic gas commitments.

Domestic Gas

All the LNG joint ventures in Queensland sell surplus gas from their upstream fields to the domestic gas market. A discussion of the East Coast market is set out in Section 3.1.

Annexure 1. Independent Expert's Report *continued*

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4 Profile of Origin

4.1 Overview

Background

Origin was established in February 2000 when Boral Limited ("Boral") demerged its energy business from its building and construction materials business. At the time of the demerger, Origin's operations were:

- exploration for and production of natural gas in Australia and New Zealand, including interests in conventional gas and CSG assets in central Queensland through an 85.23% interest in ASX-listed Oil Company of Australia Limited ("OCA"). The remaining 14.77% of OCA was acquired in September 2003;
- an energy infrastructure asset management business providing services primarily to ASX-listed Envestra Limited in which Origin held a 19.97% interest. This business was sold to APA Group in July 2007;
- development and operation of gas-fired power stations and cogeneration projects in Australia; and
- retailing of natural gas, LPG, electricity and related energy services to 1.2 million retail customers in Australia. It also supplied LPG in New Zealand and the South Pacific, wholesale traded LPG, electricity and natural gas in Australia and supplied autogas in Australia.

Following the demerger, Origin focused on integrating its business across the competitive or non-regulated segments of the energy supply chain (i.e. fuel supply, transportation, generation and customers (retail and business)) in Australia and New Zealand through acquisitions, major development projects and organic growth. Key investments and acquisitions included:

- energy retailing in Australia, through acquisition of the retail electricity businesses of Powercor in June 2001 (582,000 customers primarily in western Victoria) and CitiPower (260,000 retail customers and 4,000 commercial and industrial customers in Victoria) in August 2002 as well as Sun Retail (840,000 electricity customers and 55,000 LPG customers predominantly in south east Queensland) in February 2007. In January 2011, Origin became one of Australia's largest integrated energy companies, acquiring the retail electricity businesses of Country Energy and Integral Energy in New South Wales (1.6 million customer accounts);
- extending its footprint in New Zealand through the acquisition of a:
  - 50% interest in the Kupe Gas Field in New Zealand in February 2004. The Kupe gas project commenced operations in 2010; and
  - 51.4% interest in Contact Energy Limited ("Contact Energy"), a New Zealand listed integrated generator and retailer in October 2004.

  Origin subsequently exited New Zealand, divesting its (then) 53.09% shareholding in Contact Energy in 2015 and selling its 50% interest in the Kupe gas project to Beach Energy Limited ("Beach Energy") in January 2018 as part of the Lattice Energy Limited ("Lattice Energy") divestment (refer below);
- additional generation capacity (particularly from natural gas and, more recently, from renewable energy sources including contracting supply through PPAs) and the acquisition of prospective natural gas resources.

  Origin's generation acquisitions included a 50% interest in the South West Cogeneration Joint Venture in Western Australia in July 2001, Mount Stuart Power Station, a 288MW (now 423MW) gas turbine peaking plant in Townsville, Queensland in December 2002, Uranquinty Power Station, a 640MW (now 692MW) gas-fired peaking plant in New South Wales in July 2008, WindPower and its development portfolio, including Stockyard Hill Wind Farm (530MW) in Victoria in May 2009

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(Stockyard Hill Wind Farm was subsequently sold to Xinjiang Goldwind Science & Technology Co, Ltd in May 2017 with a long term PPA) and Eraring Energy, comprising Eraring Power Station (a 2,880MW coal-fired baseload plant) and the Shoalhaven Scheme (a 240MW pumped storage hydropower peaking plant) in New South Wales in August 2013.

Origin also developed Cullerin Range Wind Farm (completed in June 2009 and subsequently sold to Energy Developments Pty Limited, a subsidiary of DUET Group in June 2016 with a long term offtake agreement), Darling Downs Power Station, a 630MW (now 644MW) gas turbine plant (originally baseload but now peaking) (completed in July 2010) and Mortlake Power Station, a 550MW (now 566MW) gas-fired peaking plant in Victoria (completed in August 2012). In May 2012, Origin entered into its then largest wind PPA, underpinning the development of Trustpower Ltd's (now Manawa Energy Limited) 270MW Snowtown II Wind Farm in South Australia;

- a 35% interest in the Beetaloo Basin shale gas resource in the Northern Territory (acquired in May 2014); and
- CSG assets. Origin (through OCA) acquired interests in the Fairview and Durham CSG fields in the Surat Basin in Queensland in February 2002 as it started to focus on producing natural gas from coal seams. The Spring Gully project commenced gas delivery in June 2005.

  Following the rejection of an acquisition proposal from BG Group plc ("BG Group") in May 2008, Origin commenced a process to monetise and accelerate the development of its CSG reserves. In October 2008, Origin formed the APLNG joint venture with ConocoPhillips Company ("ConocoPhillips") and later (in August 2011), China Petroleum and Chemical Corporation ("Sinopec") to build the $24.7 billion CSG to LNG export facility. Origin originally held a 50% interest in APLNG (with ConocoPhillips holding the other 50%), subsequently reduced to 37.5% when Sinopec became a shareholder initially with a 15% interest and subsequently increased to 25%. APLNG commenced LNG production in late 2015, with the first cargo of LNG shipped in January 2016.

The substantial APLNG construction cost over the period from FY12 to FY15 combined with a sharp decline in oil prices in FY15 resulted in a decline in Origin's earnings and a significant increase in debt. From FY16, Origin focused on simplifying its business and reducing debt. This strategy lead to a number of asset sales, including Origin's conventional upstream oil and gas business, Lattice Energy, which was sold to Beach Energy for $1.6 billion in January 2018 (effective from 1 July 2017). As part of the sale, Origin secured access to a significant proportion of Lattice Energy's future east coast gas production under long term gas supply agreements to support its domestic gas business.

With the increasing focus on decarbonisation of the energy system and technological advancements starting to transform the customer sector, Origin adjusted its asset portfolio:

- entering into a strategic partnership with Octopus Energy, a United Kingdom-based retail energy and technology company, in May 2020 by acquiring a:
  - 20% interest in Octopus Energy; and
  - perpetual licence to access Octopus Energy's proprietary *Kraken* customer technology platform in Australia;
- accelerating its exit from coal-fired power generation by bringing forward the closure of the Eraring coal-fired power station potentially as early as August 2025 (announced in February 2022) and commencing construction of a 460MW battery storage system at the Eraring power station (announced in April 2023);
- reducing its holding in APLNG by 10% to 27.5% (completed in February 2022), providing funds for investment in its Energy Markets business;

Annexure 1. Independent Expert's Report *continued*

GRANT SAMUEL

- disposing of its interest in the Beetaloo Basin unconventional gas joint venture in the Northern Territory (in November 2022), its interests in the Canning Basin joint venture exploration permits in Western Australia (announced in February 2023) and its interest in five permits in the Cooper-Eromanga Basin and announcing an intention to exit its remaining upstream exploration permits[32] (excluding those relating to APLNG and those in the Browse Basin); and
- entering into an agreement to sell its LPG business in the Pacific (in November 2022, with the sale completed in September 2023).

Today, Origin is the one of the largest integrated energy companies in Australia and has more than 5,500 employees. Prior to announcement of the Indicative Proposal, Origin was one of the 50 largest entities listed on the ASX with a market capitalisation of approximately $10 billion.

Business Operations

Origin's business operations are summarised below:

ORIGIN – BUSINESS OPERATIONS

BUSINESS		BRAND	ACTIVITIES
Energy Markets		origin	• One of Australia's largest energy businesses with 4.5 million customer accounts (across retail (consumer and SME), business (commercial and industrial) and wholesale) providing electricity, gas, LPG and broadband services to customers predominantly in Australia • 7,800MW power generation portfolio diversified by fuel and geography, including Australia's largest fleet of gas-fired peaking power stations, a substantial contracted fuel position and the black coal-fired Eraring power station (includes 1,755MW of owned and contracted renewables and storage)
Octopus Energy (20% interest)		octopus energy	• Global renewable energy and technology business • Supplies electricity and gas to 5.5 million retail customers (9.7 million retail customer accounts)[33] primarily in the United Kingdom (where it is the second largest energy retailer) as well as Germany, the United States, Japan, Italy, France, New Zealand and Spain • Licences its proprietary digital customer service platform, *Kraken*, to energy retailers globally including Origin, E.ON, EDF.UK and Plenitude, with more than 40 million contracted customer accounts
Integrated Gas	**APLNG** (27.5% interest)	AUSTRALIA PACIFIC LNG	• Australia's largest CSG reserves base with 2P reserves of 10,949PJ at 30 June 2023 (100% basis) • Largest LNG facility on the Australian east coast with a 9mtpa nameplate capacity • Export of LNG and domestic supply of gas, with two 20 year LNG export offtake agreements in place to 2035 (7.6mpta to Sinopec and 1mtpa to Kansai Electric) and one of the largest suppliers to the East Coast domestic market
	Other Integrated Gas	na	• Overhead costs (net of recoveries from APLNG) and costs incurred as upstream operator and corporate service provider to APLNG, costs associated with growth initiatives such as hydrogen and costs incurred in managing Origin's exposure to LNG pricing risk and impacts of its LNG trading positions • A potential conventional development resource in the offshore Browse Basin

Source: Origin

32 Excluding 12 permits in the Cooper-Eromanga Basin that have been surrendered.

33 The number of customers accounts is greater than the number of customers as most customers in the United Kingdom have accounts for both electricity and gas (dual fuel customers). As a result, United Kingdom customer accounts are a multiple of 1.8 times United Kingdom customers.

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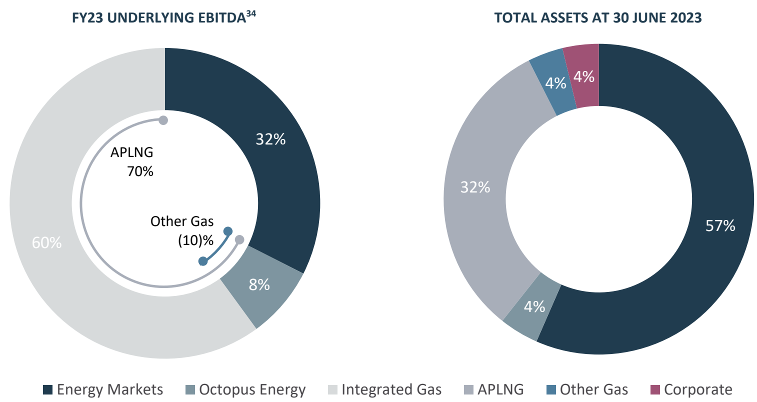
In addition to its business operations, Origin has a corporate segment that includes business development and support activities that are not allocated to operating businesses, including corporate treasury and tax.

Origin currently generates the majority of its underlying EBITDA from its Integrated Gas business, specifically, its 27.5% interest in APLNG, which represented approximately 70% of FY23 underlying EBITDA:

ORIGIN – CONTRIBUTION TO EBITDA AND ASSETS



Source: Origin
Note: Corporate total assets includes assets held for resale (see Section 4.3 for details).

The contribution of APLNG to total assets is considerably lower at 32% but this reflects its treatment as an equity accounted investment (i.e. its total assets represent the historical cost of Origin's equity investment plus share of net profit less dividends) and would understate Origin's share of the current value of APLNG. Energy Markets is also a significant contributor, representing 32% of Origin's FY23 underlying EBITDA and 57% of its total assets at 30 June 2023.

Origin's business operations and assets are described in more detail in Section 5 of this report.

Strategy

Origin refreshed its strategy in March 2022, formalising a strategic framework based on sustainable value creation through the decarbonisation of the energy system, taking advantage of growth opportunities from the energy transition and using its "privileged" assets and its scale, brand, product and platform capabilities as a foundation for growth, with an ambition to "*lead the transition to net zero through cleaner energy and customer solutions*".

This strategic framework is supported by a disciplined capital allocation framework which is underpinned by a strong balance sheet and the ability to invest in growth and increase shareholder returns.

Executing this strategy focuses on three strategic pillars:

- **unrivalled customer solutions**, with a focus on creating customer value through:
  - adopting a new operating model and migrating customers to the *Kraken* platform, delivering lower costs, a leaner operation, lower churn and improved speed to market for products. Origin has delivered over $150 million in cash cost reductions[35] and remains committed to deliver on its $200-250 million target by FY25;

[34] Contribution to underlying EBITDA excludes the corporate segment.

[35] Excluding the impact of rising bad and doubtful debt expenses.

Annexure 1. Independent Expert's Report *continued*

- superior customer experience. Investments in data analytics and digital capabilities collectively aim to enhance Origin's ability to deliver a personalised and tailored experience for its retail customers; and
- new products. Expanding its product offering across new segments such as broadband, solar, batteries, VPP and e-mobility that can provide multi-product bundling opportunities and reduce customer churn rates;

- **accelerate renewables and cleaner energy,** with a focus on:
  - directly investing in the development of a multi-GW pipeline of renewable energy projects and firming capacity (e.g. batteries and virtual power plants);
  - leveraging its large retail base to underpin new renewable energy developments through third party offtake agreements; and
  - maintaining the largest fleet of thermal peaking generation assets in the NEM by providing reliable, firming energy to support the industry-wide transition to renewable energy sources.

  Longer term ambitions target "hard-to-abate" sectors including ammonia manufacturing and transportation. Origin is in partnership with third parties (e.g. Orica Limited ("Orica"), ENEOS Corporation and Aluminium Revolutionary Chassis Company) to explore hydrogen opportunities to reduce the carbon footprint of these sectors; and
- **deliver reliable energy through the transition,** through:
  - its 27.5% interest in APLNG which is a low cost supplier of substantial and stable levels of gas for domestic and export customers;
  - the Eraring power station which continues to support the reliability and security of the NEM until its retirement;
  - its existing thermal peaking generation assets which play a critical role in providing capacity and firming as coal-fired generators retire and are replaced by intermittent renewables; and
  - its leading domestic wholesale gas position which enables Origin to transport gas from diverse sources across the East Coast to support its gas fired generation fleet as well as residential, business and wholesale customers.

Successfully delivering on these priorities will be important to maintaining Origin's leading position in Australian energy market but will likely involve significant capital investment in the near-to-medium term (and, in any event, is not without risk as the requirements to meet the energy transition continue to evolve).

4.2 Financial Performance

Historical Financial Performance

The historical financial performance of Origin for FY20 to FY23 is summarised below:

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ORIGIN – HISTORICAL FINANCIAL PERFORMANCE ($ MILLIONS)

	FY20 ACTUAL RESTATED	FY21 ACTUAL RESTATED	FY22 ACTUAL	FY23 ACTUAL
Revenue	**13,157**	**12,097**	**14,461**	**16,481**
EBITDA[36]	**1,307**	**896**	**18**	**620**
Depreciation and amortisation	(501)	(541)	(449)	(527)
EBIT[36]	**806**	**355**	**(431)**	**93**
Results of equity accounted investees	512	185	959	1,324
Net finance costs	(126)	(133)	(126)	(134)
Items excluded from underlying profit (pre-tax)	(958)	(2,373)	(1,276)	195
Income tax expense	(110)	(313)	(551)	(420)
NPAT	**124**	**(2,279)**	**(1,425)**	**1,058**
Non-controlling interests	(3)	(2)	(4)	(3)
NPAT attributable to Origin shareholders	**121**	**(2,281)**	**(1,429)**	**1,055**
STATISTICS				
Statutory basic earnings per share	*6.9c*	*(129.6)c*	*(81.5)c*	*61.3c*
Total revenue growth	*-11%*	*-8%*	*+20%*	*+14%*
EBITDA growth		*-31%*	*-98%*	*nmc*
EBITDA margin	*10%*	*7%*	*0%*	*4%*

Source: Origin and Grant Samuel analysis

It is difficult to analyse Origin's underlying financial performance based on its statutory consolidated results which have been impacted by:

- the treatment of Origin's investments in Octopus Energy and APLNG as equity accounted investments and changes in Origin's percentage ownership of these investments over the past four years;
- changes in accounting policies that apply to SaaS (derecognition as intangible assets) and PPAs (recognition as derivatives) as well as minor restatements (although the financial performance set out in the table above has been restated by Origin to reflect the impact of these changes); and
- material items that are excluded from underlying profit, which are primarily non-cash fair value and foreign exchange movements and impairments:

ORIGIN – ITEMS EXCLUDED FROM UNDERLYING PROFIT ($ MILLIONS)

	FY20 ACTUAL RESTATED	FY21 ACTUAL RESTATED	FY22 ACTUAL	FY23 ACTUAL
Increase/(decrease) in fair value and foreign exchange movements	460	(813)	1,131	105
Impairments	(746)	(1,504)	(2,196)	-
Business restructuring	(22)	(25)	(83)	(126)
Disposals	-	(13)	(114)	(44)
Other	(650)	(18)	(14)	260
Total items excluded from underlying profit (pre-tax)	**(958)**	**(2,373)**	**(1,276)**	**195**
Income tax benefit/(expense)	64	(222)	(560)	113
Total items excluded fro underlying profit (post-tax)	**(894)**	**(2,595)**	**(1,836)**	**308**

Source: Origin and Grant Samuel analysis

[36] See Appendix 1 for the definition of EBITDA, EBIT and underlying revenue.

Annexure 1. Independent Expert's Report *continued*

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Fair value and foreign exchange movements reflect fair value gains/(losses) associated with commodity hedging, interest rate swaps and other financial instruments which are excluded from underlying earnings to remove the volatility caused by timing mismatches in valuing financial instruments and the underlying transactions to which they relate. Valuation changes are subsequently recognised in underlying earnings when the underlying transactions are settled.

Impairments in FY20 related to Origin's investment in APLNG and were primarily caused by revised oil and LNG price assumptions over the medium and long term. In FY21 and FY22, impairments related to Origin's Energy Markets business. In FY21, there were impairments to goodwill and generation assets, primarily as a result of lower wholesale commodity prices and higher near term gas supply costs. In FY22, a significant uplift in the value of derivative assets associated with the hedging of very high wholesale electricity and gas prices resulted in the requirement to recognise an impairment of goodwill (but did not reflect the performance of the Energy Markets business).

Business restructuring costs in FY22 and FY23 include costs relating to the implementation of the *Kraken* technology platform across the retail segment of Energy Markets and, in FY23, include $24 million of costs relating to the proposed acquisition of Origin by the Consortium.

FY22 disposals included a $113 million loss on Origin's APLNG equity accounted investment following its divestment of a 10% interest in APLNG and in FY23 included a $106 million loss on disposal of Beetaloo.

"Other" is primarily the LGC net shortfall charge, significant onerous contracts and other provisions.

The income tax expense applicable to items excluded from underlying profit includes the deferred tax liability recognised and utilised in relation to Origin's APLNG investment (initially recognised in FY21, utilised in FY23) and the net CGT on divestment of a 10% interest in APLNG (in FY22).

Underlying financial performance, which includes Origin's proportionate interest in the EBITDA and NPAT of Octopus Energy and APLNG, provides a better understanding of Origin's financial performance. The historical underlying financial performance of Origin for FY20 to FY23 is summarised below:

ORIGIN – HISTORICAL UNDERLYING FINANCIAL PERFORMANCE ($ MILLIONS)

	FY20 ACTUAL RESTATED	FY21 ACTUAL RESTATED	FY22 ACTUAL	FY23 ACTUAL
Underlying revenue[36]	**15,889**	**14,601**	**19,007**	**24,442**
Underlying EBITDA	**3,122**	**2,036**	**2,114**	**3,107**
Underlying depreciation and amortisation[37]	(1,804)	(1,497)	(1,587)	(1,690)
Underlying EBIT	**1,318**	**539**	**527**	**1,417**
Net finance costs	(126)	(133)	(126)	(134)
Underlying income tax benefit/(expense)	(174)	(90)	10	(533)
Non-controlling interests	(3)	(2)	(4)	(3)
Underlying NPAT attributable to Origin shareholders	**1,015**	**314**	**407**	**747**
STATISTICS				
Underlying earnings per share	*57.6c*	*17.8c*	*23.2c*	*43.4c*
Dividends per share	*25.0c*	*20.0c*	*29.0c*	*36.5c*
Dividends as a % of free cash flow	*27%*	*31%*	*47%*	*66%*
Amount of dividend franked	*60%*	*0%*	*43%*	*100%*
Underlying revenue growth		*-8%*	*+30%*	*+29%*
Underlying EBITDA growth		*-35%*	*+4%*	*+47%*
EBITDA margin	*20%*	*14%*	*11%*	*13%*
Underlying return on equity	*3.9%*	*2.8%*	*4.2%*	*7.9%*

Source: Origin and Grant Samuel analysis

[37] Includes net finance costs and income tax for equity accounted investees.

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While underlying financial performance does provide a better indication of Origin's financial performance, it is still not perfect as underlying EBIT includes the proportionate NPAT (rather than the EBIT) from Octopus Energy and APLNG. Consequently, the focus should be on underlying EBITDA which includes the proportionate EBITDA from Octopus Energy and APLNG.

Origin generated a stable underlying profit in FY20 although underlying EBITDA was slightly lower largely due to lower electricity gross profit in Energy Markets following the introduction of retail price regulation. This performance was achieved despite the challenges of maintaining reliable energy supply amidst bushfires, ongoing drought and the COVID-19 pandemic. Origin was able to utilise the flexibility of its generation fleet and wholesale gas portfolio as well as portfolio flexibility at APLNG to adapt to market conditions (i.e. a reduction in electricity and gas demand caused by the COVID-19 pandemic) to mitigate the impact on its business.

Operating conditions remained challenging in FY21 due to low prices and the impact of the COVID-19 pandemic across the key commodities of electricity, natural gas and oil. Underlying EBITDA and profit fell considerably for both the Energy Markets and Integrated Gas businesses, reflecting these lower commodity prices which were only partially offset by lower operating costs in APLNG, retail cost savings and oil hedging gains.

FY22 underlying performance showed the benefits of Origin's diversified business. The modest increase in underlying EBITDA reflected a combination of significantly higher earnings from the Integrated Gas business offset by a sharp decline in earnings from the Energy Markets business. Higher Integrated Gas earnings were driven by strong LNG and domestic gas prices (and despite the sale of a 10% interest in APLNG during FY22) whereas the headwinds facing Energy Markets continued in FY22. Energy Markets earnings were impacted by higher (and volatile) wholesale electricity and gas prices, as well as coal supply shortages limiting output from the Eraring Power Station and multiple weather events. These factors more than offset a strong performance in natural gas, growth in total customer accounts and recent improvements in coal supply to Eraring (including locking in contracts for the majority of FY23 requirements). During this period, Origin continued to focus on its targeted $200-250 million of cash cost savings from an FY18 baseline. These savings included an incremental target of $100-150 million in retail cost savings associated with the adoption of the *Kraken* platform (over and above the previous cost out target of $100 million achieved in FY21).

The performance of the Energy Markets business was responsible for much of the decline in Origin's EBITDA margin over the period from FY20 to FY22 (although the Integrated Gas business also contributed to the fall in FY21).

Underlying revenue and earnings in FY23 reflected improved performance across Energy Markets, Octopus Energy and Integrated Gas. There was a substantial rebound in the earnings of the Energy Markets business in FY23 as the extreme market conditions of FY22 eased and higher wholesale costs from previous periods were recovered through higher retail electricity tariffs. Coal supply costs also declined following introduction of the coal price cap. Octopus Energy delivered its first positive contribution to underlying EBITDA ($240 million, up from a loss of $36 million in FY22) reflecting an increase in customer accounts (including a six month contribution from Bulb Energy) and the lag in the reset of tariffs. Integrated Gas revenue and earnings increased despite the sale of a 10% interest in APLNG during FY22, benefiting from higher LNG and domestic gas prices. At the same time, persistent wet weather restricted access to wells in 1HY23 and although improved conditions enabled more well workover and optimisation activities to occur in 2HY23, FY23 production declined by 3%. Underlying profit attributable to Origin shareholders was impacted by higher income tax expense associated with the unfranked distributions from APLNG.

Origin's policy is to pay 30-50% of annual free cash flow as dividends, any with remaining cash used for debt reduction, growth and other capital management activities. Origin's dividend payout ratio has been outside this range in two of the past four years:

Annexure 1. Independent Expert's Report *continued*

- FY20, when a dividend marginally below this range was declared in light of the considerable economic uncertainty and lower commodity prices at the time; and
- FY23, when a dividend above the target range was declared, reflecting the improved earnings outlook, strong balance sheet and a significant one-off increase in working capital.

In recent years, interim and final dividends have typically been unfranked (or only partially franked) as Origin had made low tax payments due to low earnings, once off deductions and a capital loss on divestment. However, Origin began paying fully franked dividends in FY23.

Outlook

On 17 August 2023, in conjunction with the release of its FY23 financial results, Origin provided earnings guidance for FY24 and FY25. This earnings guidance was updated at Origin's Annual General Meeting on 18 October 2023. Subject to there being no material change in market conditions and the regulatory environment:

- Origin expects Energy Markets FY24 underlying EBITDA of $1.4-1.7 billion, with electricity gross profit expected to improve as higher wholesale electricity prices flow through to customer tariffs and an increased contribution from Eraring and the peaking fleet, and gas gross profit expected to moderate as a result of higher procurement costs as supply contracts are repriced. In FY25, Origin anticipates a reduction in electricity gross profit as regulated customer tariffs decline in line with wholesale costs;
- Origin's share of Octopus Energy's FY24 EBITDA is expected to be lower with a wide range of possible outcomes, reflecting stronger retail competition (despite a full year contribution from Bulb Energy customers);
- while APLNG production is expected to increase, Origin's share of APLNG's FY24 EBITDA is expected to be impacted by higher operating expenditure primarily due to higher power costs, increased well workover and optimisation programs and higher non-operated development activity. Operating expenditure in FY25 and FY26 is expected to be lower; and
- LNG trading EBITDA is expected to be $40-60 million in FY24 and $450-600 million across FY25 and FY26.

Origin has not publicly released specific earnings forecasts for FY24 or beyond. To provide a more defined indication of the expected future financial performance of Origin, Grant Samuel has considered brokers' forecasts for Origin (see Appendix 2) as follows:

ORIGIN – FORECAST FINANCIAL PERFORMANCE ($ MILLIONS)

	FY23 ACTUAL	FY24 BROKER CONSENSUS (MEDIAN)
Underlying EBITDA	3,107	3,383
Underlying EBIT	1,417	1,826

Source: Grant Samuel analysis (see Appendix 2)

The median broker's forecasts are sufficiently close to Origin's FY24 Budget to be useful for analytical purposes.

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4.3 Financial Position

The financial position of Origin at 30 June 2023 is summarised below:

ORIGIN – FINANCIAL POSITION ($ MILLIONS)

	AT 30 JUNE 2023 ACTUAL
Trade and other receivables	2,548
Inventories	180
Trade and other payables	(2,288)
Net working capital	**440**
Property, plant and equipment (net)	2,705
Right-of-use assets (net)	464
Investments accounted for using the equity method	6,255
Goodwill	1,964
Other intangible assets	529
Derivative financial instruments (excluding those relating to borrowings) (net)	601
Other financial assets/(liabilities) (net)	390
Assets held for resale (net)	86
Deferred tax liabilities	(386)
Provisions	(1,142)
Other assets/(liabilities) (net)	(200)
Total funds employed	**11,706**
Cash and cash equivalents	463
Debt	(2,713)
Net debt (excluding lease liabilities)	**(2,250)**
Lease liabilities	(545)
Net debt (including lease liabilities)	**(2,795)**
Net assets	**8,911**
Non-controlling interests	(20)
Equity attributable to Origin shareholders	**8,891**
STATISTICS	
Shares on issue at period end (million)	*1,721*
Net assets per share	*$5.17*
NTA per share	*$3.45*
Gearing	*24%*
Adjusted net debt/adjusted EBITDA	*1.2x*

Source: Origin and Grant Samuel analysis

Origin's reported financial position does not present a true reflection of its funds employed and net debt as its largest asset, a 27.5% interest in APLNG, is accounted for as an equity investment. APLNG had a carrying value of $5,469 million at 30 June 2023, based on Origin's share of APLNG's total funds employed of $7,593 million and its share of APLNG's net debt of $1,555 million (as well as other adjustments made by Origin such as its impairment expense, own costs and elimination of MRCPS capitalised interest). The balance of investments accounted for using the equity method represents the carrying value of Origin's 20% interest in Octopus Energy ($776 million) as well as a 25% interest in each of "Gaschem Sydney", "Gaschem Melbourne" and "Gaschem Brisbane" (the "Gaschem joint ventures") with a carrying value of $10 million.

Annexure 1. Independent Expert's Report *continued*

Origin also has a 29% interest in Gasbot Pty Limited ("Gasbot") with a carrying value of nil. Gasbot designs and manufactures low cost hardware and software solutions and a suite of products for the management and optimisation of gas deliveries for LPG distributors.

Origin's Energy Markets activities, particularly its generation assets, are capital intensive and its investment in property, plant and equipment is substantial. Goodwill primarily relates to historical retail acquisitions (e.g. Integral Energy and Country Energy).

Other notable items included in Origin's financial position at 30 June 2023 are:

- Origin uses a range of derivative financial instruments to manage its exposure to various commodity price, interest rate and foreign exchange risks. Derivative financial instruments are carried on the balance sheet at fair value and, due to the volatility in energy markets and the size of Origin's operations can represent a substantial variable component of funds employed;
- other financial assets and liabilities represent:
  - futures collateral (measured at amortised cost) of $(11) million;
  - $129 million in Settlement Residue Distribution Agreement units[38] (measured at fair value);
  - environmental scheme surrender obligations net of environmental scheme certificates held (measured at fair value) of $(20) million; and
  - investments in investment fund units, equity securities, debt instruments and debt and other securities (measured at fair value other than debt instruments which are measured at amortised cost) with a carrying value of $292 million;
- net assets held for resale represent Origin's:
  - LPG business in the Pacific. Origin entered into an agreement to sell this business in November 2022, with the sale subject to fulfilment of conditions precedent which had not been satisfied at 30 June 2023 (although the sale subsequently completed in September 2023); and
  - participating interests in seven exploration permits in the Canning Basin, the respective joint operating agreements and the farm-in agreements. Origin executed an agreement with Buru Energy Limited ("Buru Energy") to exit these interests in February 2023 but settlement of the transaction remains subject to regulatory approvals.

    The terms of the sale include Origin providing up to $4 million to Buru Energy to fund a seismic survey and for Buru Energy providing Origin with future reimbursement payments of up to $34 million, conditional on the achievement of key development and production milestones;
- deferred tax liabilities primarily relate to Origin's investment in APLNG;
- provisions[39] are primarily for restoration and onerous contracts as well as employee benefits; and
- non-controlling interests represent the minority interests in Origin Energy PNG Ltd (33.3% interest), Fiji Gas Pte Ltd (49% interest) and Origin Energy Solomons Ltd (20% interest). These non-controlling interests primarily relate to Origin's LPG business in the Pacific (which Origin has entered into an agreement to sell).

Net debt consists principally of capital markets borrowings:

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[38] Market participants such as Origin that operate in more than one region of the NEM can be exposed to price differences between regions. This risk is managed by Origin purchasing units that provide it with a right to receive a portion of inter-regional settlements residue.

[39] Provisions also includes "other" which primarily relates to costs for compliance with safety standard requirements relating to the Eraring ash dam wall, costs associated with the Eraring Power Station closure and a make good provision relating to existing property leases).

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ORIGIN – NET DEBT AT 30 JUNE 2023 ($ MILLIONS)

FACILITY	FACILITY SIZE	CARRYING VALUE	TERM/MATURITY
Bank loans	3,364	(515)	FY26-FY27
Capital market borrowings		(2,198)	
Bank guarantees	753	-	FY25-FY27
Total debt		**(2,713)**	
Cash and cash equivalents[40]		370	
Debt related derivatives (at fair value)		11	
Net debt (excluding lease liabilities)		**(2,332)**	
Lease liabilities		(545)	
Net debt (including lease liabilities)		**(2,877)**	

Source: Origin

Net debt at 30 June 2023 excludes Octopus Energy's net cash and APLNG's net debt (see Sections 5.2 and 5.3 for details). It is also shown net of capitalised borrowing costs of ~$17 million.

Origin's debt book has been refinanced over the past few years to take advantage of lower interest rates and stronger debt markets. At 30 June 2023, average term to maturity was 3.6 years, with limited near-term maturities. The average interest rate on drawn debt was 5.0%.

Origin had total liquidity (cash balance[40] plus undrawn debt facilities) at 30 June 2023 of $3.2 billion.

At 30 June 2023, Origin had a gearing ratio of 24% (towards the middle of its target range of approximately 20-30%) and an adjusted net debt to adjusted underlying EBITDA ratio of 1.2 times (well below its target range of 2.0-3.0 times).

Origin has an investment grade credit rating of Baa2 (stable outlook) from Moody's.

4.4 Cash Flow

Origin's cash flow for FY20 to FY23 is summarised below:

ORIGIN - CASH FLOW ($ MILLIONS)

	FY20 ACTUAL	FY21 ACTUAL	FY22 ACTUAL	FY23 ACTUAL
Underlying EBITDA	**3,122**	**2,036**	**2,114**	**3,107**
Non-cash items in underlying EBITDA[41]	(1,754)	(1,027)	(1,979)	(2,304)
Changes in working capital	(202)	68	590	(1,061)
Tax (paid)/refund	(215)	31	(27)	(193)
Other	-	(144)	(167)	(182)
Operating cash flow	**951**	**964**	**531**	**(633)**
Capital expenditure	(500)	(339)	(336)	(475)
Distribution from APLNG	1,275	709	1,595	1,783
Investments/acquisitions	(165)	(161)	(392)	(205)
Disposals	234	7	1,963	72
Interest paid (net)	(292)	(231)	(189)	(120)
Free cash flow	**1,503**	**949**	**3,172**	**422**

40 Cash and cash equivalents exclude $93 million of cash held by Origin as upstream operator, to fund APLNG related operations.

41 Primarily (profits)/losses from Octopus Energy and APLNG as well as non-cash expenses.

Annexure 1. Independent Expert's Report *continued*

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ORIGIN - CASH FLOW ($ MILLIONS) (CONT)

	FY20 ACTUAL	FY21 ACTUAL	FY22 ACTUAL	FY23 ACTUAL
On-market purchase of shares	(75)	(96)	(325)	-
Dividends paid	(478)	(343)	(314)	(576)
Payment of lease liabilities	(75)	(76)	(73)	(71)
Joint venture operator cash call movements	56	(90)	(70)	66
APLNG loan (repayment)/proceeds	(8)	(3)	(51)	-
Settlement of foreign currency contracts	(55)	(65)	(46)	(48)
AEMO deposits	-	-	(290)	290
Proceeds from other financial liabilities	108	306	125	57
Net cash generated/(used)[42]	**976**	**582**	**2,128**	**136**
Net cash/(debt)[43] – opening	*(6,050)*	*(5,098)*	*(4,293)*	*(2,235)*
Effect of exchange rate changes on cash and debt and other non-cash movements in debt	*(24)*	*223*	*(70)*	*(131)*
Cash and cash equivalents held for sale at year end	-	-	-	*(20)*
Net cash/(debt)[43] – closing	*(5,098)*	*(4,293)*	*(2,235)*	*(2,250)*

Source: Origin and Grant Samuel analysis

Free cash flow has been variable over the past four years primarily due to variability in cash distributions from APLNG and significant swings in futures exchange collateral[44] (reflecting the volatility in underlying commodity prices and shown in the movement in working capital) and the sale of a 10% interest in APLNG in FY22. In FY23, free cash flow was adversely impacted by a significant increase in working capital in the Energy Markets business (driven by the unwind of higher priced net creditors for wholesale energy and higher customer tariffs impacting outstanding receivables), an increase in Integrated Gas (excluding APLNG) working capital (primarily reflecting the cash settlement timing of LNG trading activities) and the unwinding of the futures exchange collateral.

To better reflect the cash flows from Origin's underlying business, certain items are excluded to determine adjusted free cash flow:

ORIGIN – ADJUSTED FREE CASH FLOW ($ MILLIONS)

	FY20 ACTUAL	FY21 ACTUAL	FY22 ACTUAL	FY23 ACTUAL
Free cash flow	**1,503**	**949**	**3,172**	**422**
Major growth capital expenditure	141	191	318	253
APLNG proceeds	-	-	(1,957)	-
Futures exchange collateral	-	(110)	(471)	290
Adjusted free cash flow	**1,644**	**1,030**	**1,062**	**965**

Source: Origin and Grant Samuel analysis

Major growth capital expenditure primarily represents cash payments associated with the investment in Octopus Energy, *Kraken* implementation costs and, in FY23, the Eraring battery project.

Origin aims to deliver sustainable shareholder returns through the business cycle, targeting a payout range of 30-50% of free cash flow in the form of ordinary dividends and/or on-market share buy-backs. Any remaining cash flow is used to reduce debt, invest in organic growth and acquisition opportunities and/or undertake additional capital management initiatives.

42 Net cash generated/(used) is before the repayment of or proceeds from debt.

43 For the purposes of the cash flow, net debt excludes lease liabilities. Lease payments are included in the cash flows.

44 Futures exchange collateral relates to cash deposited with the futures exchange associated with gas and electricity hedge positions.

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Origin reported strong adjusted free cash flow in FY20, driven by record production at APLNG and a record (at the time) cash distribution to Origin of $1,275 million.

In FY21, adjusted free cash flow declined because of a lower cash distribution ($709 million) from APLNG but remained robust as a result of high cash conversion in the Energy Markets business (due to lower working capital requirements) and lower capital expenditure.

Adjusted free cash flow in FY22 was at a similar level to FY21. A record (at the time) cash distribution from APLNG due to higher realised oil and spot LNG prices contributed to the strong free cash flow but was offset by the decline in earnings from the Energy Markets business. The strong free cash flow (including the proceeds from the sale of a 10% interest in APLNG) enabled Origin to pay down debt, invest in growth and deliver returns to shareholders (including a $250 million share buyback (38.5 million shares at an average price of $6.50 per share) over the period from April-June 2022).

FY23 adjusted free cash flow declined in FY23 as a record cash distribution from APLNG due to higher realised oil prices (net of hedging, the cash distribution received was $1.489 billion) and higher earnings from Energy Markets being more than offset by increase in Energy Markets working capital and higher sustaining capital expenditure (particularly for generation assets). Free cash flow was utilised to invest in growth and provide increased dividend payments to shareholders.

4.5 Taxation Position

Under the Australian tax consolidation regime, Origin and its wholly owned Australian resident entities have elected to be taxed as a single entity.

At 30 June 2023, Origin had $1 million (tax effected) of Australian carry forward tax losses recognised on the balance sheet.

At 30 June 2023, Origin had $453 million of Australian franking credits (at 30%) which included franking credits anticipated to arise in respect of tax payments relating to FY23.

4.6 Capital Structure and Ownership

Capital Structure

On 10 October 2023, Origin had the following securities on issue:

- 1,722,747,671 ordinary shares (including 1,746,760 treasury shares);
- 2,455,873 performance share rights;
- 3,114,057 restricted share rights; and
- 306,830 matching share rights.

Origin operates incentive plans under which a proportion of the variable remuneration of senior executives is delivered as deferred remuneration (restricted shares and/or share rights and/or deferred cash):

- approximately 600 roles in Origin (including senior executives) participate in deferred remuneration arrangements under the short term incentive ("STI") plan. For members of the executive leadership team, the proportion of the STI award that is subject to deferral is 50% and the deferral period is two years. For the remaining participants, the proportion of the STI award that is subject to deferral is 20% and the deferral period is one year. The deferred element is delivered in the form of restricted shares[45] with vesting subject to service conditions being met. Restricted shares carry dividend entitlements and voting rights; and

[45] The FY23 STI award and LTI award were delivered in the form of deferred cash. Deferred cash awards, on vesting, carry dividend equivalent payments calculated on the same basis as for deferred equity awards.

Annexure 1. Independent Expert's Report *continued*

- approximately 75 of Origin's most senior roles are eligible for participation in the long term incentive ("LTI") plan. LTI awards are awarded in the form of share rights[45] with vesting periods from three to five years (subject to performance conditions) and with total deferral periods up to five years:
  - 50% of each award is subject to a financial condition, awarded as performance share rights[45]; and
  - the other 50% of each award is subject to non-financial conditions, awarded as restricted share rights[45].

  Vesting of LTI awards is also subject to service and personal conduct and performance requirements. Share rights do not carry any dividend or voting entitlements but, on vesting, each vested share right represents a right to a fully paid ordinary share and additional shares equal to the value of dividends in the period from grant to exercise on a reinvested basis. The Board has the discretion to make a cash equivalent payment to settle the dividend-equivalent amount.

The Board generally purchases shares on-market to satisfy the delivery of restricted shares or the vesting of share rights (held as treasury shares), but it may issue shares or make the award in alternative forms, including cash or deferred cash.

Origin also operates a universal employee share plan in which employees can choose to:

- be eligible for awards of up to $1,000 worth of Origin shares annually, with shares restricted for three years or until cessation of employment, whichever occurs first; or
- participate in a salary sacrifice scheme to purchase up to $4,800 in shares annually, with shares restricted for two years or until cessation of employment, whichever occurs first. For every two shares purchased within a 12 month cycle, participants are issued a matching right that vests two years after the cycle began, provided the employee remains employed by Origin.

The universal employee share plan has been temporarily suspended.

Origin operates a dividend reinvestment plan which enables investors to reinvest some or all of their dividends in new ordinary shares. The plan has been suspended since the interim dividend for FY22 (paid in March 2022).

Ownership

At 10 October 2023 there were 120,376 registered shareholders in Origin. The top 10 registered shareholders accounted for approximately 75% of the ordinary shares on issue.

The top 10 registered shareholders are principally institutional nominee or investment companies. Origin has a significant retail investor base with a majority of shareholders classified as retail although this represents less than 30% of shares on issue. Origin shareholders are predominantly Australian based investors (approximately 98% of registered shareholders and between 60-70% of issued shares)[46].

Origin has received notices from the following substantial shareholders:

ORIGIN – SUBSTANTIAL SHAREHOLDERS

SHAREHOLDER	DATE NOTICE RECEIVED	NUMBER OF SHARES IN NOTICE	PERCENTAGE OF CAPITAL IN NOTICE
AustralianSuper Pty Ltd ("AusSuper")	21 September 2023	235,588,746	13.68%
The Vanguard Group, Inc.	28 April 2022	88,061,736	5.00%[47]

Source: Origin, IRESS

[46] Based on a beneficial holder analysis of the top 100 Origin shareholders representing approximately 76% of shares on issue at 22 September 2023.

[47] The Vanguard Group, Inc. has a 5.11% interest in Origin shares based on the current number of issued shares of 1,722,747,671 and assuming no change in the number of shares held.

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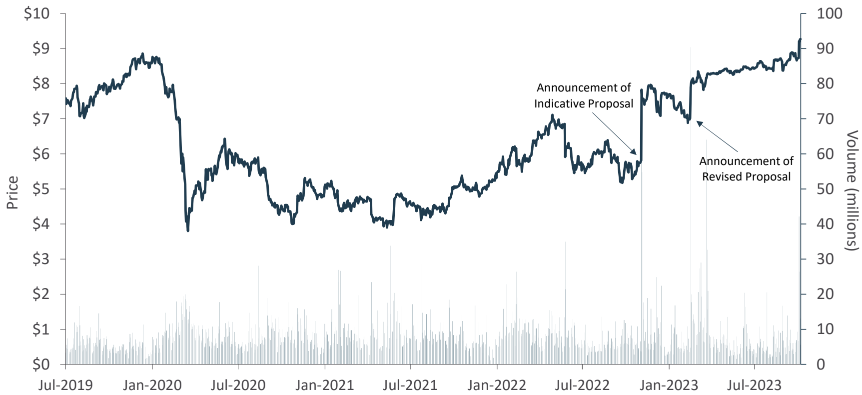
4.7 Share Price Performance

Share Price History

The following graph illustrates the movement in the Origin share price and trading volumes since July 2019:

ORIGIN – SHARE PRICE AND TRADING VOLUME

JULY 2019 TO OCTOBER 2023



Source: IRESS

From July 2019 until mid-January 2020, the Origin share price generally trended upwards (other than a relatively small decline following the release of its June 2019 quarterly production report), reaching a high of $8.89 in mid-December 2019. While the share price started to fall from mid-January 2020, the emergence of the COVID-19 pandemic saw a sharp drop in March 2020, including a substantial fall of 16% on 9 March 2020. The shares briefly traded at below $4.00 (and as low as $3.75) with the collapse (of close to 60% from its recent highs) reflecting the plunging oil price which, in turn, was the result of a significant decline in energy demand and global economic and social uncertainty caused by the COVID-19 pandemic.

The Origin share price (and the oil price) recovered from this low relatively quickly (to as high as $6.48 in early June 2020). However, its upwards trajectory was halted by the announcement in July 2020 that the FY20 financial results would be impacted by the recognition of $1.2 billion in impairments and onerous contract and other provisions primarily caused by revised commodity price assumptions, the associated economic impacts of the COVID-19 pandemic and the progressive transition to a lower carbon energy supply. The share price was relatively stable (in a range around $4.50) from the end of 2020 until mid-April 2021, when Origin provided an adverse update to FY21 guidance and the share price fell to around $4.00. Despite a subsequent recovery, the share price fell again following the announcement at the end of July 2021 that Origin expected to recognise $2.2 billion in impairments and deferred tax liabilities in its FY21 results and provided lower FY22 guidance for its Energy Markets business.

The share price then trended upwards, increasing from around $4.25 at the start of August 2021 to as high as $7.13 in early May 2022 on the back of positive announcements in relation to Origin's investment in Octopus Energy, the sale of a 10% interest in APLNG, an accelerated exit from coal-fired generation, a refreshed strategy and a $250 million share buyback. However, a June 2022 update on operating conditions (outlining how extreme volatility across global commodity markets and high coal and gas prices domestically were contributing to a steep escalation in wholesale electricity prices) and lower FY22 guidance for the Energy Markets business again saw the share price fall back to a range around $5.50.

Annexure 1. Independent Expert's Report *continued*

GRANT SAMUEL

Origin shares closed at $5.81 on 9 November 2022, the last trading day prior to announcement of the Indicative Proposal (at $9.00 per share). Following announcement of the Indicative Proposal, Origin shares traded as high as $8.15, but drifted lower (other than a spike following the 21 December 2022 announcement that exclusivity would be extended) on uncertainty as due diligence continued, exclusivity was extended again and, eventually, active engagement continued on a non-exclusive basis. The share price closed at $7.01 on 21 February 2023, the last trading day prior to announcement of the Revised Proposal (at $8.90 per share[5]) and traded in the range $7.81-8.37 prior to announcement of the Scheme, closing at $7.92 on 26 March 2023. Since announcement of the Scheme, Origin shares have traded in the range $8.09-9.29 and at a VWAP of $8.51. The discount to the Scheme consideration in trading immediately after announcement of the Scheme is likely to reflect some market uncertainty over the extended approval process and the risk of the ACCC coming to an adverse view on the transaction. However, the share price has trended upwards, and since late September 2023 (and particularly subsequent to the Consortium being granted ACCC authorisation on 10 October 2023) has been trading in excess of the cash consideration, possibly in the expectation of a higher offer. The share price closed at $9.27 on 13 October 2023.

Liquidity

Origin has been a reasonably liquid stock. Average weekly volume over the twelve months prior to the announcement of the Indicative Proposal represented approximately 2%[48] of average shares on issue or annual turnover of around 109%[49] of total average issued capital.

Relative Performance

Origin is a member of various indices including the S&P/ASX 200 Index and the S&P/ASX 200 Utilities Index. In August 2023 its weighting in these indices was approximately less than 1% and 43% respectively. The following graph illustrates the performance of Origin shares since July 2019 relative to the S&P/ASX 200 Index, the S&P/ASX 200 Utilities Index and the Brent oil price (measured in US$):

ORIGIN VS S&P/ASX 100 UTILITIES INDEX VS S&P/ASX 200 INDEX VS BRENT OIL PRICE

JULY 2019 TO OCTOBER 2023

Source: IRESS

48 Calculated as the average weekly volume of Origin shares traded from 10 November 2021 to 9 November 2022 of 36,588,000 divided by weighted average shares on issue over the same period of 1,746,879,503 (adjusted to take into account the share buyback completed on 27 June 2022).

49 Calculated as the total volume of Origin shares traded from 10 November 2021 to 9 November 2022 of 1,902,575,999 divided by weighted average shares on issue over the same period of 1,746,879,503 (adjusted to take into account the share buyback completed on 27 June 2022).

GRANT SAMUEL

Since July 2019, there have been short periods of outperformance (November 2020, January 2021, June 2021 and September 2021) and underperformance (December 2020, February 2021 and April 21) against the S&P/ASX 200 Index, but the Origin share price has broadly been in line with the Index over the full period (although the outperformance since November 2022 is due to the Indicative Proposal and the Revised Proposal.

The constituents of the S&P/ASX 200 Utilities Index are Origin (43%), APA Group ("APA") (34%) and AGL Energy (23%) and the index is therefore heavily influenced by movements in the Origin share price. The relatively smaller fall in the index in March 2020 reflected limited falls in share prices of both APA and AGL Energy, as well as a quicker recovery in the APA share price to pre March 2020 levels.

Annexure 1. Independent Expert's Report *continued*

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5 Profiles of Origin's Business Operations

5.1 Energy Markets

Overview

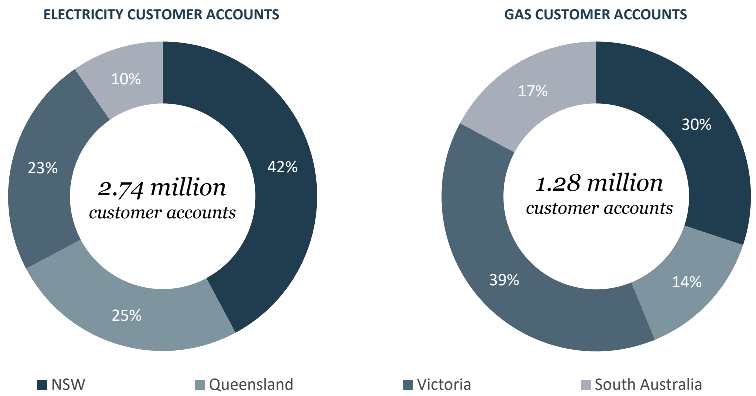
Origin's Energy Markets business is one of Australia's largest vertically integrated "gentailers" with leading retail market positions in New South Wales, Queensland, Victoria and South Australia. Underwritten by its extensive retail demand, Origin has developed a portfolio of upstream electricity generation capabilities and other cost efficient long term supply arrangements (PPAs for electricity and GSAs for gas). The retail market position also enables it to extend its businesses into downstream product offerings that expand and enhance customer relationships with a focus on technological solutions and renewable energy.

Energy Retailing

Origin sells and markets gas and electricity residential and business customers across Australia but principally along the East Coast. It is the largest energy retailer in the country (by number of customer accounts) with a share of approximately 25% of total electricity and gas retail accounts in the NEM, or approximately 4.5 million customer accounts (including LPG and broadband).

Origin built its retail business largely by acquiring new accounts through acquisition (i.e. Powercor, CitiPower, Sun Retail, Country Energy, Integral Energy, OC Energy and WINconnect) but it now operates under a single brand with strong customer relationships evidenced by lower than market churn rates. Origin's customer accounts are well diversified across the East Coast:

ENERGY MARKETS – TOTAL CUSTOMER ACCOUNTS AT 30 JUNE 2023[50]



Source: Origin

Origin's customer base predominantly comprises residential customers and small-to-medium sized enterprises ("SMEs") known as the mass market. Total electricity volumes are broadly split in line with the customer accounts (i.e. 42% in New South Wales, 23% in Queensland), however, gas volumes are quite different. Queensland represented over 37% of total volume in FY23, despite only having 14% of accounts (due to legacy GLNG sale contract volumes). Most of the remaining gas volume is supplied to New South Wales and Victoria which account for 20% and 34% of the total volume, respectively.

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[50] Excludes broadband (approximately 96,000), LPG (approximately 368,000) and Origin Home Assist (approximately 37,000) customers. Australian Capital Territory customer accounts are included in New South Wales. Northern Territory and Western Australia customer accounts are included in South Australia.

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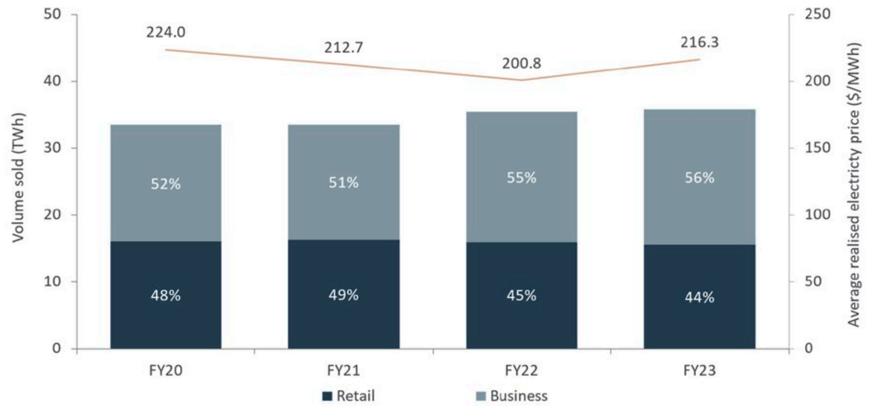
Large customers such as industrial or commercial businesses (which are categorised internally as Origin Zero customers) represent less than 1% of accounts by number but have historically accounted for an outsized share of electricity volumes and gas volumes sold by Origin (as shown below). Origin accounts for approximately 30% of the electricity market share and approximately 50% of the gas market share of these large customers[51]. These large customers usually enter into longer term energy retail contracts (typically between one and three years, with some very large wholesale customers entering into longer term contracts) that can include minimum and maximum contracted consumption volumes (particularly for gas) that are often set around prevailing market prices at the time. In contrast, residential customers and SMEs typically enter into shorter term contracts and may be subject to regulatory price settings (DMO/VDO). Retail prices are a function of wholesale energy costs, regulated network costs (e.g. transmission and distribution), retail costs and retailer margins.

ENERGY MARKETS – ELECTRICITY VOLUMES AND AVERAGE REALISED PRICE



Source: Origin

The volume of electricity sold over the period has trended up slightly, driven by higher business volumes (net customer wins), but partially offset by softer retail volumes (reduced demand, continued uptake in solar and advances in energy efficiency). The average realised electricity price has been more volatile decreasing 10% between FY20 to FY22, with prices for FY22 largely being set in FY21 during a period of low wholesale prices due to the impacts of the COVID-19 pandemic. This trend was reversed in FY23, as higher wholesale prices flowed into customer tariffs, reflecting the recovery of higher costs associated with current and prior periods (and substantial further uplifts of approximately 20-25% for an average standing residential customer in FY24).

Gas volumes are supplied to Origin's retail book, gas peaking plants and large business customers (nearly 50% of the gas market for large customers). Expiration of several business segment contracts has resulted in decreased business volumes over the period, while retail volumes have remained stable. The repricing of retail and business customer tariffs has resulted in higher realised gas prices in FY22 and FY23, reflecting the recovery of higher costs (albeit lagged).

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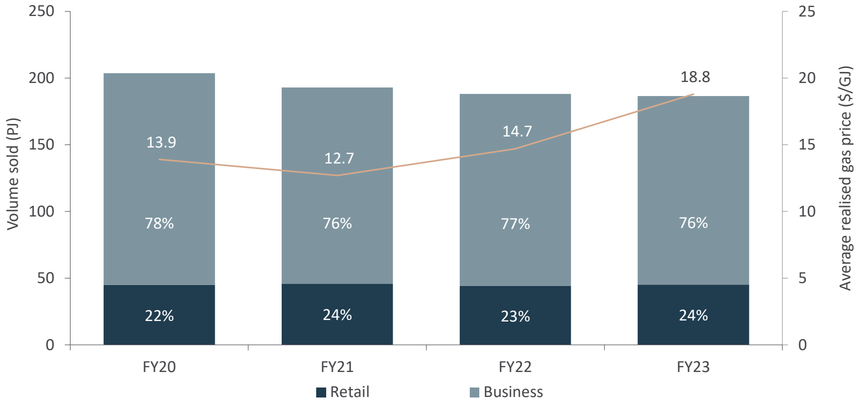
51 Source: AER, Retail Markets Quarterly, Q3 2022-23, June 2023.

Annexure 1. Independent Expert's Report *continued*

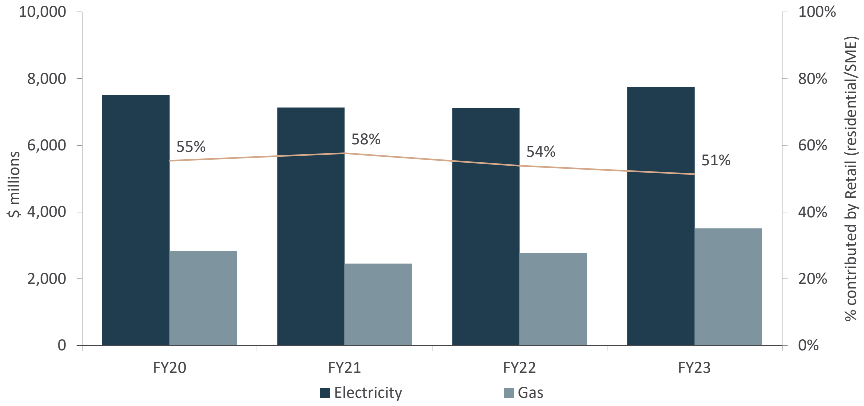
ENERGY MARKETS – GAS VOLUMES[52] AND AVERAGE REALISED PRICES



Source: Origin

The resultant revenue is shown in the following chart:

ENERGY MARKETS – ELECTRICITY AND GAS REVENUE



Source: Origin

Revenue is mostly influenced by the average realised electricity and gas prices that Origin can achieve (as volume changes are relatively minor). Lower realised prices in FY21 reduced both electricity and gas revenue, while prices rebounded (representing the recovery of higher costs) in FY22 (for gas) and FY23 (for both gas and electricity) and revenue subsequently followed suit.

Retail revenue has historically comprised around 55% (slightly higher in FY21) with business revenue representing the remaining amount, however this reduced to as low as 51% in FY23 on the back of stable business volumes and strong prices.

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[52] Excludes volumes consumed internally by gas peaking plants.

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Underlying Origin's mass market retail business is the Kraken platform, which enables a low-cost base and positive customer experience. The migration of mass market electricity and gas customers (which commenced in FY21) was successfully completed in early May 2023. The platform should see a continuance of Origin's low churn rates, through improved customer experience and optimisation. Origin continues to target cash cost savings of $200 to $250 million by FY2025, from the FY2018 baseline.

Energy Sourcing

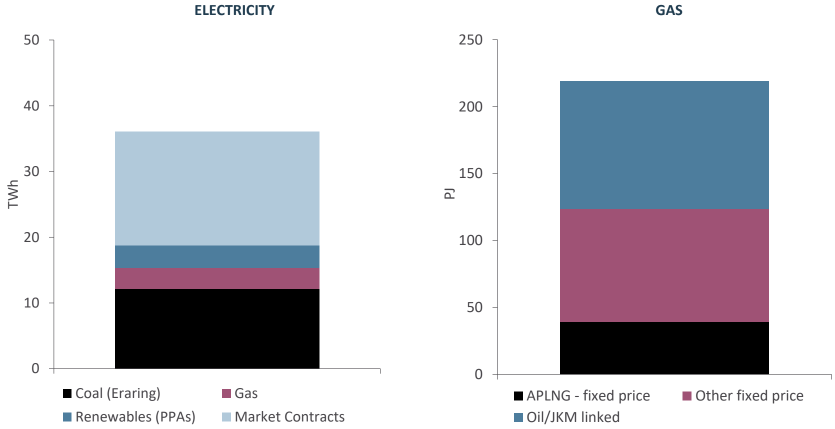
WHOLESALE AND TRADING

The Wholesale and Trading business sources energy supplies for both electricity and gas, as well as managing Origin's exposure to movements in wholesale electricity and gas prices. In particular, this segment is responsible for:

- overseeing a portfolio of short and long term physical gas and electricity supply contracts (e.g. PPAs and gas supply agreements);
- managing the generation and dispatch of electricity from the generation portfolio to the NEM as well as purchasing electricity from the NEM;
- implementing and managing of a portfolio of caps, swap contracts and other instruments to hedge prices paid for peak and base load electricity and gas requirements, including hedging of JKM and oil price exposure on gas supply and sale contracts;
- purchasing and surrendering of LGCs;
- overseeing insurance contracts designed to mitigate potential losses stemming from unplanned offline periods of Origin's generators; and
- administering low-carbon energy solutions, to ensure renewable energy obligations are met.

As a partially vertically integrated business, Origin's generating assets offer some natural hedges against fluctuations in wholesale electricity and gas prices. However, Origin's generation assets only account for approximately 40% of its electricity retail and business customer load (unlike a fully vertically integrated gentailer which more closely matches 100% of its generation output with 100% of its customer load). As such, Origin remains a substantial net buyer from the wholesale electricity market:

ENERGY MARKETS – ENERGY SOURCES (FY23)



Source: Origin

Annexure 1. Independent Expert's Report *continued*

GRANT SAMUEL

Gas generation volumes represented less than 7% of demand volumes in FY23.

The sourcing profile varies across the different states in which Origin operates. In New South Wales and the Australian Capital Territory, generation load and retail load are closely matched (at least until Eraring is decommissioned). In other states, Origin has a substantially higher retail load than owned-generation volumes (and therefore more reliant on third party PPAs and market purchases to complement its own production).

Origin has a number of long term renewable PPAs (1.5 GW capacity) contracted with solar and wind farm projects (e.g. Stockyard Hill, etc.) and with two exceptions, expire by December 2030. It also has 240 MW capacity at the Pelican Point power station under an agreement with ENGIE Australia through to July 2024.

The Wholesale and Trading business also has a portfolio of swaps and caps to manage fluctuations in wholesale electricity and environmental certificate prices. These contracts trade a fixed volume of energy for a set price, effectively exchanging the variable NEM spot price for a predetermined price. Origin also secures bilateral and exchange-traded cap contracts, which act as insurance against high prices, and are triggered when the spot price exceeds a specific threshold. Payments are settled based on the price differential, with many of Origin's caps set at $300/MWh, although some have a higher strike price. A breakdown of Origin's wholesale electricity costs is shown below:

ENERGY MARKETS – ELECTRICITY PROCUREMENT COSTS

	FY20	FY21	FY22	FY23
$ MILLIONS				
Owned generation	1,208	1,078	1,293	1,660
Other sources	1,972	2,004	2,353	2,364
Electricity procurement costs	**3,179**	**3,081**	**3,647**	**4,024**
$/MWH				
Owned generation	61.6	61.7	83.4	106.5
Other sources	128.9	113.2	111.5	113.7
Electricity procurement costs	**90.9**	**87.9**	**99.7**	**110.5**

Source: Origin

Owned generation costs represented around 35% of total energy procurement costs in FY22, rising to over 40% in FY23 as a result of rising fuel costs with unit costs increasing 28%. The remaining costs are spread across market contracts (16%), net pool costs (13%) and green schemes (12%) remained relatively stable on a unit cost basis across the board, save for a noticeable decrease in solar feed-in tariff (around 30% decrease on a unit basis).

In contrast, gas is predominantly sourced under a variety of long term contracts including:

- APLNG, which are set at legacy terms and at fixed pricing (subject to annual CPI adjustments) and currently materially lower than prevailing market prices. This contract expires in 2034;
- Beach Energy, with certain agreements established in 2017 (following Origin's sale of Lattice Energy) that provide Origin with access to gas feed from the Otway Gas Project and Cooper Basin. Prices under the agreements are fixed (subject to annual CPI adjustments) and are subject to price reviews every three years. The agreements expire in 2030 and 2033. The Otway contract is currently in price review, to be effective 1 July 2023; and
- ESSO and BHP Billiton (now ESSO and Woodside), where Origin signed a gas supply agreement in September 2013 to purchase up to 432 PJ of natural gas over nine years from Longford in Victoria.

Historical gas procurement costs have risen 50% since FY20:

GRANT SAMUEL

ENERGY MARKETS – GAS PROCUREMENT COSTS

	FY20	FY21	FY22	FY23
Gas procurement costs ($ millions)	1,294	1,218	1,456	1,784
Gas procurement costs ($/GJ)	6.4	6.3	7.7	9.6

Source: Origin

GENERATION

Origin's power generation portfolio consists of a mix of coal, gas and renewable generation facilities. These facilities are primarily located on the East Coast and collectively have a generation capacity of approximately 6.1 GW (on a 100% basis):

ENERGY MARKETS – GENERATION PORTFOLIO

ASSET	STATE	OPERATING MODE	CAPACITY (MW) 100% BASIS	EXPECTED CLOSURE YEAR
BLACK COAL				
Eraring Power Station	NSW	Merchant	2,880	2025
GAS TURBINES				
Uranquinty	NSW	Merchant	692	2044
Darling Downs	QLD	Merchant	644	2045
Mortlake	VIC	Merchant	584	2047
Mount Stuart	QLD	Merchant	423	2044
Quarantine	SA	Merchant	235	2055
Osborne	SA	PPA[53]	180	2026[54]
Ladbroke Grove	SA	Merchant	80	2035
Roma	QLD	Merchant	80	2034
Eraring Gas Turbine	NSW	Merchant	42	n.a.
PUMPED HYDRO				
Shoalhaven	NSW	Merchant	240	2100
Total Origin internal generation			**6,080**	

Source: AEMO

Eraring is by far the largest power generation asset in Origin's portfolio. It accounts for nearly 50% of the company's generation capacity (and substantially more of the output) and is the only baseload power generation asset in its portfolio. Eraring is the largest power station (by capacity) in the NEM, accounting for approximately 25% of New South Wales' power requirements. It is also one of the oldest power generation assets in the NEM and has been in operation for over approximately 40 years. The coal supply to power Eraring has historically been primarily sourced from coal mines local to Eraring (including the Myuna and Mandalong mines owned by Centennial Coal Pty Limited ("Centennial")) but is now being increasingly sourced from the Hunter Valley and delivered by rail.

In February 2022, Origin notified the AEMO of the early retirement of coal-fired generation at Eraring potentially as early as August 2025. In September 2023, in response to the "NSW Electricity Supply and Reliability Check Up" report prepared by Marsden Jacob, the New South Wales Government advised that it would engage with Origin to clarify its plans for Eraring. Origin continues to assess the market and engage with the New South Wales Government to manage any risk to the reliability of electricity supply and the economic viability of Eraring. At the date of this report, no agreement has been reached between Origin and the New South Wales Government to extend the early retirement of Eraring beyond August 2025.

53 Origin has a 50% interest in the 180 MW plant and contracts 100 per cent of the output.

54 The Osborne Power Station was originally scheduled for closure on 31 December 2023 but its closure has since been deferred by an additional three years (to 2026).

Annexure 1. Independent Expert's Report *continued*

GRANT SAMUEL

The remainder of the generation portfolio predominantly comprises "flexible" or "peaking" power plants (3,200MW). These "peaking" plants are typically used to provide firming capacity to the grid and to supply energy only in times of "peak" demand for electricity. Accordingly, the average price for electricity generated from these assets is consistently higher than for baseload power generation assets such as Eraring.

Based on Origin's generation portfolio at 30 June 2023, the expected closure of Eraring will likely result in the generation portfolio being heavily weighted towards "peaking" plants (particularly gas-fired power assets which will account for more than 90% of existing generation capacity) and be more evenly distributed across states (with Queensland and New South Wales each comprising 30-35% of total capacity and Victoria and South Australia each comprising just around 15-20%).

Origin is targeting to have at least 4GW of renewable generation and storage capacity by 2030. It is currently evaluating or progressing a number of renewable energy and low-carbon energy projects to supplement the capacity of its generation portfolio:

ENERGY MARKETS – SUMMARY OF DEVELOPMENT PROJECTS

ASSET	STATE	CAPACITY	STATUS
SOLAR			
Yarrabee Solar Farm	NSW	450	• Secured planning approval • Pending connection to grid
Yanco Solar Farm	NSW	60	• Secured planning approval
Dapper Solar Farm	NSW	250	• Drafting development application, EIS
Carisbrook Solar Farm	VIC	74	• Fully permitted
Morgan Solar Farm	SA	250-300	• Fully permitted • Pending connection to grid
BATTERY ENERGY STORAGE SYSTEMS (BESS)			
Morgan BESS	SA	80	• Fully permitted • Pending connection to grid
Eraring BESS	NSW	700	• Fully permitted • Reached FID on first stage of 460 MW in April 2023
Mortlake BESS	VIC	300	• Seeking planning approval
Darling Downs BESS	QLD	500	• Seeking amendment to permit
OTHER			
Shoalhaven Hydro Expansion	NSW	235	• Public exhibition of the environmental impact statement completed

Source: Origin

The Eraring Battery project stands as a pivotal endeavour within Origin's generation portfolio, encapsulating the business's commitment to renewable energy while mitigating the impact of closing the coal-fired power station. In April 2023, a final investment decision was made on the first stage of a large scale battery at Eraring Power Station, with a commitment to invest approximately $600 million. The first stage of the project involves the construction of a 460 MW battery storage system, designed with a dispatch duration of two hours. This phase is projected to become operational by the end of 2025, following the planned closure of the power plant.

Origin has secured a number of solar farms, the largest of which being its acquisition of Yarrabee Solar Farm from Reach Solar in April 2022. The 2,600-hectare site is situated 30 kilometres southwest of Narrandera in New South Wales and is part of the broader Yarrabee Park. It has the potential to host up to 900 MW of solar generation, with the first phase of the project expected to include 450 MW of solar generation. Origin is targeting a Final Investment Decision following the approval of TransGrid's southwest transmission stability project.

GRANT SAMUEL

Other Customer Facing Businesses

LPG

Origin is also one of Australia's largest LPG and propane suppliers, procuring and distributing LPG to residential and business locations across the country. Following the divestment of its LPG business in the Pacific region (i.e. across Vanuatu, American Samoa, Samoa and Cook Islands, Fiji, Papua New Guinea and Solomon Islands) which has not yet been complete, the LPG business will focus solely in Australia. The Australian business operates an extensive network with 48 terminals, including five LPG seaboard terminals through which it distributes LPG directly to LPG distributors and to commercial and retail customers. LPG is typically sold and stored in portable cylinders and transported via a fleet of cylinder trucks (or by tanker trucks if the customer has an on-site LPG storage tank). The majority of Origin's LPG supply is sourced from third parties.

SOLAR AND ENERGY SERVICES

This segment provides a variety of downstream services to mass market and business customers, including solar installation, community energy services ("CES") and broadband.

Over the past 15 years, Origin has installed more than 1.8 million solar photovoltaic systems in Australia with ongoing maintenance services. This has been achieved through working with various panel and battery providers, including Fronius, Trina Solar, Tesla, Sungrow, GoodWe, Tigo Energy, LG Energy Solution and JA Solar. Recently, a number of these services have been supported by other offerings such as Origin Loop, as discussed below in Future Energy.

The CES business predominantly supplies greenfield developments such as apartment blocks and high-rise buildings with centralised hot water, electricity, and gas. These assets are installed at Origin's cost for the benefit of the owners' corporation and end use customers (e.g. centralised hot water heating equipment, solar panels and other infrastructure). Churn rates are typically low for CES customers. Attractive price offerings incentivise electricity customers from switching providers, while increased floor space due to consolidated assets (such as hot water and heating equipment) benefits gas customers.

In recent years, Origin has solidified its position as a market leader, capitalising on market consolidation and relationships with property developers. CES contributed $148 million gross profit in FY23, driven by continued customer growth including the acquisition around 100,000 customers through the acquisition of WINconnect in April 2022.

Under the white labelling of *Aussie Broadband*, Origin also provides broadband services for its retail customers, usually as part of a bundled energy package. Over the next couple of years, Origin is planning to develop its own broadband platform with the ambition of having approximately 600,000 customers by FY26.

FUTURE ENERGY

Future Energy comprises various digital and future energy-focused ventures. The largest constituent of this segment is Origin Loop, a Virtual Power Plant ("VPP") system that connects household and corporate assets to the grid, flexibly managing energy demand during peak periods. A VPP lowers Origin costs in delivering energy by using power at cheaper points in the day, with the benefits shared with the customer. In recent years, Origin Loop has grown to include bundled solar and battery, a bring your own battery offer to integrate with customers' existing assets and a trial of EV charging tariffs.

Integrated in the retail offering is Origin's Spike program, which uses behavioural demand analytics to rewards customers for reducing energy usage during periods of peak market demand. The program continues to grow, with over 137,000 customers using the platform.

Annexure 1. Independent Expert's Report *continued*

Additionally, the Future Energy business includes Origin 360 EV, an E-mobility business offering end-to-end EV solutions. The venture supports retail customers with the transition towards EVs by offering fleet, car share and charging solutions, alongside EV energy plans.

Financial Performance

The historical financial performance of Energy Markets from FY20 to FY23 is summarised below:

ENERGY MARKETS - OPERATING PERFORMANCE ($ MILLIONS)

	FY20 ACTUAL	FY21 ACTUAL	FY22 ACTUAL	FY23 ACTUAL
ELECTRICITY				
Revenue	7,509	7,136	7,125	7,755
Network costs	(3,142)	(3,156)	(3,271)	(3,158)
Energy procurement costs	(3,179)	(3,081)	(3,647)	(4,024)
Gross profit – Electricity	**1,187**	**899**	**207**	**574**
GAS				
Revenue	2,835	2,455	2,769	3,510
Network costs	(796)	(789)	(749)	(783)
Energy procurement costs	(1,294)	(1,218)	(1,456)	(1,784)
Gross profit – Gas	**744**	**447**	**564**	**943**
EBITDA				
Electricity and Gas				
Gross profit	1,931	1,346	771	1,517
Costs to serve	(570)	(489)	(487)	(576)
Total	**1,361**	**857**	**284**	**941**
LPG	83	89	92	96
Solar and Energy Services	33	55	52	55
Future Energy	(15)	(19)	(28)	(54)
EBITDA	**1,459**	**991**	**401**	**1,038**
Total capital expenditure (excluding investments/acquisitions)	395	263	261	454
STATISTICS				
Energy procurement costs as a % of electricity revenue	*42.3%*	*43.2%*	*51.2%*	*51.9%*
Energy procurement costs as a % of gas revenue	*45.6%*	*49.7%*	*52.6%*	*50.8%*
Gross profit margin - electricity (%)	*15.8%*	*12.6%*	*2.9%*	*7.4%*
Gross profit margin - natural gas (%)	*26.3%*	*18.2%*	*20.4%*	*26.9%*
Cost to serve – Electricity and Natural Gas ($ per customer)[55]	*159*	*136*	*135*	*161*
EBITDA margin - electricity and natural gas (%)	*13.2%*	*8.9%*	*2.9%*	*8.4%*
EBITDA margin – LPG (%)	*13.7%*	*15.1%*	*13.0%*	*12.8%*
EBITDA margin (%)	*11.3%*	*8.3%*	*2.9%*	*6.7%*
Capital expenditure as a % of revenue (%)	*3.1%*	*2.2%*	*1.9%*	*2.9%*

Source: Origin and Grant Samuel analysis

The financial performance for Energy Markets has been extremely volatile since FY20, largely impacted by movements in wholesale prices and input costs such as coal. To a large extent, it is a timing issue with changes in energy procurement costs not reflected in tariffs until the following year. This is particularly the case with electricity as shown by the FY22 result. FY23 saw a return to some degree of normality (i.e. less volatility), but was bolstered by:

- the introduction of the price cap on coal of $125/t from 23 December 2022 which underpinned the return of Eraring to profitability; and

[55] Represents cost to serve per average customer account, excluding CES accounts.

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- increased gas tariffs (which are not directly regulated), particularly for business customers. Realised prices per GJ for this customer group rose by 36% in FY23.

In light of the volatile financial performance over the period presented above, the following factors are important to note:

- its retail customer base remains one of the largest in the NEM and has grown customer accounts by an average of 2.2% per annum over the period. The growth in the customer accounts reflects the combined impact of acquisition-driven growth (e.g. the acquisition of WINconnect), lower customer churn rates than the market (at around 12-14% per annum) and organic growth (across all of its offerings). Regulatory measures such as the trigger of "retailer of last resort" events also provided some uplift to its retail customer base;
- the movements in wholesale prices (and perhaps more pertinently, its ability to pass through cost increases to customers in a given period or adequately hedge energy price exposures) have been the primary driver for its financial performance. In particular:
  - wholesale electricity prices have been the largest cause of the swings in its financial performance. Since FY20, energy procurement costs have risen from around \$90/MWh to well over \$110/MWh in FY23 (rising from 42% of electricity revenue to around 52%). These issues have become increasingly pronounced as the contribution from its own fleet of generation assets has declined in recent years. The contribution from internal generation assets declined from around 55% in FY20 to 41% in FY23, in part due to coal supply disruptions and the resulting reduction in Eraring output.

    As a consequence, Energy Markets is sensitive to movements in wholesale market prices (or third party supply contracts); and
  - gas prices and LPG prices have also risen in recent years but the profit margins from these two commodities have generally been more resilient largely due to the nature of the market coupled with Origin's leading position in both markets;
- the full benefit from cost savings initiatives is yet to be reflected in financial performance. Since FY19, Origin has announced a series of cost improvement initiatives that are expected to deliver \$200-250 million in total cash cost reduction, with initiatives including digitisation and optimisation of the business as well as the partnership with Octopus. Through FY23, Origin has delivered underlying cost savings of around \$150 million, excluding the impact of increased bad and doubtful debts (and remains committed to achieving the full target cost out by FY25). Despite the progress from these initiatives, cost to serve per customer has remained relatively flat as the balance of bad and doubtful debts has increased (largely due to cost of living pressures). These will continue to impact bad debt expenses, but the cost savings initiatives should become more pronounced as the business stabilises post migration; and
- the increased losses in Future Energy are the result of incremental investment in new and emerging businesses (Origin Loop and Origin 360 EV).

Outlook

Origin provided guidance on its underlying earnings for FY24 alongside its FY23 results and updated this guidance at its Annual General Meeting on 18 October 2023. Underlying EBITDA for Energy Markets is expected to be between \$1.4 billion and \$1.7 billion. Included in this guidance is the expectation that:

- electricity gross profit increases as a result of higher tariffs and capacity pricing, reflecting the recent rise in energy procurement costs (the FY24 DMO tariffs for a standing average residential customer represent increases of approximately 20% to 25%). Coal price caps are also expected to continue to 30 June 2024, maintaining the reduced fuel costs to Eraring; and
- gas gross profit moderates as supply contracts are repriced and JKM linked supply costs increase.

Annexure 1. Independent Expert's Report *continued*

Additionally, Origin has indicated that assuming that price volatility does not increase materially, Energy Markets' cash conversion will improve in FY24, driven by higher earnings and the first refund of LGC shortfall charge. The increased cash flow will be partially offset by higher working capital requirements as a result of higher customer tariffs.

Earnings in FY25 are anticipated to moderate as tariffs will reflect the lower wholesale costs of FY24 (compared to FY23) and as a result of higher coal prices once the $125/t price cap expires in June 2024.

5.2 Octopus Energy

Overview

Octopus Energy was founded by three entrepreneurs in 2015 as a start-up retail energy supplier in the United Kingdom, backed by private investment company, Octopus Capital Limited ("Octopus Capital"), and with a vision to use technology and data to bring affordable green energy to the world combined with best in class customer experience.

The retail energy supply business was launched in 2016 and grew rapidly, both organically and through acquisition, reaching 100,000 customers by April 2017, 1.2 million by April 2019 and 2.1 million by April 2021. In 2019, Octopus Energy expanded its retail operations into Europe with the acquisition of a small start-up energy business in Germany. Further expansion into Europe continued in 2021, with small acquisitions in Spain, Italy and France. Octopus Energy also acquired a start-up in the United States in 2020 and launched in Japan in 2021 (through a joint venture with Tokyo Gas Co. Ltd. ("Tokyo Gas"), refer below for details) and New Zealand in 2022. During the United Kingdom energy crisis, Octopus Energy acquired Avro Energy (September 2021, 580,000 customers) through the supplier of last resort process and Bulb Energy (November 2021, 1.5 million customers) through the court approved special administrative process. Following the acquisition of Bulb Energy, Octopus Energy increased its market share to 17% in electricity and 16% in gas and became the United Kingdom's second largest retail energy supplier by number of customer accounts.

Octopus Energy's proprietary cloud-based energy technology platform, *Kraken*, is an end-to-end operating system to manage and support energy customers and is central to its business operations. Initially developed to be used in Octopus Energy's retail energy supply business in the United Kingdom, the success of the platform led Octopus Energy to enter into licensing agreements for the *Kraken* technology platform from 2019 and, by 2023, Kraken was contracted to provided services to over 30 million energy accounts globally. The *Kraken* technology has also been expanded, with Octopus energy launching *Kraken Flex* in 2020 and *Kraken Utilities* in 2022.

In July 2021, Octopus Energy acquired 100% of Octopus Renewables Limited[56] ("Octopus Renewables") (previously owned by Octopus Capital) for an initial cash consideration of £18 million plus deferred consideration with a fair value of £33.3 million[57]. Octopus Renewables manages one of the largest portfolios of renewable generation in Europe with £5.8 billion in third party generation assets under management.

On 1 September 2023, Octopus Energy announced that it had entered into an agreement to acquire Shell Energy's retail business in the United Kingdom and Germany ("Shell Energy Retail"). Shell Energy Retail has 1.4 million household energy customers and 500,000 broadband customers in the United Kingdom and 110,000 household energy customers in Germany. As part of the agreement, Shell and Octopus Energy have also signed a memorandum of understanding to explore a potential international EV charging partnership. The transaction is subject to regulatory approvals and is expected to complete in the fourth quarter of 2023. Financial details of the transaction have not been disclosed.

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56 Excluding Octopus Renewables Australia.

57 The deferred consideration is payable contingent on the future growth of the FUM over the five years following acquisition.

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Today, Octopus Energy is a leading energy technology company with a relentless focus on customer service. It was named *Which? Recommended Provider* for the sixth consecutive year in 2023 (the most awarded energy company in the United Kingdom) and has maintained a 4.8 (out of 5) Trustpilot rating throughout the United Kingdom's energy crisis.

Ownership

Octopus Energy was initially owned by Octopus Capital, the three co-founders and Octopus Energy employees.

Origin was the initial external investor in Octopus Energy, acquiring a 20% interest and an exclusive[58] and perpetual *Kraken* licence in Australia in May 2020 for £265 million (payable over three years and subject to achieving certain milestones). Over the following 20 months, the number of external investors in Octopus Energy increased to four:

- in December 2020, Tokyo Gas acquired a 9.7% interest in Octopus Energy for a consideration of US$200 million. In addition to the investment in Octopus Energy, Octopus Energy and Tokyo Gas have established a new energy retail joint venture, TG Octopus Energy (30% owned by Octopus Energy and 70% owned by Tokyo Gas) to pursue growth in the Japanese energy market (one of the world's largest competitive energy markets with 83 million electricity customers and 25 million gas customers);
- in September 2021, a fund managed by Generation Investment Management ("GIM") invested US$300 million to acquire 7.25% of Octopus Energy. GIM had an option to double its interest in Octopus Energy under the same terms prior to 30 June 2022 (which it partially exercised); and
- in December 2021, Octopus Energy entered into a long term strategic partnership with Canada Pension Plan Investment Board ("CPP Investments"), through an initial US$300 million equity investment in Octopus Energy to acquire a ~6% interest in Octopus Energy and an initial investment of £204 million into a new renewable asset management fund with a mandate to further invest in renewable assets.

Origin has invested a further £168 million over this period to maintain its 20% interest in Octopus Energy (including a £94 million investment in July 2022 at the same price as its prior investment in September 2021). The other external investors also contributed additional funding to maintain or increase their initial interests in Octopus Energy.

The current ownership structure of Octopus Energy is summarised below:

OCTOPUS ENERGY – CURRENT OWNERSHIP STRUCTURE

SHAREHOLDER	OWNERSHIP INTEREST
Octopus Capital	40%
Origin	20%
Tokyo Gas	10%
GIM	10%
CPP Investments	6%
Co-founders	12%
Employees	2%
Total	**100%**

Source: Origin

58 Subject to an existing licence arrangement in Australia with the Hanwha Group ("Hanwha") which was entered into in April 2019. Hanwha (trading as Nectr) entered into a *Kraken* licensing agreement to support its launch into the Australian retail energy market. Nectr has less than 1% of the Australian electricity market. In addition, with permission from Origin, Octopus Energy entered into a *Kraken* licensing arrangement with Energy Queensland Limited for use in the Ergon distribution area.

Annexure 1. Independent Expert's Report *continued*

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The Octopus Energy shareholders' agreement contains customary shareholder protections (e.g. in relation to pre-emptive rights on a sale, veto rights on key decisions etc), a number of which flow specifically from Origin's 20% shareholding (and remain in place as long as Origin's shareholding in Octopus Energy is above a minimum level). In particular, there are a number of different classes of shares with differing (or no) voting rights.

The Octopus Board comprises nine directors, the three co-founders, two members from Octopus Capital (including the Chair), three members from other investors (Origin, CPP Investments and GIM) and one independent director.

Business Operations

Octopus Energy's business operations are summarised below:

- **Retail Energy Supply**, which supplies 100% renewable electricity and gas to 5.5 million retail customers (representing 9.7 million customer accounts) primarily in the United Kingdom (more than 5 million customers[59]) as well as Germany, the United States, Japan, Italy, France, New Zealand and Spain.

  Octopus Energy sources its renewable energy from:

  - Octopus Renewables (refer below);
  - more than 190 green energy producers in the United Kingdom (directly under PPAs); and
  - its own green energy generators (Octopus Energy owns two wind turbines, one in East Yorkshire and one in South Wales).

  Most of Octopus Energy's retail customers are on variable price contracts and pay by direct debt;

- **Platform Licensing**, which is the licensing of Octopus Energy's proprietary customer service platform, *Kraken*, to energy retailers globally. *Kraken* is a scalable operating model and customer platform that improves the operational efficiency and customer service of energy providers, enabling a low operational cost to serve. Based on advanced data and machine learning capabilities, the end-to-end platform automates the energy supply chain, delivering additional control and reliability. Its continuous release, continuous deployment system ensures it is always up to date. *Kraken* is currently contracted to support more than 40 million customer accounts in 10 countries. In addition to supporting Octopus Energy's 9.7 million retail energy customer accounts, Kraken is licensed to E.ON UK, EDF UK and Good Energy in the United Kingdom, Origin in Australia, TG Octopus Energy in Japan, Evolve Energy in the United States and Plenitude globally[60].

  The *Kraken* technology has been expanded to include:

  - *Kraken Flex*, a cloud-based platform that controls distributed energy assets with machine learning and artificial intelligence to match supply and demand and helps the electricity grid deal with the natural volatility of renewable generation. *Kraken Flex* currently has over 5GW of capacity contracted to its platform; and
  - *Kraken Utilities*, which applies the *Kraken* technology from energy to other utilities such as water and broadband;

- **Octopus Renewables**, which manages one of the largest portfolios of renewable generation in Europe with £5.8 billion in third party generation assets under management. Octopus Renewables manages more than 240 large scale and over 4,500 small scale green energy projects across ten countries and eight technologies (predominantly solar and offshore wind but also energy from waste and pumped

[59] Prior to the acquisition of Shell Energy Retail.
[60] Plenitude is Eni SpA's international retail energy business with around 2 million customers in France, Greece, Slovenia, Spain and Portugal.

hydro) with a combined capacity of 3.3GW. Octopus Energy generates fee income from managing this portfolio; and

- **Other Energy Services**, which are focused on enabling the energy transition through electrification and include:
  - installation of smart meters, the next generation of metering technology that automatically send regular meter readings to energy suppliers and help customers track their energy usage;
  - EV leasing (including installation of home EV chargers and providing green EV tariffs optimised for EV charging); and
  - installation of heat pumps, solar panels and batteries. In line with its focus on heat pumps, in February 2022, Octopus Energy acquired a 20% interest in Renewable Energy Devices Limited ("RED"), a manufacturer of ultra-high efficiency air source heat pumps and associated technologies, which is expected to help Octopus Energy expand production of heat pumps to meet demand while lowering unit prices.

Energy Retail generates the vast majority of Octopus Energy's revenue but is a very low margin business (even though Octopus Energy's margins compare favourably to competitors because of its significantly lower cost to serve). Accordingly, scale is critical to profitability.

In contrast, Kraken Platform Licensing has to date generated a much smaller and sometimes lumpy (due to migration and performance payments) amount of revenue but is very high margin, given the scalable nature of the *Kraken* platform. Similarly, Octopus Renewables is a very small contributor to revenue but is also a higher margin business.

Strategy

Octopus Energy's vision is to drive the renewable energy transition cheaper and faster through technology while always ensuring outstanding customer service. Its strategy follows a set of guiding principles that are based on Octopus Energy's views of:

- the future renewables-led energy system and rapid transition to renewables;
- value flowing to an empowered consumer (customer centricity); and
- the role of technology to drive efficiency and lower costs.

These guiding principles provide a frame of reference for all decision-making across the business.

Customer centricity is a key focus. Octopus Energy challenges itself to create and deliver better service, product and value for retail customers as well as focus on identifying how it can deliver more value for technology licence customers and investors in Octopus Renewables.

Financial Performance

The historical financial performance of Octopus Energy for the years ended 30 April 2020 to 2022 and for FY22 to FY23 is summarised below[61]:

[61] Octopus Energy has a 30 April year end. The financial information summarised in the table has been sourced from Octopus Energy's Annual Report and Financial Statements for 2020, 2021 and 2022. Octopus Energy has not yet released its Annual Report and Financial Statements for 2023 (and is not expected to do so prior to the date of this report). Consequently, Grant Samuel has also included FY22 and FY23 financial information for Octopus Energy based on disclosures included in Origin's FY23 Annual Report. Origin only discloses summarised information for Octopus Energy in its Annual Reports so not all financial information is able to be shown in the table. More detailed FY21 to FY23 financial information was provided to Grant Samuel by Origin but has not been disclosed on the basis of commercial sensitivity.

Annexure 1. Independent Expert's Report *continued*

OCTOPUS ENERGY - FINANCIAL PERFORMANCE (£ MILLIONS, 100% BASIS)

	AS REPORTED BY OCTOPUS ENERGY			AS REPORTED BY ORIGIN[62]	
	MAY 2019 TO APRIL 2020 ACTUAL	MAY 2020 TO APRIL 2021 ACTUAL (RESTATED)	MAY 2021 TO APRIL 2022 ACTUAL (RESTATED)	FY22 ACTUAL	FY23 ACTUAL
Retail Energy Supply customers[63,64] ('000s, yr end)	*1,434*	*2,137*	*3,417*	*3,507*	*5,579*
Retail Energy Supply customers ('000s, avg)	*1,050*	*1,785*	*2,777*	*2,924*	*4,543*
Platform Licensing customer accounts ('000s, yr end)	*2,721*	*7,465*	*16,099*	*25,7683*	*32,158*
Platform Licensing customer accounts ('000s, avg)	*1,944*	*5,093*	*11,782*	*20,063*	*28,921*
Retail Energy Supply	1,228	1,906	4,023	4,617	12,939
Platform Licensing	10	74	103	115[65]	99[65]
Other	3	29	99	-	-
Revenue	**1,241**	**2,009**	**4,225**	**4,732**	**13,038**
Cost of sales	(1,174)	(1,874)	(3,979)	(4,628)	(12,009)
Gross profit	**67**	**135**	**246**	**104**	**1,029**
Cost to serve	(97)	(139)	(317)	(207)[65]	(386)[65]
EBITDA	**(30)**	**(4)**	**(71)**	**(104)[66]**	**643[66]**
Depreciation and amortisation	(33)	(60)	(108)	(117)	(137)
EBIT	**(63)**	**(64)**	**(179)**	**(221)**	**506**
Share of net loss of associates	0	0	(1)		
Net finance income/(expense)	(9)	(11)	14[67]		
Income tax credit	11	10	25		
Profit/(loss) for the financial year	**(61)**	**(65)**	**(141)**		
Non-controlling interests	1	0	0		
Profit/(loss) for the 12 month period attributable to Octopus Energy shareholders	**(60)**	**(65)**	**(141)**		
STATISTICS					
Retail Energy Supply customer growth	*+115%*	*+49%*	*+60%*	*+50%*	*59%*
Retail Energy Supply revenue per customer	*£1,169*	*£1,068*	*£1,449*	*£1,529*	*£2,910*
Platform Licensing customer accounts growth	*+133%*	*+174%*	*+116%*	*+78%*	*+25%*
Platform Licensing revenue per customer account	*£189*	*£39*	*£15*	*£8*	*£5*
Revenue growth	*+160%*	*+62%*	*+110%*	*+119%*	*+176%*
Gross profit growth	*+1,821%*	*+102%*	*+82%*	*+29%*	*+893%*
Gross margin	*5.4%*	*6.7%*	*5.8%*	*2.2%*	*7.9%*
EBITDA margin	*(2.4)%*	*(0.2)%*	*(1.7)%*	*(2.2)%*	*4.9%*
EBIT margin	*(5.1)%*	*(3.2)%*	*(4.2)%*	*(4.7)%*	*3.8%*

Source: Octopus Energy Annual Report and Financial Statements 2000 to 2022, Origin 2022 and 2023 Annual Reports and Grant Samuel analysis

62 Figures reported by Origin are for its 20% interest in Octopus Energy and are reported in Australian dollars. Grant Samuel has grossed up these figures to reflect 100% of Octopus Energy and has converted them from A$ to £ at an exchange rate of 0.576 for FY22 and 0.536 for FY23.

63 United Kingdom customers are less than United Kingdom customer accounts. Customer accounts are a multiple of 1.8 times customers as most customers have accounts for both electricity and gas.

64 At 30 June 2023, there were 9,176,000 United Kingdom customer accounts (5,885,000 at 30 June 2022) and 481,000 international customers (238,000 at 30 June 2022).

65 Licensing revenue and operating costs include fees for Octopus Energy customers that are eliminated on consolidation in Octopus Energy's statutory financial reporting.

66 EBITDA as reported by Origin includes share of loss of associates, although this is immaterial in FY22 and FY23.

67 Finance income in FY22 includes the cost of capital reclaimed as part of the supplier of last resort process from the industry levy associated with Octopus Energy taking on the Avro customer book.

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Octopus Energy's performance in the 12 months to 30 April 2021 reflected strong customer growth in the United Kingdom as well as launching in the United States, New Zealand and German markets and several new customers secured on the *Kraken* licensing platform. Improving operating efficiency within the Retail Energy Supply business contributed to the increase in the gross margin to 6.7%. The gross margin improvement flowed down to EBITDA, with Octopus Energy almost breaking even (at the EBITDA level) in the 12 months to 30 April 2021. EBIT is impacted by the substantial depreciation and amortisation expense, which primarily reflects amortisation of customer acquisition costs (which are capitalised and amortised over a period of three years).

While strong growth in revenue continued in the 12 months ended 30 April 2022 (and FY22), Octopus Energy generated a substantial EBITDA loss, largely driven by the unprecedented market conditions of the United Kingdom energy crisis. Octopus Energy's prudent hedging policy for the management of wholesale risk largely shielded it from the market volatility but it still incurred a higher cost of energy during periods of extreme wholesale prices and with no ability to pass this cost into customers due to the lag in the reset of the price cap (which was only being reset every six months). Octopus Energy also chose to hold its variable tariff below the price cap during this period. These factors (offset in part by Octopus Energy's operating cost advantage) resulted in a decline in the gross margin for the 12 months ended 30 April 2022 to 5.8%. Operating costs also increased in FY22 as Octopus Energy increased its labour force to support the growth in platform licensing, energy services and the international retail energy supply business.

The acquisition of 580,000 Avro customers (~1 million customer accounts) resulted in a claim from the industry (via the supplier of last resort levy claim) of £681 million. This reduced the profit and loss impact of the Avro acquisition, in particular through the impact on gross margin of increased wholesale prices. Octopus Energy also entered into an agreement to accelerate receipt of £633 million of industry levy receivables from other industry participants (included in Octopus Energy's balance sheet at 30 April 2022 (refer below), but subsequently paid).

The *Kraken* licensing platform was profitable in the 12 months ended 30 April 2022, following completion of the E.ON UK migration (and the continued migration of Origin customers), generating a gross margin of 96% and an EBITDA margin of 87%.

FY23 saw a step change in Octopus Energy's performance. The continued growth in retail energy supply customer accounts and a change in the reset frequency for the price cap to quarterly from August 2022 meant that the costs from FY22 were able to be recouped and the more frequent resets enabled a more rapid response to changing wholesale market prices (so higher costs in 1HY23 were recouped in 2HY23). Market conditions were also more stable in 2HY23. The majority of Octopus Energy's retail energy supply customers continue to be priced at a discount to the price cap.

In addition, FY23 performance benefited from a six month contribution from the customers acquired from Bulb Energy, which added 1.5 million customers (~2.5 million customer accounts) from December 2022. The reported financial performance in FY23 includes fair value accounting considerations as a result of the acquisition agreement (which will continue for the duration of the agreement). Total *Kraken* licensing platform revenue declined in FY23 as higher one-off migration and performance payments were included in FY22 (and in earlier years).

These factors resulted in an increase in the FY23 gross margin to 7.9%.

Cost to serve continued to increase, driven by investment in people to scale the business, although Octopus Energy still recorded its first positive EBITDA and an EBITDA margin of 4.9%.

Annexure 1. Independent Expert's Report *continued*

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Financial Position

The financial position of Octopus Energy at 30 April 2022 and 30 June 2023[61,68] is summarised below:

OCTOPUS ENERGY – FINANCIAL POSITION (£ MILLIONS, 100% BASIS)

	AT 30 APRIL 2022 ACTUAL	AT 30 JUNE 2023 ACTUAL
Trade and other receivables	924	nd
Inventories	1	nd
Trade and other payables	(1,558)	nd
Net working capital	**(633)**	**(835)**
Property, plant and equipment (net)	48	nd
Goodwill	87	nd
Other intangible assets	197	nd
Investments	2	nd
Deferred tax asset	30	nd
Avro levy	625	-
Deferred consideration	(13)	nd
Amounts due from/(to) shareholders (net)	(9)	nd
Other financial payables (net)	(22)	nd
Total funds employed	**313**	**nd**
Cash and cash equivalents	236	4,035
Debt	(40)	(3,009)
Net cash/(debt) (excluding lease liabilities)	**196**	**1,026**
Lease liabilities	(36)	nd
Net cash/(debt) (including lease liabilities)	**160**	**nd**
Net assets	**473**	**nd**
Non-controlling interests	(12)	nd
Equity attributable to Octopus Energy shareholders	**461**	**1,101**
STATISTICS		
Net tangible assets	*176*	*494*

Source: Octopus Energy Annual Report and Financial Statements 2022, Origin and Grant Samuel analysis

Octopus Energy typically operates with substantial negative working capital as most customers pay by direct debit on a monthly basis while a significant proportion of payments are made over longer time frames (e.g. suppliers). In addition, the working capital balance is subject to seasonality due to:

- differences between monthly fixed revenue from customers and consumption driven payables (i.e. payables are higher over the autumn/winter period when greater volumes of electricity and gas are consumed relative to the fixed income receivable from customers, which reverses in the summer months); and
- the receipt of cash from customers over the course of the year (as part of the tariff) that is used to fulfil Octopus Energy's renewable obligations. Renewable obligations are settled after 30 June each year.

Consequently, at 30 April each year, there is an inflated payables balance that is settled/reversed in the following months. However, this has largely corrected by 30 June each year, with the working capital balance at 30 June indicative of average working capital over the July to June period.

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68 The 30 June 2023 financial information for Octopus Energy has been converted from A$ to £ at an exchange rate of 0.5250. More detailed 30 June 2023 financial information was provided to Grant Samuel by Origin but has not been disclosed at the request of Octopus Energy on the basis of commercial sensitivity.

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The financial position at 30 June 2023 also reflects accounting for the Bulb Energy acquisition (from April 2023). Bulb Energy customers and some its assets and liabilities[69] were transferred to a wholly owned subsidiary, Octopus Energy Retail 2022 Limited ("ORE2022") within the Octopus Energy group. As part of the acquisition, the United Kingdom government provided funding to ORE2022 ensure the future sustainability of the Bulb Energy business. Octopus Energy is required to run ORE2022 as a ringfenced entity within its group until the government funding has been repaid. The total amount to be repaid by ORE2022 to the government is ~£3 billion (these amounts are included in cash and debt in Octopus Energy's balance sheet).[70]

Investments is Octopus Energy's 30% interest in TG Octopus Energy (as well as a 50% investment in Co-op Community Energy Limited (a community based renewable generation company) and a 25% interest in Energise Energy Solutions Limited (involved in meter installation)).

Other intangible assets primarily represents customer acquisition costs. These costs are capitalised and amortised over a period of three years. Other intangible assets also includes software development costs and fund contracts. Software development costs represent the salaries and other costs associated with the development of the *Kraken* software.

Other assets and liabilities include[71]:

- the Avro levy of £325 million (which has subsequently been paid);
- deferred consideration (of £13 million at 30 April 2022, with £9 million falling due after more than one year at 30 April 2022);
- amounts owed from related parties (of £24 million at 30 April 2022, including amounts owed by Origin and Tokyo Gas in relation to shares issued in March 2021 which has since been paid);
- amounts owed to related parties (of £33 million at 30 April 2022 due to Octopus Capital for the acquisition of Octopus Renewables, with £31 million falling due after more than one year at 30 April 2022); and
- other financial receivables (of £19.6 million at 30 April 2022) and financial payables (of £41.7 million at 30 April 2022) related to Octopus Energy's hedging activities.

Octopus Energy has a prudent and sophisticated hedging policy that uses forward contracts to hedge the electricity and gas delivery for each of its customers:

- for customers on fixed price contracts, it makes forward commitments for electricity and gas delivery for each customer that is acquired or renewed for the duration of the term offered to the customer and allows for some expected attrition. Daily adjustments are made to correct the wholesale position for variances in demand and renewable generation versus forecast. This approach largely locks in the margin for customers across the life of their fixed contracts; and
- for customers on variable price contracts, Octopus Energy executes a rolling hedge that follows the price cap methodology.

Lease liabilities are in respect of lease contracts for rental premises, EV leasing and other equipment used in Octopus Energy's operations.

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69 Including the complete domestic and business customer book, all customer debt and credit balances, certain regulatory assets (such as Renewable Energy Guarantees of Origin and Renewable Energy Certificates) and energy licences.

70 Source: National Audit Office Report "Investigation into Bulb Energy", 29 March 2023.

71 Based on disclosures in Octopus Energy's Annual Report and Financial Statements 2022.

Annexure 1. Independent Expert's Report *continued*

Non-controlling interests primarily represent an 80% interest in RED. Octopus Energy acquired a 20% interest in RED in February 2022, with an immediately exercisable option to acquire the remaining 80%, giving Octopus Energy controlling power based on the potential voting rights. Consequently, the initial cash consideration of £1.4 million for the 20% interest was paid and £12 million was recognised as a non-controlling interest.

Outlook

In conjunction with the release of its FY23 results on 17 August 2023 (and confirmed at its Annual General Meeting on 18 October 2023), Origin stated that Octopus Energy is in a rapid growth phase and continued to invest in international growth, technology platform developments and services offerings.

Origin expects Octopus Energy EBITDA to be lower in FY24, with a wide range of potential outcomes reflecting stronger retail competition. FY24 will include the first full year contribution from the acquisition of Bulb Energy.

The longer term outlook for the business is extremely positive:

- Retail Energy currently supplies only about 2% of households in the major markets in which Octopus Energy operates (excluding the United States) and Origin believes the business is well placed to replicate growth in the United Kingdom across other markets;
- Origin estimates that the total addressable Platform Licensing market in the medium term is over 1 billion meter points. With more than 40 million contracted customer accounts today, Origin believes that the *Kraken* platform is well placed to reach its target of 100 million customer accounts by 2027. Recurring revenue will increase as customer accounts go live on the *Kraken* platform.

  Kraken Flex will play an increasingly important role in balancing supply and demand as more intermittent renewable energy is deployed across the globe. Origin expects that Octopus Energy will benefit from licencing *Kraken Flex* to platform partners, while also utilising the technology across its own customer base to increase customer lifetime value.

  Kraken Utilities also entered into its first water and broadband agreements in July 2023, providing further avenues for growth over the longer term;
- Octopus Renewables is targeting growth in assets under management from £5.8 billion today to £15 billion by 2030; and
- the energy transition provides significant tail winds in Energy Services, with Octopus Energy's early position in EVs, smart meters and heat pumps poised to benefit from electrification of transport and heat.

5.3 APLNG

Overview

APLNG is an integrated LNG project located in south-eastern and central Queensland. The project is held in an incorporated joint venture between ConocoPhillips (47.5%), Origin (27.5%) and Sinopec (25%). Upstream gas fields and associated infrastructure as well as the gas transmission pipeline are currently operated by Origin, while the downstream liquefaction plant is operated by ConocoPhillips. APLNG also holds interests in other upstream gas fields operated by third parties.

The project produces natural gas from various CSG fields located in the Surat and Bowen basins. Gas is then either transported and sold to customers in the domestic East Coast gas market or transported 530km via the APLNG gas transmission pipeline to Curtis Island, Gladstone, where it is liquefied in two LNG trains with combined nameplate capacity of 9.0Mtpa and exported to international customers. APLNG is a major supplier to the East Coast market and during FY23 sold 8.9Mt of LNG.

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History

APLNG was established in 2008 as a 50:50 CSG to LNG joint venture between Origin and ConocoPhillips. Prior to the transaction, Origin's CSG business sold gas into the domestic market only (including supply of gas to Origin's Energy Markets business). The new CSG to LNG joint venture involved all of Origin's existing CSG interests, related processing facilities and existing gas sales contracts as well the development of a CSG to LNG project with up to four trains to export LNG to international customers for 30 years. The total headline subscription price of up to $9.6 billion payable by ConocoPhillips for the transaction included the following components:

- an upfront subscription for shares in APLNG of US$5.0 billion ($6.0 billion);
- additional fixed capital contribution to APLNG of $1.15 billion to carry Origin's share of costs up to FID; and
- additional subscription for shares in APLNG of US$500 million ($600 million) at the point of each of the four LNG trains being approved (although these have not been paid).

FEED for APLNG commenced in late 2009. In April 2011, APLNG entered into binding agreements with Sinopec for the supply of 4.3Mtpa of LNG to Sinopec for 20 years. Sinopec also acquired a 15% interest in APLNG for US$1.8 billion by way of an equity injection, with the Origin and ConocoPhillips interests both reduced to 42.5%. FID for Train 1 of the project was obtained in July 2011. Total capital costs for the project were forecast to be US$20 billion (including US$2.5 billion of contingencies) for a two train development, each with nameplate production capacity of 4.5Mtpa. An initial commitment of US$14 billion (including US$1.7 billion of contingencies) was approved by APLNG for development of Train 1 and the infrastructure required to support Train 2, with Train 1 expected to commence in mid-2015 and Train 2 in early 2016.

In November 2011, APLNG announced it had signed a binding heads of agreement with The Kansai Electric Power Company ("Kansai Electric") for the sale of 1Mtpa of LNG for 20 years commencing in mid-2016, conditional on FID being obtained on Train 2. Shortly after, in January 2012, APLNG entered into binding agreements with Sinopec for supply of an additional 3.3Mtpa of LNG through to 2035, increasing Sinopec's offtake to 7.6 Mtpa. Sinopec would also acquire an additional 10% interest in APLNG through a further equity injection, conditional on Train 2 FID, which was subsequently announced in July 2012. The FID reaffirmed project timing and the original cost estimate of $23 billion (US$20 billion) for the two train development and resulted in the agreements with Kansai Electric and Sinopec becoming effective, with Sinopec increasing its ownership interest to 25% in exchange for a net subscription for shares in APLNG of US$1.4 billion.

APLNG production commenced through Train 1 in December 2015, with the first LNG cargo exported to Sinopec in January 2016. Supply to Kansai Electric began in June 2016 and Train 2 started production in October 2016. APLNG also signed a 20-year gas transportation agreement with APA in 2016. Under the terms of the agreement, APA would build and operate a gas pipeline from the APLNG upstream gas field network directly to the Wallumbilla Gas Supply Hub, providing APLNG with greater ability to sell gas directly into the domestic East Coast gas market.

In October 2021, Origin announced it had agreed to sell a 10% interest in APLNG to EIG Partners for $2.12 billion (US$1.58 billion). Post transaction, Origin would hold a 27.5% interest and remain upstream operator, with completion of the sale subject to pre-emptive rights in the favour of existing shareholders, ConocoPhillips and Sinopec. ConocoPhillips exercised its pre-emptive right and the sale of the 10% interest to ConocoPhillips was completed in February 2022, with Origin receiving net proceeds of approximately $2 billion.

Annexure 1. Independent Expert's Report *continued*

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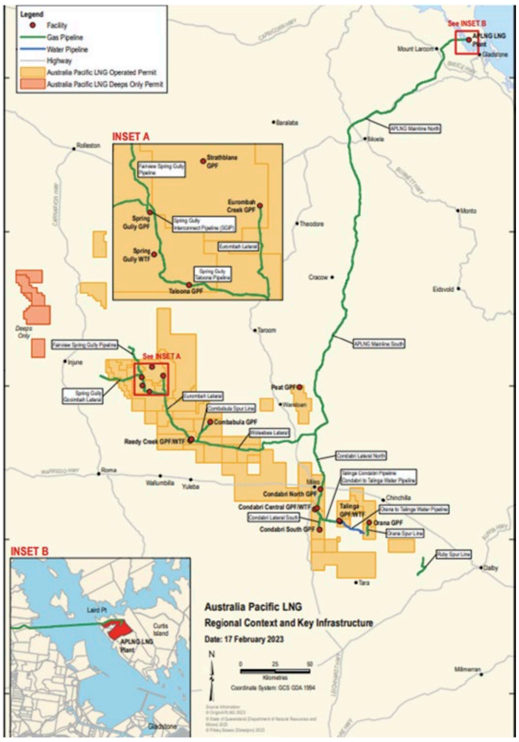
Project Components

The map below shows the major components of the APLNG project:

APLNG – PROJECT COMPONENTS



Source: APLNG Environment and Social Report January to December 2022

UPSTREAM OPERATIONS

APLNG sources CSG from gas fields located in the Surat and Bowen basins, from both tenements held by APLNG and operated by Origin, as well as tenements operated by third parties in which APLNG holds ownership interests. APLNG's upstream gas fields are held in two operating areas:

- **Asset West**, which includes the Spring Gully, Denison and Peat fields located in the Bowen Basin (84PJ of production in FY23[72]) and the Reedy Creek and Combabula fields located in the Surat Basin (176PJ of production in FY23[72])
- **Asset East**, which includes the Condabri, Talinga and Orana fields located in the Surat Basin (275PJ of production in FY23[72])

CSG wells are fitted with pumps that extract water during the process of depressurising the coal seam. As water pressure in the coal seam is reduced, gas begins to desorb and flows to the surface via production wells. At the surface, a separator is used to remove the associated water from the gas. When production

[72] APLNG 100% gross basis.

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of a CSG well commences, the rate of water production exceeds the rate of gas production as the well undergoes a dewatering phase. The rate of water production then declines as the peak gas rate is achieved during the stable production phase. During this phase approximately 30-50% of the well's reserves are produced, which generally occurs within the first five years of production. The well then enters a decline phase where the gas production rate declines over time. The typical average well life is 30 years.

Once the gas and associated water is separated at the wellhead separator, CSG from each well flows into the Gas Gathering System ("GGS"), an interconnected system of low pressure pipelines. The GGS then delivers the gas to a centralised gas processing facility. Origin operates a total of 12 gas processing facilities on behalf of APLNG which during FY23 operated at a combined average production rate of 1,463TJ/day.

UPSTREAM OWNERSHIP INTERESTS OPERATED BY THIRD PARTIES

APLNG also holds ownership interests in upstream gas field and associated infrastructure assets operated by third parties. The ownership interests are in tenements across six fields in the Surat and Bowen basins operated by Santos Limited and Shell Petroleum Company Limited ("Shell"). In FY23, these non-operated assets contributed 41PJ and 99PJ of production respectively.

APLNG GAS PIPELINE

The APLNG pipeline is a gas transmission pipeline owned by the joint venture and is operated by Origin. It transports gas from APLNG's upstream gas processing facilities to the liquefaction facility on Curtis Island. The pipeline is 530km in length and has daily transport capacity of 1,560TJ. It consists of three main sections:

- **APLNG Pipeline Mainline**, the 362km main pipeline that connects the east and west laterals junction near Wandoan to the Curtis Island liquefaction facility;
- **Woleebee Lateral**, a 87km lateral section that connects the Asset West fields to the mainline; and
- **Condabri Lateral**, a 76km lateral section that connects the Asset East fields to the mainline.

The APLNG Pipeline also comprises several other lateral sections and spur lines that connect APLNG's various gas processing facilities to the main sections of the pipeline. Both GLNG and QCLNG have access to sections of the APLNG pipeline under various infrastructure connection agreements and gas swap agreements entered into by the parties and give effect to gas transport without physical flow. These agreements allow for more efficient gas transportation through the region and have reduced the need for additional upstream pipeline infrastructure by the three projects.

CURTIS ISLAND LNG FACILITY

The APLNG downstream liquefaction facility converts gas produced from the upstream gas fields to LNG for export to APLNG's international offtake customers. The facility has total nameplate production capacity of 9Mtpa via two trains each with nameplate production capacity of 4.5Mtpa. The total LNG production capacity of 9Mtpa is equivalent to approximately 500PJ per year. The facility, located on a 244 hectare site on Curtis Island, offshore from Gladstone, also includes LNG storage tanks and loading and berthing facilities.

The facility uses the Optimised Cascade Technology process for LNG production. The LNG product is then transferred to two storage tanks, each with a capacity of 160,000m^3 . The storage tanks are located adjacent to the plant's ship loading facility where ships of up to 220,000m^3 capacity are loaded with LNG for export to international customers.

Annexure 1. Independent Expert's Report *continued*

Project Funding

In May 2012, APLNG announced it had secured commitments for an US$8.5 billion project finance facility. The facility provided funding for the construction of the downstream components of the project, including the liquefaction facility on Curtis Island. The original syndicated facility comprised three tranches which are summarised below:

APLNG – PROJECT FINANCE FACILITIES

	LIMIT	MATURITY	LENDING PARTIES
Commercial Bank Tranche	US$2.875 billion	2028	Syndicate of 15 domestic and international commercial banks
US EXIM Tranche	US$2.866 billion	2029	Export-Import Bank of the United States (US EXIM)
China EXIM Tranche	US$2.759 billion	2028	Export-Import Bank of China (China EXIM)

Source: Origin

The facilities were structured as non-recourse to APLNG shareholders. However, each shareholder provided a several guarantee of its shareholding percentage of the debt during the construction phase of the project. These guarantees fell away post the construction phase and after the project met certain construction completion test requirements. In FY19, the joint venture refinanced US$4.5 billion of the original facilities through a US$2.0 billion US Private Placement Note and a new US$2.5 billion bank loan from a syndicate of domestic and international banks. The facilities amortise over their remaining term and are due to be fully repaid by FY31.

Reserves and Resources

Origin's share of APLNG reserves and resources, as estimated by Origin for its operated assets and by Netherland, Sewell & Associates, Inc. ("NSAI") for the non-operated assets are summarised in the table below.

APLNG – RESERVES AND RESOURCES AT 30 JUNE 2023 (PJ)

	ORIGIN SHARE (27.5%)			APLNG (100%)
	DEVELOPED	UNDEVELOPED	TOTAL 2P RESERVES	TOTAL 2P RESERVES
Total operated assets	1,537	978	2,514	9,142
Total non-operated assets	303	194	497	1,807
Total 2P reserves	**1,839**	**1,172**	**3,011**	**10,949**
Total 3P reserves			**3,297**	**11,991**
Total 2C resources			**1,025**	**3,729**

Source: Origin

APLNG reserves and resources reported by Origin since the commencement of LNG production in FY16 are shown in the chart below.

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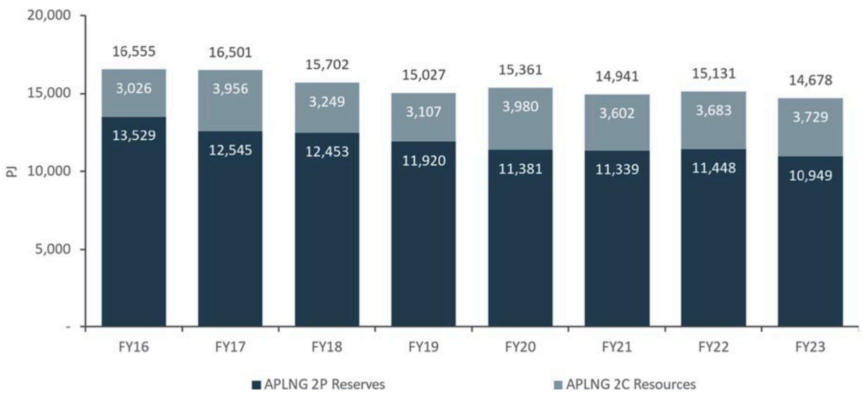
APLNG – RESERVES AND RESOURCES (PJ, 100% BASIS)



Source: Origin

APLNG has maintained a broadly consistent level of reserves and resources over the past five years, despite the project producing almost 3,500PJ during that time. 2C resources have increased by approximately 500PJ since FY18. This strong level of reserves and resources replacement has been achieved through:

- higher estimated ultimate recovery from fields than originally forecast at FID, proven up through demonstrated field production performance;
- enhanced drilling technology and cost reductions that have unlocked additional reserves and resources in existing maturing gas fields;
- maturation of contingent resources to reserves through successful gas field appraisal and development programs;
- booking new contingent resources through successful exploration drilling of resource prospects; and
- acquisition of new fields in the region, including APLNG's acquisition of the Ironbark gas field from Origin in 2019.

Marketing and Offtake

APLNG sells gas into the domestic East Coast gas market as well as LNG to international LNG customers. Origin markets all APLNG gas sold into the domestic market on behalf of APLNG, while APLNG leads the marketing of LNG production with the assistance of ConocoPhillips. Both domestic gas production and LNG production are underpinned by long term offtake contracts. Domestic gas and LNG production above the contracted amount each year is sold into short term spot markets. The composition of product sales during the period FY21 to FY23 is summarised in the table below:

APLNG – SALES COMPOSITION (PJ, 100% BASIS)

	FY21		FY22		FY23	
	VOLUME (PJ)	SHARE OF TOTAL SALES	VOLUME (PJ)	SHARE OF TOTAL SALES	VOLUME (PJ)	SHARE OF TOTAL SALES
Contracted LNG	450	69%	450	68%	468	73%
Spot LNG	48	7%	55	8%	27	4%
Total LNG	**498**	**76%**	**505**	**76%**	**495**	**77%**
Total domestic gas	**158**	**24%**	**159**	**24%**	**150**	**23%**
Total sales	**656**	**100%**	**664**	**100%**	**645**	**100%**

Source: Origin

Annexure 1. Independent Expert's Report *continued*

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LIQUEFIED NATURAL GAS

APLNG entered into two major offtake agreements prior to FID for Train 1 and Train 2. These offtake agreements are summarised below:

APLNG – LNG OFFTAKE CONTRACTS

	START DATE	CONTRACT TERMS	COUNTRY	PRICING	VOLUME (MTPA)
Sinopec	2015	20 year ToP	China	JCC-linked	7.6
Kansai Electric	2015	20 year ToP	Japan	JCC-linked	1.0
Total					**8.6**

Source: Origin

APLNG sells spot LNG under shorter term master bilateral agreements, typically on an FOB basis, where the buyer takes economic ownership of the product once it is loaded onto the export vessel. Individual spot cargoes are typically marketed by the joint venture 6-12 weeks in advance of shipment. Pricing for these spot sales is usually linked to the JKM LNG pricing benchmark.

DOMESTIC GAS

Gas is transported from APLNG's upstream gas fields to domestic customers via the major East Coast gas market transmission pipelines, including the South West Queensland Pipeline, the Roma Brisbane Pipeline and the APLNG Gas Pipeline. APLNG sells gas to customers via long term GSAs as well as under short term contracts and through the Wallumbilla Gas Supply Hub. APLNG's major long term GSAs are summarised below:

- **Origin**: a legacy contract with Origin's Energy Markets business for supply of gas ending in 2034;
- **Rio Tinto**: a contract with Rio Tinto Aluminium though to 2031 to supply gas to the Yarwun alumina refinery in Gladstone;
- **Queensland Alumina Limited** ("QAL"): a contract to supply gas to QAL's alumina plant in Gladstone, ending in 2041; and
- **QGC**: a contract to supply gas to QGC over a 20 year period ending in 2035.

Production

Historical production performance of the APLNG upstream gas fields since the commencement of LNG exports in FY16 is shown in the chart below.

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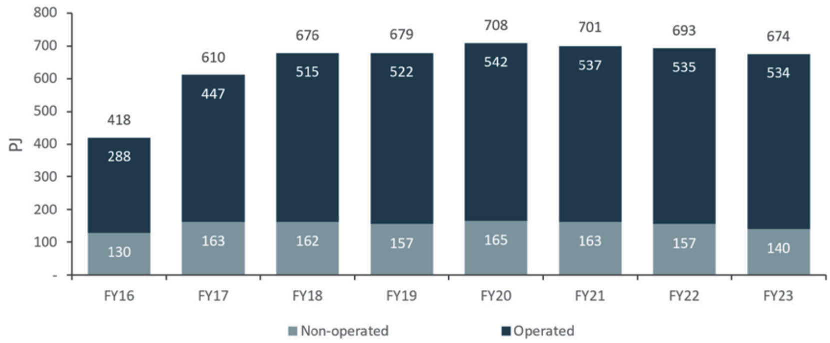
APLNG – PRODUCTION BY SOURCE (PJ, 100% BASIS)



Source: Origin

Following the commencement of LNG production through Train 1 on Curtis Island in December 2015, the project ramped up to full production when the Train 2 came online in October 2016. Since FY18, the project has produced around 700PJ per year, with approximately 75% of total production from fields operated by APLNG (Origin) and the remainder from APLNG's interests in fields operated by third parties. Since FY18, approximately 75-80% of total APLNG upstream production has been used as feed gas to produce LNG and it has produced more LNG than required to meet its contract commitments.

Financial Performance

The historical financial performance of APLNG from FY18 to FY23 is summarised below:

APLNG – OPERATING PERFORMANCE ($ MILLIONS, 100% BASIS)

	FY18 ACTUAL	FY19 ACTUAL	FY20 ACTUAL	FY21 ACTUAL	FY22 ACTUAL	FY23 ACTUAL
Domestic gas sales (PJ)	*205*	*195*	*187*	*158*	*159*	*150*
LNG sales (PJ)	*475*	*481*	*481*	*498*	*505*	*495*
Total product sales (PJ)	***680***	***676***	***668***	***656***	***664***	***645***
Revenue	5,528	7,443	7,100	4,595	9,362	11,259
Operating costs	(1,782)	(1,781)	(1,992)	(1,544)	(2,486)	(3,091)
Underlying EBITDA	**3,746**	**5,662**	**5,108**	**3,051**	**6,876**	**8,168**
Depreciation and amortisation	(1,853)	(2,116)	(1,863)	(1,568)	(1,563)	(1,659)
Underlying EBIT	**1,893**	**3,546**	**3,245**	**1,483**	**5,313**	**6,509**
STATISTICS						
Revenue growth	*47%*	*35%*	*(5%)*	*(35%)*	*104%*	*20%*
EBITDA growth	*64%*	*51%*	*(10%)*	*(40%)*	*125%*	*19%*
EBITDA margin	*68%*	*76%*	*72%*	*66%*	*73%*	*73%*
EBIT margin	*34%*	*48%*	*46%*	*32%*	*57%*	*58%*
AVERAGE REALISED PRICES						
Domestic gas sales ($/GJ)	*4.50*	*5.04*	*4.61*	*4.24*	*6.23*	*8.54*
LNG sales ($/GJ)	*9.59*	*13.42*	*12.86*	*7.79*	*16.36*	*20.01*
All product sales ($/GJ)	*8.06*	*11.00*	*10.55*	*6.94*	*13.94*	*17.34*

Source: Origin and Grant Samuel analysis

APLNG's earnings have grown significantly over the past five years, with EBITDA increasing from $3.7 billion in FY18 to $8.2 billion in FY23. Despite relatively stable total sales volumes and increases in operating costs

Annexure 1. Independent Expert's Report *continued*

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over this period, earnings have grown predominantly due to increasing LNG and domestic gas prices leading to higher revenue. The reduction in earnings in FY21 was driven by a decline in commodity prices, with APLNG's offtake contracts having pricing linked to movement in the JCC oil price.

Financial Position

The financial position of APLNG at 30 June 2023 is summarised below:

APLNG – FINANCIAL POSITION ($ MILLIONS, 100% BASIS)

	AT 30 JUNE 2023 ACTUAL
Trade and other receivables	551
Inventories	259
Trade and other payables	(507)
Net working capital	**303**
Property, plant and equipment (net)	32,441
Exploration, evaluation and development assets	510
Intangible assets	18
Loans receivable from shareholders	324
Provisions	(1,919)
Deferred tax liability	(2,762)
Other assets/(liabilities) (net)	(860)
Total funds employed	**28,055**
Cash and cash equivalents	1,720
Debt	(7,375)
Net debt (excluding lease liabilities)	**(5,655)**
Lease liabilities	(444)
Net debt (including lease liabilities)	**(6,099)**
Net assets	**21,956**
STATISTICS	
Net debt (including lease liabilities)/Underlying EBITDA	*0.7x*
Gearing (excluding lease liabilities)	*20%*

Source: APLNG Consolidated Financial Report 30 June 2023 and Grant Samuel analysis
Note: APLNG US$ statement of financial position converted to A$ at an exchange rate of 0.6629.

Loan receivables from shareholders of $324 million represent the withdrawal of funds from APLNG that are reserved for future repayments of the project finance facility, measured at amortised cost. The loans attract a variable rate of interest and are repayable on demand (although they are classified as non-current assets as APLNG does not intend to call upon the funds within 12 months). Of the total loan receivables of $324 million, $136 million is due from Origin.

The net deferred tax liability of $(2,762) million includes a deferred tax asset for carried forward tax losses of $797 million (tax effected).

Provisions primarily represent the estimated present value of future restoration, rehabilitation and dismantling activities.

The carrying amount of APLNG's debt of $7,375 million is net of the unamortised value of debt arrangement fees of $59 million.

APLNG's lease contracts primarily relate to plant and equipment, such as pipelines and electricity infrastructure and have terms of up to 30 years (in some cases with extension and/or termination options).

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Cash Flow

The historical cash flow of APLNG for FY18 to FY23 is summarised in the table below:

APLNG – CASH FLOW ($ MILLIONS, 100% BASIS)

	FY18 ACTUAL	FY19 ACTUAL	FY20 ACTUAL	FY21 ACTUAL	FY22 ACTUAL	FY23 ACTUAL
Underlying EBITDA	3,746	5,662	5,108	3,051	6,876	8,168
Change in net working capital, foreign exchange and other items	40	(13)	238	168	333	104
Capital expenditure	(1,170)	(1,348)	(1,283)	(459)	(347)	(480)
Free cash flow	**2,617**	**4,301**	**4,063**	**2,760**	**6,862**	**7,792**
Project finance principal repayment	(915)	(808)	(731)	(672)	(694)	(813)
Project finance interest	(418)	(513)	(382)	(263)	(233)	(311)
Finance lease costs	-	-	(99)	(64)	(70)	(91)
Other finance costs/income	-	(35)	(5)	(40)	(15)	82
Distributable cash flow	**1,284**	**2,945**	**2,846**	**1,721**	**5,850**	**6,659**
Net cash distributed to shareholders	**808**	**2,558**	**3,384**	**1,888**	**5,211**	**6,483**

Source: Origin and Grant Samuel analysis

APLNG free cash flow has increased broadly in line with EBITDA growth over the period (as APLNG has not paid tax to date as it has utilised its carried forward tax losses).

Capital expenditure was lower over the period from FY21 to FY23 (compared to the prior three years) as a result of lower exploration, appraisal and development activity. APLNG capital expenditure is expected to increase over the next few years as drilling activity increases.

Distributions to project shareholders were historically made through redemptions of MRCPS however these were fully redeemed in FY22. APLNG currently makes cash distributions as unfranked dividends and will continue to do so until its carried forward tax losses are fully utilised. Cash distributed to shareholders has increased over the period as a result of the improvement in earnings and a reduction in project finance debt servicing costs as the facilities amortise.

Strategy

Origin's strategy for APLNG's upstream operations is centred around three key strategic pillars:

- **optimise production**: This is focused on optimising well availability, minimising the time wells are offline and optimising gas efficiency (defined as realised production as a proportion of maximum production possible). Reducing processing facility ullage by optimising pressures across the upstream network is key to this strategy;
- **lowest cost of supply**: Origin is targeting reductions in unit costs through improved drilling and well workover rates as well as reducing their overall activity through reducing workover frequency and maintaining a flat headcount as operations technology systems improve; and
- **decarbonisation**: Origin has plans for various decarbonisation initiatives, including electrification of upstream operations, methane use reductions and supporting improvements across the various non-operated upstream interests.

APLNG Reversion

In 2002, Oil Company of Australia Limited (later renamed to APLNG) acquired interests in various CSG assets ("CSG interests") from Tri-Star Group ("Tri-Star") for US$20 million with the interests subject to reversionary rights and an ongoing royalty in favour of Tri-Star. If triggered, the reversion rights require APLNG to transfer back to Tri-Star a 45% share of ownership in the CSG interests for no additional

Annexure 1. Independent Expert's Report *continued*

consideration. Reversion is triggered when revenue from the sale of petroleum from those CSG interests plus any other revenue derived from or in connection with those CSG interests exceeds the aggregate of:

- all expenditure relating to the CSG interests;
- interest on that expenditure;
- royalty payments; and
- the original US$20 million acquisition price.

The CSG interests represent approximately 19% of APLNG's 2P reserves and 18% of 3P reserves as reported by Origin at 30 June 2023.

In 2015, Tri-Star initiated proceedings against APLNG claiming that reversion occurred as early as 2008 when ConocoPhillips invested in APLNG ("Reversion Proceeding"), asserting that the equity subscription money (or a portion of) paid by ConocoPhillips should be classified as revenue for the purposes of the reversion rights trigger. Tri-Star has also claimed that in the alternative, reversion occurred following Sinopec's investments in APLNG in 2011 and 2012. In addition, Tri-Star has made other associated claims in the Reversion Proceeding relating to the calculation of inputs to the reversion trigger, calculation of royalties payable by APLNG to Tri-Star and rights relating to access to infrastructure and gas sales over the period since the alleged reversion. If Tri-Star's reversion claims are successful, APLNG may no longer have access to the reserves and resources associated with the reverted CSG interests and as a result, may need to source alternate sources of gas to fulfill its offtake contract commitments. There are also other complex issues that would need to be resolved if reversion is deemed to have occurred, including:

- how some jointly held CSG interests will be operated (as there are no joint operating terms in place);
- Tri-Star's contribution to exploration and development costs incurred by APLNG since the reversion;
- the consequences of APLNG having since commercialised and sold gas attributable to the reverted CSG interests;
- Tri-Star's ownership and/or rights to access certain APLNG project infrastructure since reversion; and
- Tri-Star's repayment of the ongoing royalties it has received from the reversionary CSG interests since reversion.

In 2017, Tri-Star commenced separate proceedings against APLNG alleging that APLNG breached three CSG joint operating agreements by failing to offer Tri-Star an opportunity to participate in the "markets" allegedly formed when the project signed certain domestic gas and LNG offtake agreements, including the Sinopec and Kansai LNG agreements ("Markets Proceeding"). Tri-Star alleges it was denied the right to participate with respect to current participating interests it holds as well as its reversionary interests (if reversion is deemed to have occurred).

APLNG filed its defences and counterclaims for both proceedings in 2020. Both parties have since made numerus other filings relating to the proceedings and are waiting for the court to make further orders for the conduct of each proceeding. Origin has stated that if APLNG is not successful in defending some or all of the claims made by Tri-Star then the financial performance of APLNG may be materially adversely impacted as may the timing and quantum of cash flows from APLNG to its shareholders.

5.4 Other Integrated Gas

Overview

The Other Integrated Gas business covers a variety of discrete activities comprising the remainder of Origin's gas activities, including the upstream operations of APLNG, LNG hedging and price risk management, legacy upstream exploration and other growth initiatives.

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Operations

APLNG RELATED SERVICES

Origin's Integrated Gas business incurs overhead costs as the upstream operator and corporate service provider to APLNG. The Integrated Gas business has a mechanism to recover indirect costs incurred from the APLNG joint venture based on operated spend levels each year, with these recovered APLNG indirect costs netted off against Origin's corporate allocation of indirect costs to the Integrated Gas business.

OIL PRICE HEDGING

Uncontracted gas volumes produced by APLNG are sold to the domestic gas and spot LNG markets. To manage its risk exposure to oil and LNG prices, Origin enters into a number of hedging instruments. This includes a mixture of instruments linked to Brent oil such as swaps, producer collars and upside participation collars (with respect to its exposure to oil).

LNG TRADING

Origin's LNG supply arrangements are principally with:

- Cameron LNG, which allows Origin to purchase 0.25Mtpa of LNG from Cameron LNG at a Henry Hub-linked price plus a fixed tolling fee (which Origin, in practice, then sells at either TTF-linked prices or JKM-linked price). The 20-year contract is due to mature in 2039; and
- ENN Energy Trading Company Limited ("ENN"), which involves Origin selling 0.28Mtpa of LNG to ENN under a medium term contract commencing in FY19. The contract is significantly out-of-the-money in favour of ENN and a non-cash onerous provision of $62 million was held at 30 June 2023[73].

LEGACY EXPLORATION INTERESTS

Historically, the Other Integrated Gas business also held a number of interests in upstream gas assets across Australia. In September 2022, Origin announced its intention to exit these interests and has sold its exploration permits in the Beetaloo Basin[74] (in Northern Territory), Canning Basin[75] (in Western Australia) as well as certain permits in the Cooper-Eromanga Basin (in Queensland). Origin intends to exit its remaining exploration interests.

GROWTH INITIATIVES

The Other Integrated Gas business is also responsible for exploring the potential of renewable hydrogen production and conversion of hydrogen to other forms (e.g. gas, liquid or ammonia) for storage, domestic use and export. The majority of its work is focused on developing hydrogen hub concepts as well as conducting feasibility and demand studies.

The most advanced of these is the Hunter Valley Hydrogen Hub Project in Newcastle, New South Wales (in partnership with Orica) which is currently in FEED. The project was granted Commonwealth funding (of $70 million) to progress further engineering and design work.

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[73] At 30 June 2022, a non-cash onerous provision of $397 million was held in relation to this contract, reflecting stronger LNG prices relative to Brent oil prices. In FY23, a reduction in the non-cash onerous provision of $335 million was recognised, revaluing the provision to $62 million at 30 June 2023, reflecting a decline in near-term LNG price assumptions relative to Brent oil prices.

[74] On 9 November 2022, Origin completed the sale of its 100% interest in the Beetaloo Basin joint venture for an upfront consideration of $60 million and a life of field royalty (5.5% royalty based on wellhead revenue). Origin has also executed a gas sale agreement for offtake of future gas production from these permits.

[75] On 13 February 2023, Origin entered into a sale agreement to divest its interests in certain exploration permits in the Canning Basin for an upfront consideration of $4 million and certain contingent reimbursements of up to $34 million (subject to `development and production milestones).

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Financial Performance

The historical financial performance of Other Integrated Gas from FY20 to FY23 and Origin's estimates for FY24 are summarised below:

OTHER INTEGRATED GAS BUSINESS - OPERATING PERFORMANCE ($ MILLIONS)

	FY20 ACTUAL	FY21 ACTUAL	FY22 ACTUAL	FY23 ACTUAL	FY24 ESTIMATE
Commodity hedging (premium expense and gain/(loss))	(21)	92	(165)	(293)	(27)
Gain/(loss) on LNG trading	(72)	(37)	(23)	58	40-60
Other costs (net of recoveries from APLNG)	(82)	(65)	(109)	(91)	
EBITDA	**(174)**	**(10)**	**(297)**	**(327)**	

Source: Origin and Grant Samuel analysis

The Other Integrated Gas business has generated losses in each of the last four years. The primary cause of its performance has been commodity hedging, which reflects the mark-to-market gains and losses on its oil, gas and foreign exchange hedging positions as well as any associated hedging premium expense. The FY23 net loss included a hedge loss of $271 million associated with 5.4Mbbl of oil swaps and 1.6Mbbl of oil producer collars which realised a hedge price of US$99/bbl. These hedge contracts were established over the period from October 2020 to August 2021 during the height of the COVID-19 pandemic to protect Origin's investment grade credit rating. Based on current forward market prices (at 7 August 2023), Origin estimates a net loss on oil, gas and foreign exchange hedging in FY24 of $27 million (including $2 million in premium spend). These hedging losses are offset by (Origin's share of) the stronger performance of APLNG.

The gain/(loss) on LNG trading reflects the impact of contracts and derivative hedge contracts that manage the price risk associated with the physical LNG contracts that form part of an LNG trading portfolio, primarily the Cameron LNG Henry Hub-linked contract and the ENN Brent oil-linked contract. The profit or loss from this arbitrage depends on the LNG price relative to either Henry Hub prices or Brent oil prices. Based on market forward prices (at 7 August 2023), Origin expects the FY24 LNG trading EBITDA to be in the range $40-60 million. Across FY25 and FY26, the LNG trading EBITDA is expected to be in the range $450-650 million in total. This outlook is subject to market prices on unhedged volumes, operational performance and delivery risk of physical cargoes, and shipping and regasification costs.

Other costs are overhead costs (net of recoveries) incurred as upstream operator and corporate services provider to APLNG, costs associated with growth initiatives such as hydrogen development initiatives and costs associated with Origin's exploration interests. Other than the impact of one-off costs such as exploration well write-offs (in FY22) or non-recurring payments (in FY20), these other costs are dependent on the growth activity being pursued by Origin.

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6 Valuation of Origin

6.1 Summary

Grant Samuel has valued Origin in the range $14.6-16.4 billion which corresponds to a value of $8.45-9.48 per share. The valuation is summarised below:

ORIGIN - VALUATION SUMMARY ($ MILLIONS)

	REPORT SECTION REFERENCE	VALUATION RANGE	
		LOW	HIGH
Energy Markets	6.4	9,000	10,000
Other Integrated Gas	6.5	13	26
Corporate costs (net of savings)	6.6	(460)	(495)
Wholly owned business operations		**8,553**	**9,531**
Investment in Octopus Energy (20% interest)	6.7	2,250	2,450
Investment in APLNG (27.5% interest)	6.8	6,894	7,506
Other assets and liabilities	6.9	427	427
Enterprise value		**18,124**	**19,914**
Adjusted net borrowings at 30 June 2023	6.10	(3,538)	(3,538)
Value of equity		**14,586**	**16,376**
Fully diluted shares on issue (millions)[76]	4.6	1,726.9	1,726.9
Value per share		**$8.45**	**$9.48**

The valuation represents the estimated full underlying value of Origin assuming 100% of the company was available to be acquired and includes a premium for control. The valuation is on an ex dividend basis (i.e. after the final FY23 dividend of $0.20 per share that was paid on 29 September 2023).

The value exceeds the price at which, based on current market conditions, Grant Samuel would expect Origin shares to trade on the ASX in the absence of a takeover offer. Shares in a listed company normally trade at a discount of 15-25% to the underlying value of the company as a whole (but this discount does not always apply).

The value attributed to Origin's business operations and its investments in Octopus Energy and APLNG are overall judgements having regard to a number of valuation methodologies and parameters, including DCF analysis, capitalisation of earnings or cash flows (multiples of EBITDA and EBIT) and other measures commonly used in the relevant industries (i.e. value per retail energy supply customer for Octopus Energy and multiples of resources, reserves and production for APLNG) as well as recent transactions involving interests in Octopus Energy and APLNG. A general discussion of valuation methodologies is set out in Section 6.2.

The principal approach to valuing Origin's business operations and its investments in Octopus Energy and APLNG was by DCF analysis. The DCF analysis was based on Origin's Business Operation Cash Flow Models adapted as appropriate by Grant Samuel. The financial models use as their starting point the balance sheet of Origin at 30 June 2023 and project ungeared after tax cash flows from 1 July 2023. The cash flows were discounted to a NPV using nominal after tax discount rates appropriate for each business operation and investment. Appendix 3 sets out a detailed analysis of the selection of these discount rates.

The overall earnings multiples implied by the valuation of Origin's business operations (including its proportionate interest in the enterprise value of Octopus Energy and APLNG) are summarised below:

[76] Fully diluted shares on issue assumes that the vesting of 2,455,873 performance share rights, 3,114,057 restricted share rights and 306,830 matching share rights is satisfied by the issue of new Origin shares, after allowing for the 1,746,760 treasury shares. The result is the issue of an additional 4,130,000 Origin shares, increasing the shares on issue from 1,722,747,671 to 1,726,877,671.

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ORIGIN – IMPLIED VALUATION PARAMETERS

	VARIABLE ($ MILLION)	RANGE OF PARAMETERS	
		LOW	HIGH
Origin's wholly owned business operations		8,553	9,531
20% of Octopus Energy business operations value[77]		2,280	2,480
27.5% of APLNG business operations value[78]		8,525	9,075
Proportionate value of business operations		**19,358**	**21,086**
Multiple of underlying EBITDA – business operations			
FY23 (historical)	3,107	6.2x	6.8x
FY24 (median broker's forecast[79])	3,383	5.7x	6.2x
Multiple of underlying EBIT – business operations			
FY23 (historical)	1,417	13.7x	14.9x
FY24 (median broker's forecast[79])	1,826	10.6x	11.5x

The overall multiples implied by Grant Samuel's valuation range are presented for information purposes but (in isolation) are not particularly meaningful due to Origin's unique mix of business operations that each have materially different risks and growth outlooks:

- Energy Markets (44% of Origin's proportionate business operations value) is a mature business that requires significant investment to transition its generation assets (primarily Eraring) to a future-facing portfolio of battery, renewable and flexible generation projects;
- Octopus Energy (12% of Origin's proportionate business operations value) has a fundamentally different growth outlook from the rest of Origin's business operations that is complemented by the scalable nature of its *Kraken* technology platform; and
- APLNG (44% of Origin's proportionate business operations value) is a mature producing asset with a finite operating life (i.e. no terminal value) but has a track record of stable production output albeit with a large exposure to volatile LNG prices.

The overall multiples are blended multiples for Origin's business operations and reflect the relative size of each of the business operations. The implied overall multiples are weighted towards the valuation of Energy Markets and APLNG but also incorporate the robust growth potential of Octopus Energy. While contribution to earnings in recent years has varied due to market conditions (as well as Origin's sale of a 10% interest in APLNG in February 2022), the Energy Markets business and the investment in APLNG together represent the vast majority of Origin's underlying EBITDA. The total exposure to energy markets (in Australia through Energy Markets and in the United Kingdom through its 20% interest of Octopus Energy) is ~40-50% of underlying EBITDA.

Given its exposure to energy markets (which should increase as Octopus Energy executes its growth strategy), it may be argued that Origin's multiples should be more reflective of the attractive attributes of this part of the business, including factors such as its:

- highly strategic platform, which means that it is well placed to capitalise on the opportunities (but uncertain trajectory) of the energy transition;
- scale and leading market position in multiple geographies including in Australia and in the United Kingdom;

77 Calculated as value of Octopus Energy's business operations of £5,700-6,200 million x 20% converted to $ at a £/$ exchange rate of 0.50 (see Section 6.7.1).

78 Calculated as value of APLNG's business operations of $31,000-33,000 million x 27.5% (see Section 6.8.1).

79 Origin has decided not to include the FY24 Budget in the Scheme Booklet. To provide an indication of Origin's expected financial performance, Grant Samuel has considered broker's forecasts (see Appendix 2 for details). These forecasts are sufficiently close to Origin's FY24 Budget to be useful for analytical purposes.

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- significant opportunity to lead the energy transition in Australia, where it is building a pipeline of battery and renewable development projects; and
- growth potential of Octopus Energy, which has a highly scalable *Kraken* platform and, in only a few years, has emerged as one of the largest electricity and gas retail suppliers in the United Kingdom.

However, the reality is that it is difficult (if not impossible) to make any definitive conclusions on the appropriateness of its overall multiple. There is no market evidence for any of Origin's peers that share a similar combination of business and geographic exposures. Origin's closest peer, AGL Energy, is fundamentally an Australian energy markets business only (but with much higher generation capacity) and does not have any direct exposure to either the LNG market or international energy retail markets.

In any event, analysis of the implied multiples is also further complicated by the lack of a reliable metric for Origin's future earnings potential. Neither FY23 nor FY24 EBITDA are reliable proxies for future earnings due to the:

- different price trajectories and outlooks for Origin's underlying commodity prices (e.g. LNG and oil) and wholesale electricity prices (all of which have remained at historically high levels);
- the expected reduction in earnings contribution from Eraring from FY23 and FY24 levels as electricity prices moderate and the coal price caps expire which then ceases when Eraring closes;
- the uncertain earnings and capital requirement of replacing Eraring in FY26 (or later if retirement is delayed);
- growth potential of Octopus Energy; and
- impact of certain supply agreements (e.g. legacy APLNG supply agreement) which are favourably priced but not expected to be renewed.

It may be argued that FY25 is more reflective of Origin's future earnings potential as EBITDA for the group should decline to more sustainable levels. At the same time, this may not necessarily be true for all businesses (particularly for Octopus Energy which may have a much longer runway for growth).

Taking these factors into consideration, Grant Samuel believes that an individual assessment of the implied valuation multiples for each of the business operations (presented in Sections 6.4.3, 6.7.3 and 6.8.3) would produce more meaningful conclusions.

6.2 Methodology

6.2.1 Overview

Grant Samuel's valuation of Origin has been estimated by aggregating the underlying value of its business operations (on a "control" basis) together with the realisable value of non-trading assets and deducting external borrowings and non-trading liabilities. The value of the business operations has been estimated on the basis of fair market value as a going concern, defined as the price that could be realised in an open market over a reasonable period of time assuming that potential buyers have full information.

The most reliable evidence as to the value of a business is the price at which the business or a comparable business has been bought and sold in an arm's length transaction. In the absence of direct market evidence of value, estimates of value are made using methodologies that infer value from other available evidence. There are four primary valuation methodologies that are commonly used for valuing businesses:

- capitalisation of earnings or cash flows;
- discounting of projected cash flows;
- industry rules of thumb; and

Annexure 1. Independent Expert's Report *continued*

- estimation of the aggregate proceeds from an orderly realisation of assets.

Each of these valuation methodologies has application in different circumstances. The primary criterion for determining which methodology is appropriate is the actual practice adopted by purchasers of the type of business involved.

6.2.2 Discounted Cash Flow

Discounting of projected cash flows has a strong theoretical basis. It is the most commonly used method for valuation in a number of industries, including resources, and for the valuation of start-up projects where earnings during the first few years can be negative but it is also widely used in the valuation of established industrial businesses. Discounted cash flow valuations involve calculating the net present value of projected cash flows. This methodology is able to explicitly capture depleting resources or assets, development projects and fixed terms contracts (which are typical in the resources sector), the effect of a turnaround in the business, the ramp up to maturity or significant changes expected in capital expenditure patterns. The cash flows are discounted using a discount rate which reflects the risk associated with the cash flow stream.

Considerable judgement is required in estimating future cash flows and it is generally necessary to place great reliance on medium to long term projections prepared by management. The discount rate is also not an observable number and must be inferred from other data (usually only historical). None of this data is particularly reliable so estimates of the discount rate necessarily involve a substantial element of judgement. In addition, even where cash flow forecasts are available, the terminal or continuing value is usually a high proportion of value. Accordingly, the multiple used in assessing this terminal value becomes the critical determinant in the valuation (i.e. it is a "de facto" cash flow capitalisation valuation). The net present value is typically extremely sensitive to relatively small changes in underlying assumptions, few of which are capable of being predicted with accuracy, particularly beyond the first two or three years. The arbitrary assumptions that need to be made and the width of any valuation range mean the results are often not meaningful or reliable. Notwithstanding these limitations, discounted cash flow valuations are commonly used and can at least play a role in providing a check on alternative methodologies, not least because explicit and relatively detailed assumptions as to expected future performance need to be made.

Financial models for Origin's business operations have been developed by Grant Samuel based on the Business Operation Cash Flow Models prepared by Origin management. Grant Samuel has made adjustments to these models to reflect its judgement on certain matters. The financial models allows the key drivers of revenue, costs and capital expenditure to be modelled. The models are based on a number of assumptions about future events and is subject to significant uncertainty and contingencies, many of which are outside the control of Origin. Where relevant, a number of different scenarios have been developed and analysed to reflect the impact on value of various key assumptions relating to pricing, costs, capital expenditure and other factors. However, these scenarios do not, and do not purport to, represent the range of potential outcomes for Origin's business operations and investments. They are simply indicators of the sensitivity of the NPVs derived from the DCF analysis. The financial models are discussed in more detail in Sections 6.4, 6.7 and 6.8 of this report.

6.2.3 Capitalisation of Earnings or Cash Flows

Capitalisation of earnings or cash flows is the most commonly used method for valuation of industrial businesses. This methodology is most appropriate for industrial businesses with a substantial operating history and a consistent earnings trend that is sufficiently stable to be indicative of ongoing earnings potential. This methodology is not particularly suitable for start-up businesses, businesses with an erratic earnings pattern or businesses that have unusual capital expenditure requirements. This methodology involves capitalising the earnings or cash flows of a business at a multiple that reflects the risks of the business and the stream of income that it generates. These multiples can be applied to a number of different earnings or cash flow measures including EBITDA, EBIT or NPAT. These are referred to respectively as EBITDA multiples, EBIT multiples and price earnings multiples. Price earnings multiples are commonly used in the context of the sharemarket. EBITDA and EBIT multiples are more commonly used in valuing whole businesses for acquisition purposes where gearing is in the control of the acquirer but are also used extensively in sharemarket analysis.

6.2.4 Industry Rules of Thumb

Industry rules of thumb are commonly used in some industries. These are generally used as a "cross check" of the result determined by a capitalised earnings valuation or by discounting cash flows. While they are only used as a cross check in most cases, industry rules of thumb can be the primary basis on which buyers determine prices in some industries. Common rules of thumb for Origin's business operations and investments are:

- for energy markets businesses, value per customer or account; and
- for APLNG, multiples of resources, reserves and production.

However, it should be recognised that rules of thumb are usually relatively crude and prone to misinterpretation.

6.2.5 Net Assets/Realisation of Assets

Valuations based on an estimate of the aggregate proceeds from an orderly realisation of assets are commonly applied to businesses that are not going concerns. They effectively reflect liquidation values and typically attribute no value to any goodwill associated with ongoing trading.

6.3 Valuation Approach

6.3.1 Overview

In valuing Origin's business operations, the primary focus was on DCF analysis, with earnings multiples analyses and the price implied by the most recent capital raising (for Octopus Energy) and recent transactions (for APLNG) used as a cross check. Industry rules of thumb (e.g. value per customer and multiples of resources, reserves and production) have also been considered. The key assumptions underlying Grant Samuel's DCF analysis for Origin's business operations and its investments as well as the market evidence are described in their relevant sections.

The valuation ranges for Origin's business operations and investments are judgements. The objective is to determine a value that fits with the output of the DCF analysis in terms of the various scenarios and their likelihood and is consistent with the market evidence as to multiples.

6.3.2 Specific Valuation Issues for Origin

Valuation Date

Origin has been valued at 30 June 2023 and the DCF analysis has been prepared from 1 July 2023. The primary reference point for the valuation the balance sheet at 30 June 2023. While adjustments have been made for relevant significant subsequent events such as the payment of the final FY23 dividend, no adjustments have been made for movements in balance sheet items, in particular, the "mark to market" of derivative financial instruments and of capital markets debt. As these instruments are used as hedging instruments, daily movements should have minimal impact on net value.

Annexure 1. Independent Expert's Report *continued*

Cum Special Dividend Valuation

Origin has declared a final FY23 dividend of $0.20 per share and may, under the Scheme, pay a fully franked special dividend of $0.39 per share subject to certain conditions.

The valuation is prepared on a cum dividend basis with respect to any special dividend (i.e. the valuation is before payment of any special dividend), which is dependent on the Scheme being implemented but on an ex dividend basis with respect to the final FY23 dividend (i.e. the valuation is after payment of $0.20 per share), which was paid to Origin shareholders irrespective of whether the Scheme is implemented.

Valuation Currency

Each of Origin's business operations and investments has been valued in Australian dollars other than Octopus Energy. Octopus Energy has been valued in British pounds as it uses British pounds as its presentation currency.

Synergies

Normal valuation practice is to include (either implicitly or explicitly) a value for synergies that are available to multiple acquirers but to exclude synergy value that is unique to a particular acquirer.

The valuation includes savings on listed company costs and other corporate overheads that any acquirer of Origin would be able to achieve. At a minimum, any potential acquirer would need to offer a price for Origin that contemplated the value of these synergies to be competitive with any other buyer. These savings have been included in the negative value attributed to corporate costs. Other synergy benefits that are uniquely available to the Consortium have not been included.

It should be noted that where earnings multiples from comparable transactions represent primary valuation evidence, adding synergies to earnings or making a further multiple adjustment for synergies would potentially result in "double counting" of value as the multiples from the comparable transactions are usually based on "standalone" earnings (either reported or forecast) and the value of synergies is therefore reflected in the multiple (i.e. the transaction multiple would be lower if based on earnings including synergy benefits).

6.3.3 Key DCF Assumptions

There are a number of economic and financial assumptions that apply across the valuation of Origin's business operations:

Commodity Prices

The valuation of Origin's interest in APLNG is the most sensitive of all of its business operations to changes in commodity prices.

APPROACH

Grant Samuel has considered the following sources in determining its price assumptions for the DCF analysis:

- Consensus Economics, a monthly publication of economic and commodity forecasts that canvasses a number of investment banks, brokers and economists to consolidate consensus projections on a range of economic indicators, including commodity prices;
- specialist commodity market analysts that provide in-depth coverage of a wide range of commodities, including oil and LNG; and

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- its own research on underlying supply-demand dynamics of the relevant markets. See Section 3 for an overview of demand, supply and price dynamics as well as other relevant issues for oil, LNG and domestic gas.

Estimating the future trajectory of commodity prices and the long term sustainable price of any commodity is fraught with uncertainty:

- commodity prices are inherently volatile. For example, the closing price for Brent Oil has range from as low as US$20/bbl to well over US$120/bbl in just the past three years. LNG prices (and to an extent, domestic gas prices) have demonstrated similar levels of volatility. Commodity prices are impacted by short term fluctuations in the day to day physical supply/demand balance (and inventories) as well as speculative trading activity. In the longer term, prices can be expected to reflect the fundamentals of underlying supply, demand and marginal costs;
- the underlying drivers of commodity prices are multifaceted, complex and difficult to predict;
- it is difficult to pre-empt changes in the regulatory environment (which can impact the availability of current and future supply in the market). For instance, the future trajectory of Australian domestic gas prices are likely impacted by government environmental restrictions in place that constrain exploration for (and development of) onshore gas resources;
- global oil supply is influenced by, among other factors, decisions by the Organisation of the Petroleum Exporting Countries ("OPEC"). In the past twelve months, members of OPEC voluntarily cut production to support falling oil prices. While it is clear that the organisation's (one of many) objectives is to maximise profit, the scope or pace of these production decisions is less clear; and
- increasing demand does not automatically result in higher prices over the long term as market participants will respond with either increased supply (due to the profits to be made) or reduced demand (due to the prohibitive costs).

Accordingly, forecasts of commodity prices by industry research houses, equity analysts, economists and others tend to fall in a very wide range. There is typically no tight consensus.

Moreover:

- a number of forecasters present "base" and "upside" cases that are materially different;
- available forecasts lag current market trading, often by some months; and
- there is no one source that is regarded as "superior" to the rest.

Grant Samuel's selected price assumptions are intended solely for valuation purposes and are not predictions of future prices. Instead, they are intended to reflect the pricing assumptions real world acquirers of the assets (i.e. other industry participants) would utilise in determining the price that they are prepared to pay.

OIL PRICES

Grant Samuel has assumed two price scenarios (all US$ on a real basis) for Brent Oil:

- the Low Case assumes a Brent crude oil price of US$85/bbl in FY24, gradually stepping down to US$60/bbl by FY30 and remaining flat thereafter; and
- the High Case assumes a Brent crude oil price of US$85/bbl in FY24, gradually stepping down to US$65/bbl by FY30 and remaining flat thereafter.

The long term assumption compared to other forecasts and historical (in nominal terms) Brent crude oil prices is shown below:

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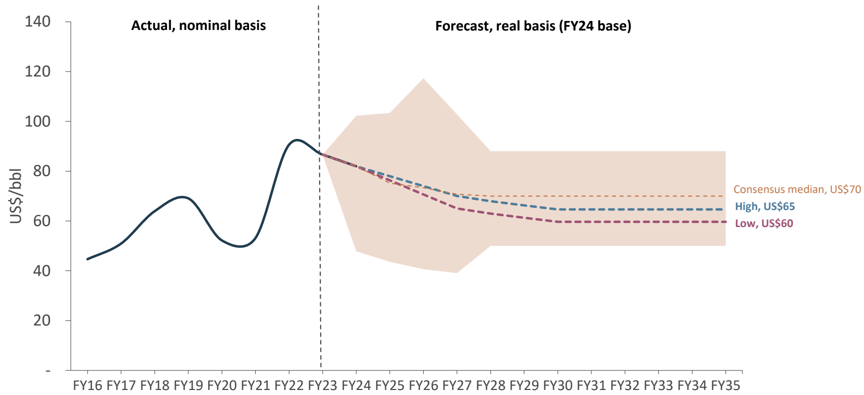
HISTORICAL AND FORECAST BRENT PRICES



Source: IRESS, Consensus Economics (August 2023), Grant Samuel analysis

Grant Samuel's Brent crude oil price assumption is broadly consistent with the range of forecasts used by market analysts. The low end of the range (US$60/bbl long term) is in line with the long term price for Brent oil estimated by Wood Mackenzie[80].

However, determining assumptions regarding future oil prices is not straightforward. Recent events in the market have highlighted the challenges in projecting the price of oil as:

- oil prices have been volatile. Oil traded at very low prices during 2020 as a result of COVID impacts (with oil futures briefly trading on a negative basis) but recovered strongly to well over US$120/bbl. More recently, it has been trading over US$90/bbl. The Russia-Ukraine war and more recently the conflict in Israel have contributed to volatility as well as decisions by some producers to curtail production and stockpiling by some other countries (such as the United States);
- oil prices are heavily influenced by changes global macroeconomic activity (which impacts industrial demand and consumption of oil) and, to a large extent, the prevailing uncertainty. Slowing growth in China and rising global inflation (particularly in a number of Western countries) has contributed to mixed responses from central banks across the world. In efforts to bolster economic growth, China has surprised the market by reintroducing monetary easing policies. On the other hand, the Federal Reserve (as well as the central banks of other major economies, including the European Central Bank, Bank of England, Reserve Bank of Australia, etc.) has embarked on one of the sharpest monetary tightening regimes in its history. This has resulted in a sharp increase in interest rates in these economies over the past eighteen months and for which the impact may not yet have fully permeated through local economies; and
- global oil supply (and consequently prices) is also heavily influenced by OPEC (which collectively account for nearly 60% of global production). Some of these decisions may counteract the impact that declines in demand arising from falling industrial demand may have on oil prices. The recent decision by OPEC producers to extend production cuts pushed oil prices above US$90/bbl (after trading around US$80/bbl in the preceding months).

80 Source: Wood Mackenzie Insight, *Long-term Brent price of US$60/bbl maintained – oil and gas price assumptions versus forecasts*, July 2023.

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The lack of consensus surrounding future oil prices (in both the short and long term) reflects these challenges and is illustrated by the very wide range of views adopted by market participants and commentators regarding both the future supply of and demand for oil. There is substantial uncertainty regarding future technological and regulatory developments and the impact of global initiatives to reduce carbon emissions.

While oil prices in the current market environment are substantially higher (due to short term factors), there are a number of important factors which should, on balance, lead to a moderation of prices over the next two or three decades:

- high prices (at least if sustained for some time) will generally elicit a number of supply responses that typically lead (even if over time) to a moderation of prices including:
  - introduction of more supply with new oil and/or gas reserves opening as development is accelerated;
  - recommissioning of previously marginal reserves that have become economic in a high price environment; and
  - substitution, as industrial or manufacturing processes source other fuel alternatives that offer a similar combination of characteristics at potentially a lower cost.

  At the same time, these changes can take some years to occur (and may face their own sets of frictions that stymie change); whereas
- low prices that are sustained for some time would inevitably force some producing assets (some of which may have been previously profitable) to go offline and consequently remove supply from the market, thereby pushing oil prices higher.

  While this appears to be an outcome that some brokers contemplate (i.e. some brokers have assumed oil prices to remain flat on nominal terms, which in an inflationary environment suggests that real oil prices would eventually fall to zero), this is an unlikely outcome as long term oil prices should arguably need to at least remain high enough to cover the costs of production (at some level).

In any event, the general market consensus suggests that oil demand should begin its long term decline in the next several years as economies shift towards cleaner forms of energy.

Grant Samuel considers a long-term Brent oil price range of $60-65/bbl to be a reasonable balancing of these factors.

LNG PRICES

APLNG has a number of long term LNG contracts that incorporate oil-linked pricing. The terms of these contracts have been reflected in Grant Samuel's valuation. Grant Samuel has assumed that when these contracts expire, they will be rolled over to oil-linked LNG contracts (i.e. pricing based on Brent oil prices and an assumed slope that allows for a small discount to account for shipping costs).

Grant Samuel's price scenarios for the oil-linked LNG contracts (net of shipping costs) are driven by the projected oil prices (see above) and reflect:

- a Low Case, which assumes that long-term oil-linked LNG prices fall to $6.8/Mbtu; and
- a High Case, which assumes that long-term oil-linked LNG prices fall to $7.4/Mbtu.

Grant Samuel has assumed that spot LNG cargoes will be delivered at prices that on average reflect long term oil-linked pricing.

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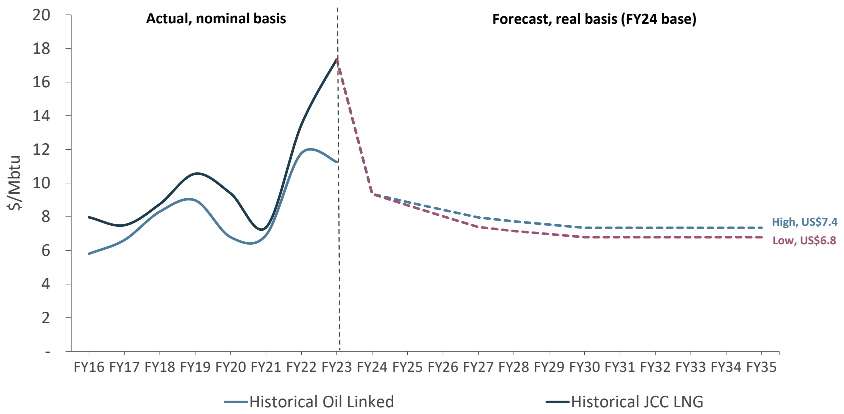
The following chart shows the historical relationship between JCC LNG pricing and Brent oil-linked prices[81] and Grant Samuel's assumptions regarding future LNG pricing:

HISTORICAL AND FORECAST LNG PRICES



Source: Bloomberg, Grant Samuel analysis

DOMESTIC GAS PRICES

APLNG (as supplier, and Origin as the customer) currently has a number of long term domestic gas supply contracts in place. The terms of these contracts have been reflected in Grant Samuel's valuation. It has been assumed that when these contracts roll over or expire, they are replaced by new supply agreements that are repriced at prevailing market levels at the time.

Grant Samuel has assumed three price scenarios (all $ on a real basis) for domestic gas prices (Queensland):

- the Low Case assumes a domestic gas price of $12/GJ in FY24, gradually stepping down to $11/GJ by FY30;
- the Mid Case assumes a domestic gas price of $12/GJ over the projected period; and
- the High Case assumes a domestic gas price of $12/GJ in FY24, gradually stepping up to $13/GJ by FY30.

The long term assumption compared to historical (in nominal terms) domestic gas prices is shown below:

[81] Historical oil-linked LNG prices are calculated based on a 13% slope to Brent. Forecast prices are based on the slopes implied by Origin's current contracts.

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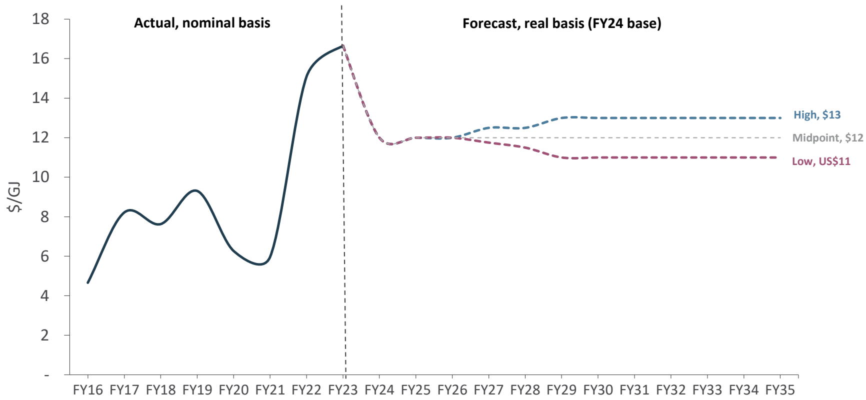
HISTORICAL SPOT AND FORECAST DOMESTIC GAS PRICES



Source: AER, Grant Samuel analysis

There are no publicly available domestic gas price projections by investment banks, brokers, economists or commodity analysts. However, recent market developments suggest the future domestic gas price should at least reflect a higher price environment relative to historical levels (which were generally at a range of $5-9/GJ for the most of the 2010s). The question is, by how much.

In determining these assumptions, Grant Samuel took into account the following considerations:

- the price of domestic gas in Australian East Coast markets has risen significantly over the last decade. This has reflected factors including:
  - continued energy demand;
  - declining gas supply as East Coast gas exploration and development has faced regulatory obstacles; and
  - the impact of global energy prices as the commencement of LNG operations in Queensland, which has effectively introduced a global pricing transmission mechanism into the East Coast market.

  Tighter supply demand dynamics for the domestic market has resulted in East Coast domestic gas pricing moving towards LNG netback pricing;
- the latest estimates for future domestic gas prices (based on LNG netback pricing) indicates that they are expected to fall from the currently elevated levels;
- near-term gas prices (at least through FY25) are moderated by temporary price caps (set at $12/GJ) and the mandatory code of conduct. It is uncertain whether such measures (or similar effect) will remain in place beyond the designated term; and
- the depletion of traditional sources of gas for the domestic market (e.g. the Gippsland, Otway and Bass Strait Basins in Victoria) is likely to constrain available supply in Victoria. Accordingly, much of its future supply is likely to come from other sources such as Queensland which would inevitably attract higher costs (to account for transport and storage). Victorian gas prices are assumed to be approximately $2/GJ higher than Queensland prices.

Taking these factors into consideration, Grant Samuel considers a long-term domestic gas price range of $11-13/GJ to be a reasonable balancing of these factors.

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Inflation

The valuation models are in nominal dollars (as are the discount rates). Accordingly, an inflation factor has been applied to all forecast dollar values (including commodity prices and costs).

Grant Samuel has assumed long term inflation rates of 2.5% for revenue and costs denominated in Australian dollars, US dollars and British pounds (but with elevated levels in FY24 and FY25). This assumption is not inconsistent with consensus forecasts for longer term inflation rates in both countries.

It is not unreasonable to assume that it will be challenging to return to the inflation lows of the pre pandemic era (2% or lower), particularly as household expenditure continues to move towards services over goods and wages inflation (which has been largely absent for the last decade) works its way into the system.

Exchange Rates

A flat nominal exchange rate has been assumed for the duration of the APLNG valuation model of 0.65 for the US$/A$, broadly consistent with the current and recent spot exchange rates. The flat exchange rate assumption is supported by the broadly similar long term inflation outlook in Australia and the United States. This exchange rate has been used to translate the future revenue for APLNG to calculate Australian dollar denominated cash flows and NPVs for the DCF analysis.

Origin's investment in Octopus Energy has been valued in British pounds and converted to Australian dollars at a £/A$ exchange rate of 0.50, which is also broadly consistent with the current and recent spot exchange rates.

Discount Rates

The discount rates selected by Grant Samuel are:

- 8.5-9.0% for Energy Markets;
- 9.5-10.0% for Octopus Energy. This represents a blended discount rate for Octopus Energy's business operations (Retail Energy Supply, Platform Licensing and Octopus Renewables); and
- 10.0-11.0% for APLNG and Other Integrated Gas.

The discount rate is applied to forecast ungeared operating cash flows in nominal terms.

The selected rate for Octopus Energy's Retail Energy business is higher than that selected for Origin's Energy Markets to reflect the higher beta that would apply to a pure energy retailer (whereas Energy Markets is, to some extent, a "gentailer"), the higher risk free rate applicable in the United Kingdom and the zero gearing assumed for Octopus Energy. Further information on the calculation of the discount rates is set out in Appendix 3.

6.4 Value of Energy Markets

6.4.1 Summary

Grant Samuel has valued Energy Markets in the range $9,000-10,000 million. This value excludes the value of LGC refunds (NPV of approximately $400 million) which has been included as a surplus asset in Other Assets and Liabilities.

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6.4.2 DCF Analysis

Approach

Origin's Energy Markets business comprises a number of separate businesses (e.g. retail, generation, wholesale and trading, LPG, Solar and Energy Services and other growth businesses such as VPP, CES and EV). The cash flows for each of these businesses have been considered separately by Grant Samuel as there are material differences in the economic drivers of each business operation in terms of growth prospects and risks. For example:

- the retail business (including LPG) is a mature business and is one of the largest energy retailers in Australia. While profit margins are generally stable, the growth prospects for each of its end markets is mixed. For example, electricity and gas retail (which provide around 60% of revenue) are mature and stable businesses with less growth options than other businesses such as Future Energy. With the shift to electrification the outlook for gas is broadly of gentle decline whereas electricity is expected to grow relatively strong although growth in grid based supply will be more subdued;
- the generation business is exposed to movements in the wholesale energy prices and each of the assets in the portfolio (including Eraring, which is expected to cease operations in 2025) have finite operating lives (and closure costs). New developments will be required to maintain its gentailer business model. Capital expenditure is expected to be substantial as Energy Markets executes its development pipeline of renewable projects (each of which is exposed to its own set of construction and development risks); and
- the wholesale and trading business comprises a number of long term and short term contracts (e.g. legacy gas supply contract from APLNG) which expose it to movements in underlying benchmark energy prices.

However, for the purposes of this report, the value of Energy Markets has been aggregated into a single business. In Grant Samuel's view, this is appropriate as:

- Energy Markets is an integrated business. That is its strength and underpins its overall strategy. There are multiple layers of interactions between the individual businesses (e.g. across retail, generation and wholesale) that are, in practice, highly complex and challenging to untangle. For example, high wholesale electricity prices over several years may benefit the generation business but this benefit may be partially reduced as the retail business may not be able to fully pass through these high wholesale prices to customers given overall cost of living pressures and regulatory settings. Substantial and sustained under recovery may, in turn, impact the viability of smaller retailers, changing the competitive landscape;
- recent transaction evidence is available (albeit limited) for gentailers of similar scale and market exposure (geographic and regulatory) as Origin. There are far fewer (if any) market benchmarks for the individual components of the Energy Markets businesses with the exception of energy retailers (although these are substantially smaller than Origin in scale); and
- there are a number of comparable listed gentailers across Australia and New Zealand.

DCF Assumptions

The DCF analysis considers a number of different scenarios. Scenario A is based on the FY24 Budget and the Energy Markets Business Operation Cash Flow Model, with certain prices and growth rates adjusted by Grant Samuel. Grant Samuel has also made longer term assumptions to extend the cash flows for:

- generation assets (including new developments) through to FY58; and
- all other businesses (e.g. retail, wholesale and trading and LPG) through to FY40.

Annexure 1. Independent Expert's Report *continued*

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The cash flow projections have been prepared over an extended period (i.e. 10+ years) to reflect the material operational changes that will impact Origin's business over that period (e.g. retirement of Eraring, capital expenditure to develop renewable projects and declining production from gas peaker plants which eventually reach the end of their operating lives).

The DCF analysis relies on a number of general assumptions that are adopted across each of the business operations (e.g. wholesale electricity prices, domestic gas prices and market cap prices). However, as the individual businesses of Energy Markets have been modelled separately, the DCF model also has discrete assumptions for each of the business operations:

- for retail, this includes revenue growth and EBITDA margins for each end market (e.g. electricity, gas, Broadband, Solar and Energy Services, Future Energy and other retail services);
- for generation, this includes firming capacity availability, pool generation output, wholesale electricity prices (and market cap prices), fuel and operating costs. Assumptions for development projects also include capital expenditure, timing and costs;
- for wholesale and trading, this includes wholesale margins on gas wholesale sales (over spot domestic gas prices) and LGC prices; and
- for LPG, this includes distribution margin growth and EBITDA margins.

The DCF model for wholesale and trading is based on the existing hedges and sales/procurement contracts (for gas and electricity). Accordingly, changes in the outputs from the DCF model are primarily caused by changes in benchmark energy price assumptions (e.g. domestic gas prices, electricity prices and LGC prices) over the longer term.

This approach allows for the different sales revenue growth and cost profiles of each of the business operations. Capital expenditure and working capital assumptions have also been made for each of the Energy Markets' business operations.

Scenario A assumes a stable energy market transition through to 2030. For Scenario A, the DCF model assumes the following for each of the businesses:

- **Retail (including Origin Zero and VPP):**
  - forecast electricity sales fall to 33.2 TWh in FY25 due to increased penetration of rooftop solar, before growing at an average of 0.6% per annum through to FY28 due to electrification. A small moderation in average customer bill size is assumed from FY24 to FY25;
  - total revenue grow by an average of around 2.5% per annum over the projected period. The stable growth rates are largely weighted towards the mature segments of the business such as electricity (around 1.5% per annum) and gas retail (no growth) and mask the higher growth rates from other newer businesses such as Solar and Energy Services and Broadband (collectively nearly 30% per annum, albeit from a smaller base). As a result, revenue contribution from electricity and gas retail falls from around 60% of Energy Markets' revenue to 55% by FY28;
  - EBITDA margins improve from around 1.5% to 4.0% by FY28 and remain at those levels for the remainder of the projected period. The majority of the EBITDA margin improvement is achieved by FY25 due to the successful execution of the cash cost saving initiatives ($200-250 million in total cost outs by FY25). The remainder is largely due to the economies of scale from Origin's VPP and Broadband products which are assumed to breakeven by FY26;
  - total capital expenditure is predominantly sustaining in nature and assumed to decline from over $160 million in FY24 (which includes the purchase of an EV fleet) to around $90-100 million per annum for the remainder of the projected period; and
  - a terminal growth rate of 2.5% was applied to the cash flows of the business.

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- **Generation:**
  - earnings from generation assets decreases by 65% from FY24 to FY27 due to reduced contribution from Eraring (as coal price caps expire) and normalisation of electricity prices in the lead up to closure of Eraring (assumed as planned in August 2025). Total generation output sold falls from 16TWh in FY24 to around 3TWh from FY26 onwards following the closure of Eraring.

    From FY2027 onwards, the contribution to earnings from generation relates to the firming value of Origin's peaking fleet which is valued based on near term and long term market capacity contract prices. These prices are assumed to be:

    - $25-30/MWh (real) across all eastern states (except Victoria, which is around $12-15/MWh (real)) in FY24 and FY25; and
    - thereafter, market cap prices decline to around $15/MWh by 2035 (NEM wide average) and remain at these levels for the remainder of the projected period.

    The $15/MWh (real) is assumed to be the price to incentivise new capacity. Available firming capacity (and pool volumes sold) are based on the remaining useful lives of Energy Markets' portfolio of generation assets, which reduce to the closure of Eraring and then remains broadly flat until FY35, after which available capacity progressively declines as the remaining fleet of power stations are retired. A residual value is assumed at each site which considers land value, scrap value or alternative use sale;
  - operating costs are primarily in relation to the fuel costs which vary by power station, particularly:
    - coal prices (e.g. Eraring), which are capped at $125/t through June 2024 (per the New South Wales Government domestic price caps) before reverting to market prices in FY25 (assumed to be a weighted average price in the range of $150-160/t); and
    - gas prices, which assume long term real prices of $12/GJ for Queensland and $14/GJ for Victoria over the projected period (see Section 6.3.3 on domestic gas prices).

    Other costs include fixed operating costs (e.g. maintenance and overheads), jet fuel costs (for Mt Stuart) and pumping/charging costs (for Shoalhaven Pumped Hydro);
  - capital expenditure is primarily sustaining in nature and falls from $300 million in FY24 to an average of $60-70 million per annum from FY26 onwards. The decline in capital expenditure requirements is largely attributable to the closure of Eraring;
  - no terminal value was applied to the generation business as it comprises a portfolio of finite life assets;
  - restoration costs of approximately $360 million, the majority of which is in relation to Eraring (nearly 70%) and incurred between FY24 and FY30. Approximately $950 million (nominal) of residual value (with less than 10% attributable to Eraring as the site is intended to be redeveloped by Origin for a new battery) is included as a cash inflow in the forecast but nearly all is realised well after FY30. The residual value at each site considers land value, scrap value or alternative use; and
  - new projects (total of 2.5 GW of capacity) are assumed to be developed at a capital cost of nearly $3.5 billion that will "firm up" renewable sources to stabilise supply post Eraring:
    - Eraring Battery (Stage 1 and 2) that become operational in FY26;
    - Mortlake Battery that become operational at the end of FY26;
    - Darling Downs Battery that become operational at the end of FY26; and

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  - additional projects that become operational post FY27.

  The battery projects are assumed to have operating lives of 20 years before they are repurposed to maximise their end-of-life values (i.e. at a residual value less restoration costs).

  Origin is targeting 4 GW of renewable generation and storage capacity by 2030, however, specific projects beyond those mentioned above have yet to be defined sufficiently for valuation purposes.

- **Wholesale and Trading:**
  - the wholesale gas portfolio remains consistently between 210 PJ and 230 PJ per annum and contribute significant positive cash flows for the majority of the projected period due to the:
    - APLNG gas supply contract (expiring in FY34);
    - Origin's near term contracted sales and purchase position; and
    - Origin's ability to earn a wholesale trading margin;

    These contracted positions comprise over 90% of total purchases in FY24 but fall to zero by FY35. Uncontracted purchases (for commercial and industrial customers and trading activities) are assumed to generate a margin over spot domestic gas prices in line with that historically achieved by Origin;
  - the wholesale electricity portfolio supplies the retail business including mass-market (where tariffs are set annually) and commercial and industrial segment (where tariffs are generally set for a period of 1 to 3 years) from various electricity sources (e.g. internal generation portfolio, renewable PPAs, contracted positions). While electricity volumes remain relatively flat (with some gas substitution offset by off grid electricity production), it is assumed that there is an under-recovery of capacity in mass market tariffs (as seen in FY22 and FY23) that unwinds in the near term;
  - renewable PPAs are valued on a bundled basis assuming a long-term LGC price of $20/certificate;
  - other cash outflows such as operating costs (approximately $30 million per annum);
  - annual maintenance capital expenditure for the wholesale business is around $10 million per annum; and
  - a zero terminal growth rate was applied to the wholesale gas business.
- **Other:**
  - LPG EBITDA remains consistently at around 40% of gross profits, stay-in-business capital expenditure absorbs nearly half of EBITDA. A zero terminal growth rate was applied to the business. No contribution is assumed for Origin's LPG business in the Pacific as it has been sold;
  - working capital movements are assumed to be negligible, with the exception of the drawdown of Eraring coal stockpiles between FY24 and FY26; and
  - an effective corporate tax rate of 30% (adjusted for Origin's carried forward revenue tax losses which are fully utilised in FY24).

DCF Scenarios

Given the high-level nature of the DCF model and the purpose of the analysis, it is neither practical nor useful to analyse an exhaustive range of alternative scenarios. However, Grant Samuel has considered the impact of alternative assumptions for the key drivers to provide some indication of the sensitivity of the NPV outcome to changes in these drivers.

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Each of the scenarios considered by Grant Samuel assumes as a starting point that the FY24 Budget is achieved. A description of each scenario is outlined in the table below:

ENERGY MARKETS – DCF SCENARIOS

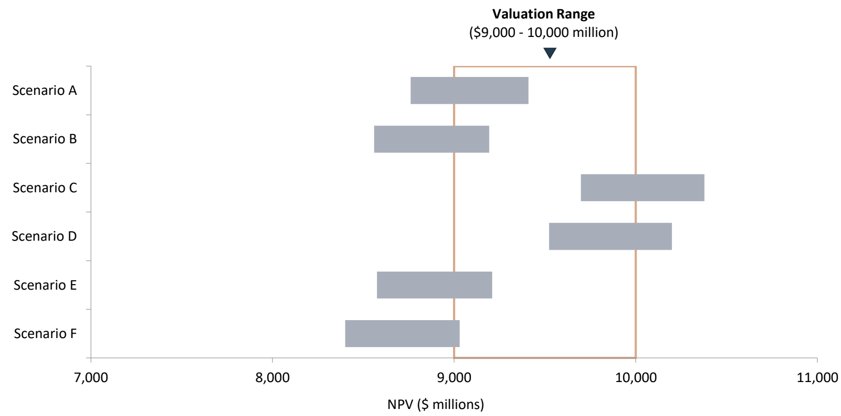
SCENARIO	DESCRIPTION
Scenario A	As above
Scenario B	Scenario A, except revenue growth from Retail growth initiatives (i.e. Broadband and Future Energy) is delayed by three years. Long term EBITDA margins for Retail remain unchanged at 4%.
Scenario C	Scenario A, except market conditions remain volatile across electricity and gas markets through FY30 that result in higher long term domestic gas prices ($13/GJ in Queensland and $15/GJ in Victoria) and higher market cap prices ($5/MWh higher from FY26 to FY30). Long term wholesale gas margins are assumed to expand by 50% in response to the market volatility.
Scenario D	Scenario C, except long term domestic gas prices are lower ($11/GJ in Queensland and $13/GJ in Victoria).
Scenario E	Scenario C, except successful rollout of battery technologies across the NEM pushes market cap prices down to $12.5/MWh from FY31. LGC prices decline to $15 per certificate in the long term. Despite higher domestic gas prices, wholesale gas margins remain at historical levels (consistent with Scenario A).
Scenario F	Scenario E, except long term domestic gas prices are lower ($11/GJ in Queensland and $13/GJ in Victoria).

NPV Outputs and Valuation

Grant Samuel's selected valuation range of $9,000-10,000 million for Energy Markets reflects a subjective balancing of the scenarios and a view that the appropriate discount rate to apply is 8.5-9.0%. This is depicted diagrammatically below:

ENERGY MARKETS – NPV OUTCOMES

(AT 8.5-9.0% NOMINAL DISCOUNT RATE)



The NPV outcomes fall across a relatively wide range which is to be expected as it is difficult (if not impossible) to be precise, let alone estimate, the impact that the energy transition will have on the Energy Markets business operations and NPV outcomes. There are innumerable factors at play such as global energy prices, wholesale electricity prices, domestic gas prices, closures of existing generation assets, development of new generation/storage assets and changes in the regulatory environment. Each of these factors have complex interrelationships. As observed in recent years, there are no precedents for the scope and pace of the energy transition.

Consequently, Grant Samuel has developed these scenarios to understand the sensitivity of the Energy

Annexure 1. Independent Expert's Report *continued*

Markets NPV to hypothetical impacts.

Grant Samuel has considered the NPV outcomes for all the scenarios in determining its valuation range for Energy Markets. In this regard:

- Scenarios A and B represent credible outcomes. The anticipated closure of coal-fired power stations and unexpected outages of the remaining coal-fired power stations has already caused and will inevitably continue to contribute to the volatility in the NEM. New replacement projects will remain a risk to grid reliability until they are fully operational and connected to the grid. The current high market cap prices are assumed to continue through to FY25 and then normalise to reflect the improved grid reliability as new generation capacity comes online. Similarly, domestic gas prices in the east coast ($12-14/GJ) remain well above historical levels as the constrained supply and a lack of clarity of future long term supply places upwards pressure on prices.

  Despite the uncertain market backdrop, there are a number of growth initiatives included in Scenario A that are achievable:

  - developing the pipeline of renewable projects which, while ambitious (and capital intensive), are fully permitted and Origin has the financial capacity to fund these investments;
  - delivering the remainder of the retail cash cost-out initiatives (e.g. *Kraken* rollout, automation and digitisation) which have already produced approximately $150 million in cash cost savings and, while delayed by a year from the original targets, continue to target the full $200-250 million in savings by FY25; and
  - scaling new retail products and offerings such as Broadband and VPP.

  In any event, the NPV impact from these growth initiatives are less sensitive compared to the overarching issues impacting the broader energy sector (e.g. cap prices and gas prices) because at least for battery/renewable projects, virtually all of the capital expenditure is yet to be incurred. The NPV impact of some of the risks is illustrated in Scenario B, which assumes a delay in delivering profitability to some of Origin's new product offerings (e.g. Broadband and VPP);

- Scenarios C and D illustrate the impact that heightened (and extended) market uncertainty can have on the value of Energy Markets and particularly its geared exposure to energy prices and its derivatives (e.g. market cap prices). Both scenarios assume that the period of uncertainty extends through to FY30 (compared to FY25 in Scenario A) and consequently places upwards pressure on market cap prices and domestic gas prices until then. The higher NPV outcomes reflect the:

  - value of the "natural hedge" as a gentailer which allows it to absorb some of the market volatility by passing on some (if not all) of its higher fuel costs (particularly for gas) to its customers;
  - operational flexibility of its peaking power plants which (unlike coal-fired power stations) can flexibly switch on/off and operate during periods of peak demand (which typically correspond with peak prices); and
  - scale of the business which allows it to capture incremental margins as a wholesaler amidst the volatile markets.

  There are reasons to believe that some level of "normality" could be achieved sooner (e.g. private sector interest in investing in Australia's energy transition, willingness of state governments to provide direct financial support and intense scrutiny across market participants and industry bodies such as AEMO on the future balance of supply and demand on the grid). In some respects, the risks to grid reliability are partly triggered by the withdrawal of capacity from the grid. While some of these issues are completely out of the market's control (e.g. unplanned outages), market participants and regulatory bodies still can exercise some level of control over continued operations and planned closures to maintain the reliability of the grid. Nevertheless, an extended period of disruption is plausible if not probable in the light of the progress to date and the scale of the task.

Accordingly, it is appropriate that the NPV outcomes includes a reasonable portion of Scenarios C and D as it appears likely that there will be periods of volatility and disruption over the coming decade from which Origin could benefit; and

- Scenarios E and F are considered downside scenarios and illustrate the impact that an "orderly" transition of the energy market can have on the value of Energy Markets. In both scenarios, market cap prices are assumed to be lower as an "adequate" amount of firming capacity is commissioned.

  Given the current development pipeline across the NEM (i.e. approximately 10GW of new generation projects, excluding battery storage, under development as well as more than 200GW of proposed projects), there appears to be an adequate amount of new capacity in the pipeline. However:

  - the projects under development may be exposed to construction delays that, unless properly managed, may cause sequencing issues with the planned retirements of existing generation assets;
  - the vast majority of the proposed projects are still in very early stages and subject to a variety of risks in relation to grid connection, permitting, funding and construction; and
  - there has been a wave of accelerated retirements particularly for large scale baseload power stations (e.g. Eraring, Bayswater, Loy Yang A and Mount Piper). Unexpected early retirements (notwithstanding the minimum three year notice period to the AEMO) would unavoidably cause additional strain on the grid.

  Successfully navigating these issues with minimal strain is conceivable but unlikely and these strains will naturally place upwards pressure on the prices of electricity and its derivatives (such as market cap prices). In any event, the scenarios do not take account of mitigating actions that Origin could take if energy prices remain low.

On balance, consideration of these scenarios would suggest that a valuation range that straddles across parts of most, if not all, of the scenarios is supportable (albeit with a lower emphasis on Scenarios E and F).

In considering these values it is important to recognise that:

- the incremental value from the identified development projects is difficult to ascertain at this stage. With the exception of Eraring battery, none of the projects have reached final investment decision. Origin will need to incur more than $3 billion in total capital expenditure to develop these projects. Each of the projects naturally has its own set of development risks (e.g. construction, budget, timing and ramp-up), all of which inevitably would weigh on their current values. Accordingly, the incremental value from these projects is relatively low at this stage (relative to the potential value once they are completed and fully operational). The incremental value from other earlier stage projects (none of which were explicitly included in the DCF analysis) would inevitably be even more marginal and is too undefined to attribute any value; and
- an extension of Eraring is not explicitly included in the NPV outcomes but, in any event, is unlikely to be a major contributor to the overall value of Energy Markets. While some market and political commentators have cited estimates of up to $3 billion of government support, these figures appear to solely represent the operating costs (i.e. fuel and operating costs) but exclude the net impact of revenue generated from its operations. At the same time, the New South Wales Energy Minister has also stated that any negotiations for government support should "start at zero and go from there". The reality is that any incremental value is unknown but will be constrained by the limited window (potentially around two or three years) and on commercial terms that, in Grant Samuel's view, are unlikely to promise windfall profits to Origin. In any event:

  - no agreement as to any form of extension has been reached at the date of this report (never mind any financial terms); and
  - the model assumes that Origin would undertake certain market transactions when Eraring closes (shaped swaps) that provide a margin.

Annexure 1. Independent Expert's Report *continued*

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Taking these factors into consideration, Grant Samuel believes that the valuation range for Energy Markets of $9,000-10,000 million to be a reasonable balancing of these issues.

6.4.3 Valuation Cross Checks

Overview

Market based valuation analysis involves the review of earnings and other multiples that buyers have been willing to pay for similar businesses in the recent past and a review of the multiples at which shares in comparable listed companies trade on sharemarkets. This analysis will not always lead to an obvious conclusion of an appropriate range of multiples as there will often be a wide spread of multiples. It is necessary to consider the particular attributes of the business operation being valued (relative to the peers) as well as the prevailing economic conditions.

Energy Markets is a gentailer business primarily focused on the east coast of Australia. Grant Samuel's review of the market evidence has considered transactions and listed companies involved in similar activities in Australia. However, due to the limited availability of market evidence in Australia, Grant Samuel has also considered market evidence observed in New Zealand.

Sharemarket Evidence

The Australian energy market comprises over 70 energy retailers registered with the AER, albeit it is dominated by three key gentailers (i.e. Origin, AGL Energy and EnergyAustralia). Together, Origin and AGL Energy, account for almost half of retail electricity accounts (and 60% of gas accounts) and represent the only gentailers (or retailers) listed on the ASX. As a result, Grant Samuel has also considered the trading multiples of listed New Zealand-based integrated energy businesses.

The New Zealand energy market is largely comparable to Australia, albeit on a smaller scale and less heavily regulated. The market is dominated by four key gentailers that collectively supply approximately 85% of New Zealand's electricity market (or about 1.9 million customers). Genesis Energy Limited ("Genesis"), Mercury NZ Limited ("Mercury") and Meridian Energy Limited ("Meridian") all operate under a mixed ownership model (i.e. being publicly listed and having the government as a majority shareholder). Contact Energy is primarily held by retail and institutional shareholders (and does not have any significant government shareholdings).

In comparison to Origin, New Zealand's energy companies operate more of a "pure" gentailer model, whereby they service customers with predominantly internally generated energy (most of which is derived from renewable sources).

The following charts set out the historical and forecast EBITDA multiples as well as customer multiples for these listed companies based on share prices at 31 August. While there is a wider group of listed entities that operate in the broader energy industry in Australia and New Zealand, the underlying business models (and value drivers) of these entities are not comparable to Origin's Energy Markets business and have been excluded from the analysis. These include transmission and distribution companies (APA Limited) and pure-play generation companies (Manawa Energy Limited and Genex Power Limited).

In considering the sharemarket evidence, it should be noted that the multiples for the listed entities are based on share prices (and therefore do not include a premium for control) and that each of the comparable trading companies has a 30 June year end:

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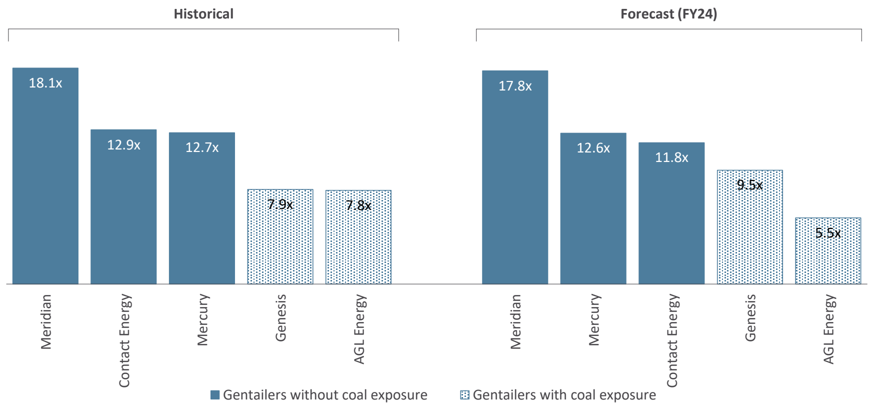
SELECTED COMPARABLE LISTED COMPANIES

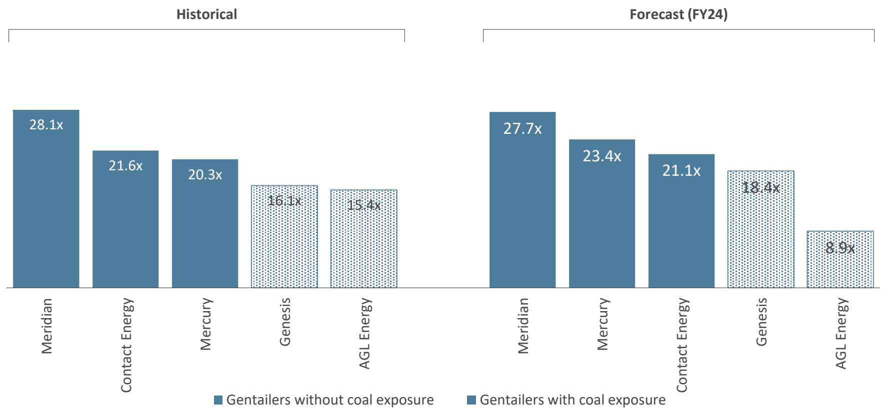
HISTORICAL AND FORECAST EBITDA MULTIPLES



Source: Grant Samuel analysis[82,83,84]

SELECTED COMPARABLE LISTED COMPANIES

HISTORICAL AND FORECAST EBIT MULTIPLES



Source: Grant Samuel analysis[82,83,84]

82 Grant Samuel analysis based on data obtained from IRESS, S&P Global Market Intelligence, company announcements, transaction documentation and, in the absence of company published financial forecasts, brokers' reports. Where company financial forecasts are not available, the median of the financial forecasts prepared by a range of brokers has generally been used to derive relevant forecast value parameters. The source, date and number of broker reports utilised for each transaction depends on analyst coverage, availability and corporate activity.

83 Historical multiples are based on the most recent publicly available full year earnings prior to the transaction announcement date. Forecast multiples are based on company published earnings forecasts or brokers' reports available at transaction announcement date.

84 Enterprise values are typically adjusted for non-controlling interests, equity accounted investments and environmental rehabilitation provisions. EBITDA and EBIT are also adjusted to exclude income from equity accounted investments (where possible).

Annexure 1. Independent Expert's Report *continued*

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The implied EBITDA and EBIT multiples of the observed peers sit across a very wide range. AGL Energy and Genesis trade at the low end of the range probably due to their exposure to coal-fired power stations and, to a lesser extent, gas-fired generation.

AGL Energy is one of the largest gentailers in Australia, generating over 45 TWh of electricity for a customer base of approximately 2.5 million accounts. While its generation far exceeds customer demand, it trades at a very low multiple as a result of its significant reliance on coal-fired generation (i.e. Loy Yang A and Bayswater), which represent over 80% of its total generation output (and are not expected to close until early to mid-2030s). These assets require extensive sustaining capital expenditure (equating to around 35% of underlying EBITDA and over 80% of total capital expenditure), reducing net earnings and its capacity to invest in the energy transition. Furthermore, AGL Energy has also been impacted by poor operational performance in recent years (e.g. prolonged outage of Loy Yang Unit 2), perceived lack of carbon transition strategy and management instability (i.e. resignation of CEO and Chairperson). Accordingly, AGL Energy consistently trades at the bottom end of the range and there is a much wider differential between its historical FY23 and forecast FY24 EBITDA multiples (to reflect the expected earnings improvement over the current year) than other peers. At the same time, the near term tailwinds for its earnings profile are expected to stabilise over the next 12 months as its forecast FY25 EBITDA multiple (not shown in the above chart) is consistent (at around 5.5 times) with its FY24 EBITDA multiple.

Similarly, Genesis also trades at the low end of the range as a result of its reliance on thermal generation through its ownership of Huntly Power Station (representing circa 37% of total generation output). Huntly Power Station has both gas and coal-fired generation although, in the coming years, it expects to increase its reliance on coal due to the declining production from Pohokura gas field (from which it sources gas).

On the other hand, renewable energy focussed gentailers are trading at much higher multiples than peers that have a material exposure to thermal generation. Contact Energy and Mercury trade at around 13 times historical EBITDA (and 11-13 times forward EBITDA) largely due to:

- renewable generation. Mercury is a 100% renewable electricity generator (over 9,000 GWh generated in FY23), while Contact Energy generates over 90%[85] of its electricity from renewable sources (total generation of over 7,500 GWh in FY23). Both, Mercury and Contact Energy also have substantial renewable energy development pipelines (in excess of 9 TWh and 6 TWh, respectively);
- similar mix of generation assets. Both companies derive over 50% of their total generation output from hydroelectric ("hydro") generation, as well as substantial exposure to geothermal. Contact Energy operates two dam reservoir hydro plants in the South Island, while Mercury operates nine reservoir hydro plants in the North Island, all of which contribute to their extensive peaking capacity. In addition, both entities also own several geothermal assets that support baseload power demand albeit at lower margins. While hydro has water availability risks, it has many advantages over coal-fired and gas-fired generation not the least being economic life (apart from turbines) and fuel costs;
- strong earnings performance and stability. Contact Energy's underlying earnings have remained largely consistent over the past five years, broadly in the range $450-550 million. On the other hand, Mercury has seen substantial earnings growth, largely attributable to the Trustpower retail and Tilt NZ acquisitions in FY22;
- similar market share of customer connections of around 20% each. Contact Energy has circa 430,000 electricity connections and 70,000 gas connections, which is comparable to Mercury's 590,000 electricity connections and 102,000 gas connections; and

[85] This percentage is expected to increase with its Tauhara geothermal project coming online at the end of 2023 and the retirement of the Te Rapa and Taranaki Combined Cycle thermal generation plants by the end of 2024.

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- substantial generation output to cover retail demand. Mercury produces over 7,500 GWh representing over 100% of its electricity demand, while Contact Energy's internal generation covers approximately 85% of its book[86], effectively hedging much of their exposure to electricity prices.

At the top end of the range is Meridian, the largest gentailer in New Zealand, which trades well above its peers at around 18 times historical and forecast EBITDA. Meridian's high multiple is supported by its:

- generation portfolio, which generates over 14 TWh of electricity (circa 30% of New Zealand's total electricity requirement) and supports almost all of its retail book;
- generation portfolio being underpinned by its substantial renewable hydroelectric generation assets. These assets account for circa 90% of its total generation and around 70% of New Zealand's total hydro storage. Meridian's hydro generation assets, particularly, the underground Manapōuri Power Station, operates at low cost and high margins; and
- significant contract with the Tiwai Point aluminium smelter. Around 35% of Meridian's generation is sold to the smelter (the largest single user of electricity in New Zealand). Traditionally, the smelter has locked in its pricing at a significant discount to the market price which has had an adverse impact on Meridian's earnings (particularly in a volatile price environment). However, this contract is expected to be renewed at the end of 2024 on more favourable terms. As a result, there will be a positive impact on Meridian's future earnings (and subsequently a reduction in the multiple); and
- stable earnings profile. In contrast to peers, Meridian's underlying earnings have remained largely consistent year-on-year, with EBITDA ranging between NZ$700 and NZ$870 million from FY19 to FY23.

In practice, it is typically difficult to assess customer multiples in isolation as they can be heavily influenced by a variety of factors. Customer type (i.e. retail vs business customers), product offering (electricity, gas, mobile and broadband) and, for gentailers particularly, the mix of upstream and downstream operations across the business can all affect the customer metric.

Transaction Evidence

Over the last decade, energy markets in Australia and New Zealand have undergone a wave of consolidation. The transactions occurred at a wide range of multiples, reflecting various market conditions and transaction objectives. While some entities have aimed to raise customer numbers, other transactions have focused on achieving sustainability objectives or driving generation capacity.

Grant Samuel has identified several comparable transactions involving both gentailers and energy retailers with a targeted geographic presence in either Australia or New Zealand. For the purposes of the analysis, pure-play generation asset transactions (predominantly privatisations) have been excluded from the transactions identified.

The following charts set out the historical and forecast EBITDA and EBIT multiples for the identified transactions involving gentailers (the unsuccessful takeover proposal for AGL Energy is depicted in non-solid columns as the transaction was not completed):

[86] Generation figures is exclusive of PPAs and demand includes both retail and business customers.

Annexure 1. Independent Expert's Report *continued*

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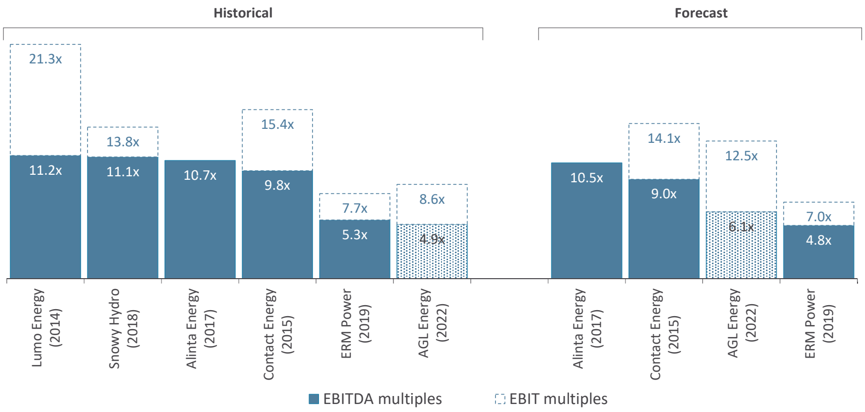
SELECTED COMPARABLE TRANSACTIONS - GENTAILERS

HISTORICAL AND FORECAST EBITDA AND EBIT MULTIPLES

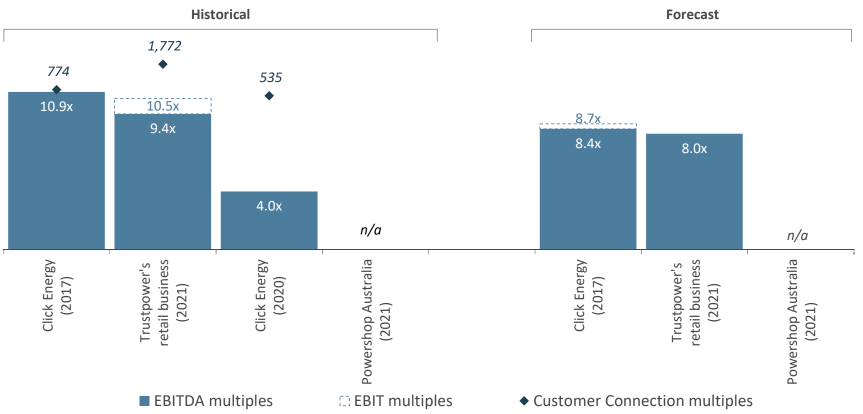


Source: Grant Samuel analysis[82,84]

The following chart sets out the historical and forecast EBITDA, EBIT and customer connection multiples for the identified transactions involving energy retailers:

SELECTED COMPARABLE TRANSACTIONS - RETAILERS

HISTORICAL AND FORECAST EBITDA, EBIT AND CUSTOMER MULTIPLES



Source: Grant Samuel analysis[82,84]

GENTAILERS

Gentailer transactions have occurred in a relatively wide range of multiples over the last decade. Those transactions at the low end of the range (<6 times historical EBITDA) have typically occurred in the last five years and have reflected poor historical performance, higher reliance on thermal generation capacity, or lack of a clear carbon transition strategy. For instance:

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- the proposed (but consequently unsuccessful) $8 billion acquisition of AGL Energy in 2022 from Brookfield and Grok Ventures which was proposed at a relatively low multiple of 4.9 times historical EBITDA (6.1 times forecast EBITDA). Despite plans to cut greenhouse gas emissions by 60% by 2034, AGL Energy's reliance on coal generation, anticipated costs relating to the energy transition and recent underperformance ultimately all impacted the multiple. In any event, the offer was rejected and did not proceed; and
- Shell Energy Australia's acquisition of ERM Power, a Queensland based integrated energy company with a focus on commercial and industrial customers, occurred in 2019 at an implied historical EBITDA of 5.3 times. At the time, ERM Power had grown to be the second largest Australian energy retailer (by load) with considerable generation capacity through owning and operating two gas-fired generation plants (i.e. Oakley and Neerabup power stations). While the observed multiple appears to be at the lower end, the offer represented a 43% premium to the last closing price and coincided with ERM Power posting a turnaround in bottom line profit ($123 million compared to a loss of $81 million the prior year), having recently sold its underperforming US business.

Those transactions that occurred prior to 2019, fell in a relatively tight range of 9-11 times historical and forecast EBITDA). Several of these transactions involved strong retail books combined with gas-fired generation. Given the age of the transactions, exposure to gas-fired generation does probably not have any significant impact on the multiple achieved.

The upper end of the range (at around 11 times historical EBITDA) comprises two transactions involving the New South Wales based Snowy Hydro.

The first was Snowy Hydro's $605 million acquisition of Lumo Energy in 2014. The acquisition comprised the electricity and gas retailing business, utility connection service business and 163 MW of gas fired peaking generation assets in South Australia and New South Wales. The high multiple was supported by its large retail customer base (over 540,000 customers across the eastern states) and additional generation capacity which complemented Snowy Hydro's existing customer base (growing it to almost one million customers) and portfolio of generation assets.

A few years later, in 2018, the Australian Government acquired the New South Wales and Victorian Government's 58% and 29% respective interests, in Snowy Hydro for an implied 100% enterprise value of $7.8 billion. The transaction occurred at a historical EBITDA multiple of approximately 11 times (in line with the acquisition of Lumo Energy) and was a key part of the Australian Government's energy sector reform to ensure reliable and affordable energy for consumers (as well as to "pave the way" for Snowy 2.0 pumped hydro project).

The remaining transactions involved Chow Tai Fook Enterprises' acquisition of Alinta Energy in 2017 and Origin's sale of its majority interest in Contact Energy in 2015. The acquisition of Alinta Energy, an Australian energy company, occurred at around 10.5 times historical and forecast EBITDA. Alinta Energy's transaction multiple was supported by its strong retail book (approximately 780,000 electricity and gas retail customers), owned and contracted generation portfolio of over 1,950 MW (87% owned gas generation with the balance derived from renewables) and previous interest from other major energy players (i.e. AGL Energy and China's Huadian).

Origin's fully underwritten sale of its 53% holding in Contact Energy was conducted via a bookbuild process at a fixed price of NZ$4.65. At the time of the transaction, Origin had substantial debt obligations arising from APLNG funding commitments and had lacked traction in its attempted sale to a trade buyer, necessitating a market "sell down". The transaction occurred at almost 10 times historical EBITDA (9 times forecast EBITDA). At the time, Contact Energy had around 562,000 customer connections and generated over 9.5 GWh (over 75% of its total generation output was from renewable energy sources). The sale also enabled Origin to redeem NZ$200 million of redeemable preference shares.

Annexure 1. Independent Expert's Report *continued*

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RETAILERS

The identified energy retailer transactions have also occurred at a wide range of multiples, albeit there are only a small number of relevant datapoints. Excluding outliers, the transactions have occurred at around 9-11 times historical EBITDA (8-9 times forecast EBITDA):

- Mercury acquired Trustpower's retail business in 2021 for approximately $400 million (or over $1,700 per customer). The Trustpower business was attractive to Mercury as it was expected to double its total customer connections (adding an additional 416,000 connections), transition it from a dual utility provider to a truly multi-product retailer and create greater scale to allow it to invest in the underlying technology platform; and
- Amaysim's 2017 acquisition of Click Energy, an online electricity and gas retailer across the eastern states of Australia, occurred at a historical EBITDA multiple of 10.9 times (or $774 per customer). The multiple was supported by business' strong and loyal customer base and asset-light business model.

At the low end of the range, and below comparable peers, is Amaysim's subsequent sale of Click Energy to AGL Energy in 2020, which occurred at a much lower multiple (4 times historical EBITDA or $535 per customer) than the acquisition of the business three years earlier. The low multiple was a result of increased bad debt exposure brought on by the pandemic, as well as operational challenges it faced as a small scale retailer in a heavy regulated environment.

Additionally, Grant Samuel has also considered the acquisition of Powershop Australia in 2021 by Shell Power Australia. Powershop Australia, an electricity and gas retailer serving more than 185,000 customers, was sold by Meridian as part of a deal that saw Infrastructure Capital Group acquire a portfolio of renewable generation assets and development projects. Despite no disclosure of the consideration paid for the retail component (i.e. Powershop Australia)[87], it was believed to be in excess of $1,000 per customer. This high multiple was supported by favourable market conditions (i.e. heightened energy forward curves and an active M&A market) and Powershop's positive reputation (i.e. carbon neural retailer and strong customer satisfaction). It may also have reflected Shell Power Australia's strategic ambitions to complement its existing investments in zero and low-carbon assets and technologies.

Analysis and Conclusions

Grant Samuel has valued Energy Markets in the range $9,000-10,000 million, which implies the following multiples:

ENERGY MARKETS – IMPLIED VALUATION PARAMETERS

	VARIABLE ($ MILLIONS)	RANGE OF PARAMETERS	
		LOW	HIGH
Valuation range ($millions)		**9,000**	**10,000**
Multiple of EBITDA			
FY23 (historical)	1,038	8.7x	9.6x
FY24 (mid-point of company guidance)	1,550	5.8x	6.5x
Multiple of EBIT			
FY23 (historical)	537	16.8x	18.6x

Assessing appropriate multiples for the valuation of Energy Markets is not straightforward:

- its earnings profile (and value) is highly dependent on movements in wholesale electricity prices and fuel costs such as for domestic gas and coal. While some of these movements can be mitigated by the

[87] The consolidated consideration for Meridian's Australian business was $729 million but there was no disclosure of the Powershop Australia component of the business nor the consideration for the generation assets.

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wholesale and trading activities of the business, EBITDA has fluctuated across a very wide range in recent years (from as low as around $401 million in FY22 to as high as $1.5 billion in FY20);

- the FY24 EBITDA guidance for Energy Markets includes some tailwinds that will not recur. It:
  - includes the EBITDA contributions from Eraring with the coal price capped at $125/t; and
  - benefits from the uplift in the DMO/VDO for FY24 and elevated cap prices relative to longer run expectations;
- FY25 EBITDA is expected to decline towards more sustainable levels. Origin has flagged downward pressure from higher coal costs as the coal caps expire and an anticipated moderation in market tariffs from FY24 levels;
- the EBITDA contribution from Eraring will cease from FY26, or possibly later if agreement is reached with the New South Wales government. When it does cease operations, Origin will incur most of the remediation and closure costs (with some incurred prior to closure); and
- medium term internal Origin projections show meaningful EBITDA growth but a significant amount comes from new storage (battery) and renewable generation projects which:
  - will require substantial capital expenditure (in excess of $3 billion) over future financial years;
  - remain subject to construction and development risks; and
  - with the exception of Eraring Battery Stage One, have yet to reach FID.

Accordingly, caution should be exercised when considering the implied multiples for Energy Markets relative to the transaction and trading evidence. Nevertheless, some broad conclusions can be drawn:

- the multiples of the New Zealand gentailers are not appropriate benchmarks given the stark differences in their business models;
- the multiples for Energy Markets should be lower than much of the transaction evidence which sits broadly in the range of 9-11 times EBITDA. Most of that evidence is dated (2019 or earlier) and occurred in a very different market environment. More importantly, there are differences in the nature of the business. While the core retail component of Energy Markets may warrant a premium multiple, the overall multiple for the business needs to reflect:
  - the loss of EBITDA contribution from Eraring from FY26 (or maybe later). In addition, there will be significant remediation and closure costs (almost $250 million); and
  - the substantial earnings contribution from the legacy gas contract with APLNG that expires in 2034; and
- the EBITDA multiple should be higher than AGL Energy (5.5 times FY24 EBITDA, excluding a premium for control). AGL Energy has a very strong generation position (compared to Origin post Eraring) but over 80% of AGL Energy's electricity production comes from coal-fired power. As a result, it faces:
  - much higher maintenance capital costs (around $500 million per annum);
  - substantially higher rehabilitation costs albeit to be incurred over a longer period (Loy Yang A and Bayswater are scheduled to close between 2030 and 2035); and
  - a monumental challenge to develop a pipeline of renewable projects to replace its coal-fired power generation capacity. It expects to deploy $3-4 billion in capital to develop 5GW by 2030 and another $5-6 billion to develop another 7GW by 2046.

While there are a number of factors that should lead to a reduction in Energy Markets' FY25 EBITDA from FY24 levels (which naturally should result in a lower FY25 EBITDA multiple), the multiples would still at a premium to AGL Energy's FY25 EBITDA multiple (of 5.5 times) for the same reasons noted above.

Annexure 1. Independent Expert's Report *continued*

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The implied multiples for Energy Markets are consistent with these views, once earnings are "normalised" from the elevated FY24 levels.

6.5 Value of Other Integrated Gas

Grant Samuel has valued Other Integrated Gas in the range $13-26 million:

ORIGIN - VALUATION OF OTHER INTEGRATED GAS ($ MILLIONS)

	VALUATION RANGE	
	LOW	HIGH
Unrecovered APLNG related services	(278)	(294)
Oil and LNG price hedging	(120)	(156)
LNG trading	320	325
Growth initiatives	43	76
Exploration and development interests	48	75
Value of Other Integrated Gas	**13**	**26**

The various components of Other Integrated Gas have been separately valued as follows:

- unrecovered APLNG related services have been valued on the basis of a DCF of the projected after tax costs over the life of project (which is assumed to be 20 years):
  - unrecovered costs are based on the Other Integrated Gas Business Operation Cash Flow Model from FY24 to FY28 and are assumed to increase by inflation of 2.5% per annum in subsequent years. The DCF analysis allows for the tax benefit on these costs at the corporate rate of 30%. A reduction in annual costs has been assumed as production declines over the last five years of the project; and
  - using a discount rate of 10-11% (consistent with the discount rate used to value APLNG);
- oil and LNG price hedging has been valued on a mark-to-market basis assuming Origin's hedged volumes and rates at 30 June 2023, oil and LNG prices as set out in Section 6.3.3, an US$/A$ exchange rate of 0.65 and a discount rate of 10-11%. The calculation also allows for tax on the spread at the corporate rate of 30%;
- LNG trading has been valued on the basis of a DCF of the projected after tax cash flows over the term of the existing contracts:
  - the key assumptions adopted for Origin's two major contracts are as follows:
    - subsequent to December 2023, the ENN contract is value neutral for Origin for the remainder of its term; and
    - the Cameron contract continues until 2039, but with majority of EBITDA generated over the period from FY24 to FY26;
  - the EBITDA over the period from FY24 to FY26 is consistent with the guidance provided by Origin with its FY23 results (of $40-60 million in FY24 and $450-650 million over the period from FY25 to FY26). EBITDA in subsequent years is based on the Business Operation Cash Flow Model and is much less material;
  - the DCF analysis allows for tax at the corporate rate of 30% and working capital movements; and
  - the after tax cash flows has been discounted to an NPV at a discount rate of 10-11% (consistent with the discount rate used to value APLNG);

- growth initiatives have been valued based on the investment to date of $43-76 million (including operating expenditure and capital expenditure). The low end of the valuation range includes only 50% of operating expenditure (on the basis that it is possible that not all operating expenditure would be attributed value by an acquirer). These growth initiatives are primarily focused on developing hydrogen hub concepts and conducting feasibility studies and demand studies. The most advanced of these initiatives is only in the feasibility study stage (the Hunter Valley Hydrogen Hub in New South Wales). These initiatives require considerable future investment (in addition to any government funding received) and are not expected to generate earnings in the near term. However, there is no certainty that these initiatives will be successful as there are still many challenges that need to be overcome for Australia to deliver hydrogen at scale.

  Grant Samuel's approach to valuing these growth initiatives takes in to account the early stage of development and the risks associated with success while also acknowledging that the work done on the initiatives to date does have some value (i.e. any acquirer would not be starting from scratch); and

- exploration and development interests of $48-75 million comprise Origin's interests in relation to the Canning Basin, the Beetaloo royalty and its remaining exploration and development interests as follows:

  - Origin's commitments and possible reimbursement payments in relation to the Canning Basin interests sold to Buru Energy have been valued at their risk adjusted net present value at 30 June 2023; and

  - GaffneyCline prepared valuations of Origin's remaining exploration and development interests, including interests in:

    - the Beetaloo royalty (based on an independent valuation by a third party); and

    - the Browse Basin in Western Australia.

    The GaffneyCline valuation of these interests is set out in its detailed report, which is included as Appendix 4 to this report. The value of exploration projects located in the Surat-Bowen Basins in Queensland has been included in the value of APLNG.

  No value has been attributed to Origin's interests in the Cooper-Eromanga Basins in Queensland.

6.6 Corporate Costs

Origin incurs corporate overhead costs which represent costs associated with running Origin's head office and include:

- the Origin executive office (such as costs associated with the offices of the Chief Executive Officer and Chief Financial Officer, company secretarial and legal, strategy planning and development, corporate affairs, treasury, tax, etc.);
- being a publicly listed company (such as directors fees, annual reports and shareholder communications, share registry and listing fees and dividend processing);
- certain group shared services (such as human resources, information technology, etc.) and associated office infrastructure (e.g. depreciation expense on corporate and regional head offices); and
- share based payments, which are non-cash but reflect part of the total remuneration package for select executives and employees.

The majority of these costs (~80%) are allocated to Origin's business operations (and are included in the Energy Markets and Other Integrated Gas cash flows used for the DCF analysis).

In FY24, Origin expects to incur unallocated corporate costs (on an underlying EBITDA basis) of around $75 million.

Annexure 1. Independent Expert's Report *continued*

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Grant Samuel has considered the appropriate level of cost savings in conjunction with Origin management. On this basis, Grant Samuel has estimated that any acquirer would be able to make cost savings of around $18 million (~24% of total corporate costs) and would incur approximately $57 million per annum of residual or incremental corporate costs. The savings primarily relate to listed company costs (including directors' fees), external reporting, audit for public markets and D&O insurance.

Grant Samuel has attributed a value to these residual corporate costs based on a DCF analysis. The DCF analysis is based on cash flows that start with the corporate cost EBITDA and also take into account:

- share based remuneration expense of around $22 million (which would need to be paid in cash if Origin was not a publicly listed company);
- the tax benefit on corporate costs (after depreciation) at the Australian corporate tax rate of 30%;
- capital expenditure incurred by Origin of around $6-7 million per annum, primarily in relation to information technology, which would be expected to continue to be incurred by any acquirer of Origin; and
- cash cost recoveries from the business units relating to past capital expenditure (~$28 million per annum). These cash recoveries are included in the corporate cost cash flows as the cash outflows are included in the Energy Markets and other Integrated Gas cash flows used for the DCF analysis.

The cash flows are based on the LTFP23 for the first five years, after which corporate costs are assumed to increase by 1.5% per annum (i.e. slightly below inflation on the basis that any acquirer of Origin should be able to achieve corporate cost savings over time). The resulting cash flows have been discounted at a rate of 8.5-9.0%. The NPV of the corporate cost cash flows of $(460)-(495) million implies a forecast EBITDA multiple of ~9-9.5 times, which is considered reasonable having regard to the forecast EBITDA multiples implied by comparable transactions.

6.7 Value of Origin's Interest in Octopus Energy

6.7.1 Summary

Grant Samuel has valued Origin's 20% interest in Octopus Energy in the range £1,125-1,225 million, which equates to a value of $2,250-2,450 million at a £/A$ exchange rate of 0.50:

ORIGIN - VALUATION OF INTEREST IN OCTOPUS ENERGY (£ MILLIONS)

	SECTION REFERENCE	VALUATION RANGE	
		LOW	HIGH
Business operations	6.7.2, 6.7.3	5,700	6,200
Adjusted net debt	6.7.4	(36)	(36)
Other assets and liabilities	6.7.5	(40)	(40)
Equity value		**5,624**	**6,124**
Origin's interest		20.0%	20.0%
Valuation of Origin's equity interest		**1,125**	**1,225**

The value of Origin's 20% stake in Octopus Energy has been estimated having regard to DCF analysis, with the price at which the most recent capital raising has been undertaken and benchmarks from comparable transactions and comparable trading multiples used as cross checks.

The valuation reflects the significant upside potential in Octopus Energy (particularly in the Platform Licensing business) but also recognised the risks associated with forecast growth in the business. In particular, in Grant Samuel's view, further growth in Retail Energy Supply will become more difficult in the United Kingdom given Octopus Energy's significant current market share (and moreso if the acquisition of Shell Energy Retail is completed). In international markets, gaining meaningful market share against

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incumbent retail energy suppliers may prove more difficult than it has been in the United Kingdom and aggressive retail growth by Octopus Energy in international markets could prove a barrier for potential Platform Licensing customers in the same markets.

Grant Samuel has not applied a discount to the valuation of Origin's equity interest in Octopus Energy to reflect the lack a controlling interest (i.e. less than 50%). Origin is the second largest shareholder in Octopus Energy (after the original backer, Octopus Capital). Origin has board representation and the Octopus Energy shareholders' agreement contains shareholder protections, a number of which flow specifically from Origin's 20% shareholding and remain in place as long as Origin's shareholding in Octopus Energy is above a minimum level (which is above the shareholding of the next largest shareholder in Octopus Energy).

Furthermore, the bottom of the valuation range (£5.6 billion) is consistent with the value implied by a "roll forward" of Octopus Energy's most recent capital raising in December 2021. Octopus Energy has a dispersed share register with a number of corporate or institutional investors, indicating institutional interest in Octopus Energy as an investment proposition. The most recent capital raising represents the price at which institutional investors were prepared to invest for a minority interest in Octopus Energy. On that basis, no adjustment to the equity value is necessary.

Grant Samuel's valuation of Origin's 20% interest in Octopus Energy of $2,250-2,450 million is materially higher than Origin's carrying value at 30 June 2023 of $776 million. Origin's carrying value is on an equity accounted basis and represents the historical cost of the investment adjusted for profits, impairments and dividends over time (no dividends have been paid to date). In comparison, Grant Samuel's value estimate is a judgement as to the price that an acquirer may be willing to pay for Origin's 20% interest in Octopus Energy by reference to DCF analysis and other valuation cross checks (e.g. multiples analysis and the equity value implied by the most recent capital raising by Octopus Energy).

6.7.2 DCF Analysis

Approach

Relevant factors to note in the approach to the valuation of Octopus Energy's business operations are:

- Grant Samuel has valued each of Octopus Energy's businesses (Retail Energy Supply, Platform Licensing and Octopus Renewables) separately as they have different key drivers, risk profiles and growth outlooks. However, they have been shown as a single business in this report at the request of Origin on the basis of commercial sensitivity;
- the Octopus Energy Business Unit Cash Flow Model only includes cash flows for Energy Services that relate to Octopus Renewables. No cash flows are included in the Octopus Energy Business Unit Cash Flow Model for other Energy Services businesses such as smart meter installation, EV leasing and installation of EV chargers and installation of heat pumps, solar panels and batteries. These Energy Services businesses make only a marginal contribution to earnings and are not key drivers of Octopus Energy's value. Grant Samuel has implicitly taken the value of these Energy Services into account in selecting its valuation range for Octopus Energy; and
- the Octopus Energy Business Unit Cash Flow Model projects cash flows based on Octopus Energy's April year end (i.e. the cash flows run from 1 May to 30 April each year). Grant Samuel has converted these cash flows to a June year end (consistent with Origin's year end and the valuation date for Origin's other businesses).

DCF Assumptions

The DCF analysis considers a number of different scenarios. Scenario A is based on the FY24 Budget and the Octopus Energy Business Unit Cash Flow Model, with certain assumptions adjusted by Grant Samuel. Grant

Annexure 1. Independent Expert's Report *continued*

Samuel has also made longer term assumptions to extend the cash flows for an additional six years to the year ending 30 April 2034 (to determine 10 years of cash flows on a FY basis).

The DCF model has discrete assumptions for each of Octopus Energy's business operations:

- for Retail Energy Supply, customer wins (United Kingdom and international) and EBITDA, cost to serve and cost of goods sold per customer;
- for Platform Licensing, customer wins (by customer, existing/known and new) and revenue, gross margin and cost to serve per customer; and
- for Octopus Renewables, additional assets under management and revenue, gross margin and cost to serve as a percentage of assets under management.

This approach allows for the different growth, earnings and cost profiles of each business. Capital expenditure and working capital assumptions have also been made for each of Octopus Energy's businesses.

For Scenario A, the DCF model assumes the following:

- EBITDA is projected for each business operation based on specific assumptions:
  - **Retail Energy Supply**:
    - in the United Kingdom, EBITDA per customer increases from just under £50 in the year ending 30 April 2024 to £60 by the year ending 30 April 2027 and customers grow to ~6.5 million by the year ending 30 April 2028 (representing ~22% market share). EBITDA per customer and the number of customers remain at these levels for the rest of the projection period.

      These assumptions reflect the expected impact of competition and regulatory price caps (and other regulatory risks) on the United Kingdom retail energy supply market.

      A long term sustainable EBITDA of £60 per customer is considered reasonable given the current (from 1 October 2023) Ofgem average annual gross margin of £307 per customer and Octopus Energy's advantageous cost to serve (which is well below the Ofgem average annual allowance of £226 per customer), enabling it to generate an annual EBIT per customer in excess of Ofgem's average annual EBIT per customer of £44 (or £65 including headroom), after allowing for movements in the cost of energy and retail price discounts;
    - for international markets, EBITDA per customer grows to £35 by the year ending 30 April 2027 and remains at that level for the rest of the projection period. Customers grow to ~5.7 million by the end of the projection period (including 100% of TG Octopus Energy customers[88]). The lower sustainable EBITDA per customer reflects the additional operational risks and smaller scale in these markets relative to the United Kingdom (which is largely de-risked); and
    - cost to serve and cost of goods sold are calculated on a per customer basis to determine revenue per customer and total revenue (although revenue is only used in the calculation of working capital);

      The result of these assumptions is a gradual decline in overall revenue per customer (i.e. across the United Kingdom and international markets) from that achieved in FY23 of £2,910 (which included the impact of recouping additional costs incurred in FY22 during the period of highly volatile wholesale market prices) to levels more consistent with those achieved in the year ended 30 April 2021 of £1,449 (adjusted for cost inflation). The decline in revenue

[88] Although the revenue and earnings from TG Octopus Energy customers is included in the cash flows at Octopus Energy's 30% joint venture interest.

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per customer also reflects the expected impact of future regulatory price caps[89]. Energy Retail Supply revenue per customer stabilises by the year ending 30 April 2028 and remains at that level for the remainder of the projection period. The average annual growth in revenue over the projection period is ~3.5%;

- **Platform Licensing**:
  - ~32 million customer accounts are added by the end of the projection period, more than double the number of contracted customer accounts at 1 July 2023. Approximately 50% of these additional accounts either relate to the migration of customers under existing agreements (e.g. EDF UK, Plenitude, Tokyo Gas) or have a reasonable degree of confidence (e.g. new Octopus Energy customers, extension of the arrangement with Tokyo Gas (where only electricity accounts are contracted to be migrated to the *Kraken* platform) to its gas accounts). The remaining 50% are effectively "blue sky" but represent the equivalent of three to four major utilities (e.g. new agreements for EDF and E.ON in regions outside the United Kingdom) or a larger number of smaller customers (e.g. international markets or the expansion of *Kraken* to other utilities such as water). The timing of migration would be different under each scenario, but Scenario A assumes that the migration of these customers occurs relatively evenly over the projection period;
  - revenue is calculated on a per customer account basis that is lower than that reported historically (£15.20 in the year ended 30 April 2022) as these historical average revenue per customer account figures include a component for migration and performance payments. Revenue per customer account grows by inflation over the projection period.

    While revenue per customer account is a simplified approach to projecting Platform Licensing revenue (which is a combination of one-off fees earned through the period of customer account migration and recurring fee-based revenue once migration is completed), it is considered appropriate as recurring fee revenue is now (and will be in the future) the main contributor to revenue (in contrast to historical Platform Licensing revenue).

    These assumptions result in Platform Licensing revenue growing from ~£100 million in FY23 to in excess of £575 million by the end of the projection period (an average annual growth rate of 16%); and
  - gross profit and cost to serve are calculated on a per customer account basis. The gross margin over the projection period is relatively consistent and averages ~85%. The scale benefits in cost to serve are reflected in an increase in the EBITDA margin over the initial years of the projection period, with the average EBITDA margin over the projection period of ~75%.

    The gross margins and EBITDA margins are lower than those reported by Octopus Energy in the year ended 30 April 2022 (of 96% and 94% respectively), which were inflated by the inclusion of migration and performance payments in revenue and earnings.

  The DCF model also allows for revenue and earnings from *Kraken Flex*, which is initially loss making but grows rapidly as it is licenced to platform partners as well as across Octopus Energy's customer base.
- **Octopus Renewables**:
  - assets under management grow from £5.8 billion currently to ~£16 billion by 30 April 2028 and remain at this level of the rest of the projection period. This level of assets under management is consistent with Octopus Renewables' stated target of £15 billion by 2030;

[89] For example, from 1 October 2023, unit rates in the United Kingdom will decrease for all customers and standing charges will vary by method of payment and region but will increase slightly for all customers. Overall, the Ofgem price cap will decrease from £2,074 to £1,923 per year for an average household.

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- revenue is calculated as 0.5% of average assets under management each year; and
- gross profit and cost to serve are calculated as a percentage of average assets under management each year.

The result of these assumptions is a gradual increase in the EBITDA margin (as Octopus Renewables reaches critical mass and achieves economies of scale) to ~40% by the year ending 30 April 2028 and remaining at that level for the rest of the projection period;

- capital expenditure based on an amount per customer win for Retail Energy Supply and an amount per customer for Platform Licensing. Capital expenditure is primarily customer acquisition costs and software costs, both of which are amortised on a straight line basis over three years, consistent with Octopus Energy's existing policy. Depreciation approximates capital expenditure by the end of the projection period;
- a working capital adjustment based on days debtors and days creditors assumptions for each business with a blended assumption of ~75 days debtors and ~100 days creditors, which is consistent with the historical trend;
- an effective corporate tax rate of 25%; and
- a blended terminal growth rate of 2.5% (implying an EBITDA exit multiple of 8.0-8.6 times). The blended terminal growth rate primarily reflects a relatively high terminal growth rate (>4%) for Platform Licensing and a lower terminal growth rate for Retail Energy Supply (1.0%).

DCF Scenarios

Given the high-level nature of the DCF model and the purpose of the analysis, it is neither practical nor useful to analyse an exhaustive range of alternative scenarios. However, Grant Samuel has considered the impact of alternative assumptions for the key drivers to provide some indication of the sensitivity of the NPV outcome to changes in these drivers.

Each of the scenarios considered by Grant Samuel assumes as a starting point that the FY24 Budget is achieved. Longer term assumptions have been made by Grant Samuel with reference to the Octopus Energy Business Operation Cash Flow Model following discussions with Origin's management. A description of each scenario is outlined in the table below:

OCTOPUS ENERGY'S BUSINESS OPERATIONS – DCF SCENARIOS

SCENARIO	DESCRIPTION
Scenario A	As above
Scenario B	As for Scenario A, except that the Shell Energy Retail acquisition is completed during the year ending 30 April 2025, increasing the United Kingdom customer base to ~6.5 million
Scenario C	As for Scenario A, except that Retail Energy Supply EBIDA per customer is held at £55 per customer for the projection period
Scenario D	As for Scenario A, except that Retail Energy Supply EBITDA per customer increases to £70 per customer by the year ending 30 April 2028 and is held at that level for the remainder of the projection period
Scenario E	As for Scenario A, except that Retail Energy Supply's international customers grow at 1.5 times Scenario A, with international customers (excluding Japan) peaking at ~6.9 million towards the end of the projection period
Scenario F	As for Scenario A, except that new (i.e. currently unknown) Licensing Platform customers are at 0.5 times Scenario A, with total customer accounts increasing to ~55 million by the end of the projection period
Scenario G	As for Scenario A, except that new (i.e. currently unknown) Licensing Platform customers are at 2.0 times Scenario A, with total customer accounts increasing to ~83 million by the end of the projection period

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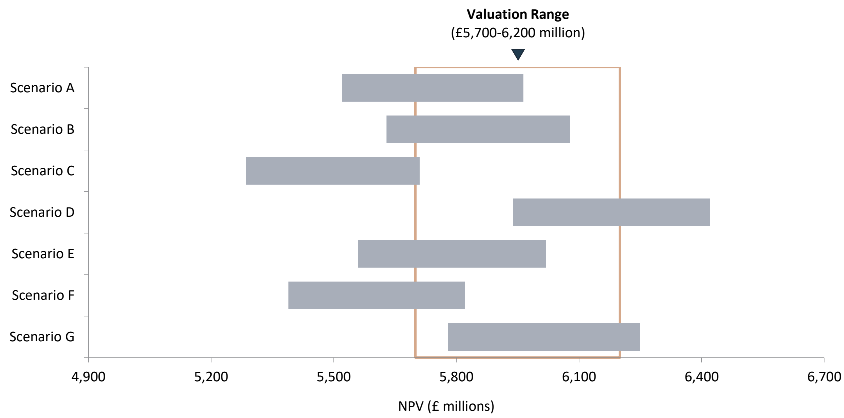
NPV Outputs and Valuation

Grant Samuel's selected valuation range of £5,700-6,200 million for Octopus Energy's business operations reflects a subjective balancing of the scenarios and a view that the appropriate blended discount rate to apply is 9.5-10.0%. This is depicted diagrammatically below:

OCTOPUS ENERGY'S BUSINESS OPERATIONS – NPV OUTCOMES

(AT 9.5-10.0% NOMINAL DISCOUNT RATE)



Grant Samuel's valuation range of £5,700-6,200 for Octopus Energy's business operations takes into account each of the NPV outcomes set out above. The valuation range incorporates the majority of the NPV outcomes for Scenarios A, B, E and G, which is appropriate given:

- Scenario B assumes that the Shell Energy Retail acquisition is completed. The uplift in value (above the acquisition price) reflects Octopus Energy's ability to:
  - improve the profitability of the Shell Energy Retail customers once they are migrated to the *Kraken* platform; and
  - manage the expanded business for margin (rather than price/customer growth) more quickly.

  While, the acquisition remains subject to regulatory approval, Origin does not anticipate any issues with obtaining regulatory approval, even though it will increase Octopus Energy's market share in the United Kingdom to ~23%, making it the largest retail supplier of electricity and the second largest retail supplier of gas in the United Kingdom;

- Scenario E indicates the impact on NPV of higher growth in Retail Energy Supply's international business (excluding Japan). While international markets represent a substantial opportunity for Octopus Energy, success in these markets has been limited to date and is likely to be impacted by:
  - competitive responses from large incumbent retail energy suppliers (in the absence of Octopus Energy making international acquisitions); and
  - balancing the desire to grow international retail energy supply customers with licensing the *Kraken* platform (effectively to competitors) in the same markets.

  The relatively small incremental increase in NPV (relative to Scenario A) reflects the more modest EBITDA per customer assumption of £35, which results in the international business (excluding Japan) representing just over 25% of total Retail Energy Supply EBITDA at the end of the projection period

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(before taking into account capitalised customer acquisition costs). The valuation range selected takes into account the enormous potential for growth in international markets (albeit this will need to be balanced against growth in the Platform Licensing business); and

- Scenario G assumes more aggressive growth in the Platform Licensing business. The inclusion in the valuation range of the majority of Scenario G reflects Grant Samuel's view that this is a more likely outcome than the less aggressive growth scenario (Scenario F), particularly given Octopus Energy's existing relationships with EDF and E.ON and the development of *Kraken Utilities*. Octopus Energy has publicly stated it is targeting 100 million customer accounts by 2027. Scenario G results in over 80 million customer accounts by the end of the projection period and the exit value in the DCF analysis allows for in perpetuity growth of >4% so this scenario would implicitly result in Platform Licensing having in excess of 100 million customer accounts, albeit not in Octopus Energy's timeframe. While growth in the Platform Licensing business has been substantial, 100 million customer accounts by 2027 would require a tripling of account customers from the current level in four years (i.e. faster growth than the Platform Licensing business has achieved over past three years from an almost zero base).

In addition, Scenarios E and G do not include completion of the acquisition of Shell Energy Retail (Scenario B). If these scenarios used Scenario B as their starting point, the NPV outcomes would be further to the right of the chart.

The inclusion of the top end of NPV outcome for Scenario C and the bottom half of the NPV outcome for Scenario D in the valuation range reflects Grant Samuel's view that, while the Retail Energy Supply business in the United Kingdom may not consistently be able to generate an EBITDA per customer of £60, this is a more likely outcome than a consistently lower EBITDA per customer (of £55 in Scenario C) or a consistently higher EBITDA per customer (of £70 in Scenario D), particularly given the impact of regulatory caps on revenue (even after allowing for Octopus Energy's advantageous cost to serve). The inclusion of a greater proportion of Scenario D reflects Grant Samuel's view that a consistently higher EBITDA per customer is a more likely outcome than a consistently lower EBITDA per customer (relative to Scenario A).

Grant Samuel has not included in the chart above any scenarios for Octopus Renewables. Even if Octopus Renewables increased assets under management to more than £16 billion, the impact on the NPV would not be material in the context of the overall valuation of Octopus Energy. For example, a target of £20 billion in assets undermanagement by 2030 would have a ~£25 million impact on the overall value of Octopus Energy (and a £5 million impact on Origin's 20% interest in Octopus Energy).

While no explicit value has been attributed to the Energy Services business (other than Octopus Renewables) (i.e. smart meter installation, EV leasing and installation of EV chargers and installation of heat pumps, solar panels and batteries), these Energy Services businesses are in the nascent stages of development and make only a marginal contribution to earnings. While they are not key drivers of Octopus Energy's value, they provide a point of differentiation to Octopus Energy's competitors and are likely to assist with customer retention in the Retail Energy Supply business.

Taking these factors into account, Grant Samuel believes that the NPV outcomes produced by the DCF analysis support a range of values for Octopus Energy's business operations of £5,700-6,200 million.

6.7.3 Valuation Cross Checks

Overview

The most reliable evidence of the value of a business is the value implied by a recent arm's length transaction involving the business. In the absence of this type of direct market evidence, valuation practitioners will often consider the multiples implied by transactions involving similar businesses as well as the trading multiples of comparable listed companies.

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Multiples analysis for Octopus Energy is difficult as it has no directly comparable peers in terms of its business mix (i.e. companies that are involved in each of Retail Energy Supply, Platform Licensing and Energy Services (including asset management)). Furthermore, its competitors in retail energy supply are largely integrated energy companies reliant mainly on legacy technology systems or gentailers, similar to Origin, and are also not directly comparable to Octopus Energy.

Nevertheless, Grant Samuel's review of the market evidence has considered:

- the multiples implied by the most recent capital raising for Octopus Energy;
- transactions involving retail energy suppliers in the United Kingdom; and
- the trading multiples of Octopus Energy's listed competitors.

In each case, Grant Samuel has calculated EBITDA and EBIT multiples (where this information is available) as well as enterprise value per customer. These parameters are generally viewed as the most common valuation metrics for retail energy supply businesses although they are relatively crude measures that tend to fall in a wide range depending on the particular circumstances.

It also needs to be recognised that Retail Energy Supply, while representing the majority of Octopus Energy's earnings, is not its only business and the appropriate multiples for Octopus Energy will be blended multiples that also reflect its high growth, high margin Platform Licensing business as well as its Octopus Renewables and Energy Services businesses.

Recent Octopus Energy Capital Raising

Octopus Energy has undertaken a number of capital risings over the past three and a half years. In assessing a value for Octopus Energy, Grant Samuel has considered the most recent third party capital raising, which was a US$300 million investment by CPP Investments in December 2021 to acquire a ~6% interest in Octopus Energy[90].

At December 2021, Octopus Energy was loss making so no meaningful earnings multiples are able to be calculated. However, the US$300 million investment by CPP Investments implied:

- a value for 100% of the equity in Octopus Energy of US$5.0 billion (equivalent to £3.75 billion at the US$/£ exchange rate at the time of 0.75) and an enterprise value of £3.76 billion (assuming that Octopus Energy had no surplus cash at the time, see Section 6.7.4);
- a FY21 historical revenue multiple of 1.7 times; and
- an enterprise value per customer of £1,213 and an enterprise value per customer account of £674 (based on 3.1 million customers and 5.6 million customer accounts)[91].

This most recent capital raising is consistent with a trend of increasing value for Octopus Energy over the 18 month period to December 2021:

90 A US$550 million investment was sourced from a mix of existing and new investors in July 2022, but US$325 million was invested by existing shareholders on the terms agreed during the December 2021 capital raising and no further information was disclosed on the terms for new investors.

91 Enterprise value per customer is calculated using the enterprise value for the entire Octopus energy business (i.e. including Retail Energy Supply, Platform Licensing, Octopus Renewables and Energy Services) divided by current Retail Energy Supply customers and therefore overstates the enterprise value per customer relative to benchmarks that are pure retail energy supply businesses.

Annexure 1. Independent Expert's Report *continued*

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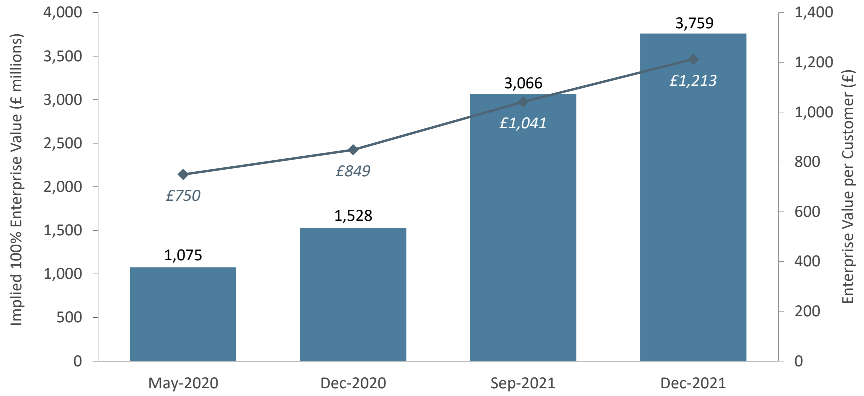
OCTOPUS ENERGY – ENTERPRISE VALUE IMPLIED BY RECENT CAPITAL RAISINGS



Source: Octopus Energy and Origin announcements and Grant Samuel analysis
Note: Implied enterprise value for each capital raising has been calculated as implied equity value + lease liabilities + deferred consideration.

The December 2021 capital raising indicates an uplift in enterprise value of 250% over the 18 month period to December 2021 and 23% since the September 2021 capital raising. Similarly, enterprise value per customer (although a relatively crude measure of value) increased by 62% over the 18 month period to December 2021 and 23% since the September 2021 capital raising.

The increase in customers, customer accounts and assets under management since December 2021 is shown in the table below:

OCTOPUS ENERGY – GROWTH IN BUSINESS FROM DECEMBER 2021 TO JUNE 2023

	DECEMBER 2021	JUNE 2023	*UPLIFT*	
			ABSOLUTE	*PERCENT*
Retail Energy Supply customers (millions)[92]	3.1	5.4	*+2.3*	*+74%*
Retail Energy Supply customer accounts (millions)[92]	5.6	9.7	*+4.4*	*+83%*
Platform Licensing customer accounts (millions)	20.0[93]	32.2	*+12.2*	*+61%*
Assets under management (£ billions)	3.4	5.8	*+2.4*	*+71%*

Company announcements, Origin and Grant Samuel analysis

Subsequent to the December 2021 capital raising, Octopus Energy experienced considerable growth:

- almost doubling customer accounts, including the Bulb Energy acquisition;
- growing contracted *Kraken* customer accounts by more than 50%;
- increasing assets under management by £2.4 billion; and
- delivering strong earnings (and its first positive EBITDA and EBIT) in FY23.

[92] Retail Energy Supply customers and customer accounts include the United Kingdom and international markets.

[93] This figure includes customer accounts where it had been agreed to migrate to the *Kraken* platform through agreements with Good Energy (October 2019, 0.3 million customer accounts), E.ON UK (March 2020, 8.7 million customer accounts), Origin (May 2020, 3.8 million customer accounts) and EDF UK (November 2021, 5 million customer accounts), even though the migration was not complete in December 2021. While this overstates the number of Platform Licensing customer accounts, it is indicative of the expectations at the time of the capital raising. The actual number of Platform Licensing customer accounts in December 2021 was between 14.4 million (in June 2021) and 16.1 million (in April 2022).

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While much of this growth would have been anticipated (and included in Octopus Energy's budgets and projections) in December 2021, the key unknown at that time was the acquisition of Bulb Energy's 1.5 million customers in November 2022. When Bulb Energy collapsed in September 2021, it was initially placed into special administration (and was run by the government through Ofgem). Octopus Energy was not identified as the acquirer of Bulb Energy's customers until October 2022, and court approval for the transaction was obtained in November 2022.

Based on the enterprise value per customer implied by the December 2021 capital raising of £1,213, the potential uplift in the value of Octopus Energy could be in the region of £1.82 billion, as illustrated below:

OCTOPUS ENERGY – POTENTIAL VALUE UPLIFT FROM ACQUISITION OF BULB ENERGY

	BULB ENERGY	£ MILLIONS
Enterprise value implied by December 2021 capital raising		3,759
Estimated value of Bulb Energy customers		
Enterprise value per customer based on December 2021 capital raising	£1,213	
Number of customer (millions)	1.5	1,820
Estimated enterprise value including the Bulb Energy acquisition		**5,579**

The estimated enterprise value following the Bulb Energy acquisition of £5.6 billion, while a relatively crude measure of value, provides a useful benchmark for the current valuation of Octopus Energy.

Multiples Analysis

OTHER TRANSACTION EVIDENCE

Most transactions involving retail energy supply businesses in the United Kingdom have been for small or loss making businesses and for which there is limited meaningful information to determine valuation multiples. The most relevant transactions have been the acquisitions of:

- Shell Energy Retail by Octopus Energy (announced on 1 September 2023);
- Innogy SE ("Innogy") (npower) by E.ON via two transactions completed in September 2019 and March 2020);
- SSE Energy Services by OVO in January 2020; and
- Impello Limited (First Utility) by Shell in February 2018.

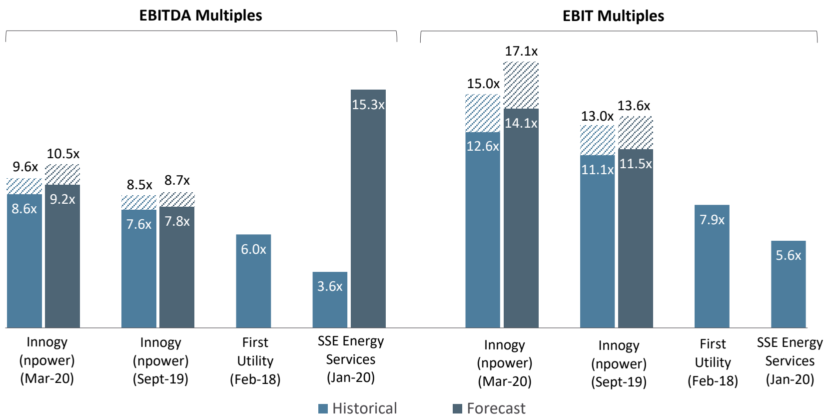
No financial information has been publicly released on the acquisition of Shell Energy Retail by Octopus Energy, although Grant Samuel has been provided with some limited information.

The following chart summarises the available historical and forecast EBITDA and EBIT multiples implied by these transactions:

Annexure 1. Independent Expert's Report *continued*

RELEVANT COMPARABLE TRANSACTIONS

HISTORICAL AND FORECAST EBITDA AND EBIT MULTIPLES



Source: Grant Samuel analysis[82, 83, 84]
Note: The hatched bars represent pre-synergy multiples for transactions where synergies were available and disclosed.

The transaction multiples fall in a reasonably wide range, reflecting the circumstances of each of the transactions. In particular:

- in March 2018, E.ON announced its intention to acquire RWE AG's 76.8% interest in Innogy as part of a larger transaction. Following completion of this transaction, E.ON made a takeover offer for the remaining shares in Innogy, increasing its interest in Innogy 90% following completion of this takeover offer in September 2019. The second transaction in March 2020 was to "squeeze-out" the remaining minority shareholders. The transactions implied post-synergy historical EBITDA multiples of approximately 7.5-8.5 times EBITDA and 11-12.5 historical EBIT (noting that the post-synergy forecast multiples are slightly higher indicating lower earnings in the forecast year). In relation to these multiples it should be noted that:
  - Innogy was also a generator and distributor of energy and retail supply represented only ~25% of EBIT. Gentailers generally trade and transact at higher multiples than pure retail energy suppliers due to their integrated nature; and
  - the higher multiples implied by the second transaction may reflect a willingness to pay a higher price for the strategic importance of E.ON gaining 100% control of Innogy;
- the acquisition of SSE Energy Services (SSE's household energy and services business in the United Kingdom) by OVO in January 2020 followed a failed merger with Innogy SE's retail subsidiary npower in December 2018 due to challenging market conditions, declining customer numbers and the introduction by the government of a retail energy price cap. Following the failed merger, SSE progressed a range of options for SSE Energy Services including a sale or standalone listing. SSE was arguably to some degree a forced seller and the performance of the business was declining due to the decision not to pass on wholesale price increases to customers during 2018 and the impact of the default tariff cap in early 2019 (SSE has a 31 March year end). This negative outlook is reflected in the implied multiples; and
- First Utility was an independent provider of retail energy and broadband in the United Kingdom and was Shell's entry into the United Kingdom retail energy supply market. Its relatively lower multiples

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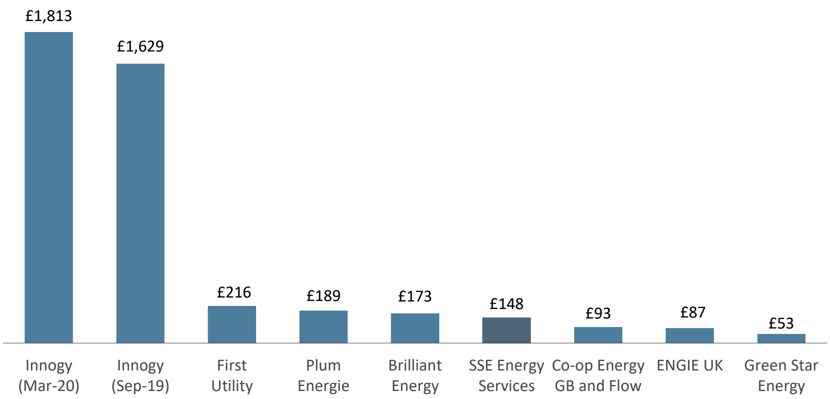
possibly reflect is smaller size with only 837,000 customers and a 3% share of the United Kingdom residential energy market.

Enterprise value per customer multiples are a common industry "rule of thumb" but are arguably more limited than EBITDA multiples as they do not reflect the economics of a retail energy supply business (i.e. profitability). The following chart illustrates the enterprise value per customer implied by the transactions referred to above as well as other smaller transactions:

RELEVANT COMPARABLE TRANSACTIONS

ENTERPRISE VALUE PER CUSTOMER



Source: Grant Samuel analysis [82, 83, 84]

In addition to reflecting the particular circumstances of each transaction (referred to above), enterprise value per customer shows the benefits of scale. Innogy, with its ~22 million customers, transacted at a materially higher enterprise value per customer than the other transactions. The higher enterprise value per customer would have also reflected Innogy's integrated business operations.

The other transactions generally involved acquiring less than 1 million customers, other than SSE, which has been shown as a different colour bar in the chart as it represents enterprise value per customer account (enterprise value per customer would be higher than the £148 shown in the chart). For these smaller transactions, there does not appear to be a linear relationship between enterprise value per customer and number of customers (e.g. Green Star Energy had 200,000 customers whereas Brilliant Energy had only 9,000 customers). In any event, at these levels of customers, the businesses would have faced significant pressure on profitability (albeit that the acquirers might have been able to achieve much higher levels of profitability).

SHAREMARKET EVIDENCE

A number of Octopus Energy's peers are listed entities but all are integrated energy companies or gentailers (similar to Origin). The following charts set out the historical and forecast EBITDA and EBIT multiples for these listed companies based on share prices at 31 August 2023:

Annexure 1. Independent Expert's Report *continued*

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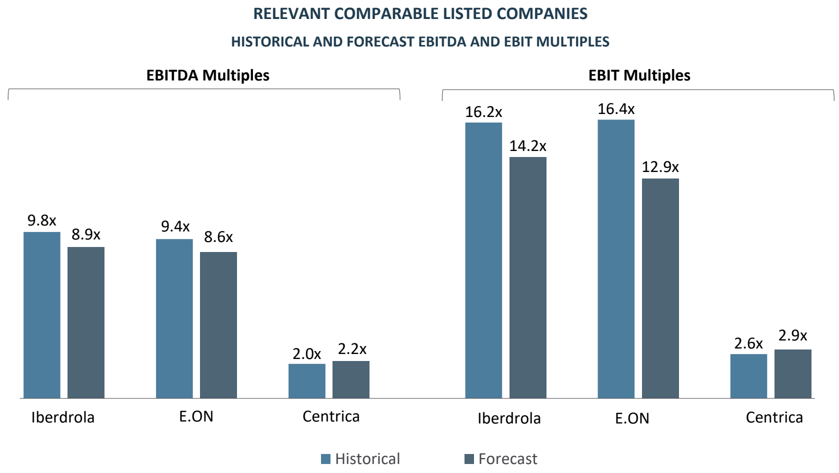

Source: Grant Samuel analysis[82, 83, 94]

The following factors are relevant to consideration of the comparable entity multiples:

- the multiples for the listed entities are based on share prices and therefore do not include a premium for control; and
- none of the listed companies is directly comparable to Octopus Energy and, at best, their trading multiples provide indicative valuation benchmarks only. In particular:
  - Iberdrola SA (which owns Scottish Power) is a global energy business. It constructs, operates and manages power generation plants (predominantly wind power), transmission and distribution facilities (regulated assets) and other assets as well as the supply of energy (electricity and gas) to end users. It is one of the largest electricity companies in the world, supplying energy to 36 million people in eight countries. Scottish Power represents only a small proportion of Iberdrola's earnings (and also has generation assets and a distribution network); and
  - similarly, E.ON (which owns E.ON UK) is one of Europe's largest operators of energy distribution networks and energy infrastructure (regulated assets) and a provider of customer solutions for approximately 48 million customers. Customer solutions includes energy retail and represents less than 20% of core EBITDA.

    The size and integrated nature of the business operations of these competitors (as well as their regulated distribution and transmission assets) is reflected in their relatively high trading multiples; and
  - Centrica plc ("Centrica") (which owns British Gas) is an international integrated energy services and solutions business. Its principal activity is the supply of electricity and gas to residential and small business consumers in the United Kingdom (British Gas) and Ireland (Bord Gáis Energy) but it also has operations in energy trading and marketing (the contribution from this business varies greatly from year to year) and upstream exploration and production (nuclear, gas). In the year ended 31 December 2022, British Gas represented only 3% of EBITDA and 0.3% of EBIT due to the impact of highly volatile wholesale energy markets in the United Kingdom over this period.

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94 Centrica's historical earnings have been adjusted to exclude the impact of the disposal of Spirit Energy's interest in certain Norwegian assets. The transaction completed in May 2022.

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Centrica's low trading multiples relative to its peers reflect the nature of its operations:

- it does not own any regulated transmission or distribution infrastructure and is more impacted by volatile wholesale energy prices than Iberdrola or E.ON;
- a significant proportion of its recent earnings is attributable to its energy marketing/trading and upstream (oil and gas production and sale of nuclear power) segments. In 2022, these segments contributed more than 95% of the group's operating profit (£3.2 billion) compared to less than 60% in 2020 (£264 million). The low multiples may in part reflect the market's doubts that this performance is sustainable; and
- its upstream assets have a finite operating life and are expected to approach the end of their lifecycles by the end of the decade (which, in turn, would also involve substantial decommissioning costs).

Moreover, its share price may also be impacted by what some market commentators refer to as a "conservative" approach to capital management. Despite its strong operating cash flows over the past 18 months as well as over £3 billion in cash proceeds from the divestments of Direct Energy and Norwegian gas assets in 2021 and 2022, it has delivered very low capital returns (despite a share buyback programme commencing at the end of 2022) as it focused on reducing net debt and maintaining adequate liquidity levels to navigate the energy crisis.

The enterprise value per customer implied by the trading prices of these listed companies is summarised below:

RELEVANT COMPARABLE LISTED COMPANIES - ENTERPRISE VALUE PER CUSTOMER

COMPANY	MARKET CAPITALISATION (MILLIONS)	ENTERPRISE VALUE (MILLIONS)	NUMBER OF CUSTOMERS (MILLIONS)	ENTERPRISE VALUE PER CUSTOMER
Iberdrola	€68,382	€129,460	36	£3,077[95]
E.ON	€29,706	€75,470	48	£1,108[95]
Centrica	£8,290	£7,097	8	£860

Source: Grant Samuel analysis[82, 83]

The implied enterprise value per customer for Iberdrola and E.ON is relatively high, but largely reflects the integrated nature of their operations, including generation and transmission/distribution (whereas customer numbers are only for the retail energy supply business).

ANALYSIS AND CONCLUSIONS

Grant Samuel has valued Octopus Energy's business operations in the range £5,700-6,200 million, which implies the following multiples:

OCTOPUS ENERGY'S BUSINESS OPERATIONS – IMPLIED VALUATION PARAMETERS

	VARIABLE (MILLIONS)	RANGE OF PARAMETERS	
		LOW	HIGH
Valuation range (£ millions)		**5,700**	**6,200**
Multiple of EBITDA			
FY23 (historical)	£643	8.8x	9.6x
Multiple of EBIT			
FY23 (historical)	£506	11.2x	12.2x
Customers at 30 June 2023			
Value per Retail Energy Supply customer	5,365	£1,062	£1,156

95 Converted at a €/£ exchange rate of 0.8557.

Annexure 1. Independent Expert's Report *continued*

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Grant Samuel's valuation of Octopus Energy's business operations is consistent with value implied by a "roll forward" of the most recent capital raising in December 2021 (at the low end) with the DCF analysis supporting the high end of the valuation range (particularly following completion of the Shell Energy Retail acquisition).

While the historical multiples implied by Grant Samuel's valuation of Octopus Energy's business operations of 8.8-9.6 times EBITDA and 11.2-12.2 times EBIT are reasonably consistent with the transaction evidence (7.5-8.5 times EBITDA and 11-12.5 historical EBIT), this is largely coincidental. Octopus Energy's FY23 earnings were inflated by the lagged recovery of the FY22 increase in wholesale energy prices through customer tariffs and the implied historical multiples would be higher based on "normalised" FY23 earnings. The implied multiples based on FY24 and FY25 EBITDA from the Octopus Energy Business Operation Cash Flow Model[96] are considerably higher, and well above comparable transaction and comparable trading multiples. In Grant Samuel's view, these high multiples are appropriate having regard to the growth potential of Octopus Energy's business operations.

The implied enterprise value per customer is:

- much higher than the "pure" retail energy supply comparable transactions (i.e. excluding Innogy). This reflects Octopus Energy's lower cost to serve as well as the impact of its other businesses, particularly its Platform Licence business (other businesses also impact the enterprise value per customer implied by the Innogy transactions); and
- towards the low end or below those implied by the trading prices of comparable companies (excluding Centrica), where retail energy supply is a much smaller proportion of total earnings and value.

In short, implied enterprise value per customer is an imprecise measure of value and reflects the specific attributes of Octopus Energy's business operations including, in particular, its lower cost to serve and the value of its other integrated businesses, especially its Platform Licensing business.

6.7.4 Adjusted Net Debt

Octopus Energy's adjusted net debt for valuation purposes is £36 million. This amount represents Octopus Energy's net cash at 30 June 2023 adjusted to include estimated lease liabilities and to exclude cash required to be retained in the business as follows:

OCTOPUS ENERGY – ADJUSTED NET CASH

	£ MILLIONS
Net cash at 30 June 2023 (excluding lease liabilities)	1,026
Lease liabilities[97]	(36)
Cash required to be retained in the business	(1,026)
Adjusted net debt	**(36)**

Lease liabilities have been included in adjusted net cash as they are not included in the cash flows used for the DCF analysis.

While Octopus Energy has a substantial cash balance at 30 June 2023, Grant Samuel has assumed that all of this cash is required to be retained in the business, reducing Octopus Energy's surplus cash (before lease liabilities) to nil. As a result of regulatory changes subsequent to the United Kingdom energy crisis (see Section 3.2) designed to ensure a retail energy supply business is financially robust and can absorb

96 Adjusted to a 30 June year end.

97 Lease liabilities and other assets and liabilities are at 30 April 2022 as this is the latest information that was available to Grant Samuel. The deferred consideration and amount due to Octopus Capital represent the non-current portion of these balances at 30 April 2022 (i.e. amounts that were due after 30 April 2023).

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potential losses so it is protected against market volatility and can invest sufficient funds into its business to provide the best service to customers, Octopus Energy is required to:

- ringfence renewable obligation receipts. Octopus Energy had ~£300 million of renewable obligation receipts at 30 April 2023, which are remitted annually in August; and
- meet a common minimum capital requirement target of £115 of adjusted net assets (i.e. net tangible assets) per domestic dual fuel customer by the end of March 2025. Octopus Energy's target minimum capital requirement at 30 June 2023 was £586 million (based on 5.1 million customers) and it had net tangible assets at 30 June 2023 of £494 million. In relation to this deficit:
  - the target does not need to be met until March 2025, although Octopus Energy would need to be seen to be moving towards the target as quickly as possible (and the minimum capital requirement will increase as Octopus Energy's customer numbers increase e.g. through the acquisition of Shell Energy Retail); and
  - adjusted net assets includes permitted alternative sources of capital such as undrawn working capital facilities or parent company guarantees. Octopus Energy has historically had guarantees from shareholders (e.g. the three year company guarantee provided by Origin to support an Octopus energy working capital facility of up to £160 million in the first two years and reducing to a maximum of £110 million in the third year which fell away in May 2023), there are currently none in place. Furthermore, as Octopus Energy does not have a track record of profitability, it is not feasible for it to put (undrawn) working capital facilities in place (although this may become feasible in future years).

On this basis, Octopus Energy is required to retain its cash balance in its business at 30 June 2023 and has no surplus cash.

6.7.5 Other Assets and Liabilities

Octopus Energy's other assets have been valued at £(40) million[97] and represent:

- deferred consideration of £9 million relating to the acquisition of Plum Energie in January 2022; and
- the amount due to Octopus Capital for the acquisition of Octopus Renewables of £31 million.

No value has been attributed to:

- investment in associates as this primarily represents Octopus Energy's 30% interest in TG Octopus Energy, which has been included in the cash flows used for the DCF analysis. Octopus Energy has two other small investments but these are immaterial in the context of the overall valuation of Octopus Energy;
- other net financial liabilities (related to hedging), which are part of Octopus Energy's business operations; and
- Octopus Energy's outside equity interests on the basis that this balance relates primarily to Octopus Energy's 20% investment in RED. Because of the nature of the agreement (where Octopus Energy has an immediately exercisable option to acquire the remaining 80% interest in RED), Octopus Energy is required to consolidated RED for accounting purposes (and therefore recognise an outside equity interest for the remaining 80% interest).

Annexure 1. Independent Expert's Report *continued*

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6.8 Value of Origin's Interest in APLNG

6.8.1 Summary

Grant Samuel has valued Origin's 27.5% interest in APLNG in the range $6,894-7,506 million (net of the loan from APLNG to Origin). The valuation incorporates the value of the project's various interests in upstream gas fields, the APLNG pipeline and the Curtis Island LNG facility:

ORIGIN - VALUATION OF INTEREST IN APLNG ($ MILLIONS)

	SECTION REFERENCE	VALUATION RANGE	
		LOW	HIGH
APLNG business operations	6.8.2, 6.8.3	31,000	33,000
Adjusted net debt at 30 June 2023	6.8.4	(6,065)	(6,065)
Other assets	6.8.5	630	855
Equity value		**25,565**	**27,790**
Origin's interest		27.5%	27.5%
Gross valuation of Origin's equity interest		**7,030**	**7,642**
Loan due by Origin to APLNG	5.3	(136)	(136)
Net valuation of Origin's equity interest		**6,894**	**7,506**

Grant Samuel's valuation of Origin's 27.5% gross interest in APLNG of $7,030-7,642 million is higher than Origin's carrying value at 30 June 2023 of $5,469 million. Origin's carrying value is on an equity accounted basis and represents the historical cost of the investment adjusted for profits and dividends over time. In comparison, Grant Samuel's value estimate is a judgement as to the price that an acquirer may be willing to pay for Origin's 27.5% interest in APLNG by reference to DCF analysis and other valuation cross checks (e.g. multiples analysis and the equity value implied by recent sales of interests in APLNG).

The NPVs calculated by Grant Samuel's DCF analysis represent the "intrinsic value" of APLNG. When using these NPVs in the context of estimating the value of Origin's 27.5% interest, consideration needs to be given to the nature of the interest and whether a discount to the calculated NPVs should be applied. Origin is operator of the upstream components and has board representation and other protection mechanisms, including pre-emptive rights. However, the buyer pool for the asset is limited with potential acquirers most likely to be large upstream oil and gas producers (e.g. ConocoPhillips, etc.) or parties seeking to secure offtake from the project (e.g. Sinopec or Kansai Electric). Prima facie, there appears to be very few potential financial investors apart from EIG. The pre-emptive right held by each shareholder in the asset is also likely to restrict the potential buyer pool.

In selecting the valuation range, Grant Samuel has also considered the value implied by recent arm's length transactions involving minority interests in APLNG. The most recent transaction, EIG's conditional sell-down of a 2.49% interest to ConocoPhillips post completion of the Scheme, is estimated to value the equity in APLNG at 30 June 2023 at $7.25 billion (for a 27.5% interest). While this is within the valuation range adopted by Grant Samuel, it is hard to be precise about the economics of the transaction given the very limited detail provided by ConocoPhillips and EIG in their public disclosures of the transaction (e.g. in relation to any adjustment for distributions post 30 June 2022). Furthermore, it is conceivable that the price includes some level of strategic premium, as the interest allowed ConocoPhillips to increase its stake in the project to 49.9%. It will also acquire operatorship of the upstream elements of the project if the Scheme is implemented. In this context, the previous transaction in late 2021 implied a value of only $5.5 billion (for a 27.5% interest). While spot oil prices and the longer term outlook for oil prices at that time were lower than is currently the case and the A$ was stronger, long term Australian bond rates were approximately 200 basis points (2%) lower than they are now.

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These factors might suggest that the value should be at a discount to both the NPV and the benchmark transactions. On the other hand, APLNG distributes close to 100% of distributable cash to shareholders and the board seat and upstream operatorship are valuable. On balance, Grant Samuel believes a value in line with the NPVs to be a reasonable basis.

6.8.2 DCF Analysis

DCF Assumptions

The analysis adopts the commodity price (oil, LNG and domestic gas), tax, inflation and US$/A$ exchange rate assumptions set out in Section 6.3.3. The commodity price assumptions are reflected in two separate scenarios (given the sensitivity of the valuation of APLNG to changes in commodity prices):

- a Low Case, where long term Brent crude oil prices decline to US$60/bbl and LNG prices fall to $6.8/Mbtu; and
- a High Case, where long term Brent crude oil prices decline to US$65/bbl and LNG prices fall to $7.4/Mbtu; and

The NPV outcomes for the two commodity price scenarios are illustrated separately in the DCF analysis.

DCF Scenarios

The DCF valuation of APLNG's operations is based on production scenarios developed by GaffneyCline. The scenarios include the production of GaffneyCline's estimation of APLNG's 3P reserves and 2C contingent resources over the life of the project, with the forecasts prepared on a tenement-by-tenement basis. The valuation assumptions are summarised in further detail below (all figures are presented on a 100% APLNG share basis and dollar amounts are presented in real FY23 terms).

SCENARIO A

Scenario A assumes the following:

- APLNG production continues until 2064, with total production of 13,466 PJ over the life of the project. Annual production is in the range of 600-700 PJ over the period to FY32 and gradually declines to circa 100 PJ by FY60, reflecting natural reservoir decline over the life of the project;
- total operating costs are circa $1.8-2.0 billion per year over the period to FY35, at which point they decline broadly in line with declining production each year. Operating costs primarily consist of upstream production, gas processing, and water treatment costs as well as downstream LNG facility costs;
- total capital expenditure of approximately $12.1 billion over the explicit forecast period, the majority of which is incurred over the period to FY36, at which point average annual expenditure declines from circa $700 million to $100 million per year; and
- total abandonment expenditure of $4.1 billion, the majority of which relates to upstream operations. Approximately 25% of upstream abandonment expenditure is undertaken at the end of the life of the project, with the remainder undertaken progressively throughout the forecast period as individual wells are taken offline over time.

SCENARIO B

Scenario B is similar to Scenario A, with the following key changes:

- total production is approximately 500 PJ higher than Scenario A;

Annexure 1. Independent Expert's Report *continued*

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- upstream operating costs are approximately 7% lower over the life of the forecast, reflecting an assumption that APLNG achieves ongoing efficiency and other cost reduction measures;
- capital expenditure is approximately $1.1 billion lower over the life of the forecast; and
- abandonment costs are circa $0.7 billion higher in real terms, reflecting the additional wells and upstream operations associated with the larger production profile.

The following table summarises projected production and costs for the two scenarios:

APLNG – MODEL PARAMETERS

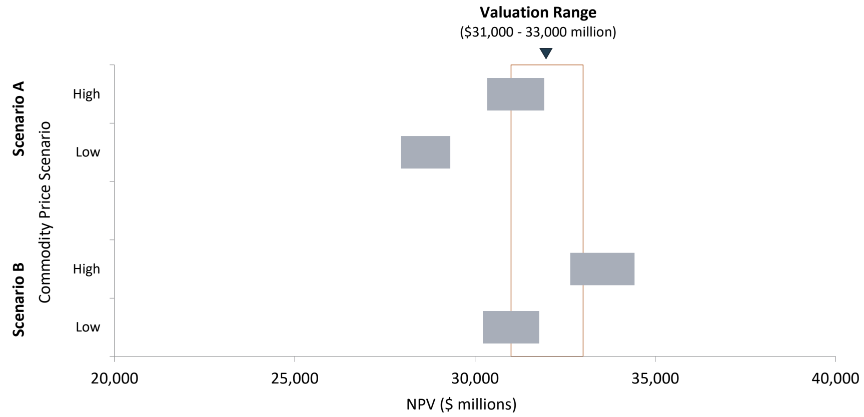
	UNIT	FY24-FY28 TOTAL	FY29-FY33 TOTAL	LIFE OF PROJECT
Scenario 1				
Total production	PJ	3,353	2,977	13,466
Operating costs (real FY23 basis)[98]	$ millions	9,463	9,181	53,840
Capital expenditure (real FY23 basis)	$ millions	3,863	3,473	12,100
Abandonment expenditure (real FY23 basis)	$ millions	147	431	4,147
Scenario 2				
Total production	PJ	3,436	2,953	13,955
Operating costs (real FY23 basis)[98]	$ millions	8,880	8,630	51,040
Capital expenditure (real FY23 basis)	$ millions	3,278	3,718	10,951
Abandonment expenditure (real FY23 basis)	$ millions	147	431	4,871

NPV Outputs and Valuation

The following chart illustrates the NPV outcomes for APLNG on a 100%, enterprise value basis:

APLNG – NPV OUTCOMES ($ MILLIONS)

(AT 10-11% NOMINAL DISCOUNT RATE)



Grant Samuel's valuation range of $31,000-33,000 million takes into account the calculated NPVs set out above and, in addition, reflects the following:

- both Scenario A and Scenario B are on a 3P reserves plus 2C resources basis. As such, the production profiles assume the project is able to deliver a very high proportion of existing reported reserves and

[98] Excludes royalty costs

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also convert 2C resources to reserves through successful development programs. This assumption is supported by the project's strong track record of production, reserves replacement and resources conversion, with the project benefitting from enhanced drilling technologies and cost reductions.

At the same time, as field development continues the operations will focus on progressively less attractive (or more marginal) coal seams over time as APLNG targets developing the lowest cost gas first. There is at least some risk that production and resource conversion performance will not be able to be sustained at current levels into the future;

- the NPV of APLNG is sensitive to the assumed US$/A$ exchange rate, particularly given the nature of APLNG's operations where the project earns the majority of its revenue in US dollars but incurs most of its costs in Australian dollars. Assuming Scenario A and the midpoint of Grant Samuel's discount rate and commodity price assumptions, the NPV of APLNG increases and decreases by circa $670 million for a 0.01 change in the US$/A$ exchange rate in either direction;
- neither Scenario attributes any value to the spare LNG processing capacity that will become available when Train 2 ceases processing APLNG gas around the year 2040. While this spare capacity is likely to have some value, it is limited by the fact that there is likely to be other spare LNG processing capacity available at that time from other parties (for example GLNG's processing facility) and the fact it does not occur for almost 20 years;
- the Scenarios do not include production volumes associated with APLNG's prospective resources or other exploration targets, as these have been valued separately by GaffneyCline to allow for appropriate risk adjustments to be applied. GaffneyCline has valued these interests in the range of $306-531 million; and
- both Scenarios implicitly assume that no APLNG reversion has or will occur over the remaining life of the project. While Grant Samuel is not in a position to assess the merits of the legal claims and counterclaims (and the cases remain at a very preliminary stage), the assessed valuation range broadly aligns with the value implied by recent arm's length transactions in APLNG. These transactions would have involved significant due diligence being undertaken by the acquiring parties and these parties factoring the reversion claims into their bid price considerations. Accordingly, Grant Samuel has made no explicit valuation adjustment for the potential risk of reversion being deemed to have occurred in the current legal proceedings.

Taking these factors into consideration, Grant Samuel considers a valuation range for APLNG of $31,000-33,000 million to be a reasonable balancing of these issues.

6.8.3 Valuation Cross Checks

Recent Transactions Involving APLNG

The most reliable evidence of the value of a business is the value implied by a recent arm's length transaction involving the business. Recent transactions involving interests in APLNG provide useful cross checks of the valuation range adopted by Grant Samuel:

- in March 2023, ConocoPhillips announced that it had agreed to acquire an additional 2.49% interest in APLNG from EIG for US$500 million (subject to successful completion of the Scheme), effective at 1 July 2022 (even though settlement is unlikely to occur before December 2023). No additional details have been released but it is reasonable to assume that the transaction terms include an adjustment for any distributions paid after 1 July 2022 and up until completion (as ConocoPhillips had an entitlement to them). After adjusting for after tax distributions paid by the project during FY23, the transaction appears to value the equity in APLNG at 30 June 2023 at approximately $26.3 billion on a

Annexure 1. Independent Expert's Report *continued*

100% basis[99], which equates to approximately $7.25 billion for Origin's equity share. The value of Origin's interest in APLNG implied by the transaction falls within the range adopted by Grant Samuel even though there are some arguments for a discount from that value; and

- in February 2022, Origin completed the sale of a 10% interest in APLNG to ConocoPhillips (which pre-empted an offer from EIG) for total proceeds of $1,998 million, implying a value for the equity in APLNG of approximately $20 billion and equates to a value for Origin's 27.5% equity interest of circa $5.5 billion. While this is well below the range adopted by Grant Samuel:
  - this was the sale of a minority interest without operatorship, a board seat or veto rights;
  - when the transaction was announced in October 2021, domestic gas, LNG and oil prices, and the longer term outlook for these prices were lower than where is the case today; and
  - the US$/A$ exchange rate at the time was approximately 0.75 compared to the current spot rate of ~0.65. Given the project predominantly earns revenue in US dollars but incurs costs in Australian dollars, all else being equal a weaker Australian dollar results in a higher A$ cash flows generated by the project.

  At the same time, Australian 10 year bond rates were approximately 200 basis points (2%) lower than they are now and United States 10 year bonds were approximately 300 basis points (3%) lower.

Other Transaction Evidence

There are limited other transactions involving LNG projects in the Australian region. The most relevant transactions include:

- Santos' acquisition of ConocoPhillips Northern Australia asset portfolio, which predominantly comprised interests in Darwin LNG and the associated offshore gas fields Bayu-Undan and Barossa (completed May 2020);
- SK E&S' subsequent acquisition of a 25% interest in Darwin LNG and Bayu-Undan completed in April 2021;
- Santos' merger with Oil Search in 2021, which held a 29% interest in the PNG LNG project; and
- Kumul Petroleum's acquisition of a 2.6% interest in PNG LNG from Santos, announced on 1 September 2023).

The following charts summarises the reserve and resource multiples implied by these transactions:

[99] Assuming an exchange rate of A$1 = US$0.65

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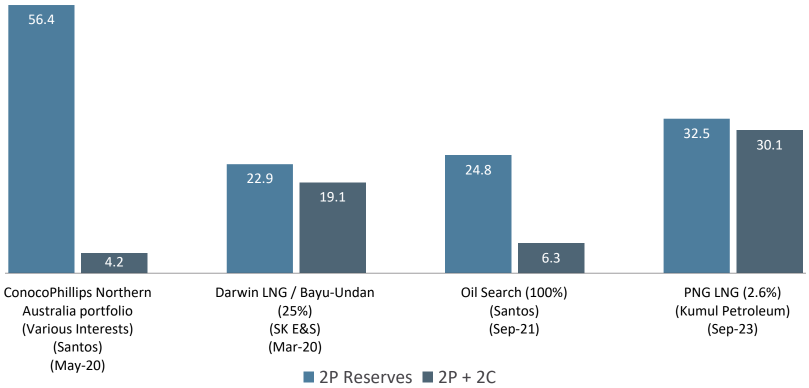
SELECTED COMPARABLE TRANSACTIONS

RESERVE AND RESOURCE MULTIPLES ($/BOE BASIS)



Source: Grant Samuel analysis[82, 83, 84]

The transactions multiples are in a wide range, reflecting the unique circumstances of each transaction and each asset. Grant Samuel notes the following:

- the transactions involving Darwin LNG, Bayu-Undan and Barossa were at much higher 2P reserve multiples than the multiples implies by the recent APLNG transactions due to the relatively lower proportion of reserves to resources. Bayu-Undan reserves are almost depleted and Barossa (which is intended to backfill Darwin LNG) is yet to be developed and hence is classified as a 2C contingent resource. These transactions are not considered comparable to APLNG;
- while Oil Search held an interest in the producing PNG LNG project, it also held interests in several undeveloped oil and gas fields in PNG, as well as interests in Alaskan oil resources. Accordingly, its broader portfolio of oil and gas assets is not like-for-like when compared to the APLNG project; and
- PNG LNG cannot be considered directly comparable to APLNG. PNG LNG sources gas from conventional gas reservoirs whereas APLNG uses CSG, which involves extracting gas through drilling thousands of individual wells. As such, the life of field production costs and capital expenditure are considerably different. Furthermore, PNG LNG is located in a different jurisdiction and is subject to different regulatory, fiscal regimes and political risks.

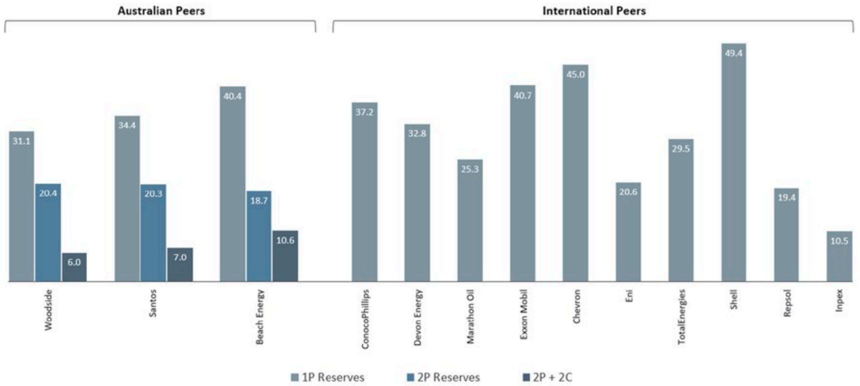
Sharemarket Evidence

There are numerous publicly listed companies both in Australia and globally that hold interests in LNG projects. The following chart sets out the reserve and resource multiples for relevant listed companies based on share prices at 31 August 2023:

Annexure 1. Independent Expert's Report *continued*

SELECTED COMPARABLE LISTED COMPANIES

RESERVE AND RESOURCE MULTIPLES ($/BOE BASIS)



Source: Grant Samuel analysis[82]

The following factors are relevant to consideration of the comparable entity multiples:

- 2P and 2C resources are only disclosed by the ASX-listed oil and gas peers. All of the other global peers only disclose 1P reserves;
- all companies have a 31 December year end with the exception of Beach Energy which has a 30 June year end;
- the multiples for the listed entities are based on share prices and therefore do not include a premium for control; and
- while all of the companies listed above interests in LNG projects, none are pure LNG players and hold interests in a broad range of projects and assets across the oil and gas sector. Furthermore, the LNG projects in which these companies hold interests have different characteristics and are at different stages of the project life cycle. For example, Beach Energy holds a 50% interest in the Waitsia LNG project, which is currently under development and has not yet commenced LNG production, while on the other hand, Woodside Energy holds interests in several huge LNG projects, some of which have been producing for over 30 years while others are also still under development. Accordingly, these benchmarks should be regarded only as broadly indicative.

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Analysis and Conclusions

Grant Samuel has valued APLNG in the range $31,000-33,000 million, which implies the following multiples:

APLNG – IMPLIED VALUATION PARAMETERS

	VARIABLE ($ MILLIONS/MBOE)	RANGE OF PARAMETERS	
		LOW	HIGH
Valuation range ($ millions)		**31,000**	**33,000**
Multiple of earnings			
FY23 EBITDA (historical)	8,168	3.8x	4.0x
FY23 EBIT (historical)	6,509	4.8x	5.1x
Multiple of production			
FY23 (historical)[100]	116	$268/boe	$285/boe
FY24 (top end of company guidance)[100]	122	$254/boe	$270/boe
Multiple of resources and reserves at 30 June 2023			
2P reserves + 2C resources[100]	2,524[100]	$12/boe	$13/boe
2P reserves[100]	1,883[100]	$16/boe	$18/boe

While Grant Samuel has also referenced other benchmarks in the form of other LNG related transactions and trading multiples of companies with interests in LNG projects, ultimately these cross checks are not particularly useful as benchmarks given the differences in the underlying characteristics of these projects and the fact that LNG projects only form part of the broader oil and gas operations of the listed comparable companies.

6.8.4 Adjusted Net Debt

APLNG's adjusted net debt for valuation purposes is $6,065 million. This amount represents APLNG's net debt (including lease liabilities) at 30 June 2023 and includes capitalised debt arrangement fees and APLNG related cash held by Origin, as shown below:

APLNG – ADJUSTED NET DEBT

	$ MILLIONS
Net debt at 30 June 2023 (excluding lease liabilities)	(5,655)
Capitalised debt arrangement fees	(59)
Lease liabilities	(444)
APLNG related cash held by Origin	93
Adjusted net debt	**(6,065)**

Source: APLNG 2023 Financial Report and Grant Samuel analysis

Capitalised debt arrangement fees have been added back to net debt as they are accounting assets (i.e. cash amounts incurred previously but capitalised and amortised over the life of the relevant debt).

Lease liabilities have been included in adjusted net debt as they are not included in the cash flows used for the DCF analysis.

APLNG related cash held by Origin as the upstream operator of APLNG is only available to fund APLNG related operations. It has been excluded from Origin's cash balance in calculating its net debt (see Section 6.10).

There are other adjustments that could be made to APLNG's net debt, namely, an adjustment for the accessibility of some cash held by APLNG which is restricted under the terms of the project's finance facilities (but will become available as the facilities are repaid), as well as an adjustment for the fair market

100 Production, resources and reserves have been converted at 1 PJ = 0.17194 boe.

Annexure 1. Independent Expert's Report *continued*

value of APLNG's debt facilities (two of which are fixed rate facilities priced below current market rates). However given the offsetting nature of these adjustments the net impact is unlikely to be material and hence no adjustments have been made for these items.

6.8.5 APLNG Other Assets

APLNG's other assets have been valued in the range $630-855 million and represent:

- receivables due from shareholders of $324 million (relating to the withdrawal of funds from APLNG that were reserved for future repayments of the project finance facility[101]). This receivable will effectively fall away once APLNG's debt facilities have been repaid in FY31 but had the funds not been withdrawn, APLNG's cash balance at 30 June 2023 would have been higher. The portion of the receivable that is effectively due from Origin ($136 million) has been deducted from the value of Origin's 27.5% interest in APLNG; and
- the value attributed to APLNG's exploration and development assets of $306-531 million. GaffneyCline prepared valuations of APLNG's exploration and development interests in the Surat-Bowen Basins in Queensland for which it is not appropriate to prepare cash flow based valuations. These include:
  - remnant resources and reserves and brownfield exploration targets not included as part of the life of field plans for each of APLNG's producing gas fields;
  - early stage development assets which are greenfield in nature and for which production schedules cannot be reliably produced at this stage; and
  - greenfield exploration assets.

  The GaffneyCline valuation of these interests is set out in its detailed report, which is included as Appendix 4 to this report.

6.9 Other Assets and Liabilities

Origin's other assets and liabilities have been valued at $427 million and include:

- the cash refund of $425 million relating to the LGC shortfall charge paid by Origin over the period from FY21 to FY23 less the actual cost of the LGCs. Origin expects this cash refund to be received over the period from FY24 to FY26. The NPV of this refund ($400 million) has been included as a surplus asset. It is not assessable for tax to align with the non-deductible treatment of the shortfall charge and has been discounted to a NPV at a discount rate reflecting the three year bond rate (~4%);
- equity securities and debt and other securities with a fair value of $168 million at 30 June 2023, including investments in a number of technology start-ups, investments in a number of new technology/energy transition funds and gas prepayments to Golden Beach Energy;
- the net proceeds (after tax) from the sale of Origin's LPG business in the Pacific;
- Origin's 25% interest in the Gaschem joint ventures which had a carrying value of $10 million at 30 June 2023 and is immaterial in the context of the overall valuation of Origin (Origin's other minor equity accounted investment, Gasbot Pty Ltd had a carrying value of nil at 30 June 2023); and
- provisions that are not included in the cash flows for Energy Markets, Other Integrated Gas and corporate costs of $225 million (tax effected). These provisions primarily relate to restoration at legacy sites inherited by Origin and provisions for "make good" of office properties on the expiry of leases.

[101] The debt servicing reserve was replaced by bank guarantees provided by each shareholder, enabling the cash held in the debt servicing reserve to be released. This cash would not ordinarily have been released (and able to be distributed to shareholders) until the debt facilities were repaid in FY31.

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Origin has a number of other assets and liabilities on its balance sheet that have not been included in other assets and liabilities for the following reasons:

- the physical position in relation to environmental scheme certificates ($349 million) and environmental scheme surrender obligations ($369 million) at 30 June 2023, which has been replaced by the cash flow impact of the LGCs referred to above;
- investment fund units with a fair value of $61 million at 30 June 2023, which are held by the Origin Foundation to fund its expenditure and are ringfenced for this purpose so are not assets available to Origin shareholders;
- assets and liabilities that are part of the Energy Markets business and have been included in the cash flows for Energy Markets used in the DCF analysis, including:
  - the value of Settlement Residue Distribution units (fair value of $129 million);
  - non-debt related derivative financial instruments of $601 million (commodity and foreign exchange contracts;
  - futures collateral (net) of $(11) million; and
  - provisions for restoration and rehabilitation and other provisions of $396 million; and
- the provision for onerous contracts of $62 million, which relates to the LNG sales contract with ENN and has been separately valued as part of Other Integrated Gas.

6.10 Adjusted Net Debt

Origin's net debt for valuation purposes is $3,538 million. This amount represents Origin's net debt (including lease liabilities) at 30 June 2023 adjusted as follows:

ORIGIN – ADJUSTED NET DEBT

	$ MILLIONS
Net debt at 30 June 2023 (excluding lease liabilities)	(2,250)
Lease liabilities	(545)
Capitalised borrowing costs	(17)
Debt related derivatives (at fair value)	11
APLNG related cash	(93)
Final FY23 dividend	(344)
Income tax working capital adjustment	(300)
Adjusted net debt	**(3,538)**

Lease liabilities have been included in net borrowings as they are not included in the cash flows used for the DCF analysis.

Capitalised borrowing costs have been added back to net debt as they are accounting assets (i.e. cash amounts incurred previously but capitalised and amortised over the life of the relevant debt).

Debt related derivatives represent fair value adjustments at 30 June 2023 on foreign exchange hedging transactions related to Origin's debt.

APLNG related cash held by Origin as the upstream operator of APLNG is only available to fund APLNG related operations. It has been included in APLNG's cash balance in calculating its net debt, see Section 6.8.4).

An allowance has been made for an income tax working capital adjustment to reflect Origin's abnormally high current provision for income tax at 30 June 2023 (of $455 million). In FY23, Origin generated

Annexure 1. Independent Expert's Report *continued*

substantial taxable income (including unfranked dividends from APLNG) but PAYG instalments were low because the instalment rates were based on prior years lodged tax returns. Accordingly, the 30 June 2023 provision for income tax of $455 million was materially above previous year end balances (which have ranged from an income tax receivable of $89 million to a provision for income tax of $160 million over the period from FY19 to FY22). The provision for income tax is expected to return towards normalised levels as tax is paid and PAYG adjustments flow through in future years. The $300 million adjustment reflects an estimate of the present value of the movement in working capital over this period.

6.11 Franking Credits

Under Australia's dividend imputation system, domestic equity investors receive a taxation credit (franking credit) for tax paid by a company. The franking credit attaches to any dividends paid by a company and the franking credit offsets personal tax for Australian investors. To the extent that personal tax has been fully offset the individual will receive a refund of the balance of the franking credit. Franking credits therefore have value to the recipient.

However, in Grant Samuel's opinion, while acquirers are attracted by franking credits there is no clear evidence that they will actually pay extra for a company with them (at any rate the sharemarket evidence used by Grant Samuel in valuing Origin's business operations will already reflect the value impact of the existence of franking credits). Further, franking credits are not an asset of the company in the sense that they can be readily realised for a cash sum that is capable of being received by all shareholders. The value of franking credits can only be realised by shareholders themselves when they receive distributions. Importantly, the value of franking credits is dependent on the tax position of each individual shareholder. To some shareholders (e.g. overseas shareholders) they may have very little or no value. Similarly, if they are attached to a distribution which would otherwise take the form of a capital gain taxed at concessional rates there may be minimal net benefit (in fact, there may be some categories of shareholders who are worse off in this situation such as shareholders with a capital loss on disposal of the shares).

Accordingly, while franking credits may have value to some shareholders they do not affect the underlying value of the company itself. No value has therefore been attributed to Origin's accumulated franking credit position in the context of the value of Origin as a whole.

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7 Evaluation of the Scheme

7.1 Opinion

Grant Samuel has concluded that the Scheme is fair and reasonable. Accordingly, in Grant Samuel's opinion, the Scheme is in the best interests of Origin shareholders in the absence of a superior proposal.

7.2 Fairness

Valuation of Origin

The past three and a half years have seen unprecedented upheaval in both Australian and global energy markets. Initially, COVID-19 disrupted the world economy. As COVID-19 concerns began to fall away, supply chain issues started to arise. Then, in early 2022, the Russia-Ukraine war caused energy supply shortages across Europe and dramatic shifts in global energy prices, which have been exacerbated by the recent conflict in Israel. Rampant inflation (caused in part by government responses to COVID-19) and the consequent sharp rises in interest rates have added further pressures.

Even when some normality is restored (and it is now starting to happen), the energy industry will face even greater challenges going forward with a fundamental transformation over the next two decades that will see the phasing out of fossil-fuel based energy (initially coal and, more gradually, oil and gas) and replacement with renewable sources (primarily solar and wind, but also hydro and geothermal). However:

- while the direction of the energy transition is clear, the precise form, timing and economics of market developments is far from certain;
- closure of coal-fired power stations can cause material step changes in power supply volumes available to markets;
- there are substantial logistical, financial and technological challenges in developing assets (such as long duration batteries) that can enable renewables to provide sufficient "firm" baseload power over extended periods; and
- the net result is the prospect of (possibly sustained) periods of significant dislocation in energy markets with potential upsides and downsides for industry participants.

Against this backdrop, valuation of Origin is both challenging and subject to considerable uncertainty.

Grant Samuel has estimated the full underlying value in Origin to be in the range $14.6-16.4 billion, which corresponds to $8.45-9.48 per share. The value is the aggregate value of the underlying value of Origin's business operations and investments together with other assets less external liabilities and any non-trading assets or liabilities.

The principal approach to valuing Origin's business operations and investments was by DCF analysis. NPVs were calculated for several different scenarios for each asset with a separate discount rate estimated for each of Energy Markets, Other Integrated Gas and Octopus Energy. The NPV outcomes for APLNG were estimated based on two production scenarios developed in conjunction with, and reflecting the technical judgement of, the independent technical specialist, GaffneyCline. Technical valuation assumptions for each scenario were reviewed in detail, and estimated, by GaffneyCline. Grant Samuel determined key assumptions relating to commodity prices and exchange rates.

Grant Samuel then determined an appropriate valuation range for each business/investment reflecting the NPV outcomes of the various scenarios, the evidence from other methodologies (e.g. multiples of earnings and resources) and other factors such as parameters from recent transactions involving the business/investment. The value is not based on any one scenario or set of assumptions.

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The valuation range of $8.45-9.48 per share includes a premium for control and exceeds the price at which, based on current market conditions, Grant Samuel would expect Origin shares to trade on the ASX in the absence of a change of control proposal (or speculation as to such a proposal). The valuation is set out in Section 6 of this report.

In considering the valuation there are several important contextual factors that shareholders should take into account:

- a number of positive events have occurred since the announcement of the Scheme on 27 March 2023. For example:
  - Origin has reported very strong FY23 results, with:
    - underlying EBITDA up 47%; and
    - underlying NPAT up 84%.

    Energy Markets is expected to increase EBITDA by a further 49% in FY24 (based on the mid-point of Origin's guidance);
  - Origin's primary competitor, AGL Energy, also reported strong FY23 results, with underlying EBITDA up 12% and underlying NPAT up 25% despite substantial losses from extended outages at Loy Lang A and the closure of the Liddel power station. AGL Energy's guidance for FY24 is for underlying EBITDA to grow by 49% (based on the mid-point of AGL Energy's guidance); and
  - AGL Energy's share price has increased from $7.69 on 27 March 2023 to $10.95 on 13 October 2023, an uplift of 42%.

  While it is tempting to believe that the underlying value of Origin has therefore increased markedly since the Scheme was announced:
  - Origin has advised that in agreeing the terms with the Consortium, the directors had an expectation that performance would improve substantially. For example, the coal price cap had been announced on 22 December 2022 and the draft DMO/VDO for FY24 was announced on 15 March 2023. Hence, the very substantial premium for control (in the order of 60%). While the recovery has been faster than expected, the critical issue is whether the long term value drivers for Origin are now more positive than those already factored into the Scheme consideration;
  - EBITDA for Energy Markets in FY25 is expected to decline to more sustainable levels:
    - the coal price cap expires in June 2024. A $30 per tonne increase in the coal price would reduce EBITDA by over $150 million in FY25. In any event, the earnings from Eraring will cease after FY25 unless operations are extended through agreement with the New South Wales Government. Even if that occurs, it will only be extended for a limited period; and
    - tariffs (i.e. DMO/VDO) are currently expected to moderate in FY25 (and the incoming New South Wales Government has flagged a focus on reducing household electricity bills). A $5/MWh reduction in tariffs would reduce Origin's margins on its ~13.5 TWh of mass market load by ~$70 million per annum; and
  - AGL Energy's strong earnings and share price uplift appear to be largely due to the performance of its coal-fired generation assets which:
    - benefit from low cost, long term coal supply contracts; and
    - represent a substantially larger proportion of AGL Energy's demand compared to Origin. AGL Energy's coal-fired plants produced well over 100% of its total customer demand in FY23.

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Accordingly, an uplift in wholesale electricity prices has a substantial positive impact on AGL Energy profitability. Origin does not benefit in the same way or to the same extent;

- Origin's Energy Markets business, with its leading market share and 3.8 million customer accounts will be a central participant in the energy transition. Its strategic position will provide it with myriad opportunities to evolve and grow its business. However, at the same time it must be recognised that:
  - Eraring is scheduled to close as early as FY25. Any extension (which is yet to be agreed with the New South Wales government) is likely to be only for a limited window and probably on terms that constrain windfall profits to Origin. It is therefore not a contributor to long term value;
  - two significant contributors to Origin's value are its legacy gas supply contract with APLNG (but expiring 2034) and its fleet of gas peaking power plants. With the exception of these assets, post Eraring, the residual business essentially purchases electricity and gas from the wholesale markets (and third parties via PPAs) and sells them to customers, generating a wholesale/retail margin (albeit with a number of value add downstream businesses with meaningful growth opportunities). Retail margins should be relatively stable (once current price uplifts are absorbed) over the medium to longer term but will always be under pressure from regulators and competitors; and
  - while there is a wide array of potential investment and development opportunities that may become available to Origin and there are some that do not primarily involve capital investment (e.g. building out Origin Loop, growing Origin Zero), the reality is that the most significant opportunities will involve large amounts of capital expenditure, for example:
    - building industrial scale batteries; and
    - developing new renewable energy assets (solar, wind, pumped hydro, hydrogen etc), although Origin can participate via long term PPAs instead of having direct ownership.

    Such future capital investments do not add value unless Origin can earn a return on capital in excess of its cost of capital. There are valid reasons as to why Origin may be able to do so (e.g. leveraging the size of its customer base, its purchasing power and its relationships, potentially advantageous locations for some assets) but, at this point in time, only a small number of investments have been sufficiently well defined (for valuation purposes). For the rest, it is merely an aspiration to which no value can be ascribed at this stage; and
- there is clearly a significant degree of upside potential in Octopus Energy. If its projections or targets are met over the next few years the future value of Origin's stake could be substantially higher than the $2,250-2,450 million attributed by Grant Samuel. However, it is important to recognise that:
  - the DCF analysis incorporates significant growth over the explicit forecast period for the Retail Energy Supply business outside the United Kingdom and, more particularly, in the Platform Licensing business, where customer accounts are assumed to more than double to 64 million and revenue increases from ~£100 million in the year ended 30 April 2023 to in excess of £575 million by the year ending 30 April 2033. Moreover, the terminal value for the Platform Licensing business assumes a long term growth rate well above that normally assumed (typically around the inflation level);
  - the business (and the forecast growth) is not without risk. Gaining meaningful market share in Retail Energy Supply against powerful incumbents may prove more difficult than it has been in the United Kingdom (and aggressive retail growth by Octopus Energy in new markets could be seen negatively by potential Platform Licensing customers in the same markets); and

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- the most recent capital raising benchmark (rolled forward to reflect the Bulb Energy acquisition) provides an arm's length "reality check" on the growth assumptions that institutional investors are actually prepared to pay for at the current point in time.

Assessment of Value of Cash Consideration

The Scheme consideration will be paid to shareholders in Australian dollars. Based on a US$/A$ exchange rate of 0.65, the Australian dollar equivalent of the Scheme consideration is $9.11 per Origin share[102]. After allowing for payment of the interim and final FY23 dividends and the additional consideration, the cash consideration that will be received by shareholders if the Scheme is implemented is $8.78 per Origin share[102].

The cash consideration includes the additional consideration that will be received by shareholders for the expected delay in implementation of the Scheme beyond 30 November 2023. Based on the implementation date set out in the Scheme Booklet of 18 December 2023, shareholders will receive additional consideration of $0.027 per share. However, the quantum of the additional consideration will increase if implementation of the Scheme is further delayed beyond 18 December 2023. The impact of the additional consideration on the cash consideration received by shareholders is illustrated below (assuming a US$/A$ exchange rate of 0.65):

ADDITIONAL CONSIDERATION – ILLUSTRATIVE EXAMPLE

IMPLEMENTATION DATE	30 NOVEMBER 2023	18 DECEMBER 2023	31 DECEMBER 2023	31 JANUARY 2024	29 FEBRUARY 2024
Scheme consideration[103]	**9.114**	**9.114**	**9.114**	**9.114**	**9.114**
FY23 interim dividend	(0.165)	(0.165)	(0.165)	(0.165)	(0.165)
FY23 final dividend	(0.200)	(0.200)	(0.200)	(0.200)	(0.200)
Adjusted Scheme consideration	**8.749**	**8.749**	**8.749**	**8.749**	**8.749**
Additional consideration	-	0.027	0.046	0.920	0135
Cash consideration received by shareholders	**8.749**	**8.776**	**8.795**	**8.841**	**8.884**

Note: Orange shaded figures reflect the expected Scheme implementation date set out in the Scheme Booklet.

In relation to the above analysis, it should be noted that:

- the cash consideration and the total cash payment received by shareholders will be rounded to two decimal places; and
- as the cash consideration will be paid in Australian dollars (with the US dollar component of the cash consideration converted to Australian dollars at the prevailing exchange rate shortly prior to implementation of the Scheme), a delay in implementation of the Scheme will expose shareholders to movements in the US$/A$ exchange rate over a longer period.

The additional consideration compensates shareholders for Origin's earnings (or, alternatively, the time value of money) in the event that the Scheme is not implemented by 30 November 2023 (at a rate equivalent to approximately 6% per annum).

Furthermore, the US dollar component of the cash consideration (US$1.641 per share) will be converted to Australian dollars based on the prevailing exchange rate shortly prior to implementation of the Scheme. Accordingly, the Australian dollar equivalent of the cash consideration will change depending on the US$/A$ exchange rate on implementation of the Scheme. The impact of the US$/A$ exchange rate on the

[102] The value attributed by Grant Samuel to the Scheme consideration of $9.11 and the cash consideration that will be received by shareholders of $8.78 differs from the values set out in the Scheme Booklet of $9.15 and $8.81 respectively as the US$/A$ exchange rate adopted in the Scheme Booklet is 0.64.

[103] Calculated as $6.589 + US$1.641/0.65 = $9.114 (rounded to three decimal places).

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Australian dollar equivalent of the cash consideration (assuming that the Scheme is implemented on 18 December 2023) is illustrated in the table below:

AUSTRALIAN DOLLAR EQUIVALENT OF CASH CONSIDERATION – ILLUSTRATIVE EXAMPLE

	EXCHANGE RATE					
	0.625	0.650	0.675	0.700	0.725	0.750
Scheme consideration[104]	**9.215**	**9.114**	**9.020**	**8.933**	**8.852**	**8.777**
Interim FY23 dividend	(0.165)	(0.165)	(0.165)	(0.165)	(0.165)	(0.165)
Final FY23 dividend	(0.200)	(0.200)	(0.200)	(0.200)	(0.200)	(0.200)
Additional consideration	0.027	0.027	0.027	0.027	0.027	0.027
Cash consideration	**8.877**	**8.776**	**8.682**	**8.595**	**8.514**	**8.439**

Note: Orange shaded figures reflect US$/A$ exchange rate assumed for the purposes of this report.

This analysis shows that the Australian dollar equivalent of the cash consideration declines as the US$/A$ exchange rate increases. The Australian dollar is currently trading at a 10-12 month low relative to the US dollar. While there are macroeconomic explanations for the current weakness in the Australian dollar (i.e. relatively lower Australian interest rates, higher inflation and lower commodity prices as well as increasing confidence that the Unites States will avoid a recession), there can be no certainty that the US$/A$ exchange rate will remain at these levels around the time of implementation of the Scheme.

However, US dollar consideration was specifically included as part of the Scheme consideration to reflect the underlying exposure of Origin's cash distributions from its 27.5% interest in APLNG. Any movement in the US$/A$ exchange rate would have a corresponding impact on the value attributed to Origin's 27.5% interest in APLNG and Origin's underlying value per share.

Conclusion

The cash consideration that will be received by shareholders of $8.78 per share[102] falls within the valuation range of $8.45-9.48 per share. Accordingly, the Scheme is fair. The bottom of the valuation range represents the relevant threshold for fairness. Any price above the bottom of the range is, by definition, fair and it is irrelevant where in the range an offer falls.

While the Australian dollar equivalent of the cash consideration will change with movements in the US$/A$ exchange rate, this would be largely offset by a corresponding movement in Grant Samuel's estimate of the underlying value per Origin share (as Origin's 27.5% interest in APLNG earns most of its revenue in US dollars).

Time Value Considerations

The transaction has had an extended and uncertain timetable having been initially announced in November 2022 but subject to an extensive ACCC approval process. Valuations by brokers have assumed various completion dates resulting in widely divergent outcomes (not least because they estimate very different levels of debt).

The Scheme includes additional consideration payable to Origin shareholders to the extent implementation is delayed beyond 30 November 2023 at a rate of approximately $0.045 per month, equivalent to about 6% per annum. The Scheme is expected to be implemented on 18 December 2023 (if approved by shareholders).

The value of Origin at 18 December 2023 would be higher than it was at the valuation date of 30 June 2023 assuming it achieves positive earnings and pays no additional dividends.

[104] Rounded to three decimal places.

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A valuation at 18 December 2023 cannot be reliably determined in advance but one theoretical approach to aligning dates would be to "roll forward" the valuation to that date assuming a return on equity. A rate of, say, 10% would add approximately $0.40 (to the low end of the valuation range). A 6% rate in line with the additional consideration would add approximately $0.24. However, it should be noted that the actual valuation at 18 December 2023 may not necessarily produce that level of increase because actual performance may vary from the FY24 Budget and forecast long term cash flows and economic conditions may have changed.

7.3 Reasonableness

As the Scheme is fair, it is also reasonable. In any event, there are a number of other factors that support the reasonableness of the Scheme and which Origin shareholders should consider in determining whether or not to vote for or against the Scheme. These factors are set out in the following sections.

7.3.1 Premium for Control

The Scheme consideration at the time of announcement of the Scheme of $9.11 per share (based on a US$/A$ exchange rate of 0.65) represents a 56.8% premium[105] to the price at which Origin shares last traded prior to announcement of the Indicative Proposal. The premium is slightly higher (up to ~63%) when compared to prices in up to the three months prior to announcement but slightly lower compared to prices over the longer term (~54-55%):

ORIGIN – PREMIUM OVER PRE-ANNOUNCEMENT PRICES

PERIOD	ORIGIN SHARE PRICE/VWAP	PREMIUM		
		ON ANNOUNCEMENT (HEDGED)[106]	ON ANNOUNCEMENT (SPOT)[107]	US$/A$ EXCHANGE RATE OF 0.65
9 November 2022 – pre-announcement closing price	$5.81	53.4%	56.2%	56.8%
1 month prior to 9 November 2022 – VWAP	$5.60	59.0%	62.0%	62.6%
3 months prior to 9 November 2022 - VWAP	$5.76	54.7%	57.6%	58.2%
6 months prior to 9 November 2022 – VWAP	$5.94	50.2%	52.9%	53.5%
12 months prior to 9 November 2022 – VWAP	$5.88	51.5%	54.3%	54.9%

The level of the premium has also been impacted by movements in the US$/A$ exchange rate. The weakening of the Australian dollar against the US dollar in August 2023 has resulted in a slight increase in the premium based on the current exchange rate.

The premiums are well above the level of premiums typically associated with takeovers in Australia (of 20-35%) particularly in view of the absence of strategic integration benefits or synergies (other than some savings in corporate costs). However, it is important to recognise that:

- premiums for control are an outcome not a determinant of value; and
- they vary widely depending on individual circumstances.

In this case, the extent of the premium is probably attributable to the subdued market perceptions of Origin and its business outlook at the time of announcement of the Indicative Proposal on 10 November 2022. For example:

105 The premiums shown in this section differ from those set out in the Scheme Booklet as the Scheme Booklet adopts a Scheme consideration of $9.15 based on a US$/A$ exchange rate of 0.64.

106 As announced to the market by Origin on 27 March 2023, this amount differs from the $8.90 value contained in Origin's 22 February 2023 announcement due to certain hedging gains realised subsequent to that date. The effective US$/A$ exchange rate is 0.6992.

107 At the spot US$/A$ exchange rate on 24 March 2023 of 0.6645.

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- Origin's FY22 results announcement on 18 August 2022 reported:
  - consolidated statutory EBITDA of only $18 million and a net loss of $1.4 billion (following a $2.3 billion net loss in FY21); and
  - underlying EBITDA for Energy Markets of $401 million, a ~60% reduction from FY21;
- the first of Origin's public upgrades of its earnings prospects for FY23 did not occur until 19 October 2022 when EBITDA guidance for Energy Markets was increased to $500-650 million (compared to the actual FY23 EBITDA of $1.04 billion);
- the overall energy market was still in a heightened state of disarray with volatile prices and threats to the viability of energy producers and retailers. The coal price cap (which had a major impact on Eraring's earnings) and the gas price cap were not announced until December 2022. The DMO/VDO for FY24 would not be released for some months; and
- Octopus Energy was still incurring losses at an EBITDA level.

In short, the path back to normality was fraught with uncertainty.

It is impossible to reliably determine what the "unaffected" Origin share price might have been at the end of March 2023 when the Scheme was announced or what it would be now. However, it is reasonable to assume it would be well above the $5.50-6.00 level that it was trading at prior to 10 November 2023. Accordingly, the effective implied premium for control is less than it appears in the table above.

7.3.2 Alternatives

Status Quo

The status quo is a viable alternative for Origin but is not without risk or the possibility of shareholders having to invest further funds. The primary challenge for a standalone Origin is funding the potential pipeline of investment/development opportunities to participate in the energy transition that is expected to occur over the next decade. In particular, it arguably needs to secure new generation capacity to replace Eraring (and ideally more). In this context:

- Origin is an investment grade borrower with relatively low gearing of 24% and adjusted net debt/adjusted underlying EBITDA of only 1.2 times at 30 June 2023. There are no particular barriers (e.g. ESG issues) to bank and institutional debt funding of renewable assets (unlike funding new coal, oil or even gas developments);
- funding needs are likely to be spread over multiple years;
- renewable asset developments (e.g. solar, wind) do not need to be funded through direct investment. An alternative would be for Origin to underwrite long term PPAs that enable developers to secure funding for projects. However, it should be noted that, while this strategy does not directly use Origin's cash resources it does increase the level of fixed (long term) obligations and therefore does utilise "capital" or financial capacity; and
- Origin could, if necessary, obtain funding by monetising some portion of its other assets (Octopus Energy, APLNG).

Nevertheless, the potential quantum of investments is very large (particularly if Origin pursues its full ambition for renewables and storage) and it could well be that Origin will need to secure additional equity capital from shareholders.

Further, it is likely that the Origin share price would fall, at least in the short term (see Section 7.3.3). At the same time, not implementing the Scheme would preserve the ability of Origin shareholders to realise a change of control premium in the future once the energy transition is further progressed although:

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- there are relatively few potential acquirers that have the scale and financial capacity to acquire Origin (see below); and
- there is no guarantee that there would be a change of control event in the foreseeable future (or at least within a shareholder's investment horizon).

Other Acquirers

In deciding whether to vote for or against the Scheme, shareholders need to have regard to the alternatives that are realistically available to them. It is conceivable that a third party could make a higher offer for Origin:

- the Scheme has highlighted the strategic value of Origin's business operations and investments. Origin could be an attractive acquisition for a number of parties; and
- there are no structural impediments to an alternative acquirer:
  - the Consortium has no shareholding in Origin. There is only one shareholder with a relevant interest of more than 10% of Origin's shares (AusSuper) but it is considered an institutional investor;
  - while there are the usual exclusivity provisions in the scheme implementation deed, there is a fiduciary carve out and Origin can respond to unsolicited proposals from other parties (subject to a disclosure obligation); and
  - the reimbursement fee of $151 million payable by Origin (under certain circumstances) is not material having regard to the standalone value of Origin.

On the other hand:

- the extent of the premium already offered under the Scheme may be a deterrent;
- the Consortium has a matching right in respect of any superior proposal received by Origin; and
- the number of realistic acquirers of Origin is relatively limited because of the size (>$18 billion) and diverse asset base of Origin. There is unlikely to be a single party with a strong interest in acquiring Energy Markets, 20% of Octopus Energy and 27.5% of APLNG. It is more than likely any alternative offer would need to take the form of some kind of consortium bid (similar to the Consortium) where each party is interested in a specific asset. However, successful consortium bids are relatively rare and there are typically considerable challenges to reaching agreement between multiple parties and significant complexities in execution.

  Further:

  - it is not apparent that there are many obvious acquirers for a 27.5% interest in APLNG. It is a semi-passive stake in a mature asset. While the shareholding does bring with it upstream operatorship (and a board seat), ConocoPhillips has a 47.5% interest in the joint venture and control of downstream activities. ConocoPhillips' recent purchase of a 10% interest from Origin and a 2.49% interest from MidOcean (conditional on the Scheme being implemented) does not suggest it wants to materially increase its holding beyond 50%; and
  - there are no local industry participants capable of acquiring the Energy Markets business. Acquirers are therefore limited to financial buyers interested in the sector or offshore industry participants (who have, in the past, acquired Energy Australia and Alinta Energy).

Since announcement of the Indicative Proposal on 10 November 2022, no superior proposal has been received and, at the date of this report, the Origin directors are not aware of any superior proposal that is likely to emerge.

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The meeting at which shareholders will vote on the Scheme is scheduled for 23 November 2023. This is ample time for an alternative offeror to come forward with a superior proposal (particularly given that the Indicative Proposal was announced in November 2022).

In summary, while it is conceivable that a third party could make a higher offer for Origin, it is unlikely in the circumstances. In Grant Samuel's view, it would be imprudent for shareholders to vote against the Scheme in the hope of a higher offer subsequent to the Scheme meeting.

7.3.3 Share Trading in the Absence of any Offer/Proposal

The Scheme enables shareholders to realise their investment in Origin at a cash price which incorporates a premium for control and takes into account the inherent value of Origin's highly strategic platform, the potential upside from its investment in Octopus Energy and reflects the synergies available to any acquirer.

Since late September 2023 (and particularly subsequent to the Consortium being granted ACCC authorisation on 10 October 2023), the Origin share price has traded at above the cash consideration that will be received by shareholders of $8.78 per share. Shareholders can, therefore, decide to sell their shares on market at a price in excess of the cash consideration. However shareholders who decide to sell their Origin shares on market will:

- incur transaction costs (e.g. brokerage); and
- not benefit from any subsequent increase in the consideration that may come from the Consortium (or a higher offer from a third party).

In the absence of the Scheme or a similar transaction, the share price would be expected to fall. It is likely that, under current market conditions (and current commodity prices) and in the absence of the Scheme or a similar transaction (or speculation as to one), Origin shares would trade at prices below the cash consideration that will be received by shareholders if the Scheme is implemented (of $8.78), at least in the short term.

Exactly where is speculative. As discussed in Section 7.3.1, there are good reasons for believing Origin shares would now trade at levels well above the $5.50-6.00 that they were trading in the months preceding the announcement on 10 November 2022. On the other hand, it is necessary to exercise a degree of caution:

- while AGL Energy's share price has risen by approximately 42% since November 2022 (and since March 2023) it has a very different exposure to generation assets. Its coal-fired power plants, which have advantageous coal supply arrangements and are expected to continue operating for another decade (at least), produce over 100% of customer demand and AGL Energy sells excess electricity into the NEM. It is a prime beneficiary of higher wholesale electricity prices. Origin does not enjoy the same benefits so it is unlikely that its share price would have increased to the same extent;
- Origin's earnings have been materially assisted by the performance of APLNG but this may have peaked in FY23 (in the absence of a sustained uplift in oil prices); and
- in conjunction with the release of its FY23 results, Origin flagged a decline in electricity gross profits in FY25 as tariffs will reflect the lower wholesale prices in FY24 and generation earnings will be adversely impacted by the ending of the coal price cap in June 2024.

Annexure 1. Independent Expert's Report *continued*

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7.3.4 Other Matters

Special Dividend

The Scheme allows Origin to pay a fully franked special dividend of $0.39 per share to shareholders subject to certain conditions. The final decision regarding the payment of any special dividend will not be made until after the Scheme meeting (subject to the Scheme being approved).

In Grant Samuel's opinion, it is not appropriate for the assessment of the Scheme to either:

- factor into the value of Origin the value of accumulated franking credits; or
- include in the value of the consideration the value of the credits attached to the special dividend.

The reasons are manifold but not the least of these is that the franking credits do not have value to a company per se but only have value to the shareholders of a company (when attached to dividends) and the value of those credits to each shareholder varies depending on their individual circumstances. Nevertheless, it needs to be recognised that, where part of a takeover offer comprises a franked dividend, some shareholders may realise additional value from the franking credits (i.e. they are better off in after tax terms than they would have been had the same amount been paid as part of the acquisition price and been received as a capital gain).

The following table sets out illustrative calculations for a variety of shareholder types:

SPECIAL DIVIDEND – FRANKING CREDIT BENEFIT ANALYSIS

	FOREIGN RESIDENT SHARE-HOLDER[108]	AUSTRALIAN RESIDENT INDIVIDUAL[109]			AUSTRALIAN SUPER FUND	AUSTRALIAN CORPORATE
		45% MARGINAL RATE	30% MARGINAL RATE	0% MARGINAL RATE		
$0.39 received as a fully franked dividend						
Dividend	0.39	0.39	0.39	0.39	0.39	0.39
Franking credit	-	0.17	0.17	0.17	0.17	0.17
Gross taxable income	**0.39**	**0.56**	**0.56**	**0.56**	**0.56**	**0.56**
Tax payable	t	(0.26)	(0.18)	-	(0.08)	(0.17)
Tax credit	-	0.17	0.17	0.17	0.17	0.17
Net tax (payable)/benefit	**-**	**(0.09)**	**(0.01)**	**0.17**	**0.08**	**-**
Net after tax income	**0.39 - t**	**0.30**	**0.38**	**0.56**	**0.47**	**0.39**
$0.39 received as a capital gain						
Gain	0.39	0.39	0.39	0.39	0.39	0.39
Tax payable	t	(0.09)	(0.06)	-	(0.04)	(0.12)
Net after tax income	**0.39 - t**	**0.30**	**0.33**	**0.39**	**0.35**	**0.27**
Net benefit of dividend	**-**	**-**	**0.05**	**0.17**	**0.12**	**0.12**

The cash consideration payable to shareholders under the Scheme will be reduced by the amount of any special dividend declared by Origin prior to implementation of the Scheme. If a special dividend is declared, depending on the individual circumstances of shareholders, some may realise additional value from the franking credits (i.e. they would be better off in after tax terms than they would have been had the same amount been paid as part of the acquisition price and been received as a capital gain). Primarily, the benefits from franked dividends (relative to capital gains) flow to Australian resident shareholders on lower tax rates (e.g. superannuation funds). There is no benefit to foreign resident shareholders.

[108] Assumes the same tax rate applies to Australian dividend income and an Australian capital gain for a foreign resident shareholder. As tax rates will vary for each foreign resident shareholder, the tax payable by a foreign resident shareholder has been shown as "t" for the purposes of this analysis. Foreign resident CGT withholding tax of 12.5% can also apply in certain circumstances.

[109] Assumes the shares have been held for more than 12 months and that the Medicare levy is 2%.

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Taxation Consequences

If the Scheme is implemented, shareholders will be treated as having disposed of their Origin shares for tax purposes. A capital gain or loss may arise on disposal depending on the cost base for the Origin shares, the length of time held, whether the shares are held on capital or revenue account and whether the shareholder is an Australian resident for tax purposes.

Details of the Australian taxation consequences for Origin shareholders who are Australian resident individuals and hold their shares on capital account are set out in Section 8 of the Scheme Booklet. Shareholders should consult their own professional adviser in relation to the taxation consequences.

Transaction Costs

If the Scheme is not approved by shareholders or otherwise not implemented, Origin has estimated that it will meet costs (including legal and other adviser's fees as well as printing and mailing costs) of $77.7 million ($0.045 per share). In certain circumstances, Origin will also be liable to pay the Consortium a $151 million break fee. If the Scheme is implemented, all transaction costs will effectively be borne by the Consortium.

7.4 Shareholder Decision

Grant Samuel has been engaged to prepare an independent expert's report setting out whether in its opinion the Scheme is in the best interests of shareholders and to state reasons for that opinion. Grant Samuel has not been engaged to provide a recommendation to shareholders in relation to the Scheme, the responsibility for which lies with the directors of Origin.

In any event, the decision whether to vote for or against the Scheme is a matter for individual shareholders based on each shareholder's views as to value and business strategy, their expectations about future economic and market conditions and their particular circumstances including risk profile, liquidity preference, investment strategy, portfolio structure and tax position. In particular, taxation consequences may vary from shareholder to shareholder. If in any doubt as to the action they should take in relation to the Scheme, shareholders should consult their own professional adviser.

Similarly, it is a matter for individual shareholders as to whether to buy, hold or sell shares in Origin. This is an investment decision upon which Grant Samuel does not offer an opinion and is independent of a decision on whether to vote for or against the Scheme. Shareholders should consult their own professional adviser in this regard.

Annexure 1. Independent Expert's Report *continued*

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8 Qualifications, Declarations and Consents

8.1 Qualifications

The Grant Samuel group of companies provide corporate advisory services in relation to mergers and acquisitions, capital raisings, debt raisings, corporate restructurings and financial matters generally. The primary activity of Grant Samuel & Associates Pty Limited is the preparation of corporate and business valuations and the provision of independent expert's reports in connection with mergers and acquisitions, takeovers and capital reconstructions. Since inception in 1988, Grant Samuel & Associates Pty Limited and its related companies have prepared more than 585 public independent expert and appraisal reports.

The persons responsible for preparing this report on behalf of Grant Samuel are Stephen Wilson MCom (Hons) CA SF Fin and Jaye Gardner BCom LLB (Hons) CA SF Fin GAICD. Each has a significant number of years of experience in relevant corporate advisory matters. Daniel Moore BCom BEng CFA, Shaun Yu BBA CFA, Mitchell Skene BEng (Hons) BCom, Mathew Hildebrand BProfAccg BProfPrac, Chris Watson BFin BSc and Vivek Kashyap BCom BSc assisted in the preparation of the report. Each of the above persons is a representative of Grant Samuel pursuant to its Australian Financial Services Licence under Part 7.6 of the Corporations Act.

8.2 Disclaimers

It is not intended that this report should be used or relied upon for any purpose other than as an expression of Grant Samuel's opinion as to whether the Scheme is in the best interests of shareholders. Grant Samuel expressly disclaims any liability to any Origin shareholder who relies or purports to rely on the report for any other purpose and to any other party who relies or purports to rely on the report for any purpose whatsoever.

Grant Samuel has had no involvement in the preparation of the Scheme Booklet issued by Origin and has not verified or approved any of the contents of the Scheme Booklet. Grant Samuel does not accept any responsibility for the contents of the Scheme Booklet (except for this report).

8.3 Independence

Grant Samuel and its related entities do not have at the date of this report, and have not had within the previous two years, any business or professional relationship with Brookfield Corporation, Brookfield Asset Management Ltd and each of their respective affiliates or MidOcean or any financial or other interest that could reasonably be regarded as capable of affecting its ability to provide an unbiased opinion in relation to the Scheme.

Grant Samuel had no part in the formulation of the Scheme. Its only role has been the preparation of this report.

Grant Samuel will receive a fixed fee of $2.25 million for the preparation of this report. This fee is not contingent on the conclusions reached or the outcome of the Scheme. Grant Samuel's out of pocket expenses in relation to the preparation of the report will be reimbursed. Grant Samuel will receive no other benefit for the preparation of this report.

Grant Samuel considers itself to be independent in terms of Regulatory Guide 112 issued by the ASIC on 30 March 2011.

8.4 Declarations

Origin has agreed that it will indemnify Grant Samuel and its employees and officers in respect of any liability suffered or incurred as a result of or in connection with the preparation of the report. This indemnity will not apply in respect of the proportion of any liability found by a court to be primarily caused

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by any conduct involving negligence, fraud, wilful misconduct, dishonesty or reckless act or omission by Grant Samuel. Origin has also agreed to indemnify Grant Samuel and its employees and officers for time spent and reasonable legal costs and expenses incurred in relation to any inquiry or proceeding initiated by any person. Any claims by Origin are limited to an amount equal to the fees paid to Grant Samuel. Where Grant Samuel or its employees and officers are found to have been negligent, fraudulent, dishonest or to have engaged in wilful misconduct or a reckless act or omission, Grant Samuel shall bear the proportion of such costs caused by its action.

Advance drafts of this report were provided to Origin and its advisers. Certain changes were made to the drafting of the report as a result of the circulation of the draft report. There was no alteration to the methodology, evaluation or conclusions as a result of issuing the drafts.

8.5 Consents

Grant Samuel consents to the issuing of this report in the form and context in which it is to be included in the Scheme Booklet to be sent to shareholders of Origin. Neither the whole nor any part of this report nor any reference thereto may be included in any other document without the prior written consent of Grant Samuel as to the form and context in which it appears.

8.6 Other

The accompanying letter dated 18 October 2023 and the Appendices form part of this report.

Grant Samuel has prepared a Financial Services Guide as required by the Corporations Act. The Financial Services Guide is set out at the beginning of this report.

GRANT SAMUEL & ASSOCIATES PTY LIMITED

18 October 2023

Grant Samuel & Associates

Annexure 1. Independent Expert's Report *continued*

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APPENDIX 1

GLOSSARY OF ABBREVIATIONS AND TECHNICAL TERMS

The following terms used in this report (including the summary letter, the full report and the appendices) have the meanings set out below:

ORIGIN – GLOASSARY OF ABBREVIATIONS AND TECHNICAL TERMS

ABBREVIATION	DEFINITION
1HYXX	the six months ended 31 December 20XX (i.e. 1HY23 is the six months ended 31 December 2023)
2C	the best estimate of contingent resources
2HYXX	the six months ended 30 June 20XX (i.e. 2HY23 is the six months ended 30 June 2023)
2P	the sum of proved and probable reserves. Denotes the best estimate of reserves
3P	the sum of proved and probable reserves. Denotes the high estimate of reserves.
$ or A$	Australian dollars
ACCC	Australian Competition and Consumer Commission
ADGSM	Australian Domestic Gas Security Mechanism
adjusted net debt	net debt excluding cash held by Origin to fund APLNG-related operations and adjusted to take into account the effect of foreign exchange hedging transactions on Origin's foreign currency debt obligations
adjusted net debt to adjusted underlying EBITDA ratio	adjusted net debt divided by adjusted underlying EBITDA over the relevant rolling 12 month period
adjusted underlying EBITDA	Origin's underlying EBITDA less Origin's share of APLNG underlying EBITDA plus net cash flow (i.e. cash dstribution) from APLNG over the relevant 12 month period
ASIC	Australian Securities & Investments Commission
ASX	Australian Securities Exchange
bbl	barrel of oil
boe	barrel of oil equivalent
CAPM	Capital Asset Pricing Model
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CGT	capital gains tax
Corporations Act	*Corporations Act 2001* (Cth)
CSG	coal seam gas
DCF	discounted cash flow
DMO/VDO	Default Market Offer (applies in New South Wales, South East Queensland, and South Australia)/ Victorian Default Offer (applies in Victoria)
EBIT	earnings before net interest, tax, results of equity accounted investees and items excluded from underlying profit
EBITDA	earnings before net interest, tax, depreciation and amortisation, results of equity accounted investees and items excluded from underlying profit
EPG	energy price guarantee
ESG	environmental, social and governance
EV	electric vehicle
FEED	front end engineering design
FID	final investment decision
FOB	free on board
free cash flow	net cash from operating and investing activities (excluding major growth projects) less interest paid
FUM	funds under management

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ABBREVIATION	DEFINITION
FYXX	financial year end 30 June 20XX (i.e. FY23 is the year ended 30 June 2023)
gearing ratio	adjusted net debt divided by adjusted net debt plus total equity
GGS	gas gathering system
GJ	gigajoule
GSA	gas sales agreement
GW	gigawatt
interest cover	EBIT divided by net interest expense
items excluded from underlying profit	items that do not align with the manner in which the CEO reviews the financial and operating performance of the business which are excluded from underlying profit
JCC	Japan Crude Cocktail
JKM	Platts Japan/Korea Marker, the LNG benchmark price assessment for spot physical cargoes delivered ex-ship into Japan, South Korea, China and Taiwan
km	kilometres
KW	kilowatt
KWh	kilowatt hours
LGC	large scale generation certificate
LNG	liquified natural gas
LPG	liquified petroleum gas
m^3	cubic metres
mm	millimetres
Mbbl	millions of barrels of oil
Mboe	millions of barrels of oil equivalent
Mbtu	millions of British thermal units
Moody's	Moody's Investor Services
MRCPS	Mandatorily Redeemable Cumulative Preference Shares
MW	megawatt
MWh	megawatt hours
Mt	million tonnes
Mtpa	million tonnes per annum
nd	not disclosed
nmc	not a meaningful calculation
NPAT	net profit after tax
NPV	net present value
NTA	net tangible assets, which is calculated as net assets less intangible assets, where intangible assets include right-of-use assets
Ofgem	Office of Gas and Electricity Markets (in the United Kingdom)
PAYG	pay-as-you-go
PJ	petajoules of natural gas production
PPA	Power Purchase Agreement
ToP	take or pay
Tbtu	trillion British thermal units
TJ	terrajoules of natural gas
TTF	Title Transfer Facility, a pricing location in the Netherlands which has become the most liquid pricing location in Europe and therefore often serves as a proxy for the overall European LNG import market
TWh	terrawatt hour
underlying EBIT	EBIT plus Origin's share of equity accounted investees NPAT
underlying EBITDA	EBITDA plus Origin's share of equity accounted investees EBITDA
underlying profit	NPAT before items excluded from underlying profit

Annexure 1. Independent Expert's Report *continued*

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ABBREVIATION	DEFINITION
underlying return on equity	underlying NPAT attributable to Origin shareholders/average equity attributable to Origin shareholders. Average equity attributable to Origin shareholders is calculated as a simple average over the relevant period
underlying revenue	Reported revenue plus Origin's share of equity accounted investees revenue
US$ or US dollars	United States dollars
VWAP	volume weighted average price
WACC	weighted average cost of capital

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APPENDIX 2

BROKER CONSENSUS FORECASTS

Origin has not publicly released earnings forecasts for FY24 or subsequent years. Accordingly, the prospective multiples implied by the valuation of Origin in the Grant Samuel report are based on median broker forecasts.

Set out below is a summary of broker forecasts that provide research coverage of Origin in the Australian sharemarket:

ORIGIN – BROKER FORECASTS ($ MILLIONS)

BROKER	DATE	FY24 REVENUE	FY24 UNDERLYING EBITDA	FY24 UNDERLYING EBIT
Broker 1	17 August 2023	16,471	3,214	1,734
Broker 2	12 September 2023	17,281	3,383	1,836
Broker 3	17 August 2023	14,545	3,611	2,178
Broker 4	17 August 2023	-	3,384	1,823
Broker 5	18 August 2023	16,448	3,190	1,713
Minimum		*14,545*	*3,190*	*1,713*
Maximum		*17,281*	*3,611*	*2,178*
Median		***16,460***	***3,383***	***1,826***
Average		***16,186***	***3,356***	***1,857***

Source: Brokers' reports, Grant Samuel analysis

When reviewing this data the following should be noted:

- the forecasts presented above represent the latest available broker forecasts for Origin;
- the brokers presented are those who have published research on Origin following the release of Origin's FY23 results on 17 August 2023;
- as far as is possible to identify from a review of the brokers' reports, Grant Samuel believes that each of the brokers' earnings forecasts have been prepared on a consistent basis and do not incorporate any one-off adjustments or non-recurring items; and
- Grant Samuel is aware of seven other brokers that have historically followed Origin. These brokers have either ceased coverage (three brokers), are restricted (two brokers) or have not released any research on Origin that includes earnings forecasts subsequent to the release of Origin's FY23 results on 17 August 2023 (two brokers).

The median broker's forecasts are sufficiently close to Origin's FY24 Budget to be useful for analytical purposes.

Only three of the brokers provided forecasts by business operation/investment. These forecasts were not sufficiently close to Origin's FY24 Budget to be useful for analytical purposes so have not been used for the purposes of Grant Samuel's analysis.

Annexure 1. Independent Expert's Report *continued*

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APPENDIX 3

SELECTION OF DISCOUNT RATE

1 Summary

The following discount rates have been selected by Grant Samuel to apply to the forecast nominal ungeared after tax cash flows for Origin's major businesses:

ORIGIN - DISCOUNT RATES

BUSINESS OPERATION	DISCOUNT RATE
Energy Markets	8.5-9.0%
Octopus Energy	9.5-10.0%
APLNG and certain Other Integrated Gas assets	10.0-11.0%

Different discount rates have been selected for each business unit because they have differing risk profiles. The cash flows of Energy Markets and APLNG are denominated in Australian dollars while the cash flows of Octopus Energy are denominated in British pounds. The cash flows of APLNG are denominated in Australian dollars for convenience but could equally be denominated in US dollars. However, the discount rate would be the same as risk free rates are essentially the same in both countries.

2 Overview

The valuation of an asset or business involves estimating the discount rates that may be utilised by potential acquirers of that asset in assessing the net present value of expected future cash flows. There is a body of theory from which models that generate a cost of capital have been developed but the selection of a discount rate is still fundamentally a matter of judgement. Despite the widespread acceptance and application of various theoretical models, it is Grant Samuel's experience that many companies rely on less sophisticated approaches. Many businesses and investors use relatively arbitrary "hurdle rates" which do not vary significantly from investment to investment or change significantly over time despite movements in interest rates. Valuation is an estimate of what real world buyers and sellers of assets would pay and must therefore reflect parameters that will be applied in practice even if they are not theoretically correct. In other words, the objective is to estimate a discount rate that generates a value for the asset that is, as far as practically possible, consistent with market prices, whether that rate fits a particular theory or not. Grant Samuel considers the rates selected to be discount rates that acquirers would use in practice.

The discount rate selected represents an estimate of the weighted average cost of capital appropriate for these businesses based on a weighted average of the cost of the two primary funding sources, equity and debt. This is the relevant rate to apply to ungeared cash flows. There are three main elements to the determination of an appropriate WACC:

- cost of equity;
- cost of debt; and
- debt/equity mix.

The cost of equity has initially been derived, in the first instance, from application of the capital asset pricing model methodology. The Capital Asset Pricing Model ("CAPM") is probably the most widely accepted and used methodology for determining the cost of equity capital. There are more sophisticated multivariate models which utilise additional risk factors but these models have not achieved any significant degree of usage or acceptance in practice. However, the cost of equity is not an observable number that can ever be "discovered" or "proved" (no matter how many studies are conducted). Estimates are derived from models or theories but these do no more than infer a rate from other data using one particular theory

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about the way in which security prices behave. The usefulness of any estimate therefore depends on the efficacy of the theory and the robustness of the data. While the theory underlying the CAPM is rigorous the practical application is subject to shortcomings and limitations and the results of applying the CAPM model should only be regarded as providing a general guide. There is a tendency to regard the rates calculated using CAPM as inviolate. To do so is to misunderstand the limitations of the model. The CAPM involves:

- a model that has questionable empirical validity;
- simplifying assumptions and approximations;
- the use of historical data as a proxy for estimates of forward looking parameters;
- data of dubious statistical reliability; and
- unresolved issues (such as the impact of dividend imputation).

The cost of debt represents an estimate of the expected future returns required by debt providers to each business over the period of the cash flows but, even for something as relatively straightforward as interest rates, there are complex measurement issues and judgements to be made.

The debt/equity mix represents an appropriate level of gearing, stated in market value terms, for the business over the forecast period. However, it should be recognised that selection of the ratio involves a significant degree of simplification and a substantial level of judgement.

In summary, it is important not to over-engineer the process or to credit the output of models with a precision they do not warrant. It is easy to be captured by the accumulation of data and its apparent sophistication. A mechanistic application of formulae derived from theory can obscure the reality that any output from cost of capital models should be treated as a broad guide rather than an absolute truth.

The following sections set out the basis for Grant Samuel's determination of the discount rates for Origin's key assets together with a discussion of the factors that limit the accuracy and reliability of the estimates. Grant Samuel's approach involves:

- derivation of a "calculated WACC" by applying the CAPM/WACC methodology using current market data points;
- consideration of other methodologies, data and factors (e.g. the Gordon Growth Model); and
- forming a judgement as to a commercially sensible discount rate.

3 Definition and Limitations of the CAPM and WACC

The CAPM provides a theoretical basis for determining a discount rate that reflects the returns required by diversified investors in the equity of the company (which is one component of the total capital funding structure). CAPM is based on the assumption that investors require a premium for investing in equities rather than in risk free investments (such as Australian Government Bonds and United Kingdom Government Bonds). The premium is commonly known as the market risk premium and notionally represents the premium required to compensate for investment in the equity market in general.

The risks relating to a company or business can be divided into specific risks and systematic risks. Specific risks are risks that are specific to a particular company or business and are unrelated to movements in equity markets generally. While specific risks will result in actual returns varying from expected returns, it is assumed that diversified investors require no additional returns to compensate for specific risk, because the net effect of specific risks across a diversified portfolio will, on average, be zero. Portfolio investors can diversify away all specific risk.

Annexure 1. Independent Expert's Report *continued*

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However, investors cannot diversify away the systematic risk of a particular investment or business operation. Systematic risk is the risk that the return from an investment or business operation will vary with the market return in general. If the return on an investment was expected to be completely correlated with the return from the market, then the return required on the investment would be equal to the return required from the market (i.e. the risk free rate plus the market risk premium).

Systematic risk is affected by the following factors:

- financial leverage: additional debt will increase the impact of changes in returns on underlying assets and therefore increase systematic risk;
- cyclicality of revenue: projects and companies with cyclical revenues will generally be subject to greater systematic risk than those with non-cyclical revenues; and
- operating leverage: projects and companies with greater proportions of fixed costs in their cost structure will generally be subject to more systematic risk than those with lesser proportions of fixed costs.

CAPM postulates that the return required on an investment or asset can be estimated by applying to the market risk premium a measure of systematic risk described as the beta factor. The beta for an investment reflects the covariance of the return from that investment with the return from the market as a whole. Covariance is a measure of relative volatility and correlation. The beta of an investment represents its systematic risk only. It is not a measure of the total risk of a particular investment. An investment with a beta of more than one is riskier than the market as a whole and an investment with a beta of less than one is less risky. The discount rate appropriate for an investment which involves zero systematic risk would be equal to the risk free rate.

The formula for deriving the cost of equity using CAPM is as follows:

Re = Rf + Beta (Rm – Rf)

Where:

Re = the cost of equity capital;
Rf = the risk free rate;
Beta = the beta factor;
Rm = the expected market return; and
Rm - Rf = the market risk premium.

The beta for a company or business operation is normally estimated by observing the historical relationship between returns from the company or comparable companies and historical returns from the market in general. The market risk premium is estimated by reference to the historical long run premium earned on equity investments by comparison with the return on risk free investments.

The formula conventionally used to calculate a WACC under a "classical tax system"[1] is as follows:

WACC = (Re x E/V) + (Rd x (1-t) x D/V)

Where:

E/V = the proportion of equity to total value (where V = D + E);
D/V = the proportion of debt to total value;
Re = the cost of equity capital;
Rd = the cost of debt capital; and
t = the corporate tax rate

[1] A tax system not featuring dividend imputation or other variants such as advance corporation tax (i.e. dividends are paid out of after tax income and are subject to full tax in the hands of investors).

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The models, while simple, are based on a sophisticated and rigorous theoretical analysis. Nevertheless, application of the theory is not straightforward and the discount rate calculated should be treated as no more than a general guide. The reliability of any estimate derived from the model is limited. Some of the issues are discussed below.

Overall Validity of the Model

The CAPM has been subject to intense criticism over many years with numerous empirical studies demonstrating that it does not accurately portray movements in individual share prices and has limited explanatory power. There are also competing formulations (such as the Sharpe-Lintner, Black, Brennan-Lally, Officer or Monkhouse) which can give different results.

In addition:

- the CAPM is a single period model rather than one developed specifically for valuing long term cash flows. It has been adapted to a multi-period model (usually annually) to calculate the value of long term cash flows. Theoretically, the analysis should use a forecast of each of the parameters for each period in question (annual is no more correct than any other period) but, typically, a long term average is assumed for the sake of practicality;
- the CAPM assumes investors are diversified and therefore are not (and should not be) concerned with the specific risk of a particular investment. Behavioural economics suggests while this may be theoretically sensible, it doesn't actually reflect how investors behave or how they price risk; and
- it ignores all investor taxes, which may or may not have an impact in the real world. Even where models do attempt to reflect taxation effects, adjustments are usually based on assumed averages which may not be accurate or appropriate given the diversity of individual tax positions.

Risk Free Rate

Theoretically, the risk free rate used should be an estimate of the risk free rate in each future period (i.e. the one year spot rate in that year if annual cash flows are used). There is no official "risk free" rate but, in developed economies such as Australia, the United Kingdom or the United States, rates on government securities are typically used as an acceptable substitute. In practice, the long term government bond rate is used as the most practical estimate (even though rates for individual years could be interpolated). However, it should be recognised that the yield to maturity of a long term bond is only an average rate and where the yield curve is strongly positive (i.e. longer term rates are significantly above short term rates) the adoption of a single long term bond rate has the effect of reducing the net present value where the major positive cash flows are in the initial years. The long term bond rate is therefore only an approximation.

The ten year bond rate is a widely used and accepted benchmark for the risk free rate. Where the forecast period exceeds ten years, an issue arises as to the appropriate bond to use. While longer term bond rates are available, the ten year bond market is the deepest long term bond market in Australia and is a widely used and recognised benchmark. There is a limited market for bonds of more than ten years although the Australian government has recently issued 30 year bonds in volume. In the United States, there are deeper markets for longer term bonds. The 30 year bond rate would be a better benchmark for long term cash flows. However, long term rates accentuate the distortions of the yield curve on cash flows in early years. In any event, a single long term bond rate matching the term of the cash flows is no more theoretically correct than using a ten year rate. More importantly, the ten year rate is the standard benchmark used in practice.

Where cash flows are less than ten years in duration the opposite issue arises. An argument could be made that shorter term bond rates should be used in determining the discount rate for these assets. While Grant Samuel believes this is a legitimate argument, an adjustment may give a misleading impression of precision for the whole methodology.

Annexure 1. Independent Expert's Report *continued*

In practice, Grant Samuel believes acquirers would use a common rate. The ten year bond rate can be regarded as an acceptable standard risk free rate for medium to long term cash flows, particularly given its wide use.

Market Risk Premium

The market risk premium (*Rm - Rf*) represents the "extra" return that investors require to invest in equity securities as a whole over risk free investments. This is an "ex-ante" concept. It is the expected premium and, as such, it is not an observable phenomenon. There is no generally accepted approach to estimating a forward looking market risk premium and attempts to develop one (e.g. through surveys) have yielded unreliable and highly variable results. Accordingly, the historical premium is used as the best available proxy measure. The premium earned historically by equity investments is usually calculated over a time period of many years, typically at least 30 years. This long time frame is used on the basis that short term rates of return are highly volatile and that a long term average return would be a fair indication of what most rational investors would expect to earn in the future from an investment in equities with a five to ten year time frame.

In the absence of controls over capital flows, differences in taxation and other regulatory and institutional differences, it is reasonable to assume that the market risk premium should be approximately equal across markets which exhibit similar risk characteristics after adjusting for the effects of expected inflation differentials. Accordingly, it is reasonable to assume similar market risk premiums for first world countries enjoying political economic stability, such as Australia, New Zealand, the United States, Japan, the United Kingdom and various western European countries.

In the United States, it is generally postulated that the historical premium is in the range of 4-6% but there are widely varying assessments (from 3% to 9%). For example, Damodaran's latest estimate (1 August 2023) is 4.4%[2]. Australian studies have been more limited and mainly derive from the Officer Study[3] which was based on data for the period 1883 to 1987 (prior to the introduction of dividend imputation in Australia) and indicated that the long run average premium was in the order of 8% using an arithmetic average but subject to significant statistical error. More recently, the Officer Study data has been updated to 2017[4] with the long term average declining to around 6.5%. Due to concerns about the earlier market data, emphasis is now placed on the average risk premium since 1958, which is estimated to be 6.0% ignoring the impact of imputation (where imputation credits are valued at 100%, the market risk premium over the same period is 6.9%).

However, even the measurement or use of long term historical returns is subject to considerable debate:

- there are multiple different outcomes for the historical market risk premium depending on time period, basis (over long term bonds or shorter term bills), method (arithmetic or geometric averages) and estimation approach;
- the measures of historical returns typically have extremely high statistical error measures. For a, say, 6% average measured premium the "true" figure will typically lie in a range of 2-10% at a 95% confidence level;
- longer term averages are inflexible and tends to fail when market conditions change materially. Market volatility is the reality of financial markets. Clearly, in the immediate aftermath of the global financial crisis (which commenced in late 2007), investors' perceptions of risk and the pricing of that risk rose significantly and rapidly. This can be demonstrated by the observable data from the pricing

2 Source: Damodaran Online. Published by Aswath Damodaran, a professor at the Stern School of Business at NYU (stern.nyu.edu)
3 R.R. Officer in Ball, R., Brown, P., Finn, F. J. & Officer, R. R., "Share Market and Portfolio Theory: Readings and Australian Evidence" (second edition), University of Queensland Press, 1989 ("Officer Study").
4 S. Bishop, A. Carlton and T. Pan, "Market Risk Premium: Australian Evidence", Research Paper prepared for the Chartered Accountants Australia and New Zealand Business Valuation Specialists Conference, August 2018, Department of Applied Finance, Macquarie University. This paper is based on earlier work by J.C. Handley in 2012 and T. Brailsford, J.C. Handley and K. Maheswaran in 2008.

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of lowly rated corporate bonds (which sit on the risk spectrum between risk free assets and equities) over this period. Yields to maturity rose dramatically in 2008 and 2009. However, long term average historical data will not flex to reflect these changes – an average of, say, 50 years of data will not move much even with 2-3 years of "new" data;

- the longer the period of measurement (and therefore the greater the "robustness" of the average) the more likely it is to reflect economic and market circumstances that have little resemblance to the present (is it really likely that investor returns prior to World War II are relevant to the kinds of returns investors expect today?); and
- the historical data also contains a logical contradiction – when the equity return required by investors is lower than the returns implied by market prices, investors respond by bidding the price of equities higher. A rising market translates to a higher measured historical risk premium, contrary to the lower return expectations driving the upwards movement in prices.

Beta Factor

The beta factor is a measure of the expected covariance (i.e. volatility and correlation of returns) between the return on an investment and the return from the market as a whole. The expected beta factor cannot be observed. The conventional practice is to calculate an historical beta from past share price data and use it as a proxy for the future but it must be recognised that:

- the expected beta is not necessarily the same as the historical beta. A company's relative risk does change over time and measured historical betas can often reflect structural changes in an industry or in the company over the time period rather than its inherent correlation to the market;
- the starting point is normally to measure the historical correlation of a company's share price against its local market index. However:
    - the composition of indices varies substantially between markets. For example, the Australian index is dominated by banks and resources compared to other markets; and
    - where a company is extensively traded by global investors it can be argued that the regression against an index such as the Morgan Stanley Capital International Developed World Index ("MSCI"), an international equities market index that is widely used as a proxy for the global stockmarket as a whole, is more relevant but it:
        - depends on who the "price setting" investors are;
        - can give materially different results to measures based on the local index; and
        - raises a related issue as to whether a global risk premium is also appropriate and, if so, what that global premium is;
- the appropriate beta is the beta of the company being valued rather than the beta of the acquirer (which may be in a different business with different risks). Betas for the particular subject company may be utilised but these are seldom regarded as reliable enough (and may not be available if the company is not listed). Accordingly, it is common practice to utilise betas for comparable companies and sector averages (particularly as those may be more reliable). However, none of these other companies is likely to be exactly comparable to the subject entity (e.g. it may operate in other jurisdictions with different economic drivers, regulatory regimes and benchmark index composition). In any event, the comparable company data seldom yields a tight and consistent range from which a precise estimate can be derived. These issues are exacerbated by Origin's beta effectively being an amalgam of two (arguably three) businesses with very different risk profiles (energy retailing and generation as well as gas/LNG production); and
- there are very significant measurement issues with betas that mean only limited reliance should be placed on such statistics. There is no "correct" beta. For example:

Annexure 1. Independent Expert's Report *continued*

- over the last four years Origin's beta as measured by the Securities Industry Research Centre of Asia-Pacific ("SIRCA") has varied between 1.26 and 2.05 and was measured at 1.61 at 31 March 2023 (in all cases, excluding March 2020[5]);
- SIRCA's latest estimate of 1.61 (excluding March 2020) compares to 0.25 measured by MSCI Barra Inc. ("Barra");
- the standard error of SIRCA's estimate for Origin at March 2023 was 0.3. This means that even at a 68% confidence level, the "true" beta is somewhere between 1.3 and 1.9 (and for 95% confidence is between 1.0 and 2.2); and
- estimates of "predicted" betas made by providers such as Barra can be significantly different to the historically calculated beta. In the case of Origin, its predicted beta is around 0.7-0.8 compared to its historical beta (as measured by Barra) of 0.3.

Debt/Equity Mix

The relevant measure of the debt/equity mix is based on market values (not book values). As beta is normally considered in the context of comparable companies as well as the subject company, the debt/equity mix should involve similar analysis. Accordingly, the relevant proportions of debt and equity are usually determined having regard to the financial gearing of the subject company, comparable companies and the industry in general as well as assessments of the appropriate level of gearing taking into account the nature and quality of the cash flow stream. However:

- a simple debt/equity mix is usually used for practicality but it represents a simplification of what are usually much more complex financial structures (e.g. hybrids, convertibles and lease obligations);
- a constant degree of leverage is typically assumed but this is seldom the case in practice;
- the debt/equity mix (measured over the same period as the historical beta is measured) can be volatile over time at an individual company level. Averages across time may give a more meaningful guide but in some circumstances this may not be appropriate;
- there is often a wide diversity of debt/equity ratios across companies in an industry. Moreover, there is often inconsistency between gearing ratios and betas (e.g. those with higher gearing may exhibit lower betas than their peers); and
- the measured beta factors for listed companies are "equity" betas and reflect the financial leverage of the individual companies. It is possible to unleverage beta factors to derive asset betas and releverage betas to reflect a more appropriate or comparable financial structure. In Grant Samuel's view, this technique is subject to considerable estimation error. Deleveraging and releveraging betas exacerbates the estimation errors in the original beta calculation and gives a misleading impression as to the precision of the methodology. Indeed, there are competing deleveraging formulae which give different results. Deleveraging and releveraging is also commonly calculated based on debt levels at a single point in time. This is incorrect as it is leverage over the same period in which the beta was measured that is relevant (although this can be difficult to estimate accurately given that data points may be, at best, quarterly) Recent advice to the Australian Energy Regulator ("AER") stated that leverage adjustments were a *"worthless pursuit of spurious precision"* and recommended a raw estimate of the industry beta (if gearing is similar)[6].

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[5] SIRCA produces estimates that include and exclude return observations for the single month of March 2020, which experienced the second largest negative values for the entire market of any month since January 1974.

[6] G. Partington and S. Satchell, "*Issues in releveraging beta and testing for structural breaks*", September 2017.

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Corporate Tax

The WACC calculation generally assumes a constant rate of corporate tax, typically the standard corporate rate. However, the tax position of many corporates, particularly multinationals, is usually much more complex and can change significantly over time.

Dividend Imputation

The conventional WACC formula set out above was formulated under a "classical" tax system. The CAPM model is constructed to derive returns to investors after corporate taxes but before personal taxes. Under a classical tax system, interest expense is deductible to a company but dividends are not. Investors are also taxed on dividends received.

Under Australia's dividend imputation system, domestic equity investors receive a taxation credit (franking credit) for any tax paid by a company. The franking credit attaches to any dividends paid out by a company and the franking credit offsets personal tax. To the extent the investor can utilise the franking credit to offset personal tax, then the corporate tax is not a real impost. It is best considered as a withholding tax for personal taxes. It can therefore be argued that the benefit of dividend imputation should be incorporated into any analysis of value.

There is no generally accepted method of allowing for dividend imputation. In fact, there is considerable debate within the academic and financial communities as to the appropriate adjustment or even whether any adjustment is required at all. Some suggest that it is appropriate to discount pre-tax cash flows, with an increase in the discount rate to "gross up" the market risk premium for the benefit of imputation credits that are on average received by shareholders. On this basis, the discount rate might increase by approximately 2% but it would be applied to pre-tax cash flows. However, not all of the necessary conditions for this approach exist in practice:

- not all shareholders can use franking credits. In particular, foreign investors gain no benefit from franking credits (except in relation to withholding taxes in some cases[7]). If foreign investors are the marginal price setters in the Australian market there should be no adjustment for dividend imputation;
- not all franking credits are distributed to shareholders; and
- capital gains tax operates on a different basis to income tax. Investors with high marginal personal tax rates will prefer cash to be retained and returns to be generated by way of a capital gain.

Others have proposed a different approach involving an adjustment to the cost of equity by a factor reflecting the effective use or value of franking credits (i.e. allowing for the proportion of taxed income paid out as dividends and the utilisation by investors). The proponents of this approach have in the past suggested a factor in the range 40-65% as representing the appropriate adjustment (gamma)[8] although more recent commentary suggests a lower level (circa 25%). The gamma can be applied to the cost of capital or, alternatively, the tax charge in the forecast cash flows can be decreased to incorporate the expected value of franking credits distributed (the usual approach adopted by regulators).

In Grant Samuel's opinion, it is not appropriate to allow for dividend imputation for business valuation purposes:

- the underlying concept of gamma is flawed. The gamma is meant to represent some kind of complex market weighted average but the value of franking credits is essentially binary. They have 100% value to some (or many) domestic investors and 0% to foreign investors[7]. There is nobody to whom

[7] Withholding tax on unfranked distributions will generally apply to portfolio investors in listed Australian entities but foreign companies (depending on their jurisdiction) are generally not subject to withholding tax on unfranked dividends of wholly owned Australian subsidiaries.

[8] Under this construct the cost of equity is scaled by gamma ("δ") (i.e. *Adjusted Re = Re x l-t/(1-t(1-δ)))*. Assuming the standard Australian corporate tax rate of 30% and δ = 0.5, Re is multiplied by 0.82 (i.e. 0.70 divided by 0.85).

Annexure 1. Independent Expert's Report *continued*

franking credits have a value equal to, say, 50% of their face value (i.e. there is no spectrum of outcomes to determine a meaningful "weighted average");

- there is no direct evidence that imputation credits are factored into market prices of listed companies or the prices paid in acquisitions. The primary "proof" appears to be based on dividend drop off studies but these face serious questions as to reliability of data and the interpretation of the outcome never mind that it does not address risk and other issues associated with the ability to use them over the longer term; and
- it is not consistent with what is happening in real world markets. The adoption of a gamma factor (of, say, 0.5) must, by definition, mean that companies in the Australian market are valued such that:
  - domestic investors (who can use 100% of imputation credits) earn a higher return than their cost of capital; and
  - offshore investors earn less than their required return.

  As such there should be no offshore investors in Australian (unless they have a lower cost of capital than domestic investors through some other means). It would also suggest that overseas acquirers of businesses in Australia would not be able to compete effectively with local acquirers. Rather, the evidence demonstrates that:
  - marginal sharemarket prices are not set using any value for gamma; but that
  - domestic investors enjoy a higher after tax return than comparably taxed offshore investors.

In summary, it is clear that dividend imputation affects returns to investors. However, the evidence gathered to date does not demonstrate or prove that franking credits are factored into the market price of listed companies or the prices paid in acquisitions. While acquirers are undoubtedly attracted by franking credits there is no clear evidence that they will actually pay extra for them or build it into values based on long term cash flows.

In any event, any of the likely acquirers of Origin's Energy Markets business or APLNG are offshore entities who will not place any value on franking credits (except possibly in relation to withholding tax savings).

Specific Risk

The CAPM/WACC discount rate is designed to be applied to "expected cash flows" which are effectively a weighted average of the likely scenarios. The theoretical underpinning of CAPM is that there is no need/requirement to recognise specific (unsystematic) risks. To the extent that a business is perceived as being particularly risky, this specific risk should be dealt with by adjusting the cash flow scenarios. This avoids the need to make arbitrary adjustments to the discount rate which can dramatically affect estimated values, particularly when the cash flows are of extended duration or much of the business value reflects future growth in cash flows. In addition, risk adjusting the cash flows requires a more disciplined analysis of the risks that the valuer is trying to reflect in the valuation.

However, it is nevertheless common in practice to allow for certain classes of specific risk (particularly sovereign and other country specific risks) by adjusting the discount rate although it must be recognised that such adjustments compromise the theoretical integrity of the methodology. Moreover, there is little evidentiary base for measuring determining the size of any adjustments.

4 General Assumptions

Risk Free Rate

Grant Samuel has adopted a risk free rate of 4.1% for assets whose cash flows denominated in Australian dollars. The risk-free rate approximates the yield to maturity on 10 year Australian Government bonds at end of August 2023.

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It should also be noted that:

- 10 year bond rates in the United States are approximately 20 basis points higher (4.3%);
- 10 year bond rates in the United Kingdom are approximately 30 basis points higher (4.4%); and
- Australian 30 year bond rates are approximately 40 basis points higher (4.5%).

Market Risk Premium

Grant Samuel has consistently adopted a market risk premium of 6% and believes that this continues to be a reasonable estimate. It:

- is not statistically significantly different to the premium suggested by long term historical data;
- is similar to that used by a wide variety of analysts and practitioners as well as regulators (typically in the range 5-7%); and
- makes no explicit allowance for the impact of Australia's dividend imputation system.

5 Energy Markets and Octopus Energy

5.1 Beta Factor

The historical beta factors for a range of wide range of electricity and gas companies have been considered in determining an appropriate beta for Origin's Energy Markets businesses. They have been derived from a variety of sources and have been calculated on two bases – relative to each company's home exchange index and relative to the MSCI (a global index). In Grant Samuel's view, betas estimated by reference to an international index are generally more relevant than those estimated relative to the local index where investors are globally diversified.

A summary of betas for selected comparable listed companies is set out in the table below:

EQUITY BETA FACTORS FOR SELECTED LISTED ELECTRICITY GENERATOR AND RETAILER COMPANIES

COMPANY	MARKET CAPITAL-ISATION[9] (BILLIONS)	BARRA[10]			SIRCA[11] /LBS[12]	MONTHLY OBSERVATIONS OVER 4 YEARS		WEEKLY OBSERVATIONS OVER 2 YEARS	
						BLOOMBERG[13]		BLOOMBERG	
		HISTORICAL	LOCAL BETA	GLOBAL BETA		LOCAL INDEX	MSCI[14]	LOCAL INDEX	MSCI[14]
Origin	**10.0**	**0.25**	**0.75**	**0.72**	**1.61**	**1.71**	**1.54**	**1.05**	**0.50**
ANZ									
Meridian Energy	12.7	0.41	1.03	0.74	1.21	1.28	0.74	1.33	0.28
Mercury NZ	7.9	0.31	0.99	0.70	1.04	1.04	0.55	1.33	0.33
AGL Energy	7.5	0.52	0.87	0.95	0.18	0.36	0.39	0.67	0.39
Contact Energy	6.0	0.28	0.93	0.60	0.52	0.93	0.44	1.01	0.15

9 Based on share prices as at 31 August 2023, except Origin which is based on its share price as at 9 November 2022 (being the day prior to the announcement of the Indicative proposal).

10 Beta factors calculated by Barra as at 31 August 2023 over a period of 60 months using ordinary least squares regression or the Scholes-Williams technique (including lag) where the stock is thinly traded.

11 The Australian beta factors calculated by SIRCA as at 30 June 2023 over a period of 48 months using ordinary least squares regression or the Scholes-Williams technique where the stock is thinly traded. The calculations exclude returns for March 2020 (because of COVID-19 impacts).

12 The United Kingdom betas are published by the Risk Measurement Service of London Business School ("LBS"), July- September 2023.

13 Bloomberg betas have been calculated up to 31 August 2023. Grant Samuel understands that betas estimated by Bloomberg are not calculated strictly in conformity with accepted theoretical approaches to the estimation of betas (i.e. they are based on regressing total returns rather than the excess return over the risk free rate). However, in Grant Samuel's view the Bloomberg beta estimates can still provide a useful insight into the systematic risks associated with companies and industries. The figures used are the Bloomberg "adjusted" betas which are adjusted to reflect reversion to 1.0 over time.

14 MSCI is calculated using local currency so that there is no impact of currency changes in the performance of the index.

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EQUITY BETA FACTORS FOR SELECTED LISTED ELECTRICITY GENERATOR AND RETAILER COMPANIES (CONT)

COMPANY	MARKET CAPITAL-ISATION[9] (BILLIONS)	BARRA[10]			SIRCA/ LBS[11,12]	MONTHLY OBSERVATIONS OVER 4 YEARS		WEEKLY OBSERVATIONS OVER 2 YEARS	
						BLOOMBERG[15]		BLOOMBERG	
		HISTORICAL	LOCAL BETA	GLOBAL BETA		LOCAL INDEX	MSCI[16]	LOCAL INDEX	MSCI[14]
Genesis Energy	2.5	0.16	0.96	0.69	0.52	1.07	0.53	0.77	0.24
Manawa Energy	1.3	0.13	0.88	0.59	-	0.37	0.47	0.52	0.12
Median	**6.8**	**0.29**	**0.94**	**0.69**	**0.52**	**0.99**	**0.50**	**0.89**	**0.26**
Weighted Average		**0.35**	**0.96**	**0.74**	**0.64**	**0.91**	**0.53**	**1.08**	**0.29**
EUROPE									
Iberdrola	114.6	0.62	0.84	0.75		0.53	0.62	0.78	0.51
Enel SpA	105.7	0.90	0.89	0.92		0.84	0.94	0.80	0.67
Engie	60.4	0.52	0.72	0.74		0.99	1.08	0.98	0.72
E.ON SE	49.8	0.46	0.71	0.72		0.68	0.69	0.70	0.68
EnBW	37.8					0.41	0.39	0.21	0.26
SSE	34.5	0.59	0.86	0.85	0.78	0.73	0.51	0.71	0.44
Endesa	34.0	0.60	0.82	0.73		0.51	0.72	0.62	0.44
EDP	29.4	0.53	0.99	0.79		0.64	0.57	0.81	0.45
Centrica plc	16.2	0.50	0.83	0.85	1.38	1.69	1.31	0.85	0.33
Drax Group	4.2	0.73	0.98	1.03	1.31	1.57	1.17	0.89	0.43
Yü Group (retailer only)	0.3	0.81	0.94	1.17	1.11	1.67	0.90	1.44	0.46
Median	**34.5**	**0.59**	**0.85**	**0.82**		**0.73**	**0.72**	**0.80**	**0.45**
Weighted Average		**0.60**	**0.82**	**0.78**		**0.70**	**0.74**	**0.72**	**0.54**
NORTH AMERICA									
Duke Energy	105.7	0.49	0.56	0.60		0.48	0.52	0.51	0.54
American Electric	62.4					0.52	0.54	0.50	0.53
Exelon Corporation	61.7	0.56	0.58	0.62		0.59	0.64	0.72	0.79
Constellation Energy	51.7					0.68	0.71	0.93	0.96
Xcel Energy	48.7	0.50	0.59	0.64		0.47	0.47	0.54	0.56
Entergy	31.1	0.75	0.70	0.76		0.77	0.83	0.61	0.66
Alliant Energy	19.6	0.63	0.62	0.66		0.60	0.61	0.60	0.63
Vistra	17.8					1.05	1.13	0.57	0.63
NRG Energy	13.3	0.89	0.78	0.85		1.14	1.21	0.81	0.91
IDACORP	7.5	0.42	0.49	0.51		0.67	0.70	0.51	0.54
Portland General	6.8	0.67	0.64	0.69		0.63	0.66	0.50	0.54
Median	**31.1**	**0.59**	**0.60**	**0.65**		**0.63**	**0.66**	**0.57**	**0.63**
Weighted Average		**0.58**	**0.59**	**0.64**		**0.63**	**0.66**	**0.65**	**0.68**

Source: SIRCA, LBS, Barra, Bloomberg

The table shows outcomes that suggest it is extremely difficult to determine a reliable beta for Origin's Energy Markets business:

- Origin's betas vary significantly depending on the measurement source. While SIRCA calculates 1.61, Barra calculates 0.25. There are also stark differences between Bloomberg measured over four years and over two years. In addition and, as discussed earlier, Origin's beta has varied significantly over time. Many of the comparable companies have similar issues (e.g. Meridian, Mercury and Centrica);

15 Bloomberg betas have been calculated up to 31 August 2023. Grant Samuel understands that betas estimated by Bloomberg are not calculated strictly in conformity with accepted theoretical approaches to the estimation of betas (i.e. they are based on regressing total returns rather than the excess return over the risk free rate). However, in Grant Samuel's view the Bloomberg beta estimates can still provide a useful insight into the systematic risks associated with companies and industries. The figures used are the Bloomberg "adjusted" betas which are adjusted to reflect reversion to 1.0 over time.

16 MSCI is calculated using local currency so that there is no impact of currency changes in the performance of the index.

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- the beta of Origin's closest peer, AGL Energy, has a SIRCA beta of 0.18 compared to Origin's 1.61 (there is also a significant difference in the Bloomberg measures). This cannot be explained just by differences in their business composition (e.g. AGL Energy has more generation);
- individual company betas (for the same source/period) fall in a very wide range. For example, Bloomberg 4 Year MSCI betas range from 0.39 (AGL Energy and EnBW) up to 1.54 (Origin);
- some individual company betas vary significantly depending on which market index is utilised (Local or MSCI). The difference can be as much as 1.0 although the variations are notably more significant for Australian and New Zealand companies; and
- gearing levels (see 5.2 below) vary significantly but this is not always consistent with beta factors.

All of the above indicates that the data is inherently unreliable. In any event, there is a broader issue of the comparability of the various businesses. In general terms, the US and European businesses are lower risk than Origin as they are more in the nature of integrated utilities that also operate transmission and distribution assets and operate in a mix of regulated and unregulated markets which gives a significant component of secure, infrastructure-type income.

In contrast, Origin is largely an energy retailer (and has no transmission/distribution income). Post closure of Eraring (planned for FY25), less than 10% of Origin's electricity demand will be met from internal generation (gas peakers), before any new renewable assets are added to the portfolio.

In this respect, it is also more "risky" than the New Zealand gentailers (Meridian, Mercury, Contact, Genesis) which have much of their retail demand covered by generation (most of which is renewable in the form of hydro). Similarly, AGL Energy has a much higher component of generation than Origin (particularly post Eraring closure). Its coal fired generation alone exceeds 100% of customer demand.

Accordingly, Origin's beta should be higher than these sets of comparables. On the other hand, the measures of circa 1.5-1.7 (calculated by SIRCA and Bloomberg on a four year basis) seem incongruously high (even if some of it may be attributable to the interest in APLNG). Energy Markets supplies a relatively non-discretionary product (with limited elasticity of demand) and, at least once markets settle down into some kind of normality, should be able to make a reasonably consistent margin. While the last 3-4 years have been highly volatile, it is not unreasonable to believe that this volatility is largely attributable to unsystematic risks (e.g. the Russa/Ukraine war).

On this basis, Grant Samuel has concluded that a beta is in the range 0.85 to 0.95 (i.e. centred around 0.9) is appropriate for Origin's Energy Market business.

5.2 Debt/Equity Mix

Gearing levels for these companies for the past five years are set out below:

GEARING LEVELS FOR SELECTED LISTED ELECTRICITY GENERATOR AND RETAILER COMPANIES

	NET DEBT/(NET DEBT + MARKET CAPITALISATION)							
	FINANCIAL YEAR ENDED					CURRENT[17]	4 YEAR AVERAGE	5 YEAR AVERAGE
	HISTORICAL 5	HISTORICAL 4	HISTORICAL 3	HISTORICAL 2	HISTORICAL 1			
Origin	31.2%	34.4%	36.2%	18.6%	14.2%	18.5%	25.9%	26.9%
ANZ								
Meridian Energy	10.5%	11.6%	10.6%	6.5%	6.8%	7.0%	8.9%	9.2%
Mercury NZ	16.2%	16.7%	13.5%	20.2%	17.8%	18.5%	17.0%	16.9%
AGL Energy	17.5%	22.2%	38.0%	32.9%	27.1%	26.6%	30.1%	27.6%

[17] Current gearing levels are based on the most recent balance sheet information and on share market prices as at 31 August 2023, except for Origin which is based on its share price as at 9 November 2022 (being the day prior to the announcement of the Indicative Proposal).

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GEARING LEVELS FOR SELECTED LISTED ELECTRICITY GENERATOR AND RETAILER COMPANIES (CONT)

	NET DEBT/(NET DEBT + MARKET CAPITALISATION)							
	FINANCIAL YEAR ENDED					CURRENT[17]	4 YEAR AVERAGE	5 YEAR AVERAGE
	HISTORICAL 5	HISTORICAL 4	HISTORICAL 3	HISTORICAL 2	HISTORICAL 1			
Contact Energy	15.5%	20.4%	9.9%	14.1%	18.2%	17.7%	15.7%	15.6%
Genesis Energy	26.7%	29.8%	27.2%	33.3%	31.0%	32.6%	30.3%	29.6%
Manawa Energy (generation only)	21.9%	25.4%	23.3%	25.4%	22.8%	24.1%	24.2%	23.8%
Median	**16.9%**	**21.3%**	**18.4%**	**22.8%**	**20.5%**	**21.3%**	**20.6%**	**20.3%**
Weighted Average	**16.1%**	**18.6%**	**18.7%**	**20.2%**	**18.7%**	**18.9%**	**19.0%**	**18.5%**
EUROPE								
Iberdrola	43.7%	39.7%	33.5%	38.1%	39.4%	39.3%	37.7%	38.9%
Enel SpA	47.2%	41.1%	37.9%	38.0%	56.5%	51.3%	43.4%	44.1%
Engie	29.9%	35.0%	36.7%	37.1%	37.9%	40.2%	36.7%	35.3%
E.ON SE	21.7%	53.3%	55.2%	48.1%	55.7%	49.9%	53.1%	46.8%
EnBW	34.4%	34.4%	36.6%	18.6%	21.3%	29.0%	27.7%	29.1%
SSE	43.3%	44.0%	35.6%	31.2%	29.9%	31.9%	35.2%	36.8%
Endesa	21.2%	20.2%	22.6%	31.2%	48.7%	40.6%	30.7%	28.8%
EDP	57.4%	53.5%	42.3%	44.2%	48.4%	52.5%	47.1%	49.2%
Centrica plc	30.8%	42.8%	56.7%	(11.1%)	(17.2%)	(49.5%)	17.8%	20.4%
Drax Group	18.4%	41.2%	35.1%	32.6%	32.5%	39.2%	35.4%	32.0%
Yü Group (retailer only)	586.2%	(14.3%)	(231.7%)	(22.7%)	(28.7%)	(13.9%)	(74.3%)	57.8%
Median	**34.4%**	**41.1%**	**36.6%**	**32.6%**	**37.9%**	**39.3%**	**35.4%**	**36.8%**
Weighted Average	**32.4%**	**38.8%**	**37.7%**	**37.1%**	**45.8%**	**43.3%**	**39.6%**	**38.1%**
NORTH AMERICA								
Duke Energy	48.3%	49.3%	49.5%	46.4%	49.5%	54.0%	48.7%	48.6%
American Electric	40.6%	39.4%	45.2%	44.9%	45.0%	52.2%	43.6%	43.0%
Exelon Corporation	44.6%	46.6%	49.3%	37.7%	48.2%	51.4%	45.4%	45.3%
Constellation Energy	---	---	---	---	17.6%	16.2%	17.6%	17.6%
Xcel Energy	40.2%	37.8%	38.1%	40.2%	40.3%	45.7%	39.1%	39.3%
Entergy	52.2%	45.2%	53.0%	54.3%	53.9%	56.4%	51.6%	51.7%
Alliant Energy	37.3%	33.2%	35.6%	33.8%	39.0%	41.6%	35.4%	35.8%
Vistra	48.5%	50.0%	50.7%	52.0%	61.7%	54.1%	53.6%	52.6%
NRG Energy	34.1%	37.9%	35.9%	43.2%	51.8%	59.3%	42.2%	40.6%
IDACORP	25.0%	23.1%	26.0%	23.8%	27.0%	32.6%	25.0%	25.0%
Portland General	37.1%	35.7%	45.0%	42.9%	46.7%	47.0%	42.6%	41.5%
Median	**40.4%**	**38.7%**	**45.1%**	**43.0%**	**46.7%**	**51.4%**	**42.6%**	**41.5%**
Weighted Average	**38.2%**	**36.7%**	**41.0%**	**39.0%**	**36.5%**	**38.9%**	**34.3%**	**34.1%**

Source: Company Reports, IRESS, S&P Global Market Intelligence, Bloomberg, Grant Samuel analysis

The following factors are relevant to consideration of the appropriate debt/equity mix:

- the data demonstrates inconsistencies. For example, Meridian has the lowest debt of its direct peer group but has the highest beta;
- for internal consistency, debt levels should be the weighted average measured over the same period as the beta factor (e.g. four years) rather than just at the current point in time. However, gearing often changes over time.

  Origin is a case in point. At circa 14%, it is currently well below historical levels of 30%. The latest figures are likely to be more representative of the gearing going forward;
- Origin has an internal target gearing of 20-30% but this is based on book values not market values;

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- the high gearing for many of the comparable companies reflects the nature of their income streams which:
  - often includes transmission and distribution income from regulated markets (as evidenced by their lower betas despite the gearing); and
  - may be a lower risk because of greater natural hedges between generation and retail.

Having regard to the above, the debt/equity mix has been assumed to be 80-85% equity and 15-20% debt. This is regarded as being broadly consistent with a beta factor of around 0.9.

5.3 Cost of Debt

A relevant starting point for estimating the cost of debt for Energy Markets are the margins achieved by companies of a comparable credit standing to Origin. Current spreads for Australian BBB[18] bonds over swap rates of similar tenor as published by the Reserve Bank of Australia (31 August 2023) are approximately:

- 170 basis points for 5 years; and
- 195 basis points for 7 years.

The current market margins that Origin is achieving (on average across a range of markets and maturities, albeit currently weighted towards lower legacy facilities) are below these levels. For example, its domestic capital market bonds (i.e. a four year maturity) are currently trading at around 150 basis points over the relevant treasury bond. This differential may reflect the fact that the corporate spreads published by the Reserve Bank of Australia are a consolidation of a basket of similarly rated companies across different industries each with their own unique capital structures and business/industry risks. However, the differential may also reflect the uncertainty on whether implementation of the Scheme would allow these bonds to be repaid early and in full (especially as the bonds have been trading at a discount to par due to higher interest rates since their issuance). Since the announcement of the Revised Proposal in February 2023, the differential between Origin's bond spreads and the benchmark BBB spreads widened further (and remain so).

In estimating the cost of debt for Energy Markets, Grant Samuel has also considered other factors including:

- the margin between lending benchmarks (i.e. interbank lending/swap rates) and government bonds (i.e. the risk-free rate). In Australia, this is in the order of 30-40 basis points;
- debt issuance costs, say, 10 basis point per annum;
- the cost of liquidity comprising:
  - the differential between interest paid on debt and interest received on cash; and
  - the cost of maintaining undrawn debt facilities.

  Both of these items can add materially to interest cost expressed as a function of net debt (by 50 basis points or more (even over 100 depending on specific circumstances); and
- the generally higher cost of lease liabilities that are part of the debt structure.

Taking these factors into account, Grant Samuel has allowed for a margin over the risk free rate of 250 basis points (i.e. a total pre-tax cost of debt of 6.6%).

The cost is above the average interest rates of 5.0% (on drawn debt in FY23) paid by Origin on its existing facilities (which have a weighted average term of 3.6 years) but this cost reflects a number of lower cost legacy facilities that were secured between 2019 and 2021.

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[18] BBB is equivalent to the Baa2 Moody's credit rating for Origin.

Annexure 1. Independent Expert's Report *continued*

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5.4 WACC Calculations and Selection

Energy Markets

Using the parameters set out above, the WACC for Energy Markets can be calculated to be:

ENERGY MARKETS – CALCULATED WACC

	LOW	HIGH
Cost of Equity *(Re = Rf + β(Rm – Rf)*	= 4.1% + (0.85 x 6.0%) = **9.2%**	= 4.1% + (0.95 x 6.0%) = **9.8%**
WACC *(WACC = (Re x E/V) + (Rd x (1-t) x D/V)*	= (9.2% x 80%) + (6.6% x (1-0.3) x 20%) = 7.4% + 0.9% = **8.3%**	= (9.8% x 85%) + (6.6% x (1-0.3) x 15%) = 8.3% + 0.7% = **9.0%**

Based on these outputs, Grant Samuel has selected a discount rate range of 8.5-9.0% for Energy Markets. Analysis of research reports indicates that brokers (that do publish their estimates) generally adopt a single WACC for all of Origin that ranges from 8-11%. Brokers that separately publish estimate for Energy Markets typically adopt a WACC within that range.

Octopus Energy

Octopus Energy is in a similar business to Energy Markets but there are several differences to consider:

- cash flows are denominated in British pounds. The 10 year United Kingdom government bond rate is approximately 30 basis points (0.3%) higher than 10 year Australian government bonds;
- Origin has the benefit of:
  - significant in-house generation capacity to mitigate its exposure to electricity price risk (albeit with coal price risk and, in any event, declining materially once Eraring closes); and
  - some long term fixed price gas supply contracts on advantageous terms that will lock in a significant profit for several years.

  Octopus Energy is arguably more exposed to energy market price risks but:
  - the United Kingdom electricity market has a quarterly price reset mechanism (compared to Australia's annual reset) lowering the extent of price lags;
  - it has a substantial component of its income (>20% of FY23 EBITDA) in the form of licensing fees from its *Kraken* platform which are (apart from migration fees) paid on a per account per annum basis, completely independent of energy market prices or conditions.

    This income stream has a very different risk (and growth) profile to a retail energy business.

    At the same time, Octopus Energy is aggressively pursuing growth in new markets outside the United Kingdom where it is starting with very low existing customer bases competing against large incumbents; and
  - it has no debt and a non trivial cash balance (although this cash is required to be retained in the business for prudential purposes). It is difficult to predict how Octopus Energy's financial leverage will evolve over the medium to longer term as the business matures but it would seem likely to hold cash for potential growth investments for at least the new few years. On balance, Grant Samuel considers the best assumption to be zero debt (i.e. WACC equals the cost of equity).

Taking these factors into account, a discount rate of 9.5-10.0% has been selected for Octopus Energy.

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6 APLNG

6.1 Beta Factor

The historical beta factors for a wide range of upstream oil and gas producers have been considered in determining an appropriate beta for APLNG. As for Energy Markets, they have been derived from a number of sources and, where possible, calculated on two bases (relative to home exchange and the MSCI).

A summary of betas for selected comparable listed companies is set out in the table below:

EQUITY BETA FACTORS FOR SELECTED OIL AND GAS COMPANIES

COMPANY	MARKET CAPITAL-ISATION[9] (BILLIONS)	BARRA[10]			SIRCA/ LBS[11,12]	MONTHLY OBSERVATIONS OVER 4 YEARS BLOOMBERG[13]		WEEKLY OBSERVATIONS OVER 2 YEARS BLOOMBERG	
		HISTORICAL	LOCAL BETA	GLOBAL BETA		LOCAL INDEX	MSCI[14]	LOCAL INDEX	MSCI
Origin	**10.0**	**0.25**	**0.75**	**0.72**	**1.61**	**1.71**	**1.54**	**1.05**	**0.50**
AUSTRALIA									
Woodside	108.6	0.63	1.04	1.04	0.80	1.23	0.96	0.70	0.26
Santos	38.3	0.53	0.99	0.99	1.28	1.74	1.53	0.63	0.13
Beach Energy	3.5	0.80	1.09	1.19	1.36	1.54	1.47	0.76	0.30
Cooper Energy	0.3	0.39	1.27	1.46	0.29	0.28	0.27	(0.03)	(0.55)
Median	**20.9**	**0.58**	**1.07**	**1.12**	**1.04**	**1.38**	**1.21**	**0.66**	**0.20**
Weighted average		**0.61**	**1.03**	**1.03**	**0.93**	**1.37**	**1.11**	**0.69**	**0.23**
EUROPE									
Eni	78.6					1.17	1.14	0.72	0.54
Repsol	30.4					1.43	0.83	0.63	0.40
Median	**54.5**					**1.30**	**0.98**	**0.68**	**0.47**
Weighted average						**1.24**	**1.05**	**0.69**	**0.50**
NORTH AMERICA									
EOG Reources	115.7	1.23	0.96	1.06		1.49	1.71	0.88	0.97
Occidental	85.8	1.07	0.86	0.95		1.86	2.21	0.66	0.59
Pioneer Natural	85.7	0.91	0.81	0.89		1.42	1.60	0.79	0.89
Hess	73.0	1.26	0.99	1.09		1.34	1.53	0.84	0.96
Devon Energy	50.6	1.63	1.21	1.35		2.35	2.65	0.94	1.02
Diamondback Energy	41.9	1.13	0.92	1.02		2.13	2.41	0.98	1.07
Coterra Energy	32.9	1.06	0.89	0.98		0.23	0.19	0.81	0.84
Marathon Oil	24.6	1.40	1.11	1.23		2.46	2.76	0.94	1.06
APA Corp (Apache)	20.8	1.46	1.17	1.30		3.72	3.99	0.97	1.09
Median	**50.6**	**1.23**	**0.96**	**1.06**		**1.86**	**2.21**	**0.88**	**0.97**
Weighted average		**1.20**	**0.96**	**1.06**		**1.77**	**2.00**	**0.84**	**0.91**
ASIA									
PTTEP	28.2	0.65	0.97	0.72		1.63	1.19	0.68	0.13
Inpex	27.8	0.52	1.10	0.79		1.43	1.15	0.65	0.03
Median	**30.5**	**0.59**	**1.03**	**0.75**		**1.53**	**1.17**	**0.66**	**0.08**
Weighted average		**0.59**	**1.03**	**0.75**		**1.53**	**1.17**	**0.66**	**0.08**
GLOBAL OIL MAJORS									
Exxon Mobil Corporation	684.6	0.92	0.80	0.87		1.02	1.16	0.52	0.57
Chevron Corporation	464.6	0.91	0.78	0.84		1.22	1.35	0.56	0.60
Shell plc	248.4	1.09	0.89	0.98	1.19	1.42	1.65	0.69	0.76
ConocoPhillips	248.4	0.77	0.98	0.96		1.34	0.57	1.22	0.38
TotalEnergies SE	216.2	0.76	0.86	0.95		1.00	0.75	0.52	0.39
BP p.l.c.	128.3	0.85	1.01	1.05	1.11	1.32	0.53	1.20	0.39
Median	**248.4**	**0.85**	**0.89**	**0.96**		**1.32**	**0.75**	**0.69**	**0.39**
Weighted average		**0.83**	**0.90**	**0.94**		**1.21**	**0.85**	**0.85**	**0.46**

Source: SIRCA, LBS, Barra, Bloomberg

Annexure 1. Independent Expert's Report *continued*

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Similar to Energy Markets, the table shows outcomes that suggest it is extremely difficult to determine a reliable beta for Origin's interest in APLNG:

- individual company betas (for the same source/period) fall in a very wide range. For example, Bloomberg Four Year MSCI betas range from 0.19 (Coterra) to 2.65 (Devon Energy) and up to 3.99 (APA) although both Coterra and APA should be treated as outliers;
- across the comparable companies, the betas vary (sometimes very materially) depending on:
  - the data measurement source (SIRCA, LBS, Bloomberg or Barra). For example, Santos varies between 0.5 (Barra) and 1.3 (SIRCA) with Bloomberg varying across an even wider range; and
  - which market index is utilised (Local or MSCI). For example, the Bloomberg two year beta for Santos is 0.6 measured against the ASX and 0.1 against the MSCI;
- the two year betas are all substantially lower than the four year betas (except Coterra). This arguably reflects lower recent volatility compared to the market, despite a surge in spot oil and LNG prices following Russia's invasion of Ukraine. However, the longer-term measures may be more reflective of the true risks of the industry; and
- gearing levels vary significantly but this is not always consistent with beta factors. The North American upstream oil and gas companies generally have higher betas, reflecting, among other things, the generally higher gearing levels for those companies. However, the European upstream oil and gas companies also have relative high gearing and similar oil refinery exposure, but their betas are lower.

In general, the industry has relatively high betas reflecting the direct exposure to the market prices of oil and associated products which, in turn, are strongly linked to economic activity.

APLNG can be considered a lower risk proposition than most of the listed comparables. It:

- is not engaged in any substantial level of exploration outside its existing geographies;
- has a stable level of annual production which is forecast to be maintained over the medium term;
- has 2P reserves that are equal to over 15 years of annual production; and
- has a significant component of downstream processing (LNG trains), representing approximately 75-80% of upstream gas.

On this basis, Grant Samuel has selected a beta of 1.2-1.3 for APLNG.

6.2 Debt/Equity Mix

Gearing levels for these companies over the past five years are set out below:

GEARING LEVELS FOR SELECTED LISTED OIL AND GAS COMPANIES

	NET DEBT/(NET DEBT + MARKET CAPITALISATION)							
	FINANCIAL YEAR ENDED					CURRENT[17]	4 YEAR AVERAGE	5 YEAR AVERAGE
	HISTORICAL 5	HISTORICAL 4	HISTORICAL 3	HISTORICAL 2	HISTORICAL 1			
Origin	**31.2%**	**34.4%**	**36.2%**	**18.6%**	**14.2%**	**18.5%**	**25.9%**	**26.9%**
AUSTRALIA								
Woodside	7.4%	7.9%	14.5%	14.0%	(0.2%)	3.9%	9.0%	8.7%
Santos	24.0%	16.4%	22.0%	19.2%	11.8%	13.6%	17.4%	18.7%
Beach Energy	(4.0%)	0.3%	5.1%	(3.5%)	5.8%	5.1%	1.9%	0.7%
Cooper Energy	5.3%	15.4%	24.6%	(19.3%)	16.4%	19.7%	9.3%	8.5%
Median	**6.4%**	**11.6%**	**18.2%**	**5.2%**	**8.8%**	**9.3%**	**9.2%**	**8.6%**
Weighted average	**11.7%**	**9.9%**	**16.2%**	**15.3%**	**11.4%**	**6.4%**	**11.0%**	**11.1%**

Source: Company Reports, IRESS, S&P Global Market Intelligence, Bloomberg, Grant Samuel analysis

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GEARING LEVELS FOR SELECTED LISTED OIL AND GAS COMPANIES (CONTINUED)

	NET DEBT/(NET DEBT + MARKET CAPITALISATION)							
	FINANCIAL YEAR ENDED					CURRENT[17]	4 YEAR AVERAGE	5 YEAR AVERAGE
	HISTORICAL 5	HISTORICAL 4	HISTORICAL 3	HISTORICAL 2	HISTORICAL 1			
EUROPE								
Eni	14.6%	25.9%	35.5%	30.1%	23.1%	22.7%	28.6%	25.8%
Repsol	28.1%	35.9%	43.9%	26.9%	15.0%	14.7%	30.4%	30.0%
Median	**21.4%**	**30.9%**	**39.7%**	**28.5%**	**19.1%**	**18.7%**	**29.5%**	**27.9%**
Weighted average	**18.4%**	**28.7%**	**37.8%**	**29.2%**	**20.9%**	**20.5%**	**29.1%**	**27.0%**
NORTH AMERICA								
EOG Reources	8.2%	7.5%	10.5%	1.3%	(0.0%)	(0.8%)	4.8%	5.5%
Occidental	13.6%	56.7%	74.4%	58.5%	34.1%	34.4%	55.9%	47.5%
Pioneer Natural	3.6%	8.6%	11.8%	7.9%	7.8%	9.0%	9.0%	7.9%
Hess	25.1%	24.1%	31.3%	22.0%	13.3%	13.0%	22.7%	23.2%
Devon Energy	16.2%	23.7%	29.3%	13.5%	11.8%	16.3%	19.6%	18.9%
Diamondback Energy	21.8%	26.0%	42.8%	23.6%	20.7%	19.8%	28.3%	27.0%
Coterra Energy	11.3%	12.9%	13.7%	13.8%	9.1%	7.5%	12.4%	12.2%
Marathon Oil	25.3%	30.9%	47.8%	21.6%	25.0%	26.6%	31.3%	30.1%
APA Corp (Apache)	43.0%	47.2%	62.1%	42.8%	26.8%	29.1%	44.7%	44.4%
Median	**16.2%**	**24.1%**	**31.3%**	**21.6%**	**13.3%**	**16.3%**	**22.7%**	**23.2%**
Weighted average	**15.5%**	**24.5%**	**33.0%**	**21.3%**	**18.4%**	**19.3%**	**23.3%**	**21.7%**
ASIA								
PTTEP	18.0%	36.3%	56.4%	41.3%	35.1%	22.8%	42.3%	37.4%
Inpex	(0.5%)	0.0%	0.0%	0.3%	0.0%	0.1%	0.1%	(0.0%)
Median	**8.8%**	**18.1%**	**28.2%**	**20.8%**	**17.6%**	**11.4%**	**21.2%**	**18.7%**
Weighted average	**18.0%**	**18.0%**	**28.0%**	**20.7%**	**17.4%**	**11.4%**	**21.0%**	**37.4%**
GLOBAL OIL MAJORS								
Exxon Mobil	10.7%	14.4%	28.2%	15.1%	3.7%	2.6%	15.4%	14.4%
Chevron Corporation	10.4%	9.9%	20.8%	11.4%	2.7%	3.8%	11.2%	11.0%
Shell plc	20.9%	31.0%	43.3%	29.6%	21.1%	19.6%	31.2%	29.2%
ConocoPhillips	9.3%	7.3%	16.3%	12.8%	5.1%	6.3%	10.4%	10.2%
TotalEnergies SE	15.7%	20.1%	31.1%	21.3%	12.0%	14.7%	21.1%	20.0%
BP p.l.c.	30.1%	36.7%	49.7%	37.6%	14.4%	27.3%	34.6%	33.7%
Median	**13.2%**	**17.2%**	**29.7%**	**18.2%**	**8.6%**	**10.5%**	**18.2%**	**17.2%**
Weighted average	**14.2%**	**16.3%**	**27.2%**	**18.8%**	**8.4%**	**10.7%**	**17.7%**	**17.0%**

Source: Company Reports, IRESS, S&P Global Market Intelligence, Bloomberg, Grant Samuel analysis

Similar to the generator and retailer companies in Section 5, the table shows a very wide range of gearing levels.

Determining an appropriate debt/equity mix for APLNG is problematic:

- APLNG itself has a changing profile. At the outset in 2012, it arranged US$8.5 billion of project financing (on the back of several long term offtake agreements) out of a total cost of US$20 billion. Over the following years, net debt has been materially reduced and now stands at US$3.6 billion (or $5.6 billion) as at 30 June 2023. This level of debt implies gearing of circa 15%. Debt will be fully amortised by FY31. It is unclear if APLNG will then operate on a debt free basis (distributing all free cash flow to shareholders) or if it will be releveraged at some stage. However, whether it happens or not, APLNG certainly has the capacity to carry a meaningful degree of leverage in view of:
  - track record of consistent production;
  - its extent of reserves and resources relative to annual production;

Annexure 1. Independent Expert's Report *continued*

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- EBITDA margins of over 70%; and
- low capital expenditure requirements (<20% of EBITDA on average over the past five years and lower more recently);

- there is a wide range of gearing levels across the industry from zero to over 30%. In broad terms, the key Australian comparables such as Woodside (the largest LNG producer in Australia) and Santos (owner of GLNG, Darwin LNG and LNG interests in Papua New Guinea) have relatively modest levels of gearing (generally <15% depending on time frame);
- debt funding for fossil fuel entities is likely to become more challenging over time (e.g. given the policies of major lending institutions); and
- there is an inconsistent relationship between gearing and beta although the data suggests the lower geared Australian businesses also enjoy lower betas relative to their US peers.

Having regard to the above, Grant Samuel has selected a debt/equity ratio of 10-15%.

6.3 Cost of Debt

Grant Samuel has assumed a cost of debt for APLNG of 6.6% (risk free rate plus 2.5%) reflecting:

- margins payable by APLNG on the US$4.5 billion of debt refinanced in FY19;
- allowances for:
  - the difference between the benchmark borrowing rate and government bonds of equivalent tenor (where relevant);
  - debt issuance costs (annualised); and
  - the cost of liquidity (see Section 5.3).

6.4 WACC Calculations and Selection

Using the parameters set out above, the WACC for APLNG can be calculated to be:

APLNG – CALCULATED WACC

	LOW	HIGH
Cost of Equity *(Re = Rf + β(Rm – Rf)*	= 4.1% + (1.2 x 6.0%) = 11.**3%**	= 4.1% + (1.3 x 6.0%) = 11.**9%**
WACC *(WACC = (Re x E/V) + (Rd x (1-t) x D/V)*	= (11.3% x 85%) + (6.6% x (1-0.3) x 15%) = 9.61% + 0.69% = **10.3%**	= (11.9% x 90%) + (6.6% x (1-0.3) x 10%) = 10.71% + 0.46% = **11.2%**

Based on these outputs, Grant Samuel has selected a discount rate of 10-11% for APLNG.

The same discount rate has been applied to various other Integrated Gas Assets owned by Origin that are connected to APLNG (unrecovered operating costs, oil hedging and LNG trading).

APPENDIX 4

TECHNICAL SPECIALIST REPORT BY GAFFNEY, CLINE & ASSOCIATES PTY. LTD.

Annexure 1. Independent Expert's Report *continued*

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Independent Technical Specialist's Report for Origin Energy Limited Transaction

Prepared for

Grant Samuel & Associates Pty Ltd

October 2023

Gaffney Cline

Document Approval and Distribution

Copies:	Electronic (PDF)
Project No:	PY-23-408010
Prepared for:	Grant Samuel & Associates Pty Ltd

Approved by Gaffney, Cline & Associates

Project Manager:	*Zis Katelis, Technical Director*	October 2023
Reviewed by:	*Doug Peacock, Technical Director*	October 2023
Reviewed by:	*Arse Clarijs, Regional/Technical Director*	October 2023
Reviewed by:	*Peter Adam, Principal Reservoir Engineer*	October 2023

Annexure 1. Independent Expert's Report *continued*

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Grant Samuel & Associates Pty Ltd
October 2023

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Annexure 1. Independent Expert's Report *continued*

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Appendices

Grant Samuel & Associates Pty Ltd
October 2023

1 Introduction

Gaffney, Cline & Associates Pty. Ltd. (GaffneyCline) has prepared this Independent Technical Specialist Report (ITSR) for the appointed Independent Expert (IE), Grant Samuel. This ITSR is intended for inclusion in the Independent Expert's Report (IER) in relation to the proposed acquisition of 100% of Origin Energy Limited (Origin) by a Brookfield-led consortium of investors, the BGTF Consortium and MidOcean Energy by way of a scheme of arrangement.

Under the Australian regulatory framework, the Independent Expert works in conjunction with an Independent Technical Specialist to complete the IER (which includes the ITSR), particularly in relation to the valuation of Origin's interest in the Australian Pacific Liquified Natural Gas (APLNG) joint venture governed by a shareholder agreement (Origin share 27.5%, ConocoPhillips 47.5%, Sinopec 25%) and the valuation of Origin's Upstream Oil and Gas Exploration and Contingent Resources assets (outside of its interest in APLNG). This ITSR is prepared in accordance with the VALMIN Code to the extent the code is relevant to the assignment and meets Australian regulatory requirements with additional conformance to the Petroleum Resource Management System (PRMS) and ASX Listing Rules for petroleum assets. The VALMIN Code makes specific reference to both.

GaffneyCline was engaged by Origin, that is, Origin provided GaffneyCline with the necessary information for the preparation of this ITSR, indemnified GaffneyCline and paid GaffneyCline's fees. As per the regulations, GaffneyCline accepted instructions exclusively from, and provided advice and reported exclusively to, Grant Samuel. GaffneyCline further confirms that in relation to this engagement GaffneyCline did not accept any instructions from Origin or any other party and interacted with Origin simply to obtain factual information and technical data so GaffneyCline could carry out the analysis contained in this report.

This report relates specifically and solely to the subject matter as defined in the scope of work (SOW), as set out herein, and is conditional upon the specified assumptions. The report must be considered in its entirety and must only be used for the purpose for which it is intended.

Annexure 1. Independent Expert's Report *continued*

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2 Basis of Opinion

This document reflects GaffneyCline's informed professional judgment based on accepted standards of professional investigation and, as applicable, the data and information provided by Origin, the limited scope of engagement, and the time permitted to conduct the evaluation. This document must be considered in its entirety.

In line with those accepted standards, this document does not in any way constitute or make a guarantee or prediction of results, and no warranty is implied or expressed that the actual outcome will conform to the outcomes presented herein. GaffneyCline has not independently verified any information provided by, or at the direction of, Origin and/or obtained from the public domain and has accepted the accuracy and completeness of these data. GaffneyCline has no reason to believe that any material facts have been withheld but does not warrant that its inquiries have revealed all of the matters that a more extensive examination might otherwise disclose.

The opinions expressed herein are subject to and fully qualified by the generally accepted uncertainties associated with the interpretation of geoscience and engineering data and do not reflect the totality of circumstances, scenarios and information that could potentially affect decisions made by the report's recipients and/or actual results. The opinions and statements contained in this report are made in good faith and in the belief that such opinions and statements are representative of prevailing physical and economic circumstances.

In the preparation of this report, GaffneyCline has used definitions contained within the Petroleum Resources Management System (PRMS), which was approved by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists and Engineers in June 2018 (see **Appendix I**).

There are numerous uncertainties inherent in estimating reserves and resources, and in projecting future production, development expenditures, operating expenses and cash flows. Oil and gas resources assessments must be recognised as a subjective process of estimating subsurface accumulations of oil and gas that cannot be measured in an exact way. Estimates of oil and gas resources prepared by other parties may differ, perhaps materially, from those contained within this report.

The accuracy of any resources estimate is a function of the quality of the available data and of engineering and geological interpretation. Results of drilling, testing and production that post-date the preparation of the estimates may justify revisions, some or all of which may be material. Accordingly, resources estimates are often different from the quantities of oil and gas that are ultimately recovered, and the timing and cost of those volumes that are recovered may vary from that assumed.

Natural gas volumes have been quoted in billions (10^9) of standard cubic feet (Bscf) or petajoules (PJ). Sales gas excludes fuel and process shrinkage losses (or Consumed in Operations (CiO)) to the inlet of the LNG plant. Standard conditions are defined as 14.7 psia and 60° Fahrenheit. Origin provided 100% Gross APLNG numbers for analysis of their financial model.

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GaffneyCline's review and audit involved reviewing pertinent facts, interpretations and assumptions made by Origin and APLNG or others (e.g. Independent third party Reserves and Resource reports) in preparing and utilising estimates of reserves and resources. GaffneyCline performed procedures necessary to enable it to render an opinion on the appropriateness of the methodologies employed, adequacy and quality of the data relied on, depth and thoroughness of the reserves and resources estimation process, classification and categorisation of reserves and resources appropriate to the relevant definitions used, and reasonableness of the estimates.

Definition of Reserves and Resources

Reserves are those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions. Reserves must satisfy four criteria: discovered, recoverable, commercial and remaining (as of the evaluation's effective date) based on the development project(s) applied.

Reserves are further categorised in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterised by development and production status. All categories of reserves volumes quoted herein have been reviewed within the context of an economic limit test (ELT) assessment (pre-tax and exclusive of accumulated depreciation amounts) prior to any Net Present Value (NPV) analysis.

Contingent Resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects, but which are not currently considered to be commercially recoverable owing to one or more contingencies. Contingent Resources may include, for example, projects for which there are currently no viable markets, where commercial recovery is dependent on technology under development, where evaluation of the accumulation is insufficient to clearly assess commerciality, where the development plan is not yet approved, or where regulatory or social issues may exist. Contingent Resources are further categorised in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterised by the economic status.

It must be appreciated that the Contingent Resources reported herein are unrisked in terms of economic uncertainty and commerciality. There is no certainty that it will be commercially viable to produce any portion of the Contingent Resources. Once discovered, the chance that the accumulation will be commercially developed is referred to as the "chance of development" (per PRMS).

Annexure 1. Independent Expert's Report *continued*

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Prospective Resources are those quantities of petroleum that are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations. Potential accumulations are evaluated according to the chance of geologic discovery and, assuming a discovery, the estimated quantities that would be recoverable under defined development projects. It is recognised that the development programs will be of significantly less detail and depend more heavily on analogue developments in the earlier phases of exploration.

There is no certainty that any portion of the Prospective Resources will be discovered. If discovered, there is no certainty that it will be commercially viable to produce any portion of the resources. Prospective Resources volumes are presented as risked. Reserves net to Origin and APLNG are quoted as Net Revenue Interest Reserves, reflecting the concession contract terms applicable to the asset.

GaffneyCline's scope of work did not extend to a site visit and inspection of Origin and APLNG and their development assets. As such, GaffneyCline is not in a position to comment on the operations or facilities in place, their appropriateness and condition, or whether they are in compliance with the regulations pertaining to such operations. Further, GaffneyCline is not in a position to comment on any aspect of health, safety, or environment of such operation.

This report has been prepared based on GaffneyCline's understanding of the effects of petroleum legislation and other regulations that currently apply to these properties. However, GaffneyCline is not in a position to attest to property title or rights, conditions of these rights (including environmental and abandonment obligations), or any necessary licences and consents (including planning permission, financial interest relationships, or encumbrances thereon for any part of the appraised properties).

Qualifications

GaffneyCline is an independent international energy advisory group of more than 60 years' standing, whose expertise includes petroleum reservoir evaluation and economic analysis.

In performing this study, GaffneyCline is not aware that any conflict of interest has existed. As an independent consultancy, GaffneyCline is providing impartial technical, commercial, and strategic advice within the energy sector. GaffneyCline's remuneration was not in any way contingent on the contents of this report.

In the preparation of this document, GaffneyCline has maintained, and continues to maintain, a strict independent consultant-client relationship with Origin. Furthermore, the management and employees of GaffneyCline have no interest in any of the assets evaluated or are related with the analysis performed, as part of this report.

Staff members who prepared this report hold appropriate professional and educational qualifications and have the necessary levels of experience and expertise to perform the work.

The ITSR team was led by Mr Zis Katelis, a Technical Director in GaffneyCline who has over 25 years' industry experience in conventional and unconventional resource projects and oil and gas asset valuations. The last 15 years of his career have been primarily dedicated to Reserves and Resource assessments and Mergers and Acquisitions with GaffneyCline. He holds a BSc with Honours (Geophysics) from Monash University in Victoria. He is currently a member of the Society of Petroleum Engineers serving on various technical committees. Zis also contributed directly to the technical work on various CSG assets for this report.

The report was reviewed by Mr Doug Peacock, a Senior Technical Director in GaffneyCline, who has over 35 years' industry experience. He holds an MSc in Petroleum Geology from Imperial College in London and a BSc Geological Sciences from Leeds University. He is a member of the Society of Petroleum Engineers, the Petroleum Exploration Society of Great Britain (PESGB), the SouthEast Asia Petroleum Exploration Society (SEAPEX) and the American Association of Petroleum Geologists (AAPG).

The report was also reviewed by Ms Arse Clarijs, a Regional and Technical Director in GaffneyCline, who has over 30 years' industry experience. She holds an MSc in Petroleum Geoscience from the University of Brunei and a BSc Geology Gadjah Mada University in Indonesia. She is a member of the American Association of Petroleum Geologists (AAPG), the Indonesia Petroleum Association (IPA) and the Southeast Asia Petroleum Exploration Society (SEAPEX).

The Reservoir Engineering aspects of this report were reviewed by Peter Adam the GaffneyCline Principal Reservoir Engineering leader for the region with 25 years' experience in Field Development Planning, Reservoir Management, Reserves Assessment, Asset Valuations, Economic Analysis and People Development. Peter has a Bachelor of Engineering (Mechanical with Honours), University of Western Australia (Perth, 1982) and a Bachelor of Engineering (Petroleum, 1st class Honours and University Medal), University of New South Wales (Sydney, 1994). He is a member of the Society of Petroleum Engineers (SPE), Engineers Australia (EA) and the Indonesian Petroleum Association (IPA).

The work contained in this report was predominantly completed by GaffneyCline between August and September 2023 with final profiles submitted to Grant Samuel in mid to late September. Regulatory submission to ASIC occurred in October with requested changes implemented and approved by the GaffneyCline team.

Annexure 1. Independent Expert's Report *continued*

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3 Methodology

Origin has provided GaffneyCline with Reserves and Resources estimates prepared by both Origin and third-party consultants, for their coal seam gas (CSG) assets. Origin also provided GaffneyCline with access to an extensive technical data set supporting their Reserves and Resources estimates in order for GaffneyCline to carry out independent technical audits of the data. This has also allowed GaffneyCline to opine on the veracity of these estimates and also on production and cost valuation scenario profiles proposed by Origin.

The work presented in this Independent Technical Specialist's Report represents the valuation scenario profiles adopted and/or modified by GaffneyCline from the valuation scenarios and associated static/dynamic and production data presented by Origin. Where GaffneyCline opined that the presented valuation scenario profiles required modification, GaffneyCline made these modifications and presented the modified profiles to Grant Samuel. Where GaffneyCline opined that the presented valuation scenario profiles were reasonable they were adopted from the Origin provided profiles. Details are included in the body of this report.

In reviewing the Reserves and Resources volume estimates utilised in the valuation scenario profiles, GaffneyCline's remit was not to undertake a complete 'from the ground up' independent assessment of all the assets and therefore duplicate work carried out by Origin and other third-party organisations. Full independent assessments generally require investigating all technical elements in accordance with the definitions and guidelines set out in the June 2018 Petroleum Resources Management System (PRMS) developed and promulgated by the Society of Petroleum Engineers and others, to capture the full uncertainty range. However, GaffneyCline has reviewed sufficient information and carried out sufficient technical analysis as part of an audit and due diligence approach to opine on the reasonableness of the Reserves and Resources estimates carried out by Origin and third-party organisations. A discussion of the actual technical work carried out by GaffneyCline is included in the subsequent sections of this report along with a description of the assets. This process allowed GaffneyCline to deliver production and cost valuation scenario profiles for assets that have Reserves and more mature Contingent Resources assets for valuation by Grant Samuel.

GaffneyCline has provided production and cost valuation scenario profiles to Grant Samuel based predominantly on a technical reconciliation of 3P + 2C reported volumes of the defined unconventional CSG projects and sub-projects with details included in subsequent sections of this report (Scenario A forecasts). Given the large portfolio of CSG assets, specific exceptions do exist. GaffneyCline focused on operator development plans and well counts for all projects. In GaffneyCline's view the Scenario A forecasts represent a reasonable best expectation case of future developments and performance upon which to base a valuation. The 3P + 2C approach to the valuation scenario profiles is governed by the deterministic incremental methodology utilised by the operator for their reserve and resource assessments where each planned or potential Drill Spacing Unit (DSU) within a play is given a classification. This results in a classification map for each major formation across the assessed development area. Section 4.7 of this report provides a detailed explanation of the methodology.

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An alternative forecast (Scenario B forecast) which represents Origin's view as shareholder for future developments were also requested by Grant Samuel in order to bracket their valuation range. These cases have been provided based on a review of Origin data with consideration of either alternate production scenarios depending on the development areas (such as 3C volumes), an alternate view of cost valuation scenario profiles, or a combination of both. There are specific assets where the case put forward by Origin has also been accepted as Scenario B forecasts by GaffneyCline.

GaffneyCline has assessed Contingent Resources projects by technically reviewing the applicable volumes with respect to the proposed development plan that GaffneyCline believes is most likely to be sanctioned. Rather than applying a Chance of Development on all defined Contingent Resources, GaffneyCline investigated assets with Contingent Resources in the Development Pending, Development on Hold and Development Unclarified project maturity sub-classes as per PRMS to include technically viable volumes in subsequent cash flow analysis based on the specific area of operation and history of the asset and area. This is discussed in more detail in the body of this report. Contingent Resources Not Viable with current technology and volumes deemed by Origin as unrecoverable have been excluded from the valuation scenario profiles provided to Grant Samuel.

Oil and gas assets where Contingent Resources based on current technical and commercial information are considered immature and hence too uncertain to construct production and cost valuation scenario profiles have been evaluated utilising an alternative method. For these assets an additional explanation for the basis for this value and its associated commercial risk factor is provided in the body of the report. This allowed a value of the Contingent Resources to be recognised while acknowledging that the development of these Contingent Resources is less certain than that of Reserves and more mature/likely Contingent Resources.

In assessing a value for Origin's APLNG exploration acreage and non-APLNG assets, GaffneyCline has considered the following elements in the valuation process:

1. Recent transactions for assets that ideally lie within or adjacent to the licence area under review and are considered to be comparable (e.g. Table 12.1, page 68).
2. Where an area contains clearly defined prospects in a mature play, a method based on Expected Monetary Value (EMV) has been considered.
3. Estimates of the future commitments were also considered.

The above elements were reviewed to formulate the final value or value range. This is discussed in the body of the report in the relevant exploration sections.

Production and cost profiles included for specific assets have been aggregated by GaffneyCline due to commercial sensitivities and this is stated in the relevant sections in the body of this report. GaffneyCline was not in a position to opine on the commercially sensitive nature of the profiles.

Annexure 1. Independent Expert's Report *continued*

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4 Description of Assets

4.1 Origin's APLNG Key Highlights

Origin is the upstream operator of APLNG and has a 27.5% interest, which was reduced from 37.5% following the sale of a 10% stake during the FY2022. APLNG is considered to be Australia's largest Coal Seam Gas (CSG) to Liquified Natural Gas (LNG) project. It is also a significant supplier to both domestic gas and international LNG markets, with most of the volume contracted until approximately 2035. Origin indicates that the APLNG profitability is underpinned by maintaining a low capital and operating cost base for this unconventional gas asset relative to revenues, much of which are linked to oil prices. In FY2023 the average realised LNG price was US$14.2 per MMBtu up 14% vs FY2022 and equivalent to an increase of 22% in A$ terms at $20.0/GJ.

APLNG is recognised in having the largest and most productive unconventional CSG reserve base in Australia based on publicly available information. APLNG has a unique position dominating Surat and Bowen Basin sweet spots with a resource base improving over time with significant reserves and resources near existing production hubs and a resource base reported annually by Origin with sufficient volumes to meet contracted demand.

Origin indicate that flexibility exists to direct excess gas supply into the highest value markets with a number of interconnected fields which allow gas shifting to available plant capacity and is also supported by existing and highly efficient infrastructure. A flat asset led upstream model supports alignment across the Operated East, Operated West and Non-Operated assets.

CSG well availability was stable at around 90 per cent in FY2022 according to the Origin annual report, with the wet weather impacts offset by strong field performance and operational efficiencies. High upstream gas processing facility reliability and improved performance from network infrastructure, driven by investment in prior periods enabled high utilisation of upstream gas processing capacity.

4.2 Project Overview

APLNG is recognised as a world-class unconventional project that is comprised of upstream and downstream operations that produces CSG for sale into the domestic and LNG markets through long and short-term contracts. The APLNG joint venture was established between Origin and ConocoPhillips in 2008, with Sinopec entering in 2011. Origin currently holds a 27.5% interest, with ConocoPhillips holding 47.5% and Sinopec holding 25%. Train 1 FID was taken in 2011 and APLNG shipped the first LNG cargo in January 2016 after five years of development and construction activities. It is a significant contributor to the Australian domestic gas natural gas supply. In 2020, APLNG shipped their 500th cargo to LNG customers (250th Cargo in 2018).

The LNG plant consists of two 4.5 mtpa nameplate capacity LNG trains. LNG is sold under 20-year offtake agreements (ending Dec 2035) with Sinopec (7.6 mtpa), Kansai Electric Power (1 mtpa) with the remainder sold as spot cargoes.

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FY2023 annual 100% APLNG production was **674 PJ** with production performance just below the FY2023 guidance in the previous annual report of **680 to 710 PJ**. This was a 3% decrease compared to FY2022 reflecting the cumulative impact of three consecutive years of La Nina weather into the first half of FY2023. During the financial year, APLNG delivered 128 cargoes, four less than FY2022 with a reduction in spot cargoes from 15 in FY2022 to seven in FY2023. This is attributed to the impact of lower production and the prioritisation of domestic market sales. In FY2023, the average realised LNG price increased to US$14.2/MMBtu, up 14% compared to FY2022 with cash distribution paid by APLNG also increasing by 12%. Unit CAPEX and OPEX increased by A$0.7/GJ reflecting both higher expenditure and lower production but was within the FY2023 guidance.

Table 4.1: Origin FY2022 APLNG Results with FY2023 Guidance Versus Actual Performance and FY2024 Guidance

Integrated Gas - APLNG 100%	FY2022 Results	FY2023 Guidance[2] (Actual)	FY2024 Guidance
Production	693 PJ	680-710 PJ **(Actual 674 PJ)**	680-710 PJ
Unit CAPEX + OPEX, excluding purchases[1]	A$3.2/GJ	3.5 - 4.1 **(Actual A$3.9/GJ)**	A$3.9-4.4/GJ

[1] OPEX excludes purchases and reflects royalties at the breakeven oil price.
[2] Initial guidance, Production guidance revised on 16 February 2023 to 660 – 680 PJ

4.3 APLNG Governance Structure

The relationship of the APLNG shareholders is governed by the Shareholder Agreement.

Overall direction and control of APLNG is the responsibility of the APLNG Board which oversees operations along the full value chain from upstream operations through to sales.

APLNG corporate office is staffed by secondees from the shareholders and is responsible for supporting the APLNG Board and administering the various service agreements described below:

1. **Upstream Operator: Origin** - Responsible for the development and operation of APLNG gas fields, main gas transmission pipeline and exploration and appraisal activities. This is governed by the Upstream Operator Agreement.
2. **Downstream Operator: ConocoPhillips** - Responsible for the liquefaction of the CSG to LNG and is governed by the Downstream Operator Agreement.
3. **LNG Marketing: ConocoPhillips** – Provision of services for the marketing and sale of LNG (contracted and spot cargoes) and is governed by the LNG Marketing Services Agreement.
4. **CSG Marketing: Origin** - Responsible for the marketing and sale of gas into the domestic market and is governed by CSG Marketing Agreement.
5. **Corporate Service Provider: Origin** - Functions include accounting, tax, human resources, insurance, information technology, government affairs and treasury and is Governed by Corporate Services Agreement.

Annexure 1. Independent Expert's Report *continued*

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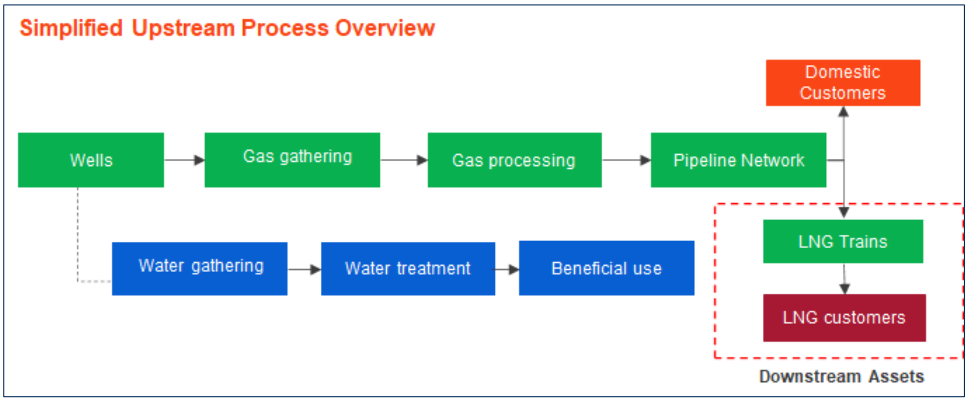
4.4 Upstream Overview

Upstream comprises APLNG's gas fields, wells, gathering network, gas and water processing facilities, and the main gas transmission pipeline (**Figure 4.1**). Origin, with over 20 years' experience in CSG production in Australia, is responsible for the exploration, development and operation of all upstream assets along with domestic gas sales and marketing. Fields are located in the Bowen and Surat Basins which are well known CSG basins.

Key Upstream Assets:

- Wells: Over 3,100 wells including >80 horizontal and >600 with fracture stimulation completion
- Gas Processing Facilities: 12 major sites: >1,600 TJ/day
- Main Pipeline System: 530 km
- Gathering Lines: >5,000 km (gas and water)
- Water Treatment Facilities: 4 sites; >100 megalitres/day
- Number of Landowners: >400 landowner groups

Figure 4.1: Origin Simplified Upstream Process Overview



Source: Origin

Origin indicates that its key trends and developments over the past 18 months include increased gas in place and deliverability from core areas, whilst the level of drilling was previously low with only one drilling rig due to the impact of wet weather, this has now increased with two drilling rigs currently in operation. Production has increased in the second half of FY2023 with drier weather allowing an increase in well workover activity and wells online.

4.5 APLNG Reserves and Resources (30 June 2023, 100%, PJ)

The 30 June 2023 APLNG reserves and resources position as provided by Origin is given in **Table 4.2**.

Table 4.2: APLNG Reserves and 2C Resources position as of 30 June 2023

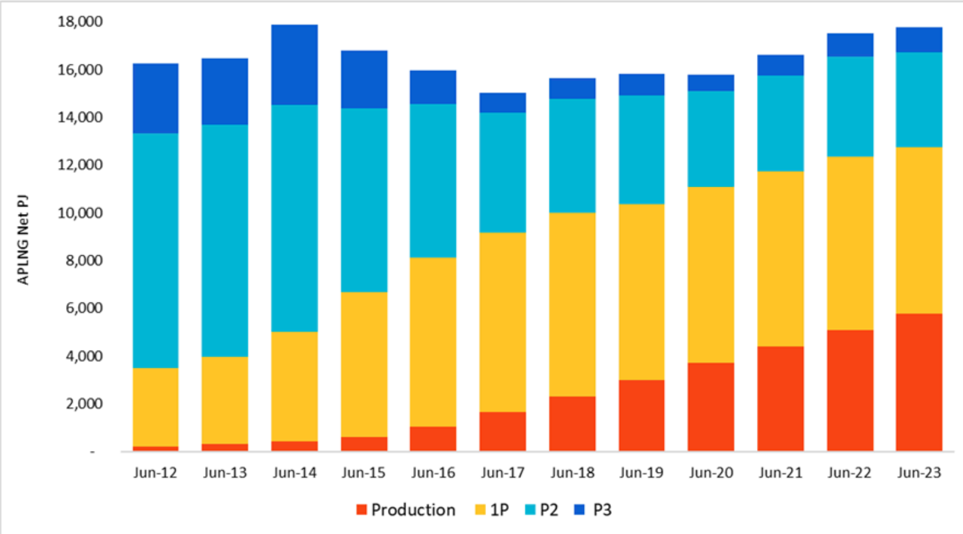
Category	Operated Volume (PJ)	Non-Operated Volume (PJ)	Total Volume (PJ)
1P (Proven)	5,607	1,354	**6,961**
2P (Proven + Probable)	9,144	1,806	**10,949**
3P (Proven + Probable + Possible)	9,987	2,003	**11,991**
2C (Contingent Resources)[1]			**3,729**

Note: Split between Operated and Non-operated Contingent Resources is commercially sensitive so only aggregated volumes are provided.

The Reserves and Resource position is largely flat year on year (as per **Figure 4.2**) with minor changes beyond production due to land access constraints with consideration of operating cost (OPEX) model updates due to the inclusion of carbon costs. These have been offset by increases in some fields in the Undulla nose area with sustained production along with the Talinga ongoing performance additions. For the operated tenures Origin indicates a 2P reserves replacement ratio of 81% since June 2017, with a FY2023 2P reserves replacement ratio of -8% and a 148% non-Operated reserves replacement ratio. Overall based on Origin numbers a 2P reserve life of 16 years exists as of 30 June 2023.

Annexure 1. Independent Expert's Report *continued*

Figure 4.2: Reserves Position History



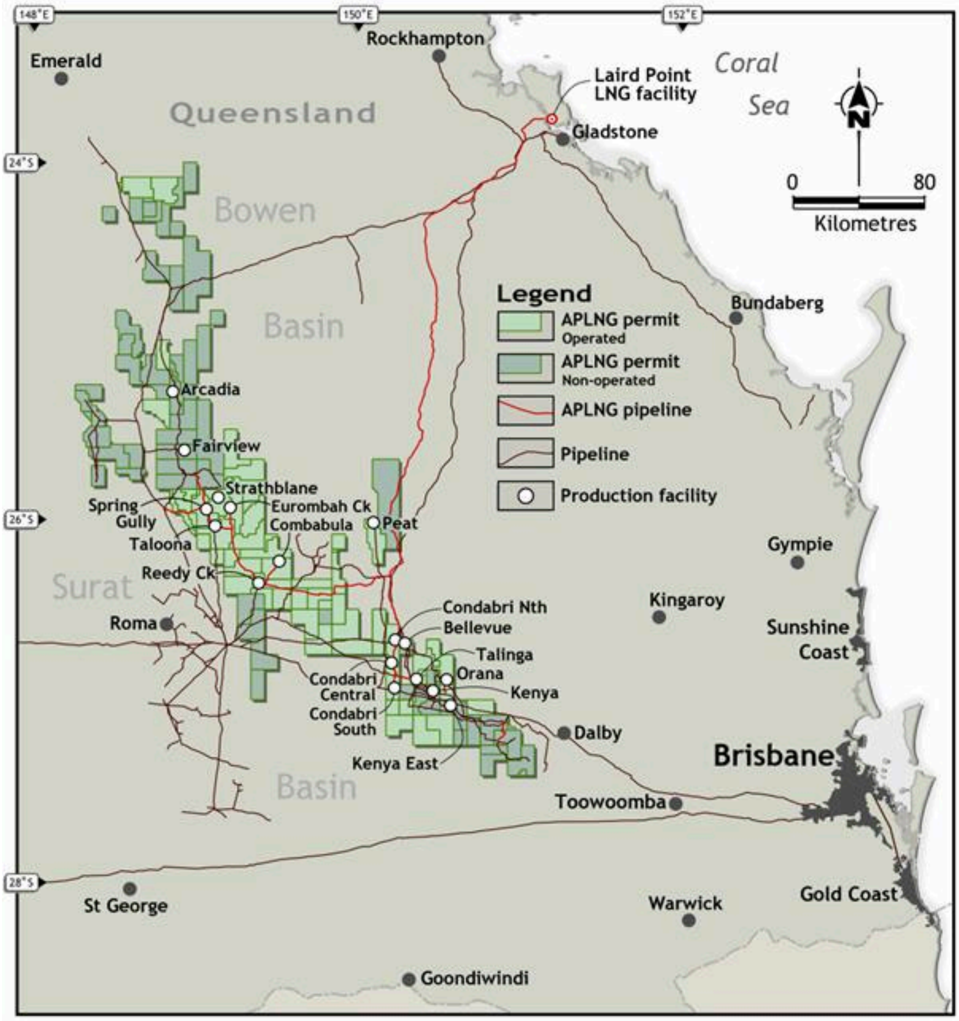
Source: Origin

4.6 Upstream Tenures (Operated and Non-Operated)

APLNG has a dominant position in prime fairways of the Surat and Bowen Basins (**Figure 4.3**). Depth, maturity and structure of coal formations have proven ideal for economic CSG production.

Walloon Coal Measures in the Surat Basin represent ~80% of the reserves with the remaining 20% situated in the Bandanna Formation coals of the Bowen Basin. Uniquely, APLNG covers the "sweet spots" in both the Bowen and Surat Basins. These are areas of measured high permeability driven by geological structure.

Figure 4.3: Operated and Non-operated Tenures



Source: Origin

Annexure 1. Independent Expert's Report *continued*

Table 4.3 includes a summary of the Operated and non-Operated tenures held by Origin through its 27.5% ownership of APLNG.

Table 4.3: Operated and Non-Operated Tenures Held by APLNG.

Tenure	APLNG Interest	Operated/Non-Operated
Angry Jungle		
ATP 631; PLs 281 and 282	4.9765375%	Non-Operated
Carinya and Ramyard		
ATP 972; PLs 469, 470 and 471	25.49696%	Operated
ATP 973	27.50%	Operated
Combabula/Reedy Creek/Peat and Taroom East		
ATP 2047	13.75%	Non-Operated
ATP 606; PLs 297, 403, 404, 405, 406, 407, 408, 412 and 413; PL(A) 444	25.49696%	Operated
PL 101	27.50%	Operated
PPL 178	27.50%	Operated
Condabri		
PLs 265, 266, 267, 1011 and 1018	27.50%	Operated
PPLs 177, 185, 186, 2000 and 2059	27.50%	Operated
Denison trough		
ATP 1191; PLs 1082 and 1083 (Mahalo block deeps)	13.75%	Non-Operated
ATP 1191; PLs 450, 451, 457, 1012; PL(A) 1062	13.75%	Non-Operated
PLs 43, 44, 45, 183 (PLA 1116) and 218 (Deeps)	13.75%	Operated
Fairview and Arcadia		
ATPs 745; PLs 420, 421 and 440	6.558623%	Non-Operated
PL 1059	6.55875%	Non-Operated
ATPs 2012, 90, 91, 92, 99, 100, 232, 233, 234, 235, 236 and 1017	6.580664%	Non-Operated
Gladstone LNG		
PFL 20	27.50%	Non-Operated
PPLs 162 and 163	27.50%	Operated
Ironbark		
ATP 788; PL(A) 1106 (Deeps)	6.875%	Operated
ATP 788; PL(A) 1106 (Shallows)	27.50%	Operated
Kenya/Kenya East/Bellevue and Anya		
PL 247	8.078125%	Non-Operated

Tenure	APLNG Interest	Operated/Non-Operated
PFL 19	8.59375%	Non-Operated
PL 1025	8.59375%	Non-Operated
PLs 257, 273, 274, 275, 278, 279, 442, 466, 474 and 503 (Shallows)	8.59375%	Non-Operated
PLs 179, 180, 228, 229 and 263	11.171875%	Non-Operated
PPLs 107, 176, 2014 and 2063	11.171875%	Non-Operated
Membrance and Lonesome		
ATP 804	8.057017%	Non-Operated
PLs 219 and 220	27.50%	Operated
Spring Gully		
ATP 592; PLs 195, 268, 414, 415, 416, 417, 418 and 419	25.9875%	Operated
PL 200	26.32038%	Operated
PL 204	27.42438%	
PPL 143, 180 and 2026	27.50%	Operated
PPL(A) 2077 (Spring Gully-Combabula)	27.50%	Operated
Talinga/Orana/Murrungama		
PLs 215, 216, 225, 226, 272, and 1084	27.50%	Operated
PFL 26	27.50%	Operated
PPLs 171, 181 and 2032	27.50%	Operated

Origin holds interests via the APLNG Joint Venture in permits in the Bowen and Surat Basins. Ownership and specific tenement details are summarised in **Table 4.3** above.

GaffneyCline has independently verified and mapped the tenement details via the Queensland government https://georesglobe.information.qld.gov.au/# tenure site (**Figure 4.4**).

Annexure 1. Independent Expert's Report *continued*

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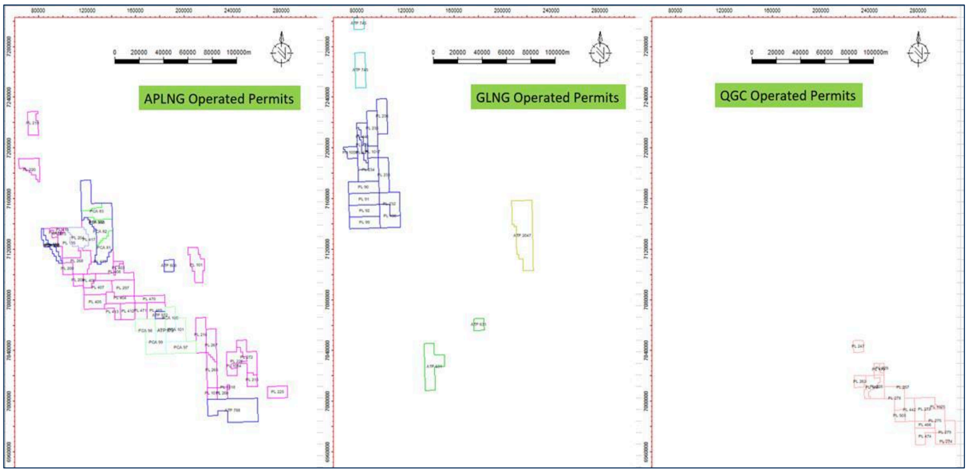
Figure 4.4: GaffneyCline Verified Tenure Maps



4.7 APLNG Reserves and Resource Methodology

The Reserves and Resources of Origin's CSG assets are prepared consistent with the Petroleum Resources Management System (PRMS) 2018 published by the Society of Petroleum Engineers (SPE) and generally accepted petroleum engineering and evaluation principles as set out in the SPE Reserves Auditing Standards. The Reserves and Resources for operated assets are prepared in-house by Origin while the non-operated assets are prepared by Netherland, Sewell & Associates, Inc. (NSAI). For permits with reserves, a deterministic, incremental methodology. This deterministic methodology is consistent with how APLNG has historically classified their reserves and resources via the services of external auditors.

For the deterministic incremental methodology, each planned or potential Drill Spacing Unit (DSU) within a play is given a classification. This results in a classification map for each major formation across the assessment area. Within the current portfolio this means one map for the Bandanna Coal Measures and one map for the Walloon Coal Measures.

The DSU's are determined by dividing up the map of the coal measures into grids of a size equivalent to the average spacing that is anticipated between development wells. For example, for the Walloon Coal Measures, the typical DSU is 750 x 750 m and so the map of the Walloons Coal Measures is divided up into grids of 750 x 750 m.

The key steps in classifying each DSU are:

- Classification of DSU's containing existing wells
- Application of classification to areas surrounding existing wells (Halos)
- Interpolating between existing wells based on established trends

Origin classifies DSU's on the following basis which is important to understand and consider in the build-up of production and cost profiles in the valuation scenarios of assets/tenements:

Proved (P1) - the well and all necessary equipment to produce the well are in place to produce to sales, the well is located within a granted Petroleum License and there is firm intent to continue producing the well as shown in a production plan or business plan. Proven DSU's are further classified as Proved Developed Producing (PDP) if the well has the ability to flow to sales and has flowed within the past 12 months, Proved Developed Behind Pipe (PDBP) if the well has the ability to flow to sales but has not flowed in the past 12 months.

If the well has been spudded and drilling is currently underway or not all necessary equipment is in place to produce the well, the well is classified as Proved Undeveloped Behind Pipe (PUBP) as long as the completion of the well including connection to sales is part of an Approved Program. If the well has not been spudded but is adjacent to a drilled well and part of an Approved Program then it is classified as Proved Undeveloped (PUD).

Probable (P2) - if the well is drilled within a PL, PL under application or ATP and the well is in an area with an approved Field Development Plan (FDP) that includes the location and timing of the wells.

Possible (P3) - assigned to outer halo rings around wells that are classified as Proved or Possible or by interpolating between existing wells based on established trends. DSU's with existing wells are not assigned a Possible classification.

C1 - for areas with existing wells where there is a high confidence in the resource estimate based on well data and in general the well would have been production tested.

C2 - designated by Origin to indicate incremental resources between 1C and 2C with a clear path being evident that it will most likely result in the resource being upgraded to reserves if the identified contingency(s) can be removed.

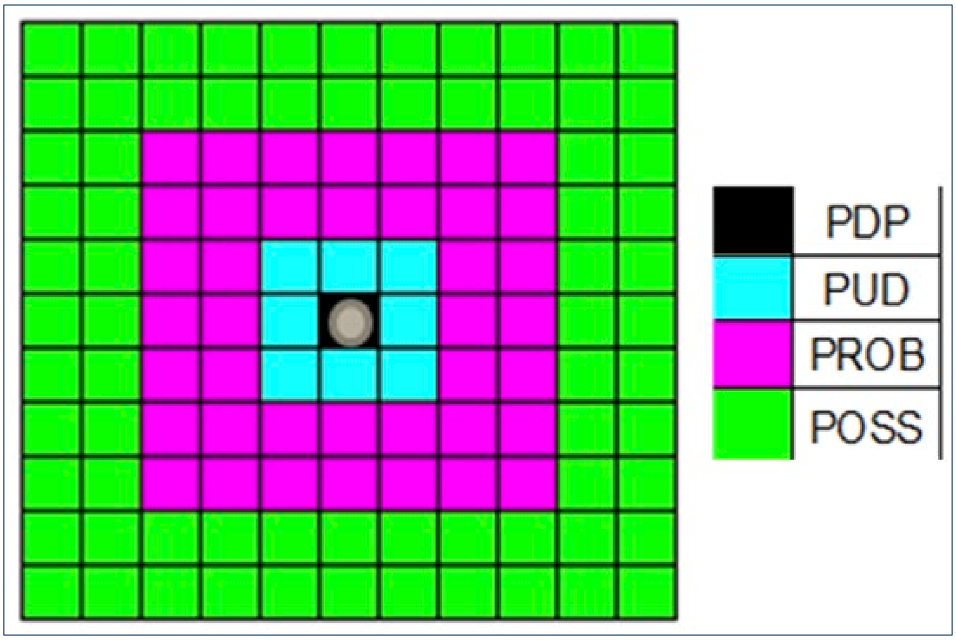
C3 - where the pathway to a reserves classification cannot be identified or the contingency looks unlikely to be removed within the foreseeable future for example, static properties or DST/MDT are at the low end of the range that would typically be considered to be commercial and a feasibility assessment for the area is yet to be completed, the well shows properties that are not sufficient to be currently considered commercial or a well confirms a discovered accumulation but there are contingencies resulting in no plans to acquire additional data, undertake trials or other work to resolve these contingencies due to limited commercial potential.

Unrecoverable Resources (UR) - where well data shows hydrocarbons are known to exist, but no current development project concept is thought applicable to recover the hydrocarbon in an economic way.

Using this methodology, Origin assigns a resource classification to all existing wells with future wells assigned a resource classification based on distance from existing wells, confidence in reservoir properties and other geological considerations. A production forecast is then assigned to every existing and future well with an economic calculation used to aid classification of future wells and to determine the economic life of a particular well. A schematic of Origin's deterministic incremental classification methodology is given in **Figure 4.5**.

Annexure 1. Independent Expert's Report *continued*

Figure 4.5: Schematic of Origin's Classification Methodology of Existing and Future Wells



Source: Origin

Undeveloped reserves and resources are therefore typically located near to existing producing fields allowing for low-cost tie in of new wells into existing infrastructure. Contingent Resources are primarily extensions of developed fields into deeper or less permeable reservoirs. GaffneyCline has reviewed the mapped reserves and resources in detail and has created independent maps to confirm their viability via property correlations. Information is commercially sensitive and is not displayed throughout the report due to this reason.

Due to the limited timeframe of this project and the large number of permits across the APLNG asset, GaffneyCline has not reviewed individual classifications of DSU's assigned by Origin but has accepted Origin's classification for its analysis.

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4.8 Upstream Development Plan

The Upstream Development Plan (UDP) is the annual optimised upstream life of field gas supply development plan for APLNG. The UDP is built from development scenarios selected by APLNG from its funnel of developed, undeveloped and exploration and new venture (ENV) resources.

The UDP is built up by establishing economic KPI's for demand assessment, evaluation of demand ranging from executed contracts to maximum demand cases, as well as an assessment of key economic metrics, executability risks, future optionality, risk of meeting contract commitments and pricing sensitivities. Strategy and assumptions incorporated in the UDP build-up include well intervention strategy, proposed development scenarios, key technical assumptions, and a prioritised sequence of development.

On this basis, the UDP does not incorporate the entirety of APLNG's reserves and resources but includes reserves and resources from developed and high graded future developments considered to be the most likely future development scenarios. The UDP provides APLNG's view of production and cost profiles for each of the selected developed and undeveloped projects. Projects which are included in the UDP but are considered as still in the appraisal or exploration stage are included in the UDP on a risked basis, the risking incorporates both technical and economic risking. EUR for each well is based on the technical and economic constraints applied in UDP23 process. The last year of production profiles is 2064, and tail volumes beyond 2064 are lumped in the last years.

The UDP is updated annually with the most recent iteration UDP23 representing APLNG's current view of its upstream life of field supply development plan. As the current view of APLNG, UDP23 has formed the basis of GaffneyCline's analysis in forming its Scenario A production and cost valuation profiles.

4.9 Origin View as Shareholder

The UDP forms the basis of Origin's Long-Term Financial Plan (LTFP), where key assumptions are challenged, and improvement opportunities identified and quantified. The LTFP focusses on key value drivers, sets targets and programs for improvement and forms the basis for team target setting.

The LTFP is an annual process. The LTFP focusses on activity levels and cost more than production. The difference between UDP and LTFP production is minor, the main difference is in the activity and cost to deliver the profile.

Annexure 1. Independent Expert's Report *continued*

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4.10 Downstream Facilities

4.10.1 Overview

The LNG plant was developed using ConocoPhillips Optimized Cascade Process LNG technology.

The LNG plant comprises processing facilities to convert CSG to LNG, storage of LNG and loading berths to transfer LNG to ships and includes:

- Two LNG trains of 4.5 mtpa capacity
- Two LNG storage tanks with capacity of 160,000m^3 each
- LNG loading berth and jetty suitable for ships with capacity up to 220, 000 m^3
- Five marine loading arms

There is significant latent value in infrastructure beyond the current committed off-take agreements through processing of additional APLNG gas, gas purchases or through potential tolling arrangements with third parties.

4.10.2 ConocoPhillips Optimized Cascade®process

ConocoPhillips has more than 30 years' experience in CSG and over 40 years' experience in LNG production. Using the ConocoPhillips's technology licence, Bechtel was engaged to build APLNG's Curtis Island Facility having over 55 years' experience and building 44 LNG trains globally. The ConocoPhillips Optimized Cascade®process includes proprietary technology necessary to liquefy natural gas, while recovering heavier hydrocarbons as a separate product to prevent freezing, and removing nitrogen, if required.

The Optimized Cascade®process (**Figure 4.6**) is based on three multi-staged, cascaded refrigerant circuits using pure refrigerants, brazed aluminium heat exchangers and insulated cold box modules. ConocoPhillips has optimised the heat integration to closely approach the natural gas and refrigerant cooling curves. Pure refrigerants of propane, ethylene and methane are utilised since their physical properties are ideal for heat integration. The refrigerant properties are also well known and predictable.

The schematic in **Figure 4.7** illustrates how the Optimized Cascade®process produces LNG. The raw gas is first treated to remove sulphur compounds, water (H_2O), organometallic mercury compounds, particulates, and other contaminants before it is routed to the liquefaction section of the plant. The treated gas is then chilled and condensed to approximately -162°C in successively colder heat exchangers, using pure propane, ethylene, and methane as refrigerants. The LNG product is then pumped into insulated storage tanks where it remains until shipment. Boil-off gas and ship return vapours are captured and recycled through the Optimized Cascade®process for reliquefication.

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Figure 4.6: ConocoPhillips Optimized Cascade Process

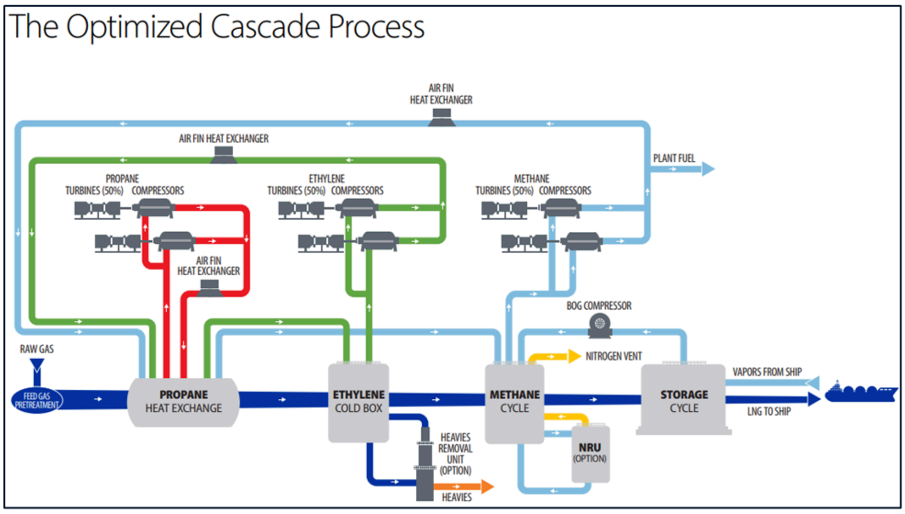
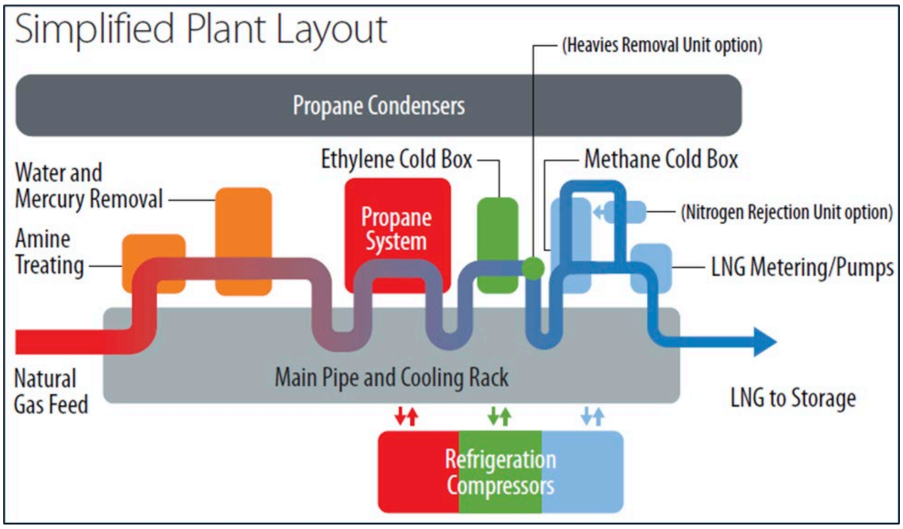


Figure 4.7: ConocoPhillips Simplified Plant Layout



(https://lnglicensing.conocophillips.com/what-we-do/lng-technology/optimized-cascade-process/)

Annexure 1. Independent Expert's Report *continued*

4.11 APLNG Project Funding for Economic Considerations

Development was funded via contributions from APLNG shareholders totalling c.US$22.6 bn (upstream & downstream) and project financed of US$8.5 bn (downstream only). The project finance debt is borrowed and secured against the downstream portion of the project (LNG facilities on Curtis Island) and backed by commercial contracts including the LNG off-take agreements and the gas sales agreement with the upstream portion.

The current project finance debt balance is c.US$5.0 bn as at 30 June 2023.

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5 Geoscience Technical Analysis

5.1 Geoscience Data Set

GaffneyCline was provided with a data set that included static models in Petrel together with well test, adsorption isotherm and coal thickness data in excel format. Regional maps of net pay, gas content, gas saturation, coal depth and permeability were also provided. These data were supported by various reports and presentations by Origin and third-party consultants. Included in the supporting documents was Origin's 'APLNG Probabilistic Resource Assessment and Long-Term Supply Forecast' (PRA Assessment) which provides an assessment of the resources of Origin's operated and non-operated fields that are currently producing, fields that are under development, fields that are yet to be proven to be feasible and exploration targets which supports the long-term supply of gas for APLNG.

GaffneyCline also requested original adsorption isotherm analytical reports from a selection of wells to allow spot-checks of the Excel format data which Origin supplied.

5.2 Geology of CSG Fields

Queensland's CSG resources are hosted in the Surat and Bowen Basins. Gas is primarily produced from thin, high permeability coals in the Jurassic aged Walloon Coal Measures of the Surat Basin and from relatively thicker, Permian aged coal seams, such as the Baralaba Coal Measures and the Bandanna Formation in the Bowen Basin.

The Bowen Basin is a foreland basin of Early Permian to Middle Triassic age covering approximately 160,000 km^2. The southern half of the basin is overlain by the Surat Basin, a large intracratonic basin covering 300,000 km^2 of central southern Queensland and central northern New South Wales. **Figure 5.1** shows the major sedimentary basins of Queensland while **Figure 5.2** shows a schematic cross section showing the relationship between the Bowen and Surat Basins.

The Surat Basin Walloon Coal Measures represent ~80% of APLNG's 2P Reserves and include dozens of thin coal seams with aggregate net thicknesses of 30 m over a gross 300 m interval. Sweet spots have enhanced permeability and are developed with vertical wells with both fracture stimulation and non-fracture stimulation used. The Bowen Basin Bandanna Coal Measures represent ~20% of APLNG's 2P Reserves and are generally formed of 2 - 3 m continuous coal seams with aggregate thicknesses varying from 5 to 15 m. Sweet spots also have enhanced permeability where development initially focused on vertical wells but currently horizontal wells are also being utilised.

Annexure 1. Independent Expert's Report *continued*

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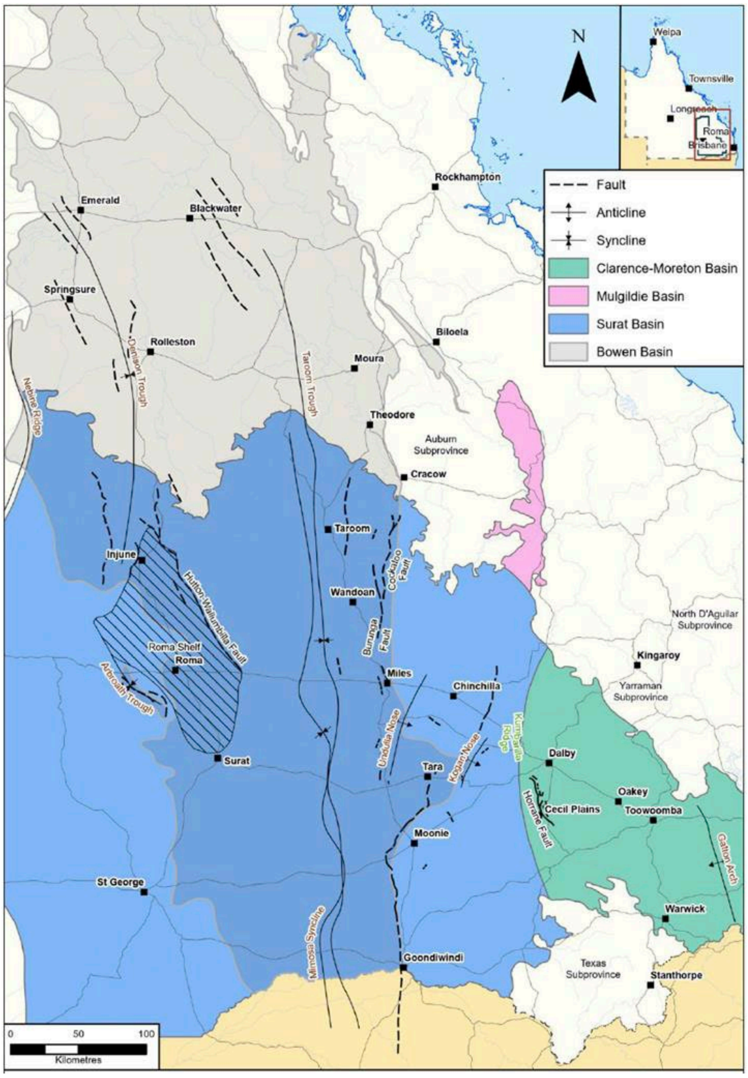
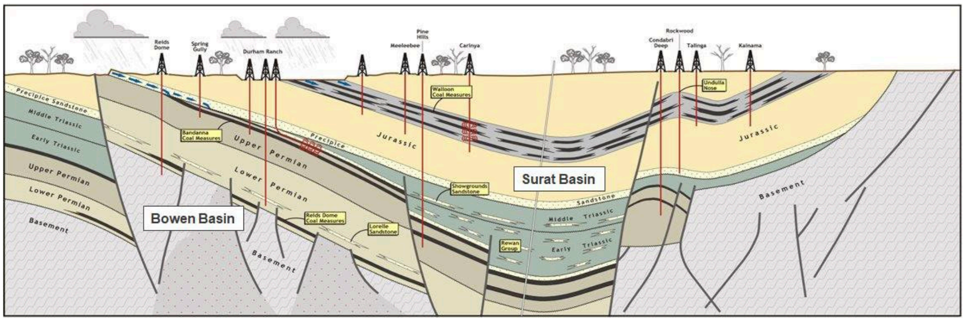
Figure 5.1: Geological Basins and major Structural Elements of the Surat – Bowen Basin Region of Queensland



Source: State of Queensland (2021)

Figure 5.2: Bowen and Surat Basin Schematic Cross Section



Source: Origin

5.2.1 Bowen Basin Overview

Of the Bowen Basin permits (**Figure 5.3**) the two most mature, for the LNG project, are the adjacent areas of Fairview and Spring Gully. Fairview is operated by Santos, while Spring Gully is operated by Origin. These two areas are among the largest CSG producing fields in Australia. To the north of Fairview, the areas of Comet Ridge and Membrance, operated by Santos, are less well explored and are currently being appraised.

Annexure 1. Independent Expert's Report *continued*

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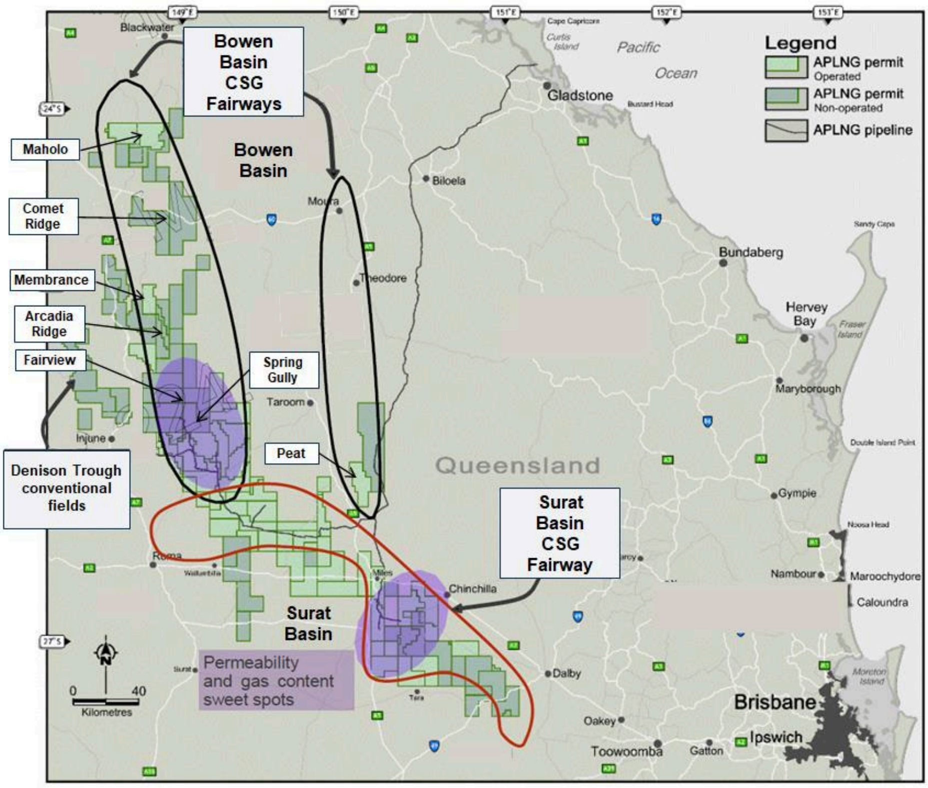
Figure 5.3: Bowen Basin Field Areas



Source: Origin

To the east of Spring Gully is the Peat Field, operated by APLNG. The Peat Field is one of the oldest CSG Fields in Australia and is believed to have been the first CSG Field to be underwritten by a gas sales agreement.

To the west, the Denison Trough area contains conventional gas fields. Potential for CSG in this area will be investigated by APLNG in the near future. Currently only Contingent Resources are included in the Origin Reserve and Resource Volumes provided for the Denison Trough and Mahalo Coal measures of the Bowen Basin.

5.2.1.1 Bowen Basin Geology

The Bowen Basin has maximum sediment thickness of approximately 10,000 m concentrated in two north trending depocenters, the Taroom Trough to the east and the Denison Trough to the west.

Deposition in the Bowen Basin commenced during an Early Permian extensional rifting phase with fluvial and lacustrine sediments and volcanics deposited in the east while a thick succession of coals and non-marine clastics were deposited in the west. Following the rifting, a period of thermal subsidence extended from the Early to Late Permian which was accompanied with a basin wide marine transgression associated with deltaic and shallow marine clastic sedimentation together with the deposition of extensive coal measures. For much of the Permian, the basin remained an area of shallow-water or terrestrial deposition. Coals accumulated throughout the Permian, initially prominent on the margins and in isolated sites and in the later Permian extending to cover most of the basin. Shelves and platforms were the most favourable areas for deposition and preservation of coals because stable conditions were sustained over longer periods of time. Foreland loading of the basin spread from east to west during the Late Permian increasing rates of subsidence and resulting in the deposition of thick Late Permian marine and fluvial clastics with associated coals deposits and Early to Middle Triassic fluvial and lacustrine clastics. Sedimentation in the basin was terminated by a Middle to late Triassic contractional event.

Due to the depositional and tectonic history of the basin, the coal seams of the Bowen Basin vary in quality. In general, it is accepted that four main groups of coal measures exist that may contain deposits of economic importance for both the CSG industry and the conventional coal industry.

The Reid's Dome Beds coal measures are classified as Group I and these are of Early Permian age. They have variable thickness and lithology and are restricted to the southwestern part of the basin. Seams can be up to 30 m thick at a depth of about 1,000 m.

The Collinsville Coal Measures in the north and Rugby Coal Measures southwest of Moranbah form the Group II coals which are also of Early Permian age. The coals are formed of several unconnected bodies located around the northern and western margins of the basin.

Group III coals of Late Permian age were deposited on the Collinsville Shelf, under conditions which varied from a marine-influenced deltaic environment in the German Creek Formation, to dominantly fluvial flood plain environments in the Moranbah Coal Measures. These formations contain most of the high-grade coking coal deposits mined in Queensland. A marine transgression, which halted deposition of Group III coals in the south, did not extend into the northern part of the basin where coal measures continued to be deposited. Volcanism at this time resulted in major outpourings of tuffaceous material, which contaminated seams in the Fair Hill Formation and Fort Cooper Coal Measures.

Annexure 1. Independent Expert's Report *continued*

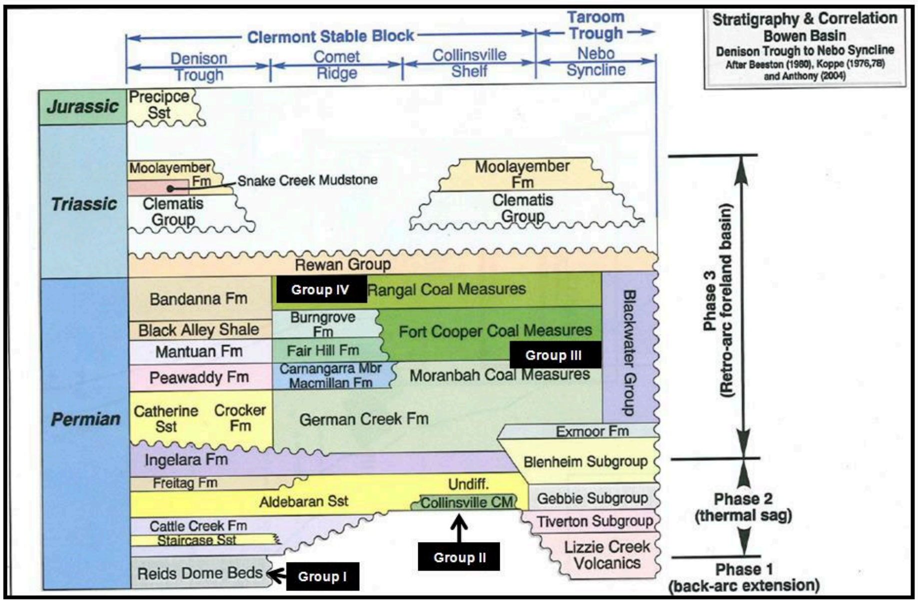
The final phase of coal deposition in the Bowen Basin occurred in the Late Permian and resulted in the formation of Group IV coals. These include the Rangal Coal Measures, Baralaba Coal Measures and the Bandanna Formation. The coals in this group are the most diverse in terms of quality, and also the most widely distributed within the basin. Group IV coals were deposited under fluviatile, lacustrine and paludal (swamp, marshy) conditions. Although the quality and rank of Group IV coals vary greatly, they are characterised by comparatively low reactive content and low sulphur.

5.2.1.2 Structure and Stratigraphy

The Bowen Basin trends almost north-south and underlies the Surat Basin throughout much of Queensland. In the Fairview / Spring Gully area the main coal seams dip to the east. To the west they are truncated by an unconformity above which lies the Precipice Sandstone. This has implications for gas production as the Precipice Sandstone is an aquifer which can communicate directly with the main coal seams making dewatering difficult. To the east, the main Bandanna Formation coal seams dip gently to the south-east. In the Fairview area, there are some structural closures which allow gas caps to form. These areas can produce high gas rates without any water production.

The stratigraphy of the Bowen Basin is shown in **Figure 5.4** below.

Figure 5.4: Bowen Basin Stratigraphy



Source: Anthony (2004) -GaffneyCline Modified

Coal Seams and Thicknesses:

The main coal seams producing gas from the Bowen Basin are the Late Permian Bandanna Formation coals. These coals are thick and continuous and can be traced for tens or even hundreds of km. They are generally bituminous. In the Fairview / Spring Gully area, seams are typically around 8 m thick, although in some areas individual seams can be over 10 m. It is also possible for seams to come together to form a "superseam" over 15 m in thickness.

In Comet Ridge and Denison, seams are thinner, with a typical range of between 4-8 m. The Peat Field contains very thick coals of around 17 m, which was a major factor leading to the early development of this area.

Density:

The density of coals in the Fairview / Spring Gully area is around 1.35 g/cc indicating good quality bituminous coals. Coal densities in other areas such as Comet Ridge and Membrance are also similar with values of 1.34 g/cc being used as an average by APLNG. GaffneyCline has verified the APLNG average values by random well spot checks in the online data room.

Ash and Moisture Content:

Ash and moisture contents in the Fairview / Spring Gully area are generally quite low, with ash around 11% and moisture around 3%. Away from this area, ash contents may be higher with values of 17% quoted in the northern Comet Ridge area. GaffneyCline has verified values used by APLNG by random well spot checks of raw data in the online data room.

Gas Content:

Gas contents in the Fairview / Spring Gully areas are very high, typically around 12 m^3/t. These are amongst the highest found in Queensland. Away from this sweet spot, gas contents are much lower and more variable. In the Comet Ridge and Denison areas, gas contents range from 4-10 m^3/t. In the Peat Field, the gas contents are around 9 m^3/t.

Fracturing/Geomechanical Characteristics:

Permeabilities in the Fairview / Spring Gully area are generally very good with a quoted average value of around 100 mD. In Fairview, areas of enhanced productivity are associated both with structural highs and fault zones, so there is likely a structural / geomechanical component to the fracturing, but it has not been formally studied.

In other areas such as Comet Ridge permeabilities are generally lower, ranging from less than 1 to 50 mD. In the Peat Field, permeability averages 10 mD.

As with most CSG Fields, permeabilities vary with depth. As depth increases, permeability decreases. Therefore, depth is usually a limiting factor for economic CSG production. The actual depths will vary based on the local coal characteristics. On the eastern flank of Fairview, a depth limit of 1,000-1,100 m has previously been assumed, but recent well results have shown that good gas rates may be achieved at depths up to 1,300 m.

Annexure 1. Independent Expert's Report *continued*

Aquifer Characteristics:

In the Fairview area, the Bandanna coals are truncated by the Precipice Sandstone. This subcrop forms the western boundary of the productive coals. The Precipice Sandstone has an aquifer which has the potential to significantly influence gas production in the area. Continued water influx from the aquifer can impact gas production negatively, as it may limit the ability to dewater wells and use up significant water handling capacity available. Some of the best producing wells are located in the west, close to the subcrop.

5.2.2 Surat Basin Overview

APLNG permits in the Surat Basin are located in three main areas (**Figure 5.5**):

- Undulla Nose
- Northern Walloons
- Eastern Walloons

Ownership and specific tenement details are summarised and available in **Table 4.3**. GaffneyCline has independently verified the tenement details via the Queensland government https://georesglobe.information.qld.gov.au/# tenure site.

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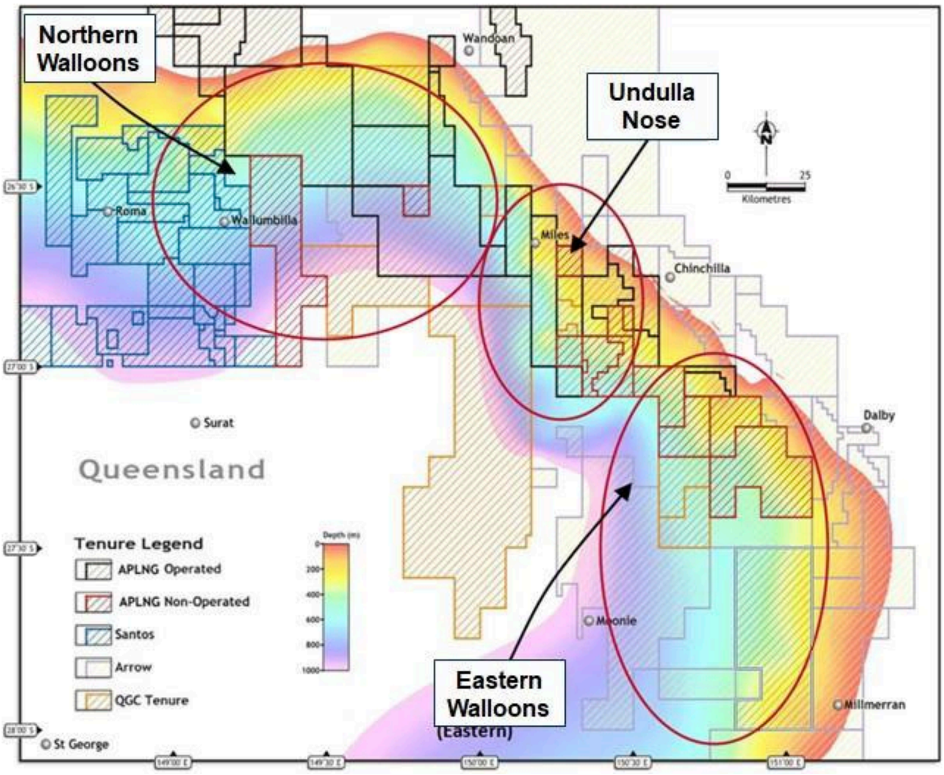
Figure 5.5: Surat Basin Tenures



Source: Origin – GaffneyCline Modified (indicative public 2015 map to demonstrate depth trends, tenement changes have occurred)

The APLNG Surat Basin CSG permits form a crescent around the north-east edge of the basin. The basin dips to the south and west. The central part of this crescent contains the Undulla Nose (Talinga, Condabri etc), with the area to the north-west containing the Northern Walloons (Combabula, Ramyard etc) and to the south-east containing the Eastern Walloons (Kenya etc).

The Undulla Nose is a sweet spot which contains several producing fields operated by APLNG and others. The Northern Walloons contain several large permits including ATP606P (Combabula) which is a producing field and others which have good potential. The Eastern Walloons also have large permits some of which are at an earlier stage of exploration.

Annexure 1. Independent Expert's Report *continued*

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5.2.2.1 Surat Basin Geology

The Surat Basin is a broad intra-cratonic sag basin of Jurassic to Early Cretaceous age and has maximum sediment thickness of 2,500 m. Sediments were deposited in a period of overall thermal subsidence with deposition being relatively continuous and widespread. The basin formed following a period of major tectonism in the Late Triassic which resulted in the uplift, folding and erosion of up to 3,000 m of Permian section.

Deposition commenced with the onset of passive thermal subsidence across much of eastern Australia. During the early Jurassic, fluvio-lacustrine deposition dominated but by the Middle Jurassic coal swamp environments predominated over much of the basin. Deposition occurred in fluvial, lacustrine and marginal marine settings with the accumulation of extensive coal bearing sections. Environments graded from high energy braided fluvial settings to lower energy meandering fluvial settings with inter-channel lakes and swamps. The major CSG producing coals are within the Middle Jurassic Walloon Coal Measures.

Towards the end of the Middle Jurassic, a period of fluvial deposition began and continued through to the earliest Cretaceous. This was followed by a marine transgression brining paralic and shallow marine deposition but subsequent regression resulted in an abrupt return to fluvial and lacustrine deposition before sedimentation ceased in the Aptian. Compression and tilting in the Late Cretaceous has resulted in extensive erosion of the section, which increases to the north.

A stratigraphic column for the Surat Basin is given in **Figure 5.6**.

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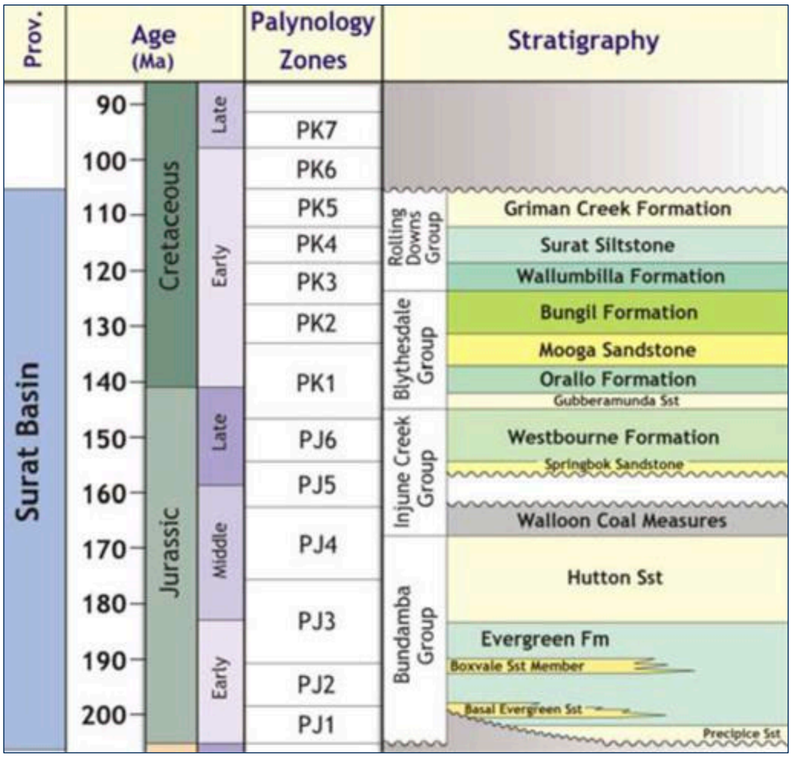
Figure 5.6: Surat Basin Stratigraphy



5.2.2.2 *Structure and Stratigraphy*

In the areas covered by APLNG's permits, the Bandanna coals outcrop in a crescent that strikes west-east in the Western Walloons, north-west south-east around the Undulla Nose and then north-south in the Eastern Walloons. The productive fairway of Walloon coals follows this trend dipping to southwest up to depths of about 1,000 m.

Coal Seams and Thicknesses:

Individual coal seams in the Surat Basin are more numerous, thinner and less laterally extensive than in the Bowen Basin. The coals themselves are typically sub-bituminous and of lower rank than the Bowen Basin coals. Seams are commonly grouped into packages containing several stringers. These seam packages can be traced regionally over large distances. Individual seams may be recognised locally, but a more common subdivision is based on packages including the Upper Juandah, Lower Juandah and Taroom and this subdivision is used by APLNG.

Annexure 1. Independent Expert's Report *continued*

Gaffney Cline

Coal thicknesses of the combined packages are typically around 20 m, although this thickness is split between multiple seams over a section of several hundred metres. In some places, coal thicknesses exceed 40 m but these areas are not extensive.

Density:

The density of the Walloon coals is generally higher than the Bowen Basin coals, with values of between 1.35 – 1.5 g/cc being typical, although with a large number of seams, there is also a wide range in values. This has been verified via checks with available information in the online data room.

Ash and Moisture Content:

Ash and moisture contents of Walloon coals are generally higher than in the Bowen Basin. Typical values range from 15-30%, although with a large number of seams, there is a lot of variability in the values. This has been verified via checks with available information in the online data room.

Gas Content:

Gas content of Walloon coals vary throughout the area and are generally lower than in the Bowen Basin. The best gas contents of around 7-8 m^3/t are located in the Undulla Nose area. To the west, in the Northern Walloons, gas contents are still good at around 5-6 m^3/t. To the south in the Eastern Walloons, gas contents are lower with values of 2-5 m^3/t in some areas.

Gas content is controlled by several factors including coal quality and burial history, but isotherm theory indicates that gas contents are highly dependent on depth. Many of the permits have coals over wide depth ranges, perhaps as much as 0-1,000 m in some cases. In these cases, gas contents may vary from shallow to deep. For example, ATP 606P (Combabula), is a permit where coals dip to the south-east from 0-1,000 m. Gas contents vary from around 3-4 m^3/t in the shallow areas to 6-7 m m^3/t in the deeper areas, although the average gas content is around 5 m^3/t. This has been verified via checks with available information in the online data room.

Fracturing/Geomechanical Characteristics:

Permeabilities are excellent in the Undulla Nose area with average values of around 500 mD and some individual wells having values over several Darcies. Away from this sweet spot, permeabilities are more variable and are typically lower. In the Northern Walloons, values vary between <1 to 600 mD, with some areas averaging less than 10 mD. In the Eastern Walloons, permeabilities are also variable with values between 1-1,000 mD having been observed.

As with most CSG Fields, permeabilities vary with depth. As depth increases, permeability decreases. Therefore, depth is usually a limiting factor for economic CSG production. APLNG's permits generally contain coals which are above the typically assumed depth limits of around 1,000-1,100 m. However, most permits have gentle dip depending on the location of the permit. For example, in ATP 606P (Combabula), the depth varies from 0 to 900 m with corresponding permeability variations from over 1,000 mD in the shallow areas to around 10 mD in the deeper areas. Permeability is controlled by several factors including coal character, structural setting and stress conditions but depth is usually a major component.

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Aquifer Characteristics:

There are no large aquifers that impact on CSG production in the Surat Basin. Current pilot well studies have shown no indication on the dewatering effects on the permits of the Surat Basin, however as additional wells are drilled this is being monitored by the Operator.

5.3 Technical Audit

5.3.1 Methodology

GaffneyCline audited the provided coal thickness and adsorption isotherm data, which included measurements of gas content, ash content, moisture content and density by cross checking values provided by Origin in Excel format with the original analytical reports of 33 wells which were requested from Origin. Wells were selected based on geographical location to ensure wells spread across the APLNG assets were audited. The audit checks showed that the provided Excel data was accurate and represented the information supplied in the original analytical reports. On the basis of these audit checks, GaffneyCline has relied on the provided Excel data set.

GaffneyCline created a regional Petrel project and for each of the key parameters of coal thickness, gas content, ash content, moisture content, and density, data was imported in point format into the Petrel project. Data was imported for all wells which had available data points and data was broken down to a coal seam level. This point data was then used to create gridded surfaces for each parameter at a coal seam level meaning that regional property surfaces were created for each of the main coal seams of Upper Juandah, Lower Juandah and Taroom for the Surat Basin coals and Bandanna coals of the Bowen Basin.

Using the regional property surfaces as inputs, GIIP maps were calculated for each of the coal measures. In addition to this, audited permeability point data was imported into Petrel and gridded to create regional permeability maps for the key coal seams.

The resulting maps were cross checked against maps provided by Origin and against averages provided in the PRA Assessment to ensure accuracy. The regional maps were then used to create GIIP and permeability maps on a permit level for each of the main field areas. This allowed total GIIP and average permeabilities to be calculated at a permit level.

Due to commercial sensitivity, the maps produced and utilised by GaffneyCline in its analysis have not been provided in this report.

The provided data set included a map of developed, undeveloped and contingent areas across the APLNG permits. This map was geo-referenced and imported into the regional Petrel project. This allowed cross checks of permeability and GIIP's for developed, undeveloped and contingent areas, which were used to determine whether EUR and peak rates per well utilised by Origin for production forecasting in the undeveloped and contingent areas were reasonable.

5.3.2 Adsorption Isotherm Data

Inputs for adsorption isotherm data which included gas content, density, moisture content and ash content recordings were available for 113 wells. The geographical spread of the input data is concentrated largely around the main field areas with data density reducing towards the margin of the project areas and away from the main field developments. The input point data was gridded for each parameter to produce regional maps of gas content, density, moisture content, and ash content. The accuracy of the resulting maps is limited to an extent by the available data set. In the main field areas data density was sufficient for maps to be relied on but near the edges of the dataset where data points are limited, some bullseyes in the maps are seen.

5.3.3 Net Coal Thickness

Net coal thickness data was available from 546 wells. In some wells, multiple stringers of the same coal measure are penetrated and, in these cases, the net thickness of each stringer was summed to produce a single net thickness for each coal measure. Net coal thickness was imported into the regional Petrel project as point data and was gridded to form regional net thickness maps for each of the main coal measures. Maps were then used as inputs into the GIIP calculation. The high density of wells with net coal thickness data results in a good regional representation of coal measure thickness with fewer bullseye's seen in the resulting maps than in the sparser adsorption isotherm dataset.

5.3.4 Gas in Place

GIIP maps were calculated in the regional Petrel project by using GaffneyCline's gas content, ash content, moisture content, density and net thickness maps as inputs into the calculation. Data for the main inputs (with the exception of net coal thickness) was available for 113 wells with the geographical spread of input data concentrated around the main development areas. As with the input property maps this resulted in some bullseye's seen in the maps towards the edge of the dataset but a reasonable concentration of input data in the main field areas.

GIIP maps were made for each of the main coal measures. Using these maps, GIIP's were calculated at a permit level and these were further broken down to development areas allowing a comparison of the GIIP for developed, undeveloped and contingent areas within each permit. These estimates allowed GaffneyCline to review if sufficient GIIP is present in the undeveloped and contingent areas for Origin's planned developments.

GaffneyCline's review of the maps showed a good correlation between the GIIP maps to the development areas with the areas of higher GIIP having been targeted by earlier developments and areas of lower GIIP in areas defined as undeveloped or contingent. GaffneyCline's estimates of GIIP for permits was used as an audit check to determine if Origin's EUR per well is reasonable. This is discussed further in the Reservoir Engineering Technical Analysis (**Section 6**).

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5.3.5 Permeability

Permeability data was available for 546 wells. A review of the permeability recordings per well identified some anomalously high permeabilities (greater than 5 Darceys) which were excluded from the analysis. Permeability readings for each well were imported into the regional Petrel model as point data which was then gridded to form regional permeability maps for each of the main coal measures.

A comparison of the GaffneyCline permeability maps was made to those provided by Origin and a good correlation between the two was found. Using the maps, average permeabilities were calculated at a permit level. These were then further broken down based on development areas within a permit to allow a comparison between average permeabilities for the developed, undeveloped and contingent areas within each permit. In general, a reasonable correlation was found between permeability and level of development within a permit whereby developed areas tended to have higher permeabilities with average permeability reducing in the areas defined as undeveloped and contingent.

This information was used to determine the reasonableness of type production curves used in the production profiles for each planned development.

5.3.6 Technical Chance of Success

In order to determine the Technical Chance of Success (COS), Origin adopted a rules-based approach for the CSG prospects or fields. Technical success is defined as the ability to flow gas to surface at measurable rates through the application of the proposed development technology. The Economic Chance of Success (ECOS) or the chance of a commercial development is considered separately. **Table 5.1** outlines Origin's approach to define the COS for CSG projects.

Table 5.1: Origin's Technical Chance of Success Matrix for CSG Projects

Level of Maturity	Description
New play exploration	Coal presence not yet confirmed
Exploration	Coal presence known (from legacy oil and gas exploration) but coal parameters unknown
Early Appraisal	Coal presence confirmed, coal parameters potentially attractive, extent unknown and no pilot or analogue production
Mature Appraisal	Coal parameters conformed, no pilot but parameters consistent with commercial analogue
Discovery	Proven gas flow to surface at sustained, measurable rates through pilot or other testing of relevant technology

For more conventional targets such as tight gas sandstone projects, Origin has used a more traditional risking methodology. In this approach, components such as reservoir presence/quality, structure/trap presence, seal and charge are individually risked then multiplied together to determine the overall COS.

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The profiles provided by Origin to GaffneyCline included risked volumes for projects Origin classifies as appraisal or ENV. GaffneyCline reviewed Origin's classification of level of maturity for each of these projects and found it to be consistent. Projects determined to be exploration were removed from GaffneyCline's Scenario A profiles and valued separately using alternate methodologies and are discussed in **Section 6.4.4** of this report.

For projects deemed as appraisal and ENV, Origin has risked volumes based on the COS methodologies described above. GaffneyCline made spot checks of this risking to determine its appropriateness. In general, GaffneyCline found that Origin had applied its COS as described above whereby CSG projects which are nearfield extensions with pilot wells and test results were assigned a COS of 100%, projects which are still being appraised but coal presence has been confirmed by wells were assigned a COS of 70% and earlier appraisal and exploration targets which may have limited well results or coals only identified in seismic data were assigned a COS of 50% or 20%. The COS applied to Origin's more conventional ENV targets followed the more traditional risking process described above. GaffneyCline's review of the COS showed that in general Origin has risked these projects appropriately and therefore GaffneyCline adopted Origin's COS for the appraisal and ENV projects.

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6 Reservoir Engineering Technical Analysis

6.1 Overview of Engineering Data Provided by Origin Energy

This section includes a brief description of the data provided to GaffneyCline relevant to the engineering technical analysis required to audit APLNG's development plans and production forecasts.

- Production history for the APLNG areas operated by Origin Energy. Production data was provided by well and includes monthly wellhead gas production in Petajoules (PJ), water production in m^3 and casing head pressure in kPag; historical data was provided up to 30 June 2023. Additional data for each well was provided, including well location, tenure, field area, development package, well status and well type.
- Reserves and resources estimated by Origin as of 30 June 2022 and 30 June 2023 (herein referred to as the "Reserves FYE22" and "Reserves FYE23" datasets). These datasets contain monthly gas and water production forecasts by well, including existing wells and future development wells. Gas volumes are expressed in terms of APLNG's working interest, and exclude any gas consumed in operations to the inlet of the LNG plant. The Reserves YEJ22 and Reserves YEJ23 datasets contain additional information for each well, including well location, the tenure and field area which each well is in, development package, well status and well type.
- Upstream Development Plan as of 30 June 2022 and 30 June 2023 (herein referred to as the "UDP22" and "UDP23" datasets). The UDP23 dataset forms the basis for the production forecasting and development inputs to the APLNG economic model. The UDP23 dataset contains, for each development package, semi-annual forecasts for gas production and new well counts; both the gas production and well counts have been adjusted to APLNG share, and the gas forecasts exclude fuel consumed in operations to the inlet of the LNG plant.
- Reservoir simulation models. Numerical simulation models were provided for all the areas operated by Origin. These models capture the key subsurface properties and physics and are the starting point of Origin's production forecasting workflow. Simulation models provided were updated and calibrated (history-matched) to different dates for different areas.
- Presentation material from Origin's FY2022 Reserves Workshop. These documents are organised by field area and illustrate several key aspects behind production forecasting and development, such as engineering workflows, assumptions, maps and location of future development.
- Reference material. Additional relevant documents were provided by Origin, such as Origin's internal Reserves and Resources Classification Consistency Rules or APLNG Probabilistic Resource Assessment and Long Term Supply Update (Update 2022).
- Reserves and Resources summary letters by third parties for non-operated areas. These letters include final reserves and resource volumes by permit.

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6.2 Field Area Overview & Production History

For the purposes of auditing production forecasting and development, the APLNG acreage has been subdivided into operated and non-operated and each of these can be further subdivided into field areas. Field areas can then be subdivided further into permits, development packages or areas of analogous coal properties (commonly referred to as geo-domains). This audit has focused on the field area, development package and permit.

Within the APLNG operated area, production began in 2005 at the Spring Gully field. As of 30 June 2023, 4,540 PJ of wellhead gas has been produced from all fields combined. **Figure 6.1** shows the production history of the area. Almost all of the historical production has come from four main field areas, Spring Gully, Combabula, Talinga Orana and Condabri.

Figure 6.1: Production History of APLNG Operated Areas

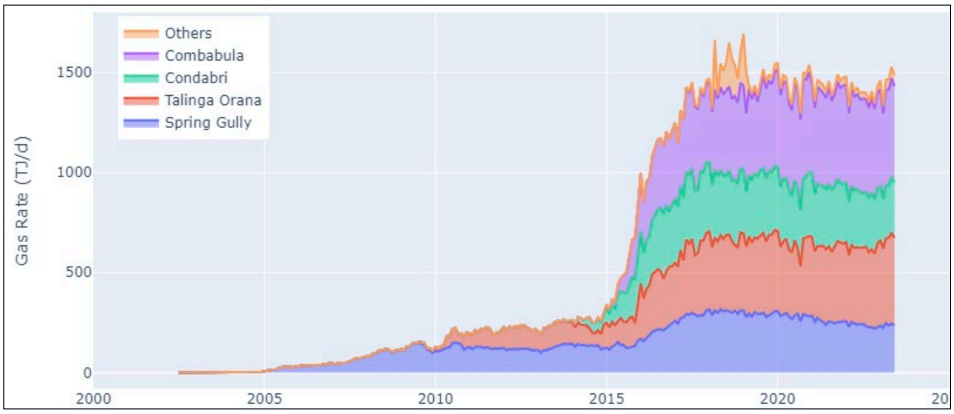

Figure 6.2 shows the production history for Spring Gully. As of 30 June 2023, this field area has produced 1,126 PJ of wellhead gas from approximately 351 online wells delivering some 236 TJ/d of wellhead gas and 67 Mstb/d of water. Four gas processing facilities exist in Spring Gully, which process and compress the gas before it is routed market.

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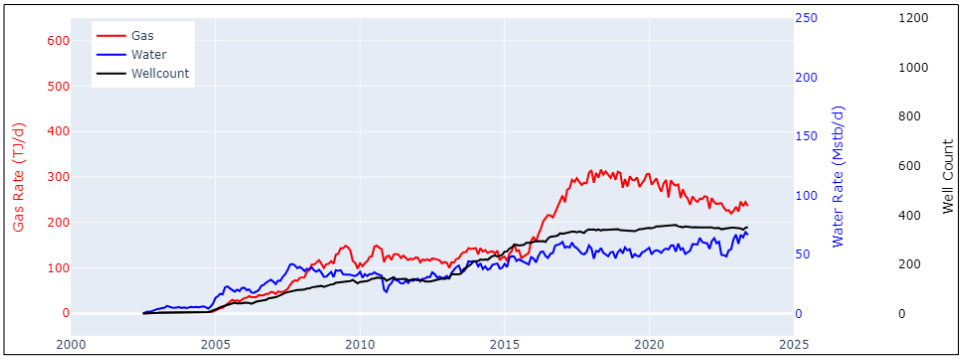
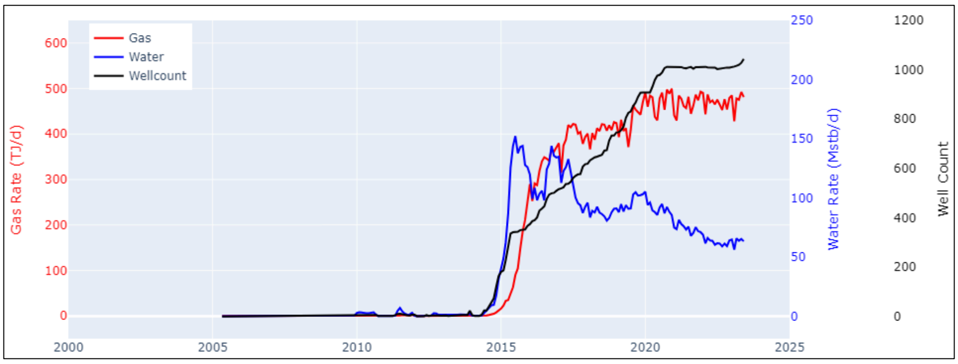
Figure 6.2: Spring Gully Production History



Combabula started production in 2009. **Figure 6.3** shows the production history for Combabula. As of 30 June 2023, this field area has produced 1,207 PJ of wellhead gas from approximately 1,044 online wells delivering some 481 TJ/d of wellhead gas and 63 Mstb/d of water. Three gas processing facilities exist in Combabula, which process and compress the gas before it is routed to market.

Figure 6.3: Combabula Production History



Talinga Orana started production in 2003. **Figure 6.4** shows the production history for Talinga Orana. As of 30 June 2023, this field area has produced 1,195 PJ of wellhead gas from approximately 554 online wells delivering some 437 TJ/d of wellhead gas and 174 Mstb/d of water. Three gas processing facilities exist in Talinga Orana, which process and compress the gas before it is routed market.

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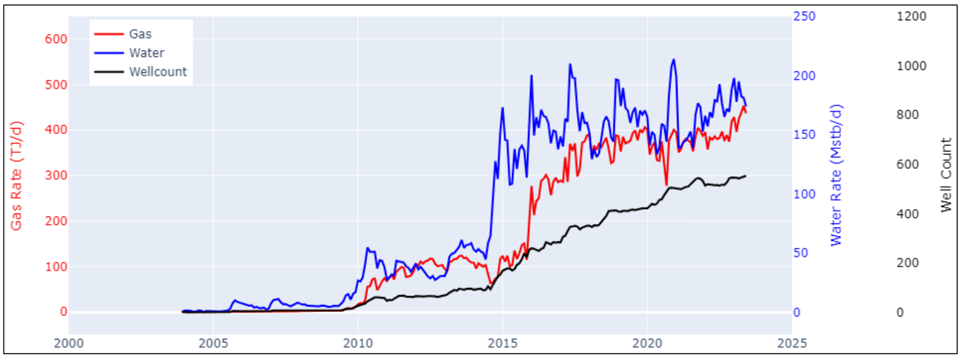
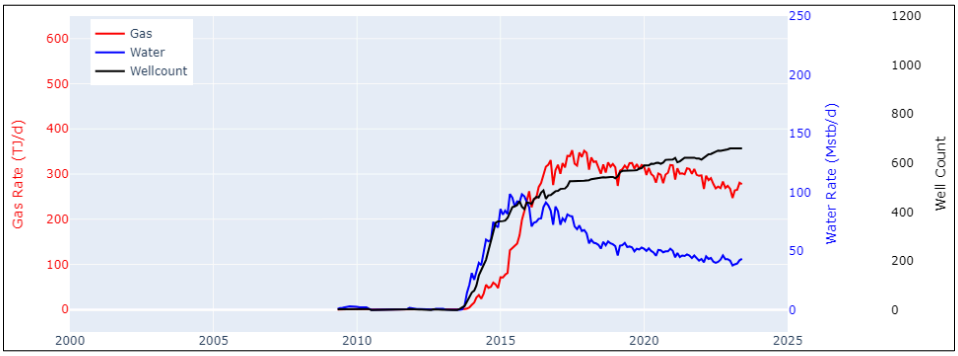
Figure 6.4: Talinga Orana Production History



Condabri started production in 2009. **Figure 6.5** shows the production history of Condabri. As of 30 June 2023, this field area has produced 893 PJ of wellhead gas from approximately 660 wells online delivering some 278 TJ/d of wellhead gas and 43 Mstb/d of water. Three gas processing facilities exist in Condabri, which process and compress the gas before it is routed to market.

Figure 6.5: Condabri Production History



6.3 Overview of Origin Energy's Workflow for Production Forecasting

UDP23 includes the production forecast that has been used as input to the APLNG economic model, delivered by field area. Each field area forecast includes three components:

- Aggregated production forecast for existing producing wells in the field area.
- Individual production and well count forecasts for development packages, related to areas currently under development or to be developed in the future.
- Entries related to the correction of production profiles to account for overall system constraints.

The way production forecasts are generated by Origin varies slightly in methodology for each field area, but the general approach is as follows:

Reservoir simulation models integrating the information such as static mapped properties, coal properties, fluid properties, well location and trajectories, plus some system constraints (e.g. bottom hole pressure constraint) are created for one or more field areas.

Reservoir simulation models are matched to actual performance every year, with different degrees of success to match well performance depending on the field area. In cases where the history match is successful to the well level, single well forecasts for the producing areas are generated directly from the simulator.

In cases where the single well performance match in the reservoir simulator is not of sufficient quality to be relied upon, single well analytical models are utilised to match wells to current performance and generate a forecast for the producing areas.

Production forecasts for wells in non-producing areas are generated based on the expected well performance in those areas. The source of these are the simulation models, which capture the variations in mapped reservoir properties throughout the region, and history-matched performance in developed areas.

These well-level forecasts are unconstrained, in the sense that they do not take into account some of the overall APLNG or field area specific system constraints. These unconstrained forecasts are then loaded into an integrated asset development tool that varies the production forecast (rates and timing) to ensure all the relevant system constraints such as facilities constraints and gas demand are honored.

GaffneyCline believes that this workflow follows good industry practice and it is fit for purpose.

6.4 Audit of Production Forecasting and Ultimate Recovery

GaffneyCline conducted a review of the production forecast and development assumptions included in the UDP23 which contain production forecasts for the following field areas:

Origin-operated areas:

- Talinga
- Spring Gully
- Spring Gully
- Peat
- Combabula
- Condabri North
- Dalwogan
- Kainama
- Ramyard
- Ironbark
- Operated ENV

Non-operated areas:

- Fairview
- Bellevue
- Kenya
- Kenya East
- Angry Jungle
- Arcadia Ridge
- QGC Operated ENV
- GLNG Operated ENV

GaffneyCline's review focused on Origin's operated assets, which added up to 12,968 PJ out of the total of 14,926 PJ included in Origin's valuation model (or 87%).

Information provided for non-operated areas was limited to third party resources summary letters. For these, GaffneyCline ran an overall reconciliation between these letters and the volumes included in the UDP23.

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GaffneyCline's technical review of operated areas relied on the Reserves FYE22 and Reserves FYE23 spreadsheets, as these datasets include well-by-well production forecasts. From these sheets, GaffneyCline generated average well production profiles per permit and resource class/category (see Section 4.7 for definitions) that were utilised to make a judgement on the reasonableness of Origin's production forecast and EUR.

Auditing of operated areas can be grouped into producing and non-producing areas. Producing areas refer to developed areas with sufficient wells and production history to derive a relevant average well performance curve. Spring Gully, Combabula, Talinga Orana and Condabri have high well counts and substantial production histories.

6.4.1 QC of Simulation Models

As an initial check of the validity of the simulation models, GaffneyCline independently ran each of these models and compared the results from these runs with the results provided by Origin. It is noted that the Reedy Creek / Combabula model could not be successfully run, but this fact did not preclude GaffneyCline from achieving its overall auditing objective.

After the models were rerun, GaffneyCline conducted audit checks of the permeability grid from each model against the regional permeability maps that GaffneyCline generated from available well data for the three major coal measures Upper Juandah, Lower Juandah and Taroom (see Section 5.3 for details).

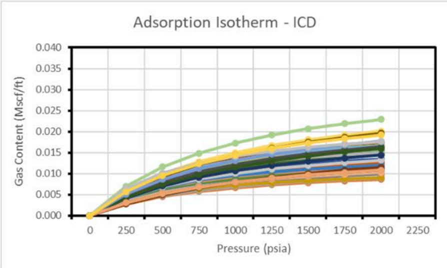
As a further check, GaffneyCline compared the reservoir quality (as indicated from the permeability grid) against Reserves maps provided by Origin for the different Reserve class/classification areas. In general, broad consistency has been observed on the basis of these checks. Due to commercial sensitivity, these maps are not provided in this report.

GaffneyCline also audited the isotherm data inputs into the simulation model. A spreadsheet of the available isotherm data was provided by Origin. GaffneyCline first audited the validity of the data in this spreadsheet by selecting two Spring Gully samples at random, and cross checking the values from the spreadsheet against the raw data in the adsorption isotherm analysis report. The check showed that the data from the report and spreadsheet were consistent.

The Langmuir isotherm parameters from the spreadsheet were used to generate plots to compare against the Langmuir isotherm inputs into the simulation model for each field. **Figure 6.6** shows an example of this check for the Ironbark / Condabri / Dalwogan model. Results from analysis on 40 samples are plotted on the left and the input to the Ironbark / Condabri / Dalwogan simulation model is shown on the right.

Annexure 1. Independent Expert's Report *continued*

Figure 6.6: Langmuir Isotherm from Well Data (Left) Versus Simulation Input (Left) for Ironbark / Condabri / Dalwogan



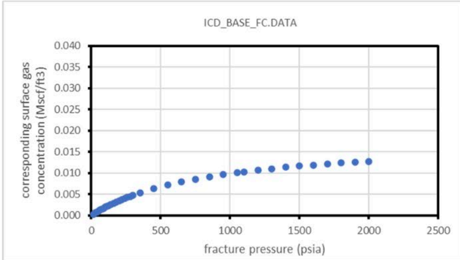


Table 6.1 lists the isotherm data count and the results from the consistency check for each field. In general, broad consistency was observed with some exceptions such as Spring Gully. Since GaffneyCline relied mostly on its production data checks when auditing the Spring Gully production forecasts, this fact did not preclude GaffneyCline from achieving its auditing objective.

Table 6.1: Summary of Available Isotherm Data and Results of Consistency Check

Field(s) Name	Total Number of Wells with Isotherm Samples	Total Number of Isotherm Samples	Consistency Between Isotherm Samples and Simulation Inputs
Reedy Ck/Combabula	3	48	Yes
Talinga/Orana	0	0	N.A.
Spring Gully	3	17	No
Ironbark Condabri/Dalwogan	6	40	Yes
Ramyard	2	15	Yes
Peat	8	58	Yes
Kainama	0	0	N.A.

6.4.2 Audit of Producing Areas

The main Origin operated field areas on production are Spring Gully, Combabula, Talinga Orana and Condabri. Generally, these areas are not yet declining or are in their first stages of decline.

GaffneyCline conducted audit checks for these at both the field area level and the permit level. Checks at the permit level presents additional advantages beyond field area checks, as it allows an additional level of granularity compared with field area checks whilst keeping a suitable statistical sample size. More specifically, checks at the permit level detect differences in performance and decline trends across different sectors that go undetected at the field area level.

A review of Origin's historical production and production forecast at the field level as per the well definitions provided in **Section 4.7** was carried out. The forecasts incorporated PDP forecasts which includes volumes coming from wells that are currently active and PDNP (Proved Developed Non-Producing) forecasts which includes volumes coming from PDBP, PUD and PUBP wells. These entail firm workover opportunities and new wells approved for expenditure about to come online. In addition, P2, P3, C1 and C2 forecasts include volumes from the development of additional areas further way from producing wells. Due to commercial sensitivity, production forecasts for individual fields are not included in this report.

GaffneyCline has run the following audit checks of the forecast:

- Check that the end of historical data and the start of forecasts have comparable gas rates.
- Check that gas and water forecasts comply with overall system constraints.
- Check that the short-term decline in the forecast is aligned with the observed decline rate in those areas where decline can be interpreted.
- Check that the long-term forecast shows decline trends in line with those given by the simulation model and overall expected trends based on experience.
- Check that the PDBP, PUD and PUBP wells have peak rates and EURs in line with historical performance.
- Check that P2, P3, C1 and C2 wells have time-to-peak, peak rates and EURs that are reasonable based on nearby historical performance and reservoir property variations.

GaffneyCline has the following comments regarding its audit of producing areas:

- GaffneyCline overall finds Origin's forecasts for the producing areas reasonable.
- The review of Spring Gully shows that this field area is currently producing at maximum water handling capacity. GaffneyCline understands that Origin is in process of rebuilding Spring Gully's simulation model to capture the observed aquifer activity on the western flank. In the meantime, Origin has explained that it has three projects ongoing aimed at increasing water handling capacity by 40% over the next few years. Spring Gully's UDP23 forecast is based on the existing simulation model output calibrated to current performance and includes adjustments to defer gas production whilst not exceeding maximum water handling capacity going forward. In terms of gas production, the forecast is conservative when compared with current production. GaffneyCline therefore finds Origin's forecast for Spring Gully reasonable.
- Analysis of performance versus forecast shows that time-to-peak in the forecast curves is generally optimistic in all field areas when compared with average performance. Origin has explained that large spare production capacity is the main reason behind this gap, caused by a number of wells taking longer than expected to reach their peak rates as their production has been held back. Origin is confident about modelled time-to-peak periods going forward. GaffneyCline finds Origin's explanation reasonable.

Annexure 1. Independent Expert's Report *continued*

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6.4.3 Audit of Non-Producing Areas

Operated non-producing field areas include Ramyard, Ironbark, Kainama and Dalwogan. These areas have very little or no production history. Additionally, sectors within producing field areas (covered in Section 6.4.2) that have not yet been put on production were audited following the same methodology.

The audit methodology applied combines checks on observed performance in nearby producing areas and property mapping, in particular:

- Calculate average type curve for every targeted permit from Origin's well-by-well forecast. Curves which are characterised by time-to-peak, peak rate and decline trend.
- Find the closest area on production to use as a reference point for expected performance.
- Apply GIIP and permeability maps from available well data that include permit and reference producing analogue areas. Calculate average values per permit. Refer to Section 5.3 for an explanation of how these maps were generated.
- Make a judgement as to whether production forecast in the permit is reasonable based on nearby observed performance and changes in mapped properties.

GaffneyCline compiled the following information, where applicable, by permit:

- P50 well cumulative production from production analysis, expressed in Bscf gross.
- P50 EUR/well from GaffneyCline's decline analysis, expressed in PJ net to APLNG.
- Range of average EUR/well from Origin Reserves FYE23 forecast for P2, P3, C1 and C2 categories, expressed in PJ net to APLNG.
- Average GIIP/km^2 from GaffneyCline's mapping and analysis, expressed in Bscf.
- P50 gas peak rate from average well analysis, expressed in TJ/d net to APLNG.
- Average gas peak rate from Origin Reserves FYE23 forecast for P2, P3, C1 and C2 categories, expressed in TJ/d net to APLNG.

P50 values from existing wells were used to compare versus expected performance. The Mean value was found to be consistently higher than P50 due to the existence of outlier very good performing wells that brought the Mean value up. Therefore, the more conservative P50 value was utilised. The audit methodology for non-producing field areas is the same as described above. The key difference is that the closest producing area chosen as reference are not within the same field area. When there is no production data in the area it is prudent to cross check the coal properties and compare to producing areas to demonstrate the veracity of the type curve selection in the production profile scenarios. At all times technical data measured in the area is cross checked to determine production type curve estimates. The difference is not all areas are currently on production so type wells are calibrated to the nearest producing area to cross check scenarios against measured coal properties.

Analysis of non-producing field areas used analogue areas as follows:

- Ramyard used Combabula permits as reference for expected performance, with emphasis on PL 297 and PL 404
- Dalwogan used Condabri permits with emphasis on PL 265 and PL 267.
- Ironbark used Condabri permits with emphasis on PL 266 and PL 1011.
- Kainama used Talinga Orana permits with emphasis on PL 215.
- Peat represents a unique case in the sense that no close analogue production was available. However, the fact that Peat has had over 20 wells with some five years of production history allowed GaffneyCline to rely on this data to audit Origin's forecast.

Based on the audit checks explained above, GaffneyCline overall finds Origin's forecasts for the non-producing areas reasonable.

6.4.4 Exploration and New Ventures Volumes

UDP23 includes production forecasts for ENV volumes. These include Origin-operated ENV volumes, as well as GLNG and Westside-operated (although the former was labelled QGC-operated). Volumes for these projects are included in the UDP in risked terms, with an aggregated total ultimate recovery of 1,683 PJ.

Origin provided a summary of results from its Probabilistic Resource Assessment process for each of the operated ENV projects, including unrisked and risked volumes, technical risk, commercial risk, probabilistic recoverable per well and other information.

Operated ENV volumes are included in the Reserves FYE23 sheets unrisked as a lumped volume with no well-by-well production profiles available for audit.

GaffneyCline conducted a high-level review of the risking and EUR for these projects. GaffneyCline accepted these volumes, however a total of 1,000 PJ of exploration volumes were removed from the production forecast to comply with VALMIN's requirement of not including exploration volumes in the cash-flow model.

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6.4.5 Non-Operated Areas

Limited information was available for field areas not operated by Origin. UDP23 production forecasts and resources summary letters by third parties were provided for these areas.

GaffneyCline gathered additional information about the process and technical assurance followed by Origin to incorporate these projects to the UDP.

- Forecasts received from the operator are technically assured by Origin's team and, in some cases, modified based on Origin's checks versus performance and its understanding of assets nearby.
- The exception is Angry Jungle where the UDP forecast is generated by the APLNG team.
- Origin's forecasts for these assets are not included in the Reserves Assessment. Third parties conduct the assessment independently from Origin, leading to noticeable differences between UDP and Reserves volumes.

GaffneyCline ran some high-level checks of total volumes in the third party summaries. In all non-operated areas, Origin's estimates are lower than the third party 3P+2C estimates. GaffneyCline accepted the UDP forecasts for non-operated areas based on Origin's explanations.

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7 GaffneyCline Production Forecasts

Following completion of the technical audit, GaffneyCline compiled a production forecast to be used as Scenario A for the valuation. This forecast uses UDP23 as the basis and introduces some modifications according to the following criteria:

- Since the Reserves FYE23 sheets were a key dataset used to audit predicted well performance in relevant areas (as explained in Section 6.4), GaffneyCline relied on it to assess the UDP23 production forecast. Resources volumes associated with C3 and UR categories, as well 2C tail volumes (refer to Section 4.7 for definitions), were deducted from the total resource estimates as these have the least likely chance of being developed economically. As a result, 3P+2C volumes were considered as a reference for the assessment of the UDP23 forecast.
- Production forecasts associated with field areas where the UDP23 volumes are higher than the Reserves FYE23 3P+2C were edited so that the overall EUR for the field area matches the 3P+2C volume. **Table 7.1** shows a summary of these EURs.

  Editing of production forecasts for these field areas was done at a development package level and included: variation of production and well count in six development packages where the differences in EUR between UDP23 and Reserves FYE23 were significant, slight adjustments of production for the rest of the development packages and removal of post-2064 volumes which were included as lumped volumes in the last entry of UDP23.
- Production forecasts associated with the exploration fraction of ENV volumes are removed. As per the VALMIN code, these volumes are valued outside of the cash flow model. Exploration projects removed from Scenario A forecast include Origin-operated ENV projects EN00011, EN00018, EN00039, EN00047, EN00051, EN00077, EN00139, EN00142, EN00143, EN00144, EN00145, EN00146 and all the Westside-operated ENV projects. The volume removed from forecast adds up to 1,000 PJ.
- Uplift to production in Kenya 620 by 88 PJ as this information was added after UDP23 process in LTFP23.

Table 7.1: EUR Reserves FYE23 for Certain Field Areas

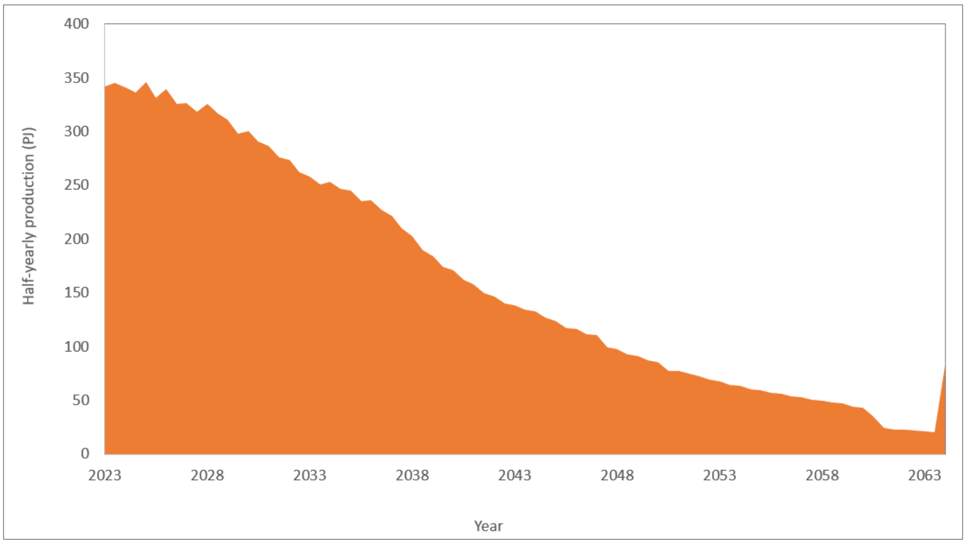
Field Area	YE23 3P+2C (PJ)
Talinga 692	1,507
Combabula 606	3,611
Kainama 225	295
Ramyard 972	1,135
Arcadia Ridge 526	109

Annexure 1. Independent Expert's Report *continued*

GaffneyCline

Figure 7.1 depicts GaffneyCline's Scenario A half-yearly production forecast aggregated by field area expressed in PJ, net to APLNG and excluding gas consumed in operations upstream of the LNG plant. The last year of production profiles is 2064, and tail volumes beyond 2064 are lumped in the last years. GaffneyCline produced these forecasts with tenement and field detail however presents an aggregated forecast due to commercial sensitivities expressed by Origin.

Figure 7.1: GaffneyCline Scenario A Production Forecast for APLNG



GaffneyCline Scenario B production forecast uses UDP23 plus Kenya 620 uplift introduced for LTFP23 minus removal of the exploration fraction of ENV volumes. **Figure 7.2** depicts GaffneyCline's Scenario B half-yearly production forecast by aggregated by field area expressed in PJ, net to APLNG and excluding gas consumed in operations upstream of the LNG plant. The last year of production profiles is 2064, and tail volumes beyond 2064 are lumped in the last years.

Figure 7.2: GaffneyCline Scenario B Production Forecast for APLNG

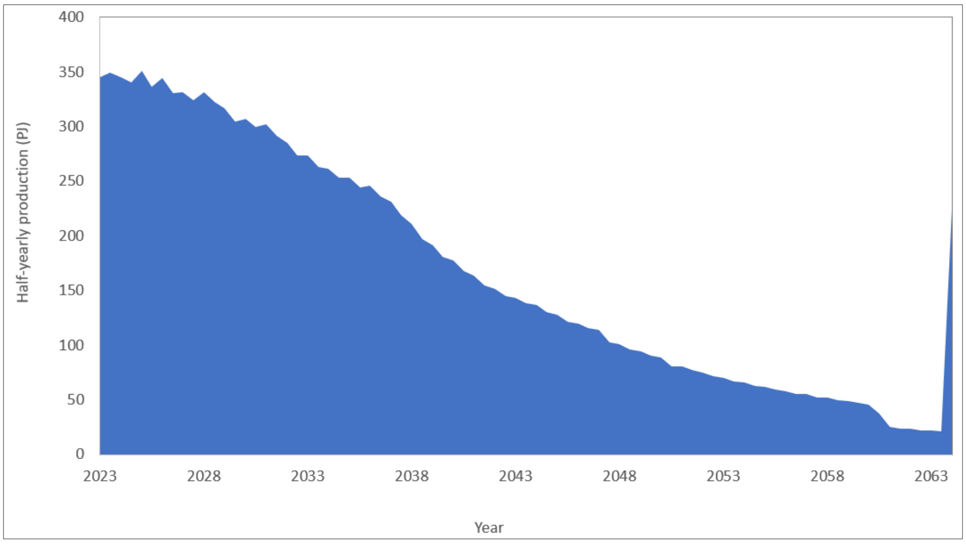


Table 7.2 shows the EUR from GaffneyCline's Scenario A versus the EUR from the UDP23, which represents GaffneyCline's Scenario B. GaffneyCline acknowledges that UDP23 includes some 3C+UR volumes and, conversely, some 3P+2C volumes included the Reserves FYE23 are not part of the UDP23 (what Origin calls Assess Reserves Only volumes).

Table 7.2: Summary of GaffneyCline's EUR Scenario A vs UDP23 (Scenario B)

Permit	UDP23 (GaffneyCline Scenario B) (PJ)	GaffneyCline Scenario A (PJ)
Total EUR	14,014	13,466

Note: UDP23 volume excludes Exploration volumes and includes minor adjustments due to LTFP23

Annexure 1. Independent Expert's Report *continued*

Gaffney Cline

8 Facilities and Costing Analysis

CSG development and production is a relatively simple process, made complex by the large scale on which it is applied, and the demands of efficiency and continuous improvement needed to operate successfully.

8.1 Upstream Facilities and Management Process

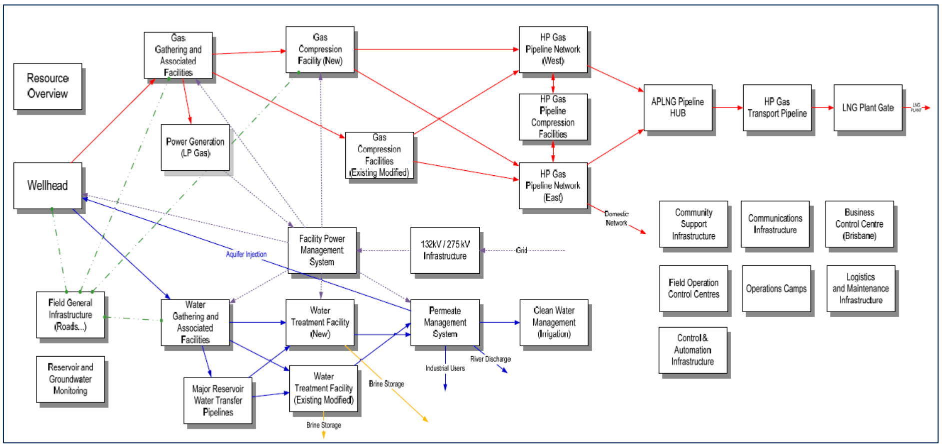
CSG wells are drilled, completed, and connected for initial dewatering and production build-up. Gas from multiple wells is gathered in a low-pressure gathering system and piped to locally located gas processing facilities (GPF's). At the GPF's gas is compressed, dehydrated, metered and exported to the long-distance high-pressure transport pipelines to the APLNG LNG plant and to the domestic market.

A critical part of CSG operations is produced water management. At the wellheads, gathering system, and GPF's production water is treated for disposal into evaporation ponds/reinjection or cleaned and made available for irrigation.

The forgoing simple process description becomes complex when applied over the thousands of wells with hundreds of kilometres of gas and water gathering and transport lines, multiple GPF's, dozens of tenements, and hundreds of landowners.

Figure 8.1 illustrates the main elements of the upstream development scope, currently applied across >3,100 wells, 12 GPF's, 4 water treatment facilities, and over 5,000 km of gathering and transport pipelines. The Operator continues to bring new wells and development areas on stream with drilling operations planned to ramp up over the next few years.

Figure 8.1: APLNG Upstream Scope Breakdown



Source: Origin "Upstream Basis of Design"

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To maintain and improve the reliability and efficiency of APLNG upstream operations, the Operator's management system focuses on standardisation, repeatability, and reduced cycle time, while concurrently identifying and implementing system improvements to improve reliability, adapt to changing process conditions, and optimising production performance.

As discussed previously in Section 6.3, the Operator's planning system commences with individual well forecasts, which are grouped into activity clusters ("projects") which form the building blocks of the annual program build, or UDP. Each annual planning cycle is supported by an Integrated Gas Assumption Book (Assumption Book) in which facilities constraints, uptime assumptions, drilling/completion/workover cycle times, fuel gas and power consumption, unit development costs, unit operating costs, and other key planning parameters are documented.

The UDP is built from the available projects and optimised against a range of program requirements e.g. overall production, cost, resource maturation, and organisational capacity. The resulting program is documented (e.g. UDP23, which formed the basis for this report) and is the basis on which the Operator seeks partner approvals. Individual projects are costed, phased, and aggregated into a "Detailed Option Build-up (DOB)" spreadsheet that provides the tenement-level inputs to the overall APLNG economic model. The DOB's supporting UDP22 and UDP23 were made available for review.

8.2 APLNG Downstream Facilities

The downstream facilities include the ConocoPhillips operated APLNG LNG plant, described in Section 4.10. The LNG plant is located on Curtis Island, Queensland, immediately to the north of the Queensland Curtis LNG plant (QCLNG) and is connected to the upstream development area by a ~450 km pipeline. **Figure 8.2** below shows an aerial view of the APLNG LNG plant.

Annexure 1. Independent Expert's Report *continued*

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Figure 8.2: APLNG Plant

Source: Origin

The two 4.5 mtpa liquefaction trains can be seen in the centre of the image, with the two 160,000 m^3 LNG storage tanks immediately to the south adjacent to the LNG loading jetty. In the long term, the two-train configuration allows one train to be shut in at the tail end of production-reducing operating costs and extending the profile to a single train minimum turndown rate.

8.3 Cost Review and Forecasting

Given the structured planning approach outlined above, GaffneyCline's cost review focussed on verification of the inputs to the planning process, and verification of the consistency of the UDP process.

Where available, unit rates and other parameters outlined in the Assumption Book were checked against independent sources (e.g., unit well drilling + completion + hook-up costs and cycle times, power prices, stated working interests) to build confidence in the Assumption Book data. Facilities capacity and performance assumptions were checked. Unit costs, cost structures, and cost coverage were all considered reasonable, internally consistent, and in line with good industry practise.

The next stage of review analysed the UDP23 Detailed Option Build-up to verify that the unit costs and other parameters implied from project-level costing were generally consistent with the Assumption Book. Activity levels, cost phasing, power consumption and unit OPEX were checked and considered reasonable.

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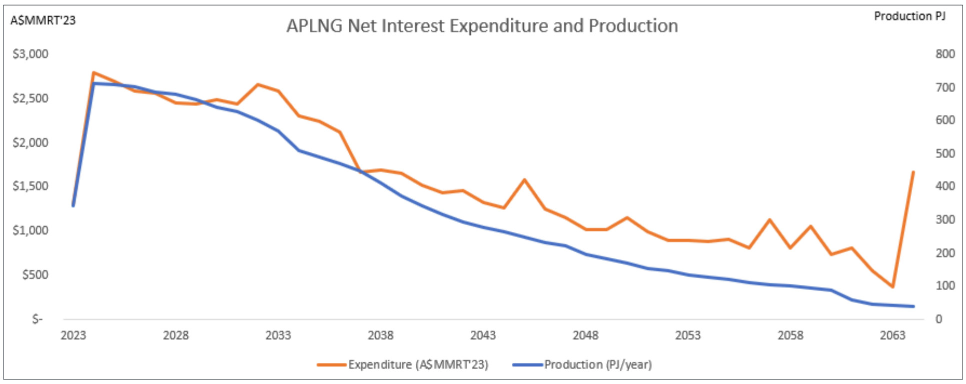
A final review stage mapped all tenement-level costs from the DOB to the appropriate line-item input to the economic model to verify consistency.

The GaffneyCline Scenario A forecast was developed at the project level. Individual projects' production profiles (and where appropriate, well count) were included, excluded, or scaled. Project level cost profiles were developed from the associated production profiles and aggregated to the tenement level for input to the APLNG economic model. **Figure 8.3** shows the Scenario A cost build-up (in A$ MM, Real Terms, 2023 base) over the forecast period, together with the total gas throughput. Aggregation of cost items has been performed by GaffneyCline due to commercial sensitivities expressed by Origin.

Figure 8.3: GaffneyCline Scenario A Cost and Production Profile

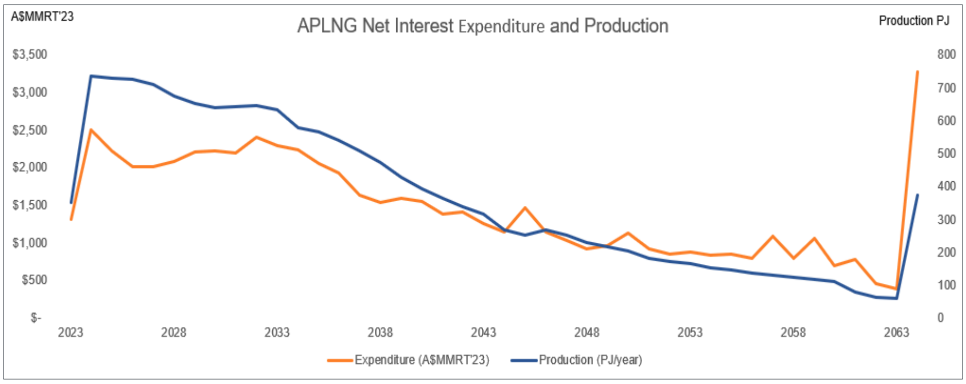


Source: GaffneyCline

GaffneyCline considers the LTFP23 cost case, adjusted by removing cost associated with exploration for Scenario B as reasonable for evaluation purposes. Total expenditure (CAPEX + OPEX) targeted to fall 6% to 7% between UDP and LTFP, while maintaining production levels. **Figure 8.4** shows the Scenario B cost build-up (in A$ MM, Real Terms, 2023 base) over the forecast period, together with the total gas throughput. In Scenario B, production and costs forecast post-2064 have been aggregated to capture this long-term upside.

Annexure 1. Independent Expert's Report *continued*

Figure 8.4: GaffneyCline Scenario B Cost and Production Profile



GaffneyCline adjusted the CiO for APLNG LNG plant using analogues from other midstream projects. GaffneyCline adjusted Midstream operating costs for expected reduction in anticipation of single train operating mode at lower throughputs. GaffneyCline updated the midstream D&R costs based on in house estimates.

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9 Carbon Liabilities

GaffneyCline has reviewed net carbon liabilities for Assets under review using current regulation as a basis (primarily *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* (Cth), *National Greenhouse Gas and Energy Reporting (Measurement) Determination 2008* (Cth), *National Greenhouse and Energy Reporting Act 2007* (Cth), *Climate Change Act 2022* (Cth)). GaffneyCline has not added any additional carbon liability costs for any anticipated changes in regulations or voluntary carbon offsets. For the APLNG portfolio of assets, carbon liabilities are applicable for only Australian operations under the Safeguard Mechanism.

9.1 The Safeguard Mechanism

The Safeguard Mechanism places a legislated obligation on Australia's largest greenhouse gas emitters to keep net emissions at or below baselines set by the Australian Clean Energy Regulator (CER) and applies to facilities with direct Scope 1 emissions of more than 100,000 tonnes of CO_2-e per year.

Under the recently reformed Safeguard Mechanism (*Safeguard Mechanism (Crediting) Amendment Act 2023*), 'standard' annual baselines are calculated by multiplying actual production with an emissions intensity value and a decline rate. Emissions intensities of current production variables at existing Safeguard facilities will be established using a weighted hybrid model, as outlined in **Table 9.1**.

Table 9.1: Outline of Weighted Hybrid Model of Emissions Intensities of Current Production Variable at Existing Safeguard Facilities

Financial Year	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Industry-average: Facility-specific	10:90	20:80	30:70	40:60	60:40	80:20	100:0

From 1 July 2023 to 30 June 2030, baselines will be subject to an annual decline rate of 4.9% (**Table 9.2**).

Table 9.2: Baseline Decline Rate

Financial Year	Decline Rate	Resultant Baseline Emissions Reduction contribution
2023-24	4.9%	95.1%
2024-25	4.9%	90.2%
2025-26	4.9%	85.3%
2026-27	4.9%	80.4%
2027-28	4.9%	75.5%
2028-29	4.9%	70.6%
2029-30	4.9%	65.7%
1 July 2030 or a later 1 July	3.285%	62.4%

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Industry-average emissions-intensity values are prescribed by Schedule 1 of the Safeguard Rule. Two emissions intensity values are pertinent for the Assets under review:

- Section 30 Schedule 1 Processed natural gas (integrated extraction and processing): 0.00275 t CO_2-e per gigajoule of processed natural gas.
- Section 32 Schedule 1 Liquefied natural gas (from processed natural gas): 0.00401 t CO_2-e per gigajoule of liquefied natural gas.
- Section 60 Schedule 1 Work of compression applied to natural gas or plant condensate: 0.253 t CO_2-e per gigajoule.

New facilities will be subject to international best-practice emissions-intensity values, adjusted for Australian conditions. The Australian Government aims to enact best practice benchmarks by the end of 2023.

9.2 ACCUs and SMCs

If a Safeguard facility exceeds its baseline for a financial year commencing on or after 1 July 2023, the facility may manage its excess emissions by purchasing and surrender of Australian Carbon Credit Units (ACCUs) or Safeguard Mechanism Credit units (SMCs), or using one of the following options:

- applying to borrow baseline from the following year (to be repaid with interest).
- applying to become a trade-exposed baseline-adjusted (TEBA) facility and receiving a discounted decline rate (up to 3 years).
- applying for a multi-year monitoring period (MYMP) to allow more time to reduce emissions.

ACCU prices are largely determined by the available supply of ACCUs from registered projects and the demand by organisations to voluntarily reduce their reported emissions through offset with the ACCU and the Australian government purchases.

ACCUs is an Australian traded entity and not necessarily equivalent or exchangeable for other international carbon credits. Under the reformed Safeguard Mechanism, the Australian Government sets up a price ceiling for ACCUs at $75/tonne in 2023-24, increasing with CPI plus 2 per cent each year.

SMCs are generated when a Safeguard facility's emissions are below its baseline. SMCs may be surrendered to meet a Safeguard facilities own compliance obligations or be sold to other Safeguard facilities to meet their Safeguard compliance obligation or be held for a Safeguard facilities future use.

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9.3 APLNG Portfolio Emissions

In the APLNG portfolio of assets, currently APLNG-operated Spring Gully, Talinga, APLNG facility, New Facility assets and non-APLNG operated Fairview, Kenya, Kenya East assets come under the Safeguard Mechanism.

Based on GaffneyCline's review, APLNG has used the methods and prescribed intensity values mentioned above to calculate production baselines and emissions liabilities for existing facilities.

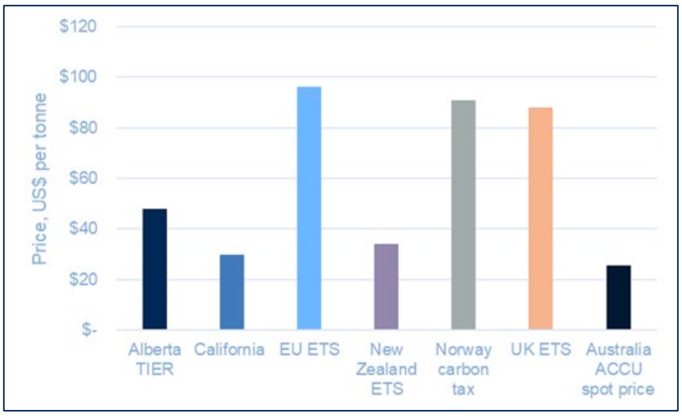
For its New Facility, APLNG used current emission intensity value 0.0028 t CO_2e/GJ as per section 30, Schedule 1 of the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015*. This value will likely change as the Australian Government legislates best practice benchmarks.

For non-APLNG operated facilities, detailed emissions data were not supplied. APLNG calculated emissions (equity share) from those assets using same emissions intensity as operated assets (integrated extraction and processing) for calculating emissions from those facilities.

APLNG calculated excess emissions from 2024-2065 using projected emissions and baselines. A jump of excess emissions is projected in 2050 as the APLNG model assumes that all facilities regardless emission volume are taken into account by then.

As corporations face more stringent abatement obligations, ACCUs prices are anticipated to increase significantly. Comparing with other countries (**Figure 9.1**) the current ACCU price is relatively modest, but it is not markedly distinct from carbon prices of New Zealand, Alberta and California.

Figure 9.1: Carbon Market Prices



Note: Nominal price as of 31 March 2023, World Bank Carbon Pricing Dashboard.

Annexure 1. Independent Expert's Report *continued*

Gaffney Cline

Going forward, GaffneyCline has accepted the APLNG assumption of ACCU price from 2024 to 2065 (**Figure 8.2**). Regulatory CO_2-e emission liabilities are less than 10% of the total OPEX for the assets under review thus not material to this transaction. GaffneyCline has accepted the total carbon emissions and regulatory carbon liabilities projections provided by APLNG.

GaffneyCline audited the total carbon emissions values provided by APLNG for the Australian assets by checking against relevant carbon intensity values and methodologies prescribed under the National Greenhouse and Energy Reporting Scheme (NGERs). GaffneyCline therefore estimated the total carbon emissions using APLNG's calculated values adjusted for the GaffneyCline production profile scenarios. GaffneyCline presents the regulatory carbon cost in the profiles documented in this report where applicable.

9.4 Fugitive Emissions

Fugitive emission across coal seam gas value chain (upstream, transport and downstream) are determined using various methods and reported with varying degrees of uncertainty. The *National Greenhouse Gas and Energy Reporting (Measurement) Determination 2008* (Cth) provides approaches for determining fugitive emissions under different circumstances.

GaffneyCline reviewed APLNG's fugitive emissions in upstream, transport and downstream using the relevant methods prescribed in *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (Cth).

In gas fields, various types of fugitive emissions are released, and assessment follows the regulatory-prescribed methods for each type (Part 3.3 - Oil and natural gas - fugitive emissions), including, but not limited to:

- 3.46A Oil or gas exploration and development – fugitive emissions from system upsets, accidents and deliberate releases
- 3.73A Onshore natural gas production, other than emissions that are vented or flared - wellheads
- 3.73K Natural gas gathering and boosting (other than venting and flaring)
- 3.73NA Produced water (other than emissions that are vented or flared)
- 3.85B Natural gas production – emissions that are vented – cold process vents
- 3.85F Natural gas production – emissions that are vented – gas driven pneumatic devices
- 3.85H Natural gas production – emissions that are vented – gas driven chemical injection pumps
- 3.85Q Natural gas production – emissions that are vented – well workovers
- 3.85S Natural gas production – emissions that are vented – vessel blowdowns, compressor starts and compressor blowdowns
- 3.86 Natural gas production (emissions that are flared)
- 3.88C Natural gas gathering and boosting (emissions that are vented)
- 3.88D (3.86) Natural gas gathering and boosting (emissions that are flared)

For LNG pipeline, fugitive emissions are calculated using the length of pipeline and emissions factor (0.02 for carbon dioxide and 11.6 for methane, unit: tonnes of CO_2-e emissions per km of pipeline) as per section 3.76, *National Greenhouse and Energy Reporting (Measurement) Determination 2008*.

For APLNG facility, fugitive emissions are calculated using emissions per LNG station (25,700 tonnes CO_2-e per station) and number of LNG stations as per section 3.78H, *National Greenhouse and Energy Reporting (Measurement) Determination 2008*).

GaffneyCline observed that fugitive emissions from gas fields vary with gas production volume, while those from LNG pipeline and LNG facility are independent of gas volume. Mitigating fugitive emissions is challenging and mandates careful consideration in long-term carbon liability assessment.

Annexure 1. Independent Expert's Report *continued*

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10 APLNG Reversion

GaffneyCline is aware of the ongoing APLNG reversionary rights litigation between Tri-Star and APLNG. To summarise, the following extracts from the 2023 Origin Annual Report (Section 8 APLNG Reversion) are quoted:

"In 2002, APLNG acquired various CSG interests from Tri-Star that are subject to reversionary rights and an ongoing royalty in favour of Tri-Star. If triggered, the reversionary rights require APLNG to transfer back to Tri-Star a 45 per cent interest in those CSG interests for no additional consideration. The reversion trigger will occur when the revenue from the sale of petroleum from those CSG interests, plus any other revenue derived from or in connection with those CSG interests, exceeds the aggregate of all expenditure relating to those CSG interests plus interest on that expenditure, royalty payments and the original acquisition price."

"The affected CSG interests represent approximately 18 per cent of APLNG's 3P CSG reserves (as of 30 June 2023), and approximately 19 per cent of APLNG's 2P CSG reserves (as of 30 June 2023)."

"If APLNG is not successful in defending all or some of the claims being made in the proceedings by Tri-Star, APLNG's financial performance may be materially adversely impacted and the amount and timing of cash flows from APLNG to its shareholders, including Origin, may be significantly affected."

It is out of the scope of this Independent Technical Specialist's Report to comment on the potential outcome of this process and/or the impact on APLNG's valuation.

11 Contingent Resources Valuation (not in Economic Model)

Origin has three Contingent Resources assets not covered in the production and cost scenario profiles provided to Grant Samuel. The following discussion presents a suggested valuation for these assets.

11.1 APLNG Contingent Resources Not Covered in Profiles provided to Grant Samuel

GaffneyCline relied on Reserves YE23 to assess the UDP23 production forecast. Resource volumes associated with C3 and UR categories and 2C tail volumes (refer to Section 4.7 for definitions) were deducted from the total resource estimates for Scenario A as these have the least likely chance of being developed economically. Based on these definitions, GaffneyCline expects insignificant value for these resources due to marginal economics, low chance of development and far out development timing. However, these volumes are included in Scenario B, which represent Origin's view as shareholder of future developments and is explained in Section 7.

UDP23 does not include some of the Contingent Resources in APLNG's portfolio as they are currently deemed uneconomic or inaccessible. GaffneyCline expects insignificant value for these remaining Contingent Resources, as Contingent Resources that are marginally positive economically are already included in UDP23. The remaining Contingent Resources could provide a pool of projects that could be used as a backup plan for already selected Contingent Resources in UDP23. At the portfolio level, the UDP23 selection process already captures all Contingent Resources with value and these are included in Scenario A and B Cases. GaffneyCline recommends no material value in the remaining Contingent Resources of APLNG outside of UDP23.

11.2 Greater Poseidon

Origin has a 40% equity interest in five retention leases, TR/7, TR/8, WA-90-R, WA-91-R, and WA-92-R in Browse Basin, offshore northwest Australia. Other partners are Santos (Operator, 40% equity) and PetroChina (20% equity). The WA-90-R, WA-91-R, and WA-92-R blocks lie in Commonwealth waters, while the TR/7 and TR/8 blocks lie in WA state waters. A total of 8 exploration and appraisal wells have been drilled to date with no dry holes. The Greater Poseidon discoveries include Poseidon, Poseidon North, Kronos, Boreas, Zephyros, Proteus and Pharos.

The discoveries are a complex series of faulted structures within a half-graben rift system. Different fault terraces control the individual fields and have different structural spill points. As a result, it is likely the fields have different GWCs. Despite the structural complexity, individual structures are reasonably well defined by 3D seismic data. The reservoirs are formed of Early Jurassic Lower Plover Formation and Late Jurassic Lower Vulcan Montara Formation.

Annexure 1. Independent Expert's Report *continued*

Various development concepts for Greater Poseidon depend on backfill options to either Barossa, Ichthys or Prelude, both with and without co-development of the neighbouring Crown and Lasseter fields. In all development cases, there is significant uncertainty on timing, costs, and potential commercial arrangements with other operators. These scenarios' anticipated field development dates are significantly far into the future, with likely development in the late 2030's and early 2040's.

Notably, with CO_2 concentrations for these assets in the range of 11% to 17% with an average of 13.4%, capital expenditures will likely increase as required CO_2 abatement is needed with the growing environmental scrutiny for high CO_2 developments. Much larger gas resources in this region have struggled to justify development, i.e., Evans Shoal, operated by ENI, and the Browse LNG project, operated by Woodside. Constraint for developing these projects includes high CO_2 that requires carbon capture from early in the project, high offshore development costs, and timing to access existing LNG plants as backfill, or otherwise high new LNG plant costs. Greater Poseidon is much smaller than these more extensive resources waiting to be developed. This competition alone will likely shift the development timing of Greater Poseidon.

11.3 Beetaloo Basin Overriding Royalty Interest

Origin has an Overriding Royalty Interest (ORRI) of 5.5% in Exploration Permits (EP) 76, EP 98 and EP 117 in Beetaloo Basin of the Northern Territory, Australia. These EP's cover approximately 18,500 km^2 in the Beetaloo Basin. Multiple exploration and appraisal wells have been drilled in the basin, but no commercial production exists. Based on PRMS, resources in the basin could be classified as contingent or prospective.

Origin commissioned and provided an independent valuation report of these ORRI's Market Value by an independent party dated October 19, 2022. This report summarises the terms of the ORRI, valuation methodology and recommended a market valuation range. The primary valuation approach employed by the independent valuer was the market-based method comparing ORRI terms to recent purchases of ORRIs in the Origin permits. Four transactions were assessed; two occurred in the past four years, and the other two occurred in 2013. Recent transactions were considered relevant for valuation recommendation as considerable de-risking has been done in the Beetaloo Basin in the last ten years.

11.4 Greater Poseidon and Beetaloo Basin Asset Valuation

Based on the review of the Greater Poseidon possible development scenarios and the Beetaloo Basin ORRI asset, GaffneyCline has recommended to Grant Samuel a market value range of between **A$39.7 MM** and **A$66.6 MM**. Origin indicated commercial sensitivities require GaffneyCline to aggregate the two assets.

12 APLNG Exploration Asset Valuation

APLNG has a large inventory of both appraisal and ENV targets. Origin provided a portfolio of these assets to GaffneyCline and also provided GaffneyCline with its classification of maturity (appraisal or ENV) for each project in the portfolio. GaffneyCline reviewed each of these projects together with Origin's classification and in general found the classification to be reasonable. Projects classified as appraisal tended to be projects which were near-field step outs with wells that had proven gas flow to the surface through pilot wells. Projects classified as exploration were in areas where coal presence may have been confirmed but extent and reservoir parameters were unknown or where there was no pilot well or analogue production. GaffneyCline therefore accepted Origin's classification of appraisal and ENV projects.

The valuation profiles provided by Origin to GaffneyCline included risked volumes for projects Origin classifies as appraisal or ENV. Volumes determined as appraisal were kept in GaffneyCline's cash-flow model however as per the VALMIN Code requirements, 1,000 PJ of mean risked volumes deemed to be exploration were removed and are valued separately here. A total of 19 exploration projects with positive expected monetary value (EMV)[1] were selected in UDP23.

Origin provided a summary of results from its Probabilistic Resource Assessment process for each of the operated ENV projects, including unrisked and risked volumes, technical risk, commercial risk, probabilistic recoverable per well, exploration and appraisal costs, APLNG's EMV at a 10% discount rate and other information. GaffneyCline conducted a high-level review of the risking and EUR for each of these projects and found them to be reasonable. Further details of these checks are provided in Section 5.3.6 of this report.

Total EMV at 10% for the APLNG exploration portfolio in UDP23 is A$660 MM. The EMV value is usually used as a relative measure for ranking exploration prospects within a portfolio to make drilling decisions, assess commercial potential and demonstrate the commercial attractiveness of a permit. This information may influence buyers or sellers' decision.

The total cost of the selected exploration work program is A$244 MM. This could provide an indication of valuation based on a reasonable Farmout agreement basis[2]. A Farmout agreement is an agreement entered into by the owner of one or more leases (called the "farmor"), and another company who wishes to obtain a percentage of ownership of that lease or leases in exchange for providing services (called the "farmee"). Typically, the farmee agrees to carry the farmor's share of work programs up to a predefined activity or cost. The farmee may pay a premium over activity costs based on the attractiveness of the exploration portfolio. A typical transaction for an attractive exploration portfolio would be 50% to 33.33% equity acquired by farmee, in exchange for carrying farmor's share of work programs. On this basis valuation of the APLNG exploration portfolio would be between A$244 to A$487 MM.

[1] EMV is calculated as the success case NPV times the probability of success less the NPV of failure multiplied by the probability of failure.
[2] https://en.wikipedia.org/wiki/Farmout_agreement

Annexure 1. Independent Expert's Report *continued*

To assess the valuation based on market approach, GaffneyCline considered the recent transactions for Australian CSG assets as tabulated in **Table 12.1** below. The average transacted price for 2P Reserves is A$0.94/GJ for assets consisting of developed and undeveloped resources. An exploration program for five to eight years is required for the exploration portfolio to mature to this stage. Usually, exploration is a higher-risk activity, and investors demand higher returns than developing proven resources. A discount rate of 12% for five years and a discount rate of 15% for eight years is applied to the average transacted price to establish a range for exploration valuation. This discounted market multiple range is A$0.31/GJ to A$0.53/GJ. Based on this discounted market multiple, the valuation range for APLNG's 1000 PJ exploration risked mean volume is A$306 to A$531 MM.

Based on the investigation of three different valuation methods above, GaffneyCline recommends a valuation range of **A$306 MM** to **A$531 MM** to Grant Samuel's for the APLNG exploration portfolio. A lower valuation range could be possible based on the Farmout agreement basis but not likely as these exploration assets have more mature work programs with favourable economics that should demand attractive terms. Total EMV is higher than the suggested range, but investors would likely demand a higher than 10% discount factor for the exploration risk thus market value should be lower than total EMV of A$660 MM.

Table 12.1: Recent CSG Transaction in Australia

Buyer	Seller	Date	A$ MM	A$/ 2P GJ	A$/ 3P GJ	2P	3P	Project / Acreage
Senex[1]	APLNG	8-Nov-21	80	$1.06	$0.61	75	130	PL209 & PL 445 Woleebee
POSCO[2]	Senex	7-Feb-22	878	$1.15	$0.86	767	1,016	Senex Energy
Comet Ridge[3]	APLNG	3-Aug-21	20	$0.25	$0.15	80	137	Mahalo 30%
APLNG[4]	Armour	18-Jun-20	4	$0.43	$0.43	9	9	PL 1084 Murrungama 10%
APLNG[5]	Origin	19-Feb-19	231	$1.79	$1.20	129	192	Ironbark
			Average	**0.94**	**0.65**			

Notes:

1. A$50 MM initially and further A$30 MM upon commonwealth environment approvals[3].
2. Based on the Senex Scheme Booklet and takeover consideration calculation (uses Senex 2P and 3P reserves as of 30 June 2021)[4].
3. Staged payments of A$12 MM at completion of the acquisition and A$8 MM deferred post-completion payments[5].
4. A$500k upfront payment with remaining A$3.5 MM based on completion of the acquisition[6].
5. Origin will be responsible for developing Ironbark as the upstream operator for APLNG[7].

[3] https://www.senexenergy.com.au/wp-content/uploads/2021/11/2296225.pdf
[4] https://www.senexenergy.com.au/wp-content/uploads/2022/02/Senex-Energy-Limited-Scheme-Booklet-incl-proxy-form.pdf
[5] https://stocknessmonster.com/announcements/coi.asx-2A1313407/
[6] https://www.miningweekly.com/article/aplng-to-buy-armours-10-interest-in-murrunga-block-2020-06-18
[7] https://stocknessmonster.com/announcements/org.asx-2A1133368/

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Appendix I
Abbreviated 2018 SPE PRMS Definitions and Guidelines

Grant Samuel & Associates Pty Ltd
October 2023

Annexure 1. Independent Expert's Report *continued*

Society of Petroleum Engineers, World Petroleum Council, American Association of Petroleum Geologists, Society of Petroleum Evaluation Engineers, Society of Exploration Geophysicists, Society of Petrophysicists and Well Log Analysts, and European Association of Geoscientists & Engineers

Petroleum Resources Management System

Definitions and Guidelines ([8])

Revised 2018 (v. 1.03)

Table 1—Recoverable Resources Classes and Sub-Classes

Class/Sub-Class	Definition	Guidelines
Reserves	Reserves are those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions.	Reserves must satisfy four criteria: discovered, recoverable, commercial, and remaining based on the development project(s) applied. Reserves are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by the development and production status. To be included in the Reserves class, a project must be sufficiently defined to establish its commercial viability (see Section 2.1.2, Determination of Commerciality). This includes the requirement that there is evidence of firm intention to proceed with development within a reasonable time-frame. A reasonable time-frame for the initiation of development depends on the specific circumstances and varies according to the scope of the project. While five years is recommended as a benchmark, a longer time-frame could be applied where, for example, development of an economic project is deferred at the option of the producer for, among other things, market-related reasons or to meet contractual or strategic objectives. In all cases, the justification for classification as Reserves should be clearly documented. To be included in the Reserves class, there must be a high confidence in the commercial maturity and economic producibility of the reservoir as supported by actual production or formation tests. In certain cases, Reserves may be assigned on the basis of well logs and/or core analysis that indicate that the subject reservoir is hydrocarbon-bearing and is analogous to reservoirs in the same area that are producing or have demonstrated the ability to produce on formation tests.
On Production	The development project is currently producing or capable of producing and selling petroleum to market.	The key criterion is that the project is receiving income from sales, rather than that the approved development project is necessarily complete. Includes Developed Producing Reserves. The project decision gate is the decision to initiate or continue economic production from the project.

[8] These Definitions and Guidelines are extracted from the full Petroleum Resources Management System (revised 2018 (v. 1.03)) document.

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Class/Sub-Class	Definition	Guidelines
Approved for Development	All necessary approvals have been obtained, capital funds have been committed, and implementation of the development project is ready to begin or is under way.	At this point, it must be certain that the development project is going ahead. The project must not be subject to any contingencies, such as outstanding regulatory approvals or sales contracts. Forecast capital expenditures should be included in the reporting entity's current or following year's approved budget. The project decision gate is the decision to start investing capital in the construction of production facilities and/or drilling development wells.
Justified for Development	Implementation of the development project is justified on the basis of reasonable forecast commercial conditions at the time of reporting, and there are reasonable expectations that all necessary approvals/contracts will be obtained.	To move to this level of project maturity, and hence have Reserves associated with it, the development project must be commercially viable at the time of reporting (see Section 2.1.2, Determination of Commerciality) and the specific circumstances of the project. All participating entities have agreed and there is evidence of a committed project (firm intention to proceed with development within a reasonable time-frame}) There must be no known contingencies that could preclude the development from proceeding (see Reserves class). The project decision gate is the decision by the reporting entity and its partners, if any, that the project has reached a level of technical and commercial maturity sufficient to justify proceeding with development at that point in time.
Contingent Resources	Those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects, but which are not currently considered to be commercially recoverable owing to one or more contingencies.	Contingent Resources may include, for example, projects for which there are currently no viable markets, where commercial recovery is dependent on technology under development, where evaluation of the accumulation is insufficient to clearly assess commerciality, where the development plan is not yet approved, or where regulatory or social acceptance issues may exist. Contingent Resources are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by the economic status.
Development Pending	A discovered accumulation where project activities are ongoing to justify commercial development in the foreseeable future.	The project is seen to have reasonable potential for eventual commercial development, to the extent that further data acquisition (e.g., drilling, seismic data) and/or evaluations are currently ongoing with a view to confirming that the project is commercially viable and providing the basis for selection of an appropriate development plan. The critical contingencies have been identified and are reasonably expected to be resolved within a reasonable time-frame. Note that disappointing appraisal/evaluation results could lead to a reclassification of the project to On Hold or Not Viable status. The project decision gate is the decision to undertake further data acquisition and/or studies designed to move the project to a level of technical and commercial maturity at which a decision can be made to proceed with development and production.

Annexure 1. Independent Expert's Report *continued*

Class/Sub-Class	Definition	Guidelines
Development on Hold	A discovered accumulation where project activities are on hold and/or where justification as a commercial development may be subject to significant delay.	The project is seen to have potential for commercial development. Development may be subject to a significant time delay. Note that a change in circumstances, such that there is no longer a probable chance that a critical contingency can be removed in the foreseeable future, could lead to a reclassification of the project to Not Viable status. The project decision gate is the decision to either proceed with additional evaluation designed to clarify the potential for eventual commercial development or to temporarily suspend or delay further activities pending resolution of external contingencies.
Development Unclarified	A discovered accumulation where project activities are under evaluation and where justification as a commercial development is unknown based on available information.	The project is seen to have potential for eventual commercial development, but further appraisal/evaluation activities are ongoing to clarify the potential for eventual commercial development. This sub-class requires active appraisal or evaluation and should not be maintained without a plan for future evaluation. The sub-class should reflect the actions required to move a project toward commercial maturity and economic production.
Development Not Viable	A discovered accumulation for which there are no current plans to develop or to acquire additional data at the time because of limited commercial potential.	The project is not seen to have potential for eventual commercial development at the time of reporting, but the theoretically recoverable quantities are recorded so that the potential opportunity will be recognized in the event of a major change in technology or commercial conditions. The project decision gate is the decision not to undertake further data acquisition or studies on the project for the foreseeable future.
Prospective Resources	Those quantities of petroleum that are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations.	Potential accumulations are evaluated according to the chance of geologic discovery and, assuming a discovery, the estimated quantities that would be recoverable under defined development projects. It is recognized that the development programs will be of significantly less detail and depend more heavily on analog developments in the earlier phases of exploration.
Prospect	A project associated with a potential accumulation that is sufficiently well defined to represent a viable drilling target.	Project activities are focused on assessing the chance of geologic discovery and, assuming discovery, the range of potential recoverable quantities under a commercial development program.
Lead	A project associated with a potential accumulation that is currently poorly defined and requires more data acquisition and/or evaluation to be classified as a Prospect.	Project activities are focused on acquiring additional data and/or undertaking further evaluation designed to confirm whether or not the Lead can be matured into a Prospect. Such evaluation includes the assessment of the chance of geologic discovery and, assuming discovery, the range of potential recovery under feasible development scenarios.
Play	A project associated with a prospective trend of potential prospects, but that requires more data acquisition and/or evaluation to define specific Leads or Prospects.	Project activities are focused on acquiring additional data and/or undertaking further evaluation designed to define specific Leads or Prospects for more detailed analysis of their chance of geologic discovery and, assuming discovery, the range of potential recovery under hypothetical development scenarios.

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Table 2—Reserves Status Definitions and Guidelines

Status	Definition	Guidelines
Developed Reserves	Expected quantities to be recovered from existing wells and facilities.	Reserves are considered developed only after the necessary equipment has been installed, or when the costs to do so are relatively minor compared to the cost of a well. Where required facilities become unavailable, it may be necessary to reclassify Developed Reserves as Undeveloped. Developed Reserves may be further sub-classified as Producing or Non-producing.
Developed Producing Reserves	Expected quantities to be recovered from completion intervals that are open and producing at the effective date of the estimate.	Improved recovery Reserves are considered producing only after the improved recovery project is in operation.
Developed Non-Producing Reserves	Shut-in and behind-pipe Reserves.	Shut-in Reserves are expected to be recovered from (1) completion intervals that are open at the time of the estimate but which have not yet started producing, (2) wells which were shut-in for market conditions or pipeline connections, or (3) wells not capable of production for mechanical reasons. Behind-pipe Reserves are expected to be recovered from zones in existing wells that will require additional completion work or future re-completion before start of production with minor cost to access these reserves. In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.
Undeveloped Reserves	Quantities expected to be recovered through future significant investments.	Undeveloped Reserves are to be produced (1) from new wells on undrilled acreage in known accumulations, (2) from deepening existing wells to a different (but known) reservoir, (3) from infill wells that will increase recovery, or (4) where a relatively large expenditure (e.g., when compared to the cost of drilling a new well) is required to (a) recomplete an existing well or (b) install production or transportation facilities for primary or improved recovery projects.

Annexure 1. Independent Expert's Report *continued*

Table 3—Reserves Category Definitions and Guidelines

Category	Definition	Guidelines
Proved Reserves	Those quantities of petroleum that, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable from a given date forward from known reservoirs and under defined economic conditions, operating methods, and government regulations.	If deterministic methods are used, the term "reasonable certainty" is intended to express a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability (P90) that the quantities actually recovered will equal or exceed the estimate. The area of the reservoir considered as Proved includes (1) the area delineated by drilling and defined by fluid contacts, if any, and (2) adjacent undrilled portions of the reservoir that can reasonably be judged as continuous with it and commercially productive on the basis of available geoscience and engineering data. In the absence of data on fluid contacts, Proved quantities in a reservoir are limited by the LKH as seen in a well penetration unless otherwise indicated by definitive geoscience, engineering, or performance data. Such definitive information may include pressure gradient analysis and seismic indicators. Seismic data alone may not be sufficient to define fluid contacts for Proved reserves. Reserves in undeveloped locations may be classified as Proved provided that: A. The locations are in undrilled areas of the reservoir that can be judged with reasonable certainty to be commercially mature and economically productive. B. Interpretations of available geoscience and engineering data indicate with reasonable certainty that the objective formation is laterally continuous with drilled Proved locations. For Proved Reserves, the recovery efficiency applied to these reservoirs should be defined based on a range of possibilities supported by analogs and sound engineering judgment considering the characteristics of the Proved area and the applied development program.
Probable Reserves	Those additional Reserves that analysis of geoscience and engineering data indicates are less likely to be recovered than Proved Reserves but more certain to be recovered than Possible Reserves.	It is equally likely that actual remaining quantities recovered will be greater than or less than the sum of the estimated Proved plus Probable Reserves (2P). In this context, when probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the 2P estimate. Probable Reserves may be assigned to areas of a reservoir adjacent to Proved where data control or interpretations of available data are less certain. The interpreted reservoir continuity may not meet the reasonable certainty criteria. Probable estimates also include incremental recoveries associated with project recovery efficiencies beyond that assumed for Proved.

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Category	Definition	Guidelines
Possible Reserves	Those additional reserves that analysis of geoscience and engineering data indicates are less likely to be recoverable than Probable Reserves.	The total quantities ultimately recovered from the project have a low probability to exceed the sum of Proved plus Probable plus Possible (3P), which is equivalent to the high-estimate scenario. When probabilistic methods are used, there should be at least a 10% probability (P10) that the actual quantities recovered will equal or exceed the 3P estimate. Possible Reserves may be assigned to areas of a reservoir adjacent to Probable where data control and interpretations of available data are progressively less certain. Frequently, this may be in areas where geoscience and engineering data are unable to clearly define the area and vertical reservoir limits of economic production from the reservoir by a defined, commercially mature project. Possible estimates also include incremental quantities associated with project recovery efficiencies beyond that assumed for Probable.
Probable and Possible Reserves	See above for separate criteria for Probable Reserves and Possible Reserves.	The 2P and 3P estimates may be based on reasonable alternative technical interpretations within the reservoir and/or subject project that are clearly documented, including comparisons to results in successful similar projects. In conventional accumulations, Probable and/or Possible Reserves may be assigned where geoscience and engineering data identify directly adjacent portions of a reservoir within the same accumulation that may be separated from Proved areas by minor faulting or other geological discontinuities and have not been penetrated by a wellbore but are interpreted to be in communication with the known (Proved) reservoir. Probable or Possible Reserves may be assigned to areas that are structurally higher than the Proved area. Possible (and in some cases, Probable) Reserves may be assigned to areas that are structurally lower than the adjacent Proved or 2P area. Caution should be exercised in assigning Reserves to adjacent reservoirs isolated by major, potentially sealing faults until this reservoir is penetrated and evaluated as commercially mature and economically productive. Justification for assigning Reserves in such cases should be clearly documented. Reserves should not be assigned to areas that are clearly separated from a known accumulation by non-productive reservoir (i.e., absence of reservoir, structurally low reservoir, or negative test results); such areas may contain Prospective Resources. In conventional accumulations, where drilling has defined a highest known oil elevation and there exists the potential for an associated gas cap, Proved Reserves of oil should only be assigned in the structurally higher portions of the reservoir if there is reasonable certainty that such portions are initially above bubble point pressure based on documented engineering analyses. Reservoir portions that do not meet this certainty may be assigned as Probable and Possible oil and/or gas based on reservoir fluid properties and pressure gradient interpretations.

Annexure 1. Independent Expert's Report *continued*

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Figure 1.1—Resources classification framework

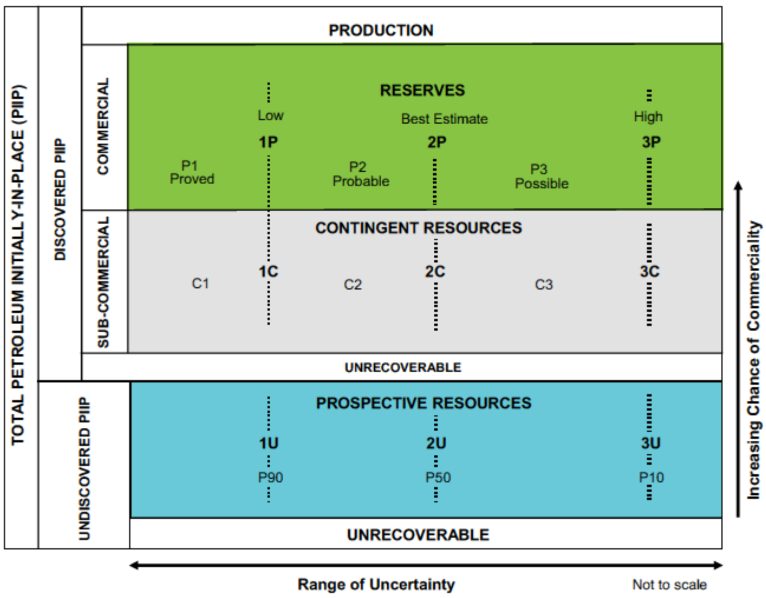
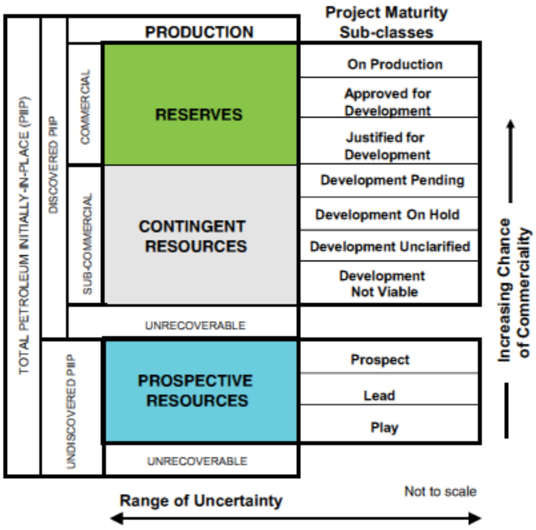


Figure 2.1—Sub-classes based on project maturity



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Appendix II
Glossary

Grant Samuel & Associates Pty Ltd
October 2023

Annexure 1. Independent Expert's Report *continued*

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GLOSSARY
List of Standard Oil Industry Terms and Abbreviations

ABEX	Abandonment Expenditure
ACQ	Annual Contract Quantity
°API	Degrees API (American Petroleum Institute)
AAPG	American Association of Petroleum Geologists
AVO	Amplitude versus Offset
A$	Australian Dollars
B	Billion (10^9)
Bbl	Barrels
/Bbl	per barrel
BBbl	Billion Barrels
BHA	Bottom Hole Assembly
BHC	Bottom Hole Compensated
Bscf or Bcf	Billion standard cubic feet
Bscfd or Bcfd	Billion standard cubic feet per day
Bm^3	Billion cubic metres
bcpd	Barrels of condensate per day
BHP	Bottom Hole Pressure
blpd	Barrels of liquid per day
bpd	Barrels per day
boe	Barrels of oil equivalent @ xxx mcf/Bbl
boepd	Barrels of oil equivalent per day @ xxx mcf/Bbl
BOP	Blow Out Preventer
bopd	Barrels oil per day
bwpd	Barrels of water per day
BS&W	Bottom sediment and water
BTU	British Thermal Units
bwpd	Barrels water per day
CBM	Coal Bed Methane
CO_2	Carbon Dioxide
CAPEX	Capital Expenditure
CCGT	Combined Cycle Gas Turbine
cm	centimetres
CMM	Coal Mine Methane
CNG	Compressed Natural Gas
Cp	Centipoise (a measure of viscosity)
CSG	Coal Seam Gas
CT	Corporation Tax
DCQ	Daily Contract Quantity
Deg C	Degrees Celsius
Deg F	Degrees Fahrenheit
DHI	Direct Hydrocarbon Indicator
DST	Drill Stem Test
DWT	Dead-weight ton
E&A	Exploration & Appraisal
E&P	Exploration and Production
EBIT	Earnings before Interest and Tax
EBITDA	Earnings before interest, tax, depreciation and amortisation
EI	Entitlement Interest
EIA	Environmental Impact Assessment
EMV	Expected Monetary Value
EOR	Enhanced Oil Recovery
EUR	Estimated Ultimate Recovery
FDP	Field Development Plan
FEED	Front End Engineering and Design

FPSO	Floating Production, Storage and Offloading
FSO	Floating Storage and Offloading
ft	Foot/feet
Fx	Foreign Exchange Rate
g	gram
g/cc	grams per cubic centimetre
gal	gallon
gal/d	gallons per day
G&A	General and Administrative costs
GBP	Pounds Sterling
GDT	Gas Down to
GIIP	Gas initially in place
GJ	Gigajoules (one billion Joules)
GOR	Gas Oil Ratio
GTL	Gas to Liquids
GWC	Gas water contact
HDT	Hydrocarbons Down to
HSE	Health, Safety and Environment
HSFO	High Sulphur Fuel Oil
HUT	Hydrocarbons up to
H_2S	Hydrogen Sulphide
IOR	Improved Oil Recovery
IPP	Independent Power Producer
IRR	Internal Rate of Return
J	Joule (Metric measurement of energy) I kilojoule = 0.9478 BTU)
k	Permeability
KB	Kelly Bushing
KJ	Kilojoules (one Thousand Joules)
kl	Kilolitres
km	Kilometres
km^2	Square kilometres
kPa	Thousands of Pascals (measurement of pressure)
KW	Kilowatt
KWh	Kilowatt hour
LKG	Lowest Known Gas
LKH	Lowest Known Hydrocarbons
LKO	Lowest Known Oil
LNG	Liquefied Natural Gas
LoF	Life of Field
LPG	Liquefied Petroleum Gas
LTI	Lost Time Injury
LWD	Logging while drilling
m	Metres
M	Thousand
m^3	Cubic metres
Mcf or Mscf	Thousand standard cubic feet
MCM	Management Committee Meeting
MMcf or MMscf	Million standard cubic feet
m^3d	Cubic metres per day
mD	Measure of Permeability in millidarcies
MD	Measured Depth
MDT	Modular Dynamic Tester
Mean	Arithmetic average of a set of numbers
Median	Middle value in a set of values
MFT	Multi Formation Tester
mg/l	milligrams per litre
MJ	Megajoules (One Million Joules)

Annexure 1. Independent Expert's Report *continued*

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Mm^3	Thousand Cubic metres
Mm^3d	Thousand Cubic metres per day
MM	Million
MMBbl	Millions of barrels
MMBTU	Millions of British Thermal Units
Mode	Value that exists most frequently in a set of values = most likely
Mscfd	Thousand standard cubic feet per day
MMscfd	Million standard cubic feet per day
mtpa	Milltion tonnes per annum
MW	Megawatt
MWD	Measuring While Drilling
MWh	Megawatt hour
mya	Million years ago
NGL	Natural Gas Liquids
N_2	Nitrogen
NPV	Net Present Value
OBM	Oil Based Mud
OCM	Operating Committee Meeting
ODT	Oil down to
OPEX	Operating Expenditure
OWC	Oil Water Contact
p.a.	Per annum
Pa	Pascals (metric measurement of pressure)
P&A	Plugged and Abandoned
PDP	Proved Developed Producing
PI	Productivity Index
PJ	Petajoules (10^{15} Joules)
PSDM	Post Stack Depth Migration
psi	Pounds per square inch
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
PUD	Proved Undeveloped
PVT	Pressure volume temperature
P10	10% Probability
P50	50% Probability
P90	90% Probability
Rf	Recovery factor
RFT	Repeat Formation Tester
RT	Rotary Table
RTA	Rate Transient Analysis
R_w	Resistivity of water
SCAL	Special core analysis
cf or scf	Standard Cubic Feet
cfd or scfd	Standard Cubic Feet per day
scf/ton	Standard cubic foot per ton
SL	Straight line (for depreciation)
s_o	Oil Saturation
SPE	Society of Petroleum Engineers
SPEE	Society of Petroleum Evaluation Engineers
ss	Subsea
stb	Stock tank barrel
STOIIP	Stock tank oil initially in place
s_w	Water Saturation
T	Tonnes
TD	Total Depth
Te	Tonnes equivalent
THP	Tubing Head Pressure

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TJ	Terajoules (10^{12} Joules)
Tscf or Tcf	Trillion standard cubic feet
TCM	Technical Committee Meeting
TOC	Total Organic Carbon
TOP	Take or Pay
Tpd	Tonnes per day
TVD	True Vertical Depth
TVDss	True Vertical Depth Subsea
USGS	United States Geological Survey
US$	United States Dollar
VSP	Vertical Seismic Profiling
WC	Water Cut
WI	Working Interest
WPC	World Petroleum Council
WTI	West Texas Intermediate
wt%	Weight percent
1H05	First half (6 months) of 2005 (example of date)
2Q06	Second quarter (3 months) of 2006 (example of date)
2D	Two dimensional
3D	Three dimensional
4D	Four dimensional
1P	Proved Reserves
2P	Proved plus Probable Reserves
3P	Proved plus Probable plus Possible Reserves
%	Percentage

Annexure 2.
Scheme of Arrangement

HERBERT SMITH FREEHILLS

Scheme of Arrangement

Origin Energy Limited

Scheme Shareholders

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T +61 2 9225 5000 **F** +61 2 9322 4000
herbertsmithfreehills.com DX 361 Sydney

HERBERT SMITH FREEHILLS

Scheme of arrangement – share scheme

This scheme of arrangement is made under section 411 of the *Corporations Act 2001* (Cth).

Between the parties

Origin Energy Limited ACN 000 051 696 of Level 32, Tower 1, 100 Barangaroo Avenue, Barangaroo NSW 2000 (**Origin**)

The Scheme Shareholders

1 Definitions, interpretation and scheme components

1.1 Definitions

Schedule 1 contains definitions used in this Scheme.

1.2 Interpretation

Schedule 1 contains interpretation rules for this Scheme.

1.3 Scheme components

This Scheme includes any schedule to it.

2 Preliminary matters

(a) Origin is a public company limited by shares, registered in New South Wales, Australia, and has been admitted to the official list of the ASX. Origin Shares are quoted for trading on the ASX.

(b) As at the date of the Implementation Deed, 1,722,747,671 Origin Shares were on issue.

(c) The Bidder is a private company limited by shares registered in New South Wales.

(d) If this Scheme becomes Effective:

(1) the Bidder must provide or procure the provision of the Scheme Consideration to the Scheme Shareholders in accordance with the terms of this Scheme and the Deed Poll; and

(2) all the Scheme Shares, and all the rights and entitlements attaching to them as at the Implementation Date, must be transferred to the Bidder and Origin will enter the name of the Bidder in the Share Register in respect of the Scheme Shares.

Annexure 2. Scheme of Arrangement *continued*

HERBERT SMITH FREEHILLS

(e) Origin and the Bidder have agreed, by executing the Implementation Deed, to implement this Scheme.

(f) This Scheme attributes actions to the Bidder but does not itself impose an obligation on it to perform those actions. The Bidder has agreed, by executing the Deed Poll, to perform the actions attributed to it under this Scheme, including the provision or procuring the provision of the Scheme Consideration to the Scheme Shareholders.

3 Conditions

3.1 Conditions precedent

This Scheme is conditional on and will have no force or effect until, the satisfaction of each of the following conditions precedent:

(a) all the conditions in clause 3.1 of the Implementation Deed (other than the condition in the Implementation Deed relating to Court approval of this Scheme) having been satisfied or waived in accordance with the terms of the Implementation Deed by 8.00am on the Second Court Date;

(b) neither the Implementation Deed nor the Deed Poll having been terminated in accordance with their terms before 8.00am on the Second Court Date;

(c) approval of this Scheme by the Court under paragraph 411(4)(b) of the Corporations Act, including with any alterations made or required by the Court under subsection 411(6) of the Corporations Act and agreed to by the Bidder and Origin;

(d) such other conditions made or required by the Court under subsection 411(6) of the Corporations Act in relation to this Scheme and agreed to by the Bidder and Origin having been satisfied or waived; and

(e) the orders of the Court made under paragraph 411(4)(b) (and, if applicable, subsection 411(6)) of the Corporations Act approving this Scheme coming into effect, pursuant to subsection 411(10) of the Corporations Act on or before the End Date (or any later date Origin and the Bidder agree in writing).

3.2 Certificate

(a) Origin and the Bidder will provide to the Court on the Second Court Date a certificate, or such other evidence as the Court requests, confirming (in respect of matters within their knowledge) whether or not all of the conditions precedent in clauses 3.1(a) and 3.1(b) have been satisfied or waived.

(b) The certificate referred to in clause 3.2(a) constitutes conclusive evidence that such conditions precedent were satisfied, waived or taken to be waived.

3.3 End Date

This Scheme will lapse and be of no further force or effect if:

(a) the conditions in clause 3.1 of the Implementation Deed do not occur or are not satisfied or waived on or before the End Date; or

(b) the Implementation Deed or the Deed Poll is terminated in accordance with its terms,

unless Origin and the Bidder otherwise agree in writing.

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4 Implementation of this Scheme

4.1 Lodgement of Court orders with ASIC

Origin must lodge with ASIC, in accordance with subsection 411(10) of the Corporations Act, an office copy of the Court order approving this Scheme as soon as possible after the Court approves this Scheme and in any event by 5.00pm on the first Business Day after the day on which the Court approves this Scheme.

4.2 Transfer of Scheme Shares

On the Implementation Date:

(a) subject to the provision of the Scheme Consideration in the manner contemplated by clause 5.3(a), the Scheme Shares, together with all rights and entitlements attaching to the Scheme Shares as at the Implementation Date, must be transferred to the Bidder, without the need for any further act by any Scheme Shareholder (other than acts performed by Origin as attorney and agent for Scheme Shareholders under clause 8.5), by:

(1) Origin delivering to the Bidder a duly completed Scheme Transfer, executed on behalf of the Scheme Shareholders by Origin (or any of its directors and officers), for registration; and

(2) the Bidder duly executing the Scheme Transfer as transferee, attending to the stamping of the Scheme Transfer (if required) and delivering it to Origin for registration; and

(b) immediately following receipt of the Scheme Transfer in accordance with clause 4.2(a)(2), but subject to the stamping of the Scheme Transfer (if required), Origin must enter, or procure the entry of, the name of the Bidder in the Share Register in respect of all the Scheme Shares transferred to the Bidder in accordance with this Scheme.

5 Scheme Consideration

5.1 Scheme Consideration

(a) The Scheme Consideration to be provided to each Scheme Shareholder in respect of their Origin Shares will be the Scheme Consideration per Scheme Share, comprising:

(1) the AUD Scheme Consideration; *plus*

(2) the USD Scheme Consideration,

which will be paid in A$, unless the Scheme Shareholder makes a valid Currency Election in accordance with clause 5.2 in which case the payment will be made in a combination of Australian Dollars and US dollars (comprising, the AUD Scheme Consideration paid in Australian Dollars and the USD Scheme Consideration paid in US Dollars).

(b) Each Scheme Shareholder is entitled to receive the Scheme Consideration in respect of the Scheme Shares held by that Scheme Shareholder, subject to the terms of this Scheme.

Annexure 2. Scheme of Arrangement *continued*

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5.2 Currency election

(a) Subject to clause 5.2(b), each Scheme Shareholder is deemed to have made an election to receive all of their Scheme Consideration in the form of Australian Dollars.

(b) A Scheme Shareholder may make an election to receive their Scheme Consideration in the form of a combination of Australian Dollars and US Dollars (comprising, the AUD Scheme Consideration in Australian Dollars and the USD Scheme Consideration in US Dollars). Such an election will be valid only if the following requirements are satisfied (or waived by Bidder and Origin (by agreement) in their sole discretion in respect of any particular Scheme Shareholder):

(1) completing and signing an Election Form in accordance with the instructions on the Election Form, including providing valid US dollar banking account details; and

(2) the Election Form is received by the Origin Registry before the Election Time at the address on the Election Form.

(c) If a Scheme Shareholder is noted on the Share Register as holding one or more parcels of Origin Shares as trustee or nominee for, or otherwise on account of, another person, the Scheme Shareholder may make an election under clause 5.2(b) in relation to each of those parcels of Origin Shares, and an election made in respect of any such parcel, or an omission to make an election in respect of any such parcel, will not be taken to extend to the other parcels. The manner in which such election is to be made, and the information to be provided to Bidder and Origin in relation to that, is to be as advised by Origin and Bidder (acting reasonably including after consultation with the Origin Registry) to the Scheme Shareholder.

(d) Subject to clause 5.2(c), a Currency Election made or deemed to be made by a Scheme Shareholder under this clause 5.2 will be deemed to apply in respect of the Scheme Shareholder's entire registered holding of Scheme Shares on the Scheme Record Date, regardless of whether the Scheme Shareholder's holding of Scheme Shares on the Scheme Record Date is greater or less than the Scheme Shareholder's holding at the time it made its Currency Election.

(e) An election made under clause 5.2(b) may be revoked in accordance with the instructions on the Election Form.

(f) Bidder and Origin (by agreement) will determine, in their sole discretion, all questions as to the correct completion of an Election Form, and time of receipt of an Election Form. Bidder and Origin are not required to communicate with any Scheme Shareholder prior to making this determination. The determination of Bidder and Origin will be final and binding on the Scheme Shareholder.

(g) Bidder will enter into one or more foreign exchange transactions with a foreign exchange broker in order to convert US$ into A$ for the USD Scheme Consideration payable to a Scheme Shareholder in A$. Bidder will use reasonable endeavours to first obtain, and notify Origin of, at least three quotes from independent foreign exchange brokers for US$ to A$ conversion rates. The Bidder will elect in its sole discretion the best rate or rates (resulting in the highest value of A$ per USD) at which US$ will be converted into A$, noting that such conversions shall occur over no less than two Business Days and be completed by 6:00am (Sydney time) on the date that is two Business Days prior to the Implementation Date (or such other time as agreed between Origin and Bidder).

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(h) Notwithstanding anything else in this Scheme, no AUD Scheme Consideration will be paid to a Scheme Shareholder in the form of US Dollars and the AUD Scheme Consideration will always be paid in the form of Australian Dollars.

5.3 Provision of Scheme Consideration

(a) The Bidder must, and Origin must use its best endeavours to procure that the Bidder does, by no later than the Business Day before the Implementation Date, deposit, or procure the deposit, in cleared funds an amount equal to:

(1) the aggregate amount in Australian dollars of the Scheme Consideration which is payable to all Scheme Shareholders, into an Australian dollar denominated trust account with an ADI operated by Origin as trustee for the Scheme Shareholders, (provided that any interest on the amounts deposited (less bank fees and other charges) will be credited to the Bidder's account); and

(2) the aggregate amount in US dollars of the Scheme Consideration which is payable to all Scheme Shareholders, into a US dollar denominated trust account with an ADI operated by Origin as trustee for the Scheme Shareholders, (provided that any interest on the amounts deposited (less bank fees and other charges) will be credited to the Bidder's account).

(b) On the Implementation Date, subject to funds having been deposited in accordance with clause 5.3(a), Origin must pay or procure the payment of that Scheme Consideration from the trust accounts referred to in clause 5.3(a) to each Scheme Shareholder as that Scheme Shareholder is entitled under clause 5.1.

(c) The obligations of Origin under clause 5.3(b) will be satisfied by Origin (in its absolute discretion, and despite any election referred to in clause 5.3(c)(1) or authority referred to in clause 5.3(c)(2) made or given by the Scheme Shareholder):

(1) if a Scheme Shareholder has, before the Scheme Record Date, made a valid election in accordance with the requirements of the Origin Registry to receive dividend payments from Origin by electronic funds transfer to a bank account nominated by the Scheme Shareholder, paying, or procuring the payment of, the relevant amount of Scheme Consideration by electronic means in accordance with that election;

(2) paying, or procuring the payment of, the relevant amount of Scheme Consideration by electronic means to a bank account (or two bank accounts for Scheme Shareholders who have made a valid Currency Election) nominated by the Scheme Shareholder by an appropriate authority from the Scheme Shareholder to Origin; or

(3) otherwise, dispatching, or procuring the dispatch of, a cheque for the relevant amount of Scheme Consideration in Australian currency to the Scheme Shareholder by prepaid post to their Registered Address (as at the Scheme Record Date), such cheque being drawn in the name of the Scheme Shareholder (or in the case of joint holders, in accordance with the procedures set out in clause 5.4).

(d) To the extent that, following satisfaction of Origin's obligations under clause 5.3(b), there is a surplus in the amount held by Origin as trustee for the Scheme Shareholders in either trust account referred to in that clause, that surplus must be paid by Origin to the Bidder.

Annexure 2. Scheme of Arrangement *continued*

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(e) If, following satisfaction of the Bidder's obligations under clause 5.3(a) but prior to the occurrence of all of the events described in clause 4.2 this Scheme lapses under clause 3.3:

(1) Origin must immediately repay (or cause to be repaid) to or at the direction of the Bidder the funds that were deposited in the Trust Accounts plus any interest on the amounts deposited (less bank fees and other charges);

(2) the obligation to transfer Scheme Shares, together with all rights and entitlements attaching to the Scheme Shares as at the Implementation Date, to the Bidder under clause 4.2 will immediately cease;

(3) the Bidder must return the Scheme Transfers, if provided pursuant to clause 4.2; and

(4) Origin is no longer obliged to enter, or procure the entry of, the name of the Bidder in the Share Register in accordance with clause 4.2(b).

5.4 Joint holders

In the case of Scheme Shares held in joint names:

(a) subject to clause 5.3(c), the Scheme Consideration is payable to the joint holders and any cheque required to be sent under this Scheme will be made payable to the joint holders and sent to either, at the sole discretion of Origin, the holder whose name appears first in the Share Register as at the Scheme Record Date or to the joint holders; and

(b) any other document required to be sent under this Scheme, will be forwarded to either, at the sole discretion of Origin, the holder whose name appears first in the Share Register as at the Scheme Record Date or to the joint holders.

5.5 Fractional entitlements and splitting

(a) Where the calculation of the Scheme Consideration to be issued to a particular Scheme Shareholder would result in the Scheme Shareholder becoming entitled to a fraction of a cent, the fractional entitlement will be rounded down to the nearest whole cent.

(b) If the Bidder is of the opinion (acting reasonably) that one or more Scheme Shareholders have, before the Scheme Record Date, been party to shareholding splitting or division or any similar action in an attempt to obtain an advantage in respect of the Scheme Consideration they would otherwise have been entitled to receive, the Bidder may direct Origin to give notice to those Scheme Shareholders:

(1) setting out the names and Registered Addresses as shown in the Share Register;

(2) stating that opinion; and

(3) attributing all Scheme Shares held by all of them to one of them specifically identified in the notice,

and, after such notice has been given, the Scheme Shareholder specifically identified in the notice as the deemed holder of all specified Scheme Shares will, for the purposes of the provisions of the Scheme, be taken to hold all those Scheme Shares and each of the other Scheme Shareholders whose names and Registered Addresses are set out in the notice will, for the purposes of the provisions of the Scheme, be taken to hold no Scheme Shares. The Bidder, in complying with the provisions of the Scheme relating to it in respect of the Scheme Shareholder specifically identified in the notice as the deemed holder of all the specified Scheme Shares, will be taken to have satisfied and discharged its obligations to the other Scheme Shareholders named in the notice under the terms of the Scheme.

5.6 Unclaimed monies

(a) Origin may cancel a cheque issued under this clause 5 if the cheque:

(1) is returned to Origin; or

(2) has not been presented for payment within six months after the date on which the cheque was sent.

(b) During the period of 12 months commencing on the Implementation Date, on request in writing from a Scheme Shareholder to Origin (or the Origin Registry) (which request may not be made until the date which is 20 Business Days after the Implementation Date), Origin must reissue a cheque that was previously cancelled under this clause 5.6.

(c) The *Unclaimed Money Act 1995* (NSW) will apply in relation to any Scheme Consideration which becomes 'unclaimed money' (as defined in section 7 of the *Unclaimed Money Act 1995* (NSW)), but any interest or other benefit accruing from unclaimed Scheme Consideration will be to the benefit of the Bidder.

5.7 Orders of a court or Government Agency

(a) If written notice is given to Origin (or the Origin Registry) or the Bidder of an order or direction made by a court of competent jurisdiction or by another Government Agency that:

(1) requires consideration to be provided to a third party (either through payment of a sum or the issuance of a security) in respect of Scheme Shares held by a particular Scheme Shareholder, which would otherwise be payable or required to be issued to that Scheme Shareholder by Origin in accordance with this clause 5, then Origin shall be entitled to procure that provision of that consideration is made in accordance with that order or direction; or

(2) prevents Origin from providing consideration to any particular Scheme Shareholder in accordance with this clause 5, or the payment or issuance of such consideration is otherwise prohibited by applicable law, Origin shall be entitled to (as applicable), retain an amount, in Australian dollars or US dollars, equal to the number of Scheme Shares held by that Scheme Shareholder multiplied by the Scheme Consideration, until such time as provision of the Scheme Consideration in accordance with this clause 5 is permitted by that (or another) order or direction or otherwise by law.

(b) To the extent that amounts are so deducted or withheld in accordance with clause 5.7(a), such deducted or withheld amounts will be treated for all purposes under this Scheme as having been paid to the person in respect of which such deduction and withholding was made, provided that such deducted or withheld amounts are actually remitted as required.

Annexure 2. Scheme of Arrangement *continued*

6 Dealings in Origin Shares

6.1 Determination of Scheme Shareholders

To establish the identity of the Scheme Shareholders, dealings in Origin Shares or other alterations to the Share Register will only be recognised if:

(a) in the case of dealings of the type to be effected using CHESS, the transferee is registered in the Share Register as the holder of the relevant Origin Shares before the Scheme Record Date; and

(b) in all other cases, registrable transfer or transmission applications in respect of those dealings, or valid requests in respect of other alterations, are received before the Scheme Record Date at the place where the Share Register is kept,

and Origin must not accept for registration, nor recognise for any purpose (except a transfer to the Bidder pursuant to this Scheme and any subsequent transfer by the Bidder or its successors in title), any transfer or transmission application or other request received after such times, or received prior to such times but not in registrable or actionable form, as appropriate.

6.2 Register

(a) Origin must register registrable transmission applications or transfers of the Scheme Shares that are received in accordance with clause 6.1(b) before the Scheme Record Date provided that, for the avoidance of doubt, nothing in this clause 6.2(a) requires Origin to register a transfer that would result in an Origin Shareholder holding a parcel of Origin Shares that is less than a 'marketable parcel' (for the purposes of this clause 6.2(a) 'marketable parcel' has the meaning given in the Operating Rules).

(b) If this Scheme becomes Effective, a holder of Scheme Shares (and any person claiming through that holder) must not dispose of or otherwise deal with, or purport or agree to dispose of or otherwise deal with, any Scheme Shares or any interest in them on or after the Scheme Record Date otherwise than pursuant to this Scheme, and any attempt to do so will have no effect and Origin shall be entitled to disregard any such disposal or other dealing.

(c) For the purpose of determining entitlements to the Scheme Consideration, Origin must maintain, or procure the maintenance of, the Share Register in accordance with the provisions of this clause 6.2 until the Scheme Consideration has been paid to the Scheme Shareholders. The Share Register in this form will solely determine entitlements to the Scheme Consideration.

(d) All statements of holding for Origin Shares (other than statements of holding in favour of the Bidder or any Excluded Shareholders) will cease to have effect after the Scheme Record Date as documents of title in respect of those shares and, as from that date, each entry current at that date on the Share Register (other than entries on the Share Register in respect of the Bidder or any Excluded Shareholder) will cease to have effect except as evidence of entitlement to the Scheme Consideration in respect of the Origin Shares relating to that entry.

(e) As soon as possible on or after the Scheme Record Date, and in any event by 5.00pm on the first Business Day after the Scheme Record Date, Origin will ensure that details of the names, Registered Addresses and holdings of Origin Shares for each Scheme Shareholder as shown in the Share Register are available to the Bidder in the form the Bidder reasonably requires.

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7 Quotation of Origin Shares

(a) Origin must apply to ASX to suspend trading on the ASX in Origin Shares with effect from the close of trading on the Effective Date.

(b) On a date after the Implementation Date to be determined by the Bidder, Origin must apply:

(1) for termination of the official quotation of Origin Shares on the ASX; and

(2) to have itself removed from the official list of the ASX.

8 General Scheme provisions

8.1 Consent to amendments to this Scheme

If the Court proposes to approve this Scheme subject to any alterations or conditions:

(a) Origin may by its counsel consent on behalf of all persons concerned to those alterations or conditions to which the Bidder has consented in writing; and

(b) each Scheme Shareholder agrees to any such alterations or conditions which Origin has consented to.

8.2 Scheme Shareholders' agreement and warranties

(a) Each Scheme Shareholder:

(1) irrevocably agrees to the transfer of their Scheme Shares together with all rights and entitlements attaching to those Scheme Shares in accordance with this Scheme;

(2) agrees to the cancellation, variation or modification (if any) of the rights attached to their Scheme Shares constituted by or resulting from this Scheme;

(3) agrees to, on the direction of the Bidder, destroy any holding statements or share certificates relating to their Scheme Shares;

(4) who holds their Scheme Shares in a CHESS Holding agrees to the conversion of those Scheme Shares to an Issuer Sponsored Holding and irrevocably authorises Origin to do anything necessary or expedient (whether required by the Settlement Rules or otherwise) to effect or facilitate such conversion; and

(5) acknowledges and agrees that this Scheme binds Origin and all Scheme Shareholders (including those who do not attend the Scheme Meeting and those who do not vote, or vote against this Scheme, at the Scheme Meeting),

without the need for any further act by the Scheme Shareholder.

(b) Each Scheme Shareholder is deemed to have warranted to Origin and Bidder on the Implementation Date, and appointed and authorised Origin as its attorney and agent to warrant to the Bidder, that as at the Implementation Date:

(1) all their Scheme Shares (including any rights and entitlements attaching to those shares) which are transferred under this Scheme will, at the date of transfer, be fully paid and free from all mortgages,

Annexure 2. Scheme of Arrangement *continued*

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charges, liens, encumbrances, pledges, security interests (including any ‘security interests’ within the meaning of section 12 of the *Personal Property Securities Act 2009* (Cth)) and interests of third parties of any kind, whether legal or otherwise, and restrictions on transfer of any kind, and that they have full power and capacity to transfer their Scheme Shares to Bidder together with any rights and entitlements attaching to those shares;

(2) they have full power and capacity to sell and to transfer their Scheme Shares together with all rights and entitlements attaching to those shares to the Bidder under this Scheme; and

(3) they have no existing right to be issued any Scheme Shares, options or performance rights exercisable into Scheme Shares, convertible notes in Origin or any other Origin securities.

(c) Origin undertakes in favour of each Scheme Shareholder that it will provide such warranty, to the extent enforceable, to Bidder as agent and attorney of that Scheme Shareholder.

8.3 Title to and rights in Scheme Shares

(a) To the extent permitted by law, the Scheme Shares (including all rights and entitlements attaching to the Scheme Shares) transferred under this Scheme to the Bidder will, at the time of transfer of them to the Bidder vest in the Bidder free from all mortgages, charges, liens, encumbrances, pledges, security interests (including any ‘security interests’ within the meaning of section 12 of the *Personal Property Securities Act 2009* (Cth)) and interests of third parties of any kind, whether legal or otherwise and free from any restrictions on transfer of any kind.

(b) Immediately upon the provision of the Scheme Consideration to each Scheme Shareholder in the manner contemplated by clause 5, the Bidder will be beneficially entitled to the Scheme Shares to be transferred to it under this Scheme pending registration by Origin of the Bidder in the Share Register as the holder of the Scheme Shares.

8.4 Appointment of sole proxy

Immediately upon the provision of the Scheme Consideration to each Scheme Shareholder in the manner contemplated by clause 5, and until Origin registers the Bidder as the holder of all Scheme Shares in the Share Register, each Scheme Shareholder:

(a) is deemed to have irrevocably appointed the Bidder as attorney and agent (and directed the Bidder in such a capacity) to appoint any director, officer, secretary or agent nominated by the Bidder as its sole proxy and, where applicable or appropriate, corporate representative to attend shareholders' meetings, exercise the votes attaching to the Scheme Shares registered in their name and sign any shareholders' resolution or document;

(b) must not attend or vote at any of those meetings or sign any resolutions, whether in person, by proxy or by corporate representative (other than pursuant to clause 8.4(a));

(c) must take all other actions in the capacity of a registered holder of Scheme Shares as the Bidder reasonably directs; and

(d) acknowledges and agrees that in exercising the powers referred to in clause 8.4(a), the Bidder and any director, officer, secretary or agent nominated by the Bidder under clause 8.4(a) may act in the best interests of the Bidder as the intended registered holder of the Scheme Shares.

8.5 Authority given to Origin

Each Scheme Shareholder, without the need for any further act:

(a) on the Effective Date, irrevocably appoints Origin and each of its directors, officers and secretaries (jointly and each of them severally) as its attorney and agent for the purpose of enforcing the Deed Poll against the Bidder and the Bidder, and Origin undertakes in favour of each Scheme Shareholder that it will enforce the Deed Poll against the Bidder and the Bidder on behalf of and as agent and attorney for each Scheme Shareholder; and

(b) on the Implementation Date, irrevocably appoints Origin and each of its directors, officers and secretaries (jointly and each of them severally) as its attorney and agent for the purpose of executing any document or doing or taking any other act necessary, desirable or expedient to give effect to this Scheme and the transactions contemplated by it, including (without limitation) executing and delivering the Scheme Transfer,

and Origin accepts each such appointment. Origin as attorney and agent of each Scheme Shareholder, may sub-delegate its functions, authorities or powers under this clause 8.5 to all or any of its directors, officers, secretaries or employees (jointly, severally or jointly and severally).

8.6 Binding effect of Scheme

This Scheme binds Origin and all of the Scheme Shareholders (including those who did not attend the Scheme Meeting to vote on this Scheme, did not vote at the Scheme Meeting, or voted against this Scheme at the Scheme Meeting) and, to the extent of any inconsistency, overrides the constitution of Origin.

9 General

9.1 Stamp duty

The Bidder will:

(a) pay all stamp duty (if any) and any related fines and penalties in respect of this Scheme and the Deed Poll, the performance of the Deed Poll and each transaction effected by or made under or in connection with this Scheme and the Deed Poll; and

(b) indemnify each Scheme Shareholder against any liability arising from failure to comply with clause 9.1(a).

9.2 Consent

Each of the Scheme Shareholders consents to Origin doing all things necessary or incidental to, or to give effect to, the implementation of this Scheme, whether on behalf of the Scheme Shareholders, Origin or otherwise.

Annexure 2. Scheme of Arrangement *continued*

9.3 Notices

(a) If a notice, transfer, transmission application, direction or other communication referred to in this Scheme is sent by post to Origin, it will not be taken to be received in the ordinary course of post or on a date and time other than the date and time (if any) on which it is actually received at Origin's registered office or at the office of the Origin Registry.

(b) The accidental omission to give notice of the Scheme Meeting or the non-receipt of such notice by an Origin Shareholder will not, unless so ordered by the Court, invalidate the Scheme Meeting or the proceedings of the Scheme Meeting.

9.4 Governing law

(a) This Scheme is governed by the laws in force in New South Wales.

(b) The parties irrevocably submit to the non-exclusive jurisdiction of courts exercising jurisdiction in New South Wales and courts of appeal from them in respect of any proceedings arising out of or in connection with this Scheme. The parties irrevocably waive any objection to the venue of any legal process in these courts on the basis that the process has been brought in an inconvenient forum.

9.5 Further action

Origin must do all things and execute all documents necessary to give full effect to this Scheme and the transactions contemplated by it.

9.6 No liability when acting in good faith

Each Scheme Shareholder agrees that neither Origin, the Bidder, nor any director, officer, secretary or employee of either of those companies shall be liable for anything done or omitted to be done in the performance of this Scheme or the Deed Poll in good faith.

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Schedule 1

Definitions and interpretation

1 Definitions

The meanings of the terms used in this Scheme are set out below.

Term	Meaning
Agreed AUDUSD Hedging Arrangements	AUDUSD hedging undertaken by Origin following the date of the Implementation Deed, in respect of APLNG distributions that are unhedged at time of the Implementation Deed, as agreed in writing between the parties prior to the date of the Implementation Deed.
Additional AUDUSD Hedging Arrangements	AUDUSD hedging undertaken by Origin no later than 2 days prior to the date that is 5 Business Days before the Scheme Meeting, in respect of unhedged APLNG distributions that is expected to be received by Origin between the date that is 5 Business Days prior to the Scheme Meeting and the Implementation Date (the USD amount of which will be agreed between Origin and Bidder, each acting reasonably).
Additional Consideration	where the Implementation Date has not occurred by 30 November 2023, an amount equal to an additional $0.001479 for each day that has elapsed from (and including) 1 December 2023 to (and including) the date on which Implementation occurs.
Adjusted Scheme AUD Consideration	The Base Scheme AUD Consideration, adjusted for additions as follows: 1 any amount of APLNG distributions (including any gains or losses from related commodity hedge transactions) in AUD received by Origin no later than 5 Business Days prior to the Scheme Meeting, that are converted from USD at the relevant hedge rate under the Agreed AUDUSD Hedging Arrangements, will be added to the Base Scheme AUD Consideration; 2 all APLNG distributions in AUD that are unhedged at time of the Implementation Deed: A. received by Origin no later than 5 Business Days prior to the Scheme Meeting, that Origin elects to convert from USD at the actual US$/A$ exchange rate undertaken by Origin pursuant to which the conversion from USD occurs; and B. that are expected to be received by Origin between the date that is 5 Business Days prior to the Scheme Meeting and the Implementation Date (the USD amount of which will be agreed between Origin and Bidder, each acting reasonably and in good faith), provided that Origin has undertaken the relevant Additional AUDUSD Hedging Arrangements, and such amounts are calculated to be converted from USD on the date that is 5 Business Days prior to the Scheme Meeting at the relevant hedge rate under the Additional AUDUSD Hedging Arrangements, will be added to the Base Scheme AUD Consideration;

Annexure 2. Scheme of Arrangement *continued*

Term	Meaning
	3 an amount of up to A$914,285,714, converted from USD at an assumed US$/A$ exchange rate of US$0.70 to A$1, to the extent the Consortium elects, by notice in writing to Origin no later than 5 Business Days prior to the Scheme Meeting, for such amount to be converted, will be added to the Base Scheme AUD Consideration.
Adjusted Scheme Consideration	The sum of the Adjusted Scheme USD Consideration and the Adjusted Scheme AUD Consideration.
Adjusted Scheme USD Consideration	The Base Scheme USD Consideration, adjusted for deductions as follows: 1 any amount of APLNG distributions (including any gains or losses from related commodity hedge transactions) in USD received by Origin no later than 5 Business Days prior to the Scheme Meeting, that are converted into AUD at the relevant hedge rate under the Agreed AUDUSD Hedging Arrangements, will be deducted from the Base Scheme USD Consideration; 2 all APLNG distributions in USD that are unhedged at time of the Implementation Deed: A. received by Origin no later than 5 Business Days prior to the Scheme Meeting, that Origin elects to convert into AUD at the actual US$/A$ exchange rate undertaken by Origin pursuant to which the conversion into AUD occurs; and B. that are expected to be received by Origin between the date that is 5 Business Days prior to the Scheme Meeting and the Implementation Date (the USD amount of which will be agreed between Origin and Bidder, each acting reasonably and in good faith), provided that Origin has undertaken the relevant Additional AUDUSD Hedging Arrangements, and such amounts are calculated to be converted into AUD on the date that is 5 Business Days prior to the Scheme Meeting at the relevant hedge rate under the Additional AUDUSD Hedging Arrangements, will be deducted from the Base Scheme USD Consideration; and 3 an amount of up to US$640,000,000, converted into AUD at an assumed US$/A$ exchange rate of US$0.70 to A$1, to the extent the Consortium elects, by notice in writing to Origin no later than 5 Business Days prior to the Scheme Meeting, for such amount to be converted, will be deducted from the Base Scheme USD Consideration.
ADI	authorised deposit-taking institution (as defined in the *Banking Act 1959* (Cth)).
ASIC	the Australian Securities and Investments Commission.
Assumed Origin Share Number	the lower of: • number of Origin Shares on issue as at the Scheme Record Date; and • 1,728,724,644 Origin Shares,

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Term	Meaning
	such number being for the purposes of calculating the Scheme Consideration in respect of each Scheme Share.
ASX	ASX Limited ABN 98 008 624 691 and, where the context requires, the financial market that it operates.
AUD Scheme Consideration	the Australian Dollar amount of the Scheme Consideration in respect of each Scheme Share, being an amount equal to: • the Adjusted Scheme AUD Consideration divided by the Assumed Origin Share Number; *plus* • the amount of any Additional Consideration; *less* • the cash amount per Origin Share of any Permitted Dividend and Special Dividend to which Origin Shareholders become entitled from the date of the Implementation Deed to the Implementation Date and the HY23 Interim Dividend (in each case, not including the value attributed to any franking credits attached to any such dividend).
Base Scheme Consideration	the sum of the Base Scheme USD Consideration and the Base Scheme AUD Consideration.
Base Scheme AUD Consideration	AUD9,987,000,000.
Base Scheme USD Consideration	USD3,793,000,000.
Bidder	MidOcean Reef BidCo Pty Ltd ABN 22 665 950 318.
Business Day	a day that is not a Saturday, Sunday or public holiday or bank holiday in Sydney.
CHESS	the Clearing House Electronic Subregister System operated by ASX Settlement Pty Ltd and ASX Clear Pty Limited.
CHESS Holding	has the meaning given in the Settlement Rules.
Corporations Act	the *Corporations Act 2001* (Cth).
Court	the Supreme Court of New South Wales or such other court of competent jurisdiction under the Corporations Act agreed to in writing by the Bidder and Origin.
Currency Election	an election made or deemed to have been made under clause 5.2.
Deed Poll	the deed poll substantially in the form of Attachment 1 under which the Bidder covenants in favour of the Scheme Shareholders to perform the obligations attributed to the Bidder under this Scheme.
Effective	when used in relation to this Scheme, the coming into effect, under subsection 411(10) of the Corporations Act, of the Court order made

Annexure 2. Scheme of Arrangement *continued*

Term	Meaning
	under paragraph 411(4)(b) of the Corporations Act in relation to this Scheme.
Effective Date	the date on which this Scheme becomes Effective.
Election Form	the election form that a Scheme Shareholder may request from the Origin Registry to make a Currency Election under which each Scheme Shareholder may elect to receive the USD Scheme Consideration in US dollars in respect of all of their Scheme Shares.
Election Time	7.00pm on 4 December 2023, or such other time as agreed in writing by the Bidder and Origin.
End Date	30 April 2024, or such other date as agreed in writing by the Bidder and Origin.
Excluded Shareholder	any Origin Shareholder who is a member of the Bidder Group or any Origin Shareholder who holds any Origin Shares on behalf of, or for the benefit of, any member of the Bidder Group and does not hold Origin Shares on behalf of, or for the benefit of, any other person.
Government Agency	any foreign or Australian government or governmental, semi-governmental, administrative, fiscal or judicial body, department, commission, authority, tribunal, agency or entity (including any stock or other securities exchange), or any minister of the Crown in right of the Commonwealth of Australia or any state, or any other federal, state, provincial, local or other government, whether foreign or Australian.
Implementation Date	the fifth Business Day after the Scheme Record Date, or such other date after the Scheme Record Date as agreed in writing by Origin and the Bidder.
Implementation Deed	the scheme implementation deed dated 27 March 2023 between Origin and the Bidder relating to the implementation of this Scheme.
Issuer Sponsored Holding	has the meaning given in the Settlement Rules.
Listing Rules	the official listing rules of ASX.
Operating Rules	the official operating rules of ASX.
Origin	Origin Energy Limited ACN 000 051 696.
Origin Registry	Boardroom Pty Ltd ACN 003 209 836.
Origin Share	a fully paid ordinary share in the capital of Origin.
Origin Shareholder	each person who is registered as the holder of an Origin Share in the Share Register.
Registered Address	in relation to an Origin Shareholder, the address shown in the Share Register as at the Scheme Record Date.

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Term	Meaning
Scheme	this scheme of arrangement under Part 5.1 of the Corporations Act between Origin and the Scheme Shareholders subject to any alterations or conditions made or required by the Court under subsection 411(6) of the Corporations Act and agreed to in writing by Origin and the Bidder.
Scheme Consideration	the consideration to be provided by Bidder to each Scheme Shareholder for the transfer to Bidder of each Scheme Share being, in respect of each Scheme Share: • the AUD Scheme Consideration; *plus* • the USD Scheme Consideration.
Scheme Meeting	the meeting of the Origin Shareholders (other than Excluded Shareholders) ordered by the Court to be convened under subsection 411(1) of the Corporations Act to consider and vote on this Scheme and includes any meeting convened following any adjournment or postponement of that meeting.
Scheme Record Date	7.00pm on 11 December 2023 or such other date as agreed in writing by Origin and the Bidder.
Scheme Shares	all Origin Shares held by the Scheme Shareholders as at the Scheme Record Date.
Scheme Shareholder	a holder of Origin Shares recorded in the Share Register as at the Scheme Record Date (other than an Excluded Shareholder).
Scheme Transfer	a duly completed and executed proper instrument of transfer in respect of the Scheme Shares for the purposes of section 1071B of the Corporations Act, in favour of the Bidder as transferee, which may be a master transfer of all or part of the Scheme Shares.
Second Court Date	the first day on which an application made to the Court for an order under paragraph 411(4)(b) of the Corporations Act approving this Scheme is heard or, if the application is adjourned or subject to appeal for any reason, the day on which the adjourned application or appeal is heard.
Settlement Rules	the ASX Settlement Operating Rules, being the official operating rules of the settlement facility provided by ASX Settlement Pty Ltd.
Share Register	the register of members of Origin maintained by Origin or the Origin Registry in accordance with the Corporations Act.
Subsidiary	has the meaning given in Division 6 of Part 1.2 of the Corporations Act.
USD Scheme Consideration	the US Dollar amount of the Scheme Consideration in respect of each Scheme Share, being an amount equal to the Adjusted Scheme USD Consideration divided by the Assumed Origin Share Number.

Annexure 2. Scheme of Arrangement *continued*

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2 Interpretation

In this Scheme:

(a) headings and bold type are for convenience only and do not affect the interpretation of this Scheme;

(b) the singular includes the plural and the plural includes the singular;

(c) words of any gender include all genders;

(d) other parts of speech and grammatical forms of a word or phrase defined in this Scheme have a corresponding meaning;

(e) a reference to a person includes any company, partnership, joint venture, association, corporation or other body corporate and any Government Agency as well as an individual;

(f) a reference to a clause, party, schedule, attachment or exhibit is a reference to a clause of, and a party, schedule, attachment or exhibit to, this Scheme;

(g) a reference to any legislation includes all delegated legislation made under it and amendments, consolidations, replacements or reenactments of any of them (whether passed by the same or another Government Agency with legal power to do so);

(h) a reference to a document (including this Scheme) includes all amendments or supplements to, or replacements or novations of, that document;

(i) a reference to ‘A$’ or ‘Australian Dollars’ is to Australian currency;

(j) a reference to 'US$' or 'US Dollars' is a reference to the currency of the United States of America;

(k) a reference to any time is, unless otherwise indicated, a reference to that time in Sydney;

(l) a term defined in or for the purposes of the Corporations Act, and which is not defined in clause 1 of this Schedule 1, has the same meaning when used in this Scheme;

(m) a reference to a party to a document includes that party’s successors and permitted assignees;

(n) no provision of this Scheme will be construed adversely to a party because that party was responsible for the preparation of this Scheme or that provision;

(o) any agreement, representation, warranty or indemnity in favour of two or more parties (including where two or more persons are included in the same defined term) is for the benefit of them jointly and severally;

(p) a reference to a body, other than a party to this Scheme (including an institute, association or authority), whether statutory or not:

    (1) which ceases to exist; or

    (2) whose powers or functions are transferred to another body,

    is a reference to the body which replaces it or which substantially succeeds to its powers or functions;

(q) if a period of time is specified and dates from a given day or the day of an act or event, it is to be calculated exclusive of that day;

(r) a reference to a day is to be interpreted as the period of time commencing at midnight and ending 24 hours later;

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(s) if an act prescribed under this Scheme to be done by a party on or by a given day is done after 5.00pm on that day, it is taken to be done on the next day; and

(t) a reference to the Listing Rules, Operating Rules or the Settlement Rules includes any variation, consolidation or replacement of those rules and is to be taken to be subject to any waiver or exemption granted to the compliance of those rules by a party.

3 Interpretation of inclusive expressions

Specifying anything in this Scheme after the words 'include' or 'for example' or similar expressions does not limit what else is included.

4 Business Day

Where the day on or by which any thing is to be done is not a Business Day, that thing must be done on or by the next Business Day.

Annexure 2. Scheme of Arrangement *continued*

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Attachment 1

Deed Poll

Attached

Annexure 3.
Deed Poll

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Deed

Scheme Deed Poll

MidOcean Reef Bidco Pty Ltd

ANZ Tower 161 Castlereagh Street Sydney NSW 2000 Australia
GPO Box 4227 Sydney NSW 2001 Australia
T +61 2 9225 5000 **F** +61 2 9322 4000
herbertsmithfreehills.com DX 361 Sydney

Annexure 3. Deed Poll *continued*

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Scheme Deed Poll

Date ▸ 17 October 2023

This deed poll is made

By	**MidOcean Reef BidCo Pty Ltd** ABN 22 665 950 318 of 'Gateway' Level 20, 1 Macquarie Place Sydney NSW 2000 (**Bidder**).
in favour of	each person registered as a holder of fully paid ordinary shares in Origin Energy Limited (**Origin**) in the Share Register as at the Scheme Record Date (other than Excluded Shareholders).
Recitals	1 Origin, the Bidder and Brookfield entered into the Implementation Deed. 2 In the Implementation Deed, the Bidder agreed to make this deed poll. 3 The Bidder is making this deed poll for the purpose of covenanting in favour of the Scheme Shareholders to perform its obligations under the Implementation Deed and the Scheme.

This deed poll provides as follows:

1 Definitions and interpretation

1.1 Definitions

(a) The meanings of the terms used in this deed poll are set out below.

Term	Meaning
First Court Date	the first day on which an application made to the Court for an order under subsection 411(1) of the Corporations Act convening the Scheme Meeting is heard or, if the application is adjourned or subject to appeal for any reason, the day on which the adjourned application is heard.
Implementation Deed	the scheme implementation deed entered into between Origin, the Bidder and Brookfield dated 27 March 2023.
Origin	Origin Energy Limited ACN 000 051 696.

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Term	Meaning
Scheme	the scheme of arrangement under Part 5.1 of the Corporations Act between Origin and the Scheme Shareholders, substantially in the form set out in Attachment 1, subject to any alterations or conditions made or required by the Court under subsection 411(6) of the Corporations Act and agreed to in writing by the Bidder and Origin.

(b) Unless the context otherwise requires, terms defined in the Scheme have the same meaning when used in this deed poll.

1.2 Interpretation

Sections 2, 3 and 4 of Schedule 1 of the Scheme apply to the interpretation of this deed poll, except that references to 'this Scheme' are to be read as references to 'this deed poll'.

1.3 Nature of deed poll

The Bidder acknowledges that:

(a) this deed poll may be relied on and enforced by any Scheme Shareholder in accordance with its terms even though the Scheme Shareholders are not party to it; and

(b) under the Scheme, each Scheme Shareholder irrevocably appoints Origin and each of its directors, officers and secretaries (jointly and each of them severally) as its agent and attorney to enforce this deed poll against the Bidder.

2 Conditions to obligations

2.1 Conditions

This deed poll and the obligations of the Bidder under this deed poll are subject to the Scheme becoming Effective.

2.2 Termination

The obligations of the Bidder under this deed poll to the Scheme Shareholders will automatically terminate and the terms of this deed poll will be of no force or effect if:

(a) the Implementation Deed is terminated in accordance with its terms; or

(b) the Scheme is not Effective on or before the End Date,

unless the Bidder and Origin otherwise agree in writing.

2.3 Consequences of termination

If this deed poll terminates under clause 2.2, in addition and without prejudice to any other rights, powers or remedies available to it:

Annexure 3. Deed Poll *continued*

HERBERT SMITH FREEHILLS

(a) the Bidder is released from its obligations to further perform this deed poll except those obligations under clause 7.1; and

(b) each Scheme Shareholder retains the rights they have against the Bidder in respect of any breach of this deed poll which occurred before it was terminated.

3 Scheme obligations

3.1 Undertaking to pay Scheme Consideration

Subject to clause 2, the Bidder undertakes in favour of each Scheme Shareholder to comply with all obligations contemplated of the Bidder under the Scheme, including:

(a) depositing, or procuring the deposit of, in cleared funds, by no later than the Business Day before the Implementation Date:

(1) an amount equal to the aggregate amount in Australian dollars of the Scheme Consideration which is payable to all Scheme Shareholders under the Scheme into an Australian dollar denominated trust account with an ADI operated by Origin as trustee for the Scheme Shareholders, except that any interest on the amounts deposited (less bank fees and other charges) will be credited to the Bidder's account; and

(2) an amount equal to the aggregate amount in US dollars of the Scheme Consideration which is payable to all Scheme Shareholders, into a US dollar denominated trust account with an ADI operated by Origin as trustee for the Scheme Shareholders, except that any interest on amounts deposited (less bank fees and other charges) will be credited to the Bidder's account; and

(b) undertaking all other actions, and giving each acknowledgement, representation and warranty (if any), attributed to it under the Scheme,

subject to and in accordance with the terms of the Scheme.

4 Warranties

The Bidder represents and warrants in favour of each Scheme Shareholder, in respect of itself, that:

(a) it is a corporation validly existing under the laws of its place of registration;

(b) it has the corporate power to enter into and perform its obligations under this deed poll and to carry out the transactions contemplated by this deed poll;

(c) it has taken all necessary corporate action to authorise its entry into this deed poll and has taken or will take all necessary corporate action to authorise the performance of this deed poll and to carry out the transactions contemplated by this deed poll;

(d) this deed poll is valid and binding on it and enforceable against it in accordance with its terms; and

(e) this deed poll does not conflict with, or result in the breach of or default under, any provision of its constitution, or any writ, order or injunction, judgment, law, rule or regulation to which it is a party or subject or by which it is bound.

5 Continuing obligations

This deed poll is irrevocable and, subject to clause 2, remains in full force and effect until:

(a) the Bidder has fully performed its obligations under this deed poll; or

(b) the earlier termination of this deed poll under clause 2.

6 Notices

6.1 Form of Notice

A notice or other communication in respect of this deed poll (**Notice**) must be:

(a) in writing and in English and signed by or on behalf of the sending party; and

(b) addressed to the Bidder in accordance with the details set out below (or any alternative details nominated by the Bidder by Notice).

Attention	David Edgar and General Counsel
Address	Suite 2001, Level 20 Gateway, 1 Macquarie Place, Sydney NSW 2000
Email address	david.edgar@eigpartners.com and notices@eigpartners.com
With a copy to:	**Brookfield**: luke.edwards@brookfield.com, michael.ryan@brookfield.com and natasha.vyrnwyjones@brookfield.com **EIG**: notices@eigpartners.com **Allens**: Tom.Story@allens.com.au and Vijay.Cugati@allens.com.au

6.2 How Notice must be given and when Notice is received

(a) A Notice must be given by one of the methods set out in the table below.

(b) A Notice is regarded as given and received at the time set out in the table below.

However, if this means the Notice would be regarded as given and received outside the period between 9.00am and 5.00pm (addressee's time) on a day that is not a Saturday, Sunday or a public holiday or bank holiday in the place of receipt (**business hours period**), then the Notice will instead be regarded as given and received at the start of the following business hours period.

Method of giving Notice	When Notice is regarded as given and received
By hand to the nominated address	When delivered to the nominated address

Annexure 3. Deed Poll *continued*

HERBERT SMITH FREEHILLS

Method of giving Notice	When Notice is regarded as given and received
By pre-paid post to the nominated address	At 9.00am (addressee's time) on the third day that is not a Saturday, Sunday or a public holiday or bank holiday in the place of receipt after the date of posting
By email to the nominated email address	The first to occur of: 1 the sender receiving an automated message confirming delivery; or 2 two hours after the time that the email was sent (as recorded on the device from which the email was sent) provided that the sender does not, within the period, receive an automated message that the email has not been delivered.

6.3 Notice must not be given by electronic communication

A Notice must not be given by electronic means of communication (other than email as permitted in clause 6.2).

7 General

7.1 Stamp duty

The Bidder:

(a) will pay all stamp duty and any related fines and penalties in respect of the Scheme and this deed poll, the performance of this deed poll and each transaction effected by or made under, or in connection with, the Scheme and this deed poll; and

(b) indemnifies each Scheme Shareholder against any liability arising from failure to comply with clause 7.1(a).

7.2 Governing law and jurisdiction

(a) This deed poll is governed by the law in force in New South Wales.

(b) The Bidder irrevocably submits to the exclusive jurisdiction of courts exercising jurisdiction in New South Wales and courts of appeal from them in respect of any proceedings arising out of or in connection with this deed poll. The Bidder irrevocably waives any objection to the venue of any legal process in these courts on the basis that the process has been brought in an inconvenient forum.

7.3 Waiver

(a) The Bidder may not rely on the words or conduct of any Scheme Shareholder as a waiver of any right unless the waiver is in writing and signed by the Scheme Shareholder granting the waiver.

(b) No Scheme Shareholder may rely on words or conduct of the Bidder as a waiver of any right unless the waiver is in writing and signed by the Bidder.

(c) In this clause 7.3:

Term	Meaning
conduct	includes delay in the exercise of a right.
right	means any right arising under or in connection with this deed poll and includes the right to rely on this clause.
waiver	includes an election between rights and remedies, and conduct which might otherwise give rise to an estoppel.

7.4 Variation

A provision of this deed poll may not be varied unless:

(a) if before the First Court Date, the variation is agreed to by Origin; or

(b) if on or after the First Court Date, the variation is agreed to by Origin and the Court indicates that the variation would not of itself preclude approval of the Scheme,

in which event the Bidder will enter into a further deed poll in favour of the Scheme Shareholders giving effect to the variation.

7.5 Cumulative rights

The rights, powers and remedies of the Bidder and the Scheme Shareholders under this deed poll are cumulative and do not exclude any other rights, powers or remedies provided by law independently of this deed poll.

7.6 Assignment

(a) The rights created by this deed poll are personal to the Bidder and each Scheme Shareholder and must not be dealt with at law or in equity without the prior written consent of the Bidder.

(b) Any purported dealing in contravention of clause 7.6(a) is invalid.

7.7 Further action

The Bidder must, at its own expense, do all things and execute all documents necessary to give full effect to this deed poll and the transactions contemplated by it.

Annexure 3. Deed Poll *continued*

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Attachment 1

Scheme

[Attached]

HERBERT
SMITH
FREEHILLS

Signing page

Executed as a deed poll

Signed sealed and delivered by
MidOcean Reef Bidco Pty Ltd
by

sign here ► Director	*sign here* ► Director
print name David Edgar	*print name* Benjamin Lee

Annexure 4.
Notice of Scheme Meeting

Origin Energy Limited ACN 000 051 696 (**Origin**)

Notice is hereby given that, by an order of the Supreme Court of New South Wales (**Court**) made on 18 October 2023, pursuant to subsection 411(1) of the Corporations Act, a meeting of holders of fully paid ordinary shares in Origin (**Scheme Meeting**) will be held as follows:

Date: 23 November 2023

Time: 2.00pm (Sydney time)

Venue: The Swissôtel Sydney, 68 Market Street, Sydney, NSW.

Business of the meeting

The purpose of the meeting is to consider and, if thought fit, to approve a scheme of arrangement proposed to be made between Origin and Origin Shareholders (with or without amendment or any alterations or conditions required by the Court to which Origin and MidOcean Reef Bidco Pty Ltd agree) (the **Scheme**).

A copy of the Scheme and a copy of the explanatory statement required by section 412 of the Corporations Act in relation to the Scheme are contained in the Scheme Booklet, of which this notice forms part.

Additional information about the Scheme Meeting is set out in the explanatory notes that accompany and form part of this notice.

Resolution

The meeting will be asked to consider and, if thought fit, pass (with or without amendment) the following resolution (the **Scheme Resolution**):

> "That, pursuant to and in accordance with the provisions of section 411 of the *Corporations Act 2001* (Cth), the scheme of arrangement proposed between Origin Energy Limited and the holders of its ordinary shares, as contained in and more particularly described in the scheme booklet of which the notice convening this meeting forms part, is approved, with or without alterations or conditions as approved by the Supreme Court of New South Wales to which Origin Energy Limited and MidOcean Reef Bidco Pty Ltd agree."

Dated 18 October 2023

By order of the Court and the Origin Board

sign here: ______________________

Company Secretary

print name: Helen Hardy

Explanatory notes

1. General

This Notice of Scheme Meeting, including these explanatory notes, relates to the Scheme and should be read in conjunction with the Scheme Booklet dated 18 October 2023, of which this Notice of Scheme Meeting forms part. The Scheme Booklet contains important information to assist you in determining how to vote on the Scheme Resolution.

A copy of the Scheme is set out in Annexure 2 of the Scheme Booklet.

Capitalised terms used but not defined in this notice have the defined meanings set out in Section 10 of the Scheme Booklet, unless the context otherwise requires.

2. Scheme Meeting format

The Scheme Meeting will be held as an in person meeting. This means that Origin Shareholders and their authorised proxies, attorneys and corporate representatives will be able to participate in the Scheme Meeting by attending in person at the Swissôtel Sydney, 68 Market Street, Sydney, NSW.

Origin Shareholders who are unable to attend in person can view the Scheme Meeting via live webcast at https://originenergy.com.au/scheme2023. Shareholders watching online will not be able to vote, ask questions or make comments via the webcast.

Origin Shareholders who are unable to, or do not wish to, participate in the Scheme Meeting in person are encouraged to submit a directed proxy vote as early as possible and in any event by 2.00pm (Sydney time) on 21 November 2023 by completing and submitting the proxy form in accordance with the instructions on that form.

Even if you plan to attend the Scheme Meeting we encourage you to submit a directed proxy vote so that your vote will be counted if for any reason you cannot attend the meeting.

3. Chair

The Court has directed that Scott Perkins is to act as Chair of the meeting (and that, if Scott Perkins is unable or unwilling to act, Nora Scheinkestel is to act as Chair of the meeting).

4. Required Majorities

For the proposed Scheme to be binding in accordance with section 411 of the Corporations Act, the Scheme Resolution must be approved by:

- unless the Court orders otherwise, a majority in number (more than 50 per cent) of Origin Shareholders present and voting (either in person or by proxy, attorney or, in the case of corporate Origin Shareholders, body corporate representative) at the Scheme Meeting; and
- at least 75 per cent of the votes cast on the Scheme Resolution at the Scheme Meeting by Origin Shareholders present and voting (either in person or by proxy, attorney or, in the case of corporate Origin Shareholders, body corporate representative).

5. Court approval

Under paragraph 411(4)(b) of the Corporations Act, the Scheme (with or without amendment or any alteration or condition required by the Court) is subject to the approval of the Court. If the Scheme Resolution is passed by the Requisite Majorities and the other Conditions Precedent to the Scheme (other than approval by the Court) are satisfied or waived (if capable of waiver) by the time required under the Scheme, Origin intends to apply to the Court for the necessary orders to give effect to the Scheme.

In order for the Scheme to become Effective, it must be approved by the Court and an office copy of the orders of the Court approving the Scheme must be lodged with ASIC.

Annexure 4. Notice of Scheme Meeting *continued*

6. Entitlement to vote

The time for determining eligibility to vote at the Scheme Meeting is 7.00pm (Sydney time) on 21 November 2023. Only those Origin Shareholders entered on the Register at that time will be entitled to participate in and vote at the meeting, either in person, by proxy or attorney, or in the case of a corporate Origin Shareholder, by a body corporate representative. Share transfers registered after that time will be disregarded in determining voting entitlements at the Scheme Meeting. The remaining comments in these explanatory notes are addressed to Origin Shareholders entitled to attend and vote at the meeting.

7. Participation in the Scheme Meeting

7.1 Participating in person

Participants who intend to attend the Scheme Meeting are asked to arrive at least 30 minutes prior to the time the meeting is to commence, so that either their shareholding can be checked against the Origin Share Register, or any power of attorney or certificate of appointment of corporate representative verified, and their attendance noted.

7.2 Updates

Please monitor Origin's website and ASX announcements, where updates will be provided if it becomes necessary or appropriate to make alternative arrangements for the holding or conduct of the Scheme Meeting.

7.3 Watching the webcast

Shareholders may watch a live webcast of the Scheme Meeting online at https://originenergy.com.au/scheme2023. Shareholders watching online will not be able to participate in the Scheme Meeting, vote, ask questions, or make comments via the webcast.

8. How to vote

Voting at the Scheme Meeting will be conducted by poll.

If you are an Origin Shareholder entitled to vote at the Scheme Meeting, you may vote:

- **by attending the Scheme Meeting in person**, at the Swissôtel Sydney, 68 Market Street, Sydney, NSW;
- **by appointing a proxy**, by completing and submitting the proxy form that accompanied the Scheme Booklet. To be valid, your proxy appointment must be received by the Origin Share Registry by 2.00pm (Sydney time) on 21 November 2023;
- **by attorney**, by appointing an attorney to participate in and vote at the Scheme Meeting on your behalf and providing a duly executed power of attorney to the Origin Share Registry by 2.00pm (Sydney time) on 21 November 2023; or
- **by corporate representative**, in the case of a body corporate, by appointing a body corporate representative to participate in and vote at the Scheme Meeting on your behalf, and providing a duly executed 'Appointment of Corporate Representative' form (in accordance with section 250D of the Corporations Act) prior to the Scheme Meeting in accordance with section 10.4 below.

9. Jointly held securities

If you hold Origin Shares jointly with one or more other persons and more than one of you attempts to vote at the meeting (personally, or by proxy, attorney or corporate representative), only the vote of the holder whose name appears first on the Register will be counted.

See also the comments in section 10.2 below regarding the appointment of a proxy by persons who jointly hold Origin Shares.

10. Voting

10.1 Voting in person

Participants who are attending the Scheme Meeting in person may vote using the electronic voting handset provided at the meeting.

10.2 Voting by proxy

If you are unable to participate and vote at the Scheme Meeting, you may appoint an individual or a body corporate as a proxy to attend the meeting in person and vote.

An Origin Shareholder entitled to participate in and vote at the Scheme Meeting may appoint a person to participate in and vote at the meeting as their proxy at any time between the date of this notice and 2.00pm (Sydney time) on 21 November 2023. Proxy forms received after this time will be invalid.

To appoint a proxy, you should complete and return the proxy form that accompanied this Scheme Booklet in accordance with the instructions on that form. Please refer to section 10.5 of this Notice of Scheme Meeting below for further details in relation to how to submit a proxy form.

The following applies to proxy appointments:

- your proxy or proxies need not be another Origin Shareholder, and may be an individual or body corporate;
- each proxy will have the right to vote on the poll and to ask questions at the meeting;
- an Origin Shareholder who is entitled to cast two or more votes at the Meeting may appoint up to two proxies and may specify the proportion or number of votes each proxy may exercise. If you wish to appoint a second proxy, a second hard copy proxy form should be used and you should clearly indicate on the second proxy form that it is a second proxy and not a revocation of your first proxy. Both proxy forms should be returned together in the same envelope. If you wish to appoint two proxies using hard copy forms, you may copy your proxy form or obtain a second proxy form. You can obtain a second proxy form, or a replacement proxy form, from the Origin Share Registry or online at www.investorserve.com.au;
- if you appoint two proxies, each proxy should be appointed to represent a specified proportion of your voting rights. If you do not specify the proportions in the proxy forms, each proxy may exercise half of your votes with any fractions of votes disregarded;
- if you hold Origin Shares jointly with one or more other persons, each joint holder should sign the proxy form;
- if a body corporate is appointed as a proxy, it must ensure that it appoints an individual as its corporate representative (in accordance with section 250D of the Corporations Act) to exercise its powers as proxy at the Scheme Meeting in accordance with section 10.4 below; and
- if a proxy form is completed under power of attorney or other authority, the power of attorney or other authority, or a certified copy of the power of attorney or other authority, must accompany the completed proxy form unless the power of attorney or other authority has previously been noted by the Origin Share Registry.

A vote given in accordance with the terms of a proxy appointment is valid despite the revocation of that appointment, unless notice in writing of the revocation has been received by the Origin Share Registry before the start of the meeting (or, if the meeting is adjourned or postponed, before the resumption of the meeting in relation to the resumed part of the meeting) in any of the ways set out in section 10.5 below.

If you have appointed a proxy and participate in and vote at the Scheme Meeting, the authority of your proxy to participate and vote on your behalf, is automatically suspended. However, if you view the live webcast of the meeting, you will not revoke your proxy appointment.

You should consider how you wish your proxy to vote. That is, whether you want your proxy to vote 'for' or 'against', or abstain from voting on, the Scheme Resolution, or whether to leave the decision to the proxy after he or she has considered the matters discussed at the meeting.

If you do not direct your proxy how to vote on an item of business, the proxy may vote, or abstain from voting, as he or she thinks fit. If you instruct your proxy to abstain from voting on an item of business, they are directed not to vote on your behalf, and the shares the subject of the proxy appointment will not be counted in computing the required majority.

If you return your proxy form:

- without identifying a proxy on it, you will be taken to have appointed the Chair of the meeting as your proxy to vote on your behalf; or
- with a proxy identified on it but your proxy does not attend or participate in the meeting, the Chair of the meeting will act in place of your nominated proxy and vote in accordance with any directions on your proxy form.

Annexure 4. Notice of Scheme Meeting *continued*

The Chair of the meeting intends to vote all valid undirected proxies in favour of the Scheme Resolution, in the absence of a Superior Proposal and subject to the Independent Expert continuing to conclude that the Scheme is in the best interests of Origin Shareholders.

Proxies of eligible Origin Shareholders who attend in person will be admitted to the meeting and given an electronic voting handset on providing their name and address at the point of entry to the meeting.

10.3 Voting by attorney

You may appoint no more than two attorneys to attend and vote at the meeting on your behalf. Your attorney need not be another Origin Shareholder. Each attorney will have the right to vote on the poll and also to ask questions at the meeting.

The power of attorney appointing your attorney to participate in and vote at the meeting must be duly executed by you and specify your name, the company (that is, Origin Energy Limited), and the attorney, and also specify the meeting at which the appointment may be used. The appointment may be a standing one.

The power of attorney, or a certified copy of the power of attorney, should be received by the Origin Share Registry before 2.00pm (Sydney time) on 21 November 2023 (or, if the meeting is adjourned or postponed, no later than 48 hours before the resumption of the meeting in relation to the resumed part of the meeting) in any of the ways specified for proxy forms in section 10.5 below.

A validly appointed attorney wishing to participate in and vote at the Scheme Meeting will need to register their attendance and identify themselves as an attorney on the day of the meeting in person at the registration desk at the Swissôtel Sydney, 68 Market Street, Sydney, NSW. Attorneys must also bring with them, and hand in at the registration desk, a properly executed declaration of non-revocation of the power of attorney.

If you appoint two attorneys, each attorney should be appointed to represent a specified proportion of your voting rights. If you do not specify the proportions in the power of attorney, each attorney may exercise half of your votes.

10.4 Voting by corporate representative

A body corporate that is an Origin Shareholder, or that has been appointed as a proxy, may appoint an individual to act as its representative at the Scheme Meeting. The appointment must comply with the requirements of section 250D of the Corporations Act, meaning that Origin will require a certificate of appointment of body corporate representative to be executed in accordance with the Corporations Act.

A form of 'Appointment of Corporate Representative' certificate may be obtained online from https://boardroomlimited.com.au/investor-forms/. The certificate of appointment may set out restrictions on the representative's powers.

A validly appointed corporate representative wishing to participate in and vote at the Scheme Meeting in person must bring and provide at the registration desk the certificate appointing them as the corporate representative of the relevant Origin Shareholder or proxy.

Alternatively, Origin Shareholders may submit the certificate:

- via email, by sending it to enquiries@boardroomlimited.com.au; or
- in any of the ways specified for proxy forms in section 10.5 of this Notice of Scheme Meeting, except that a form of appointment of corporate representative cannot be lodged online.

If a certificate is completed under power of attorney or other authority, the power of attorney or other authority, or a certified copy of the power of attorney or other authority, must accompany the completed certificate unless the power of attorney or other authority has previously been received by the Origin Share Registry.

10.5 How to submit a proxy form

To appoint a proxy, you should complete and submit the proxy form accompanying the Scheme Booklet in accordance with the instructions on that form.

To be effective, proxy appointments must be received by way of completed proxy forms by the Origin Share Registry by 2.00pm (Sydney time) on 21 November 2023 (or, if the meeting is adjourned or postponed, no later than 48 hours before the resumption of the meeting in relation to the resumed part of the meeting) in any of the following ways:

- **online**: at https://www.votingonline.com.au/originscheme2023;
- **by post in the provided reply paid envelope to the Origin Share Registry at the following address:**

  Origin Energy Limited
  C/o Boardroom Pty Limited
  GPO Box 3993, Sydney NSW 2001
- **by fax to the Origin Share Registry on the following number:**

  +61 2 9290 9655
- **by hand delivery to the Origin Share Registry during normal business hours (Monday to Friday, 9.00am to 5.00pm) at the following address:**

  Boardroom Pty Limited
  Level 8, 210 George Street, Sydney NSW 2000

Proxy Forms received after 2.00pm (Sydney time) on 21 November 2023 (or, if Scheme Meeting is adjourned or postponed, no later than 48 hours before the resumption of the meeting in relation to the resumed part of the meeting) will be invalid.

If a proxy form is completed by an individual or corporation under power of attorney or other authority, the power of attorney or other authority, or a certified copy of the power of attorney or other authority, must accompany the completed proxy form unless the power of attorney or other authority has previously been received by the Origin Share Registry.

11 Questions

Origin Shareholders will have a reasonable opportunity to ask questions during the Scheme Meeting.

Origin Shareholders who prefer to register questions in advance of the meeting are also invited to do so by submitting questions online at www.boardroomlimited.com.au/origin/scheme2023. To allow time to collate questions and prepare answers, please submit any questions by 2.00pm (Sydney time) on 21 November 2023.

Origin Shareholders are requested to restrict themselves to two questions or comments initially, and further questions will be considered if time permits. Questions and comments may be moderated to avoid repetition and to make them more concise.

The Chair of the Scheme Meeting will endeavour to address as many of the more frequently raised relevant questions as possible during the course of the meeting. However, there may not be sufficient time available during the meeting to address all of the questions raised. Please note that individual responses will not be sent to Origin Shareholders.

12 Advertisement

Where this Notice of Scheme Meeting is advertised unaccompanied by the Scheme Booklet, a copy of the Scheme Booklet can be obtained by anyone from ASX's website (www.asx.com.au) or from Origin's website (https://www.originenergy.com.au/about/investors-media/) or by contacting the Origin Share Registry.

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Corporate Directory

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Jarden
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Independent Expert

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Origin Share Registry

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