

To	Company Announcements Office	Facsimile	1300 135 638
Company	ASX Limited	Date	30 August 2022
From	Helen Hardy	Pages	51
Subject	Sustainability Report		

Please find attached a release on the above subject.

Regards



Authorised for lodgement by:
Helen Hardy
Company Secretary

02 8345 5000

Where all good change starts



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Origin's corporate reporting



Origin's corporate reporting suite provides a summary of our financial, operating and sustainability performance, and how we are managing material risks and opportunities.

- [2022 Annual Report](#)
Details our financial and operating performance.
- 2022 Sustainability Report
Details our sustainability performance.
- Management approaches
Describe our approach and policies on how we manage key aspects of our business.
- [Performance data](#)
Includes our sustainability performance data for the past five years.
- [2022 Modern Slavery Statement](#)
Outlines our processes for identifying, assessing and addressing the risk of modern slavery in our supply chain and actions taken.
- [2021 Tax Contribution Report](#)
Details the taxes we paid in the 2020 and 2021 financial years.
- Case studies on the [Origin blog](#)
A deeper look into some of the actions we are taking in key areas of sustainability.

We have also published the following reports on key issues:

- [Beetaloo Native Title Holder Engagement and FY2022 update](#)
Sets out key practices for engagement with the Native Title holders in the Northern Territory.
- [Industry Association Review](#)
Reviews our industry association memberships and their respective positions on climate change and climate-related policies.

More information on Origin and its reporting can be found at originenergy.com.au.

UN Sustainable Development Goals

We are contributing to a number of the United Nation's Sustainable Development Goals (SDGs) through our policies and activities. We have mapped these through the report and outline actions supporting the SDGs in detail in Our reporting.

Reporting frameworks

This report references the Global Reporting Initiative (GRI). This year we have also reported against the SASB Standards. Our GRI content index and SASB index are available on our [website](#).

Origin became a supporter of the Task Force on Climate-related Financial Disclosures (TCFD) in FY2018 and is listed as a supporter on the TCFD website. See our [TCFD disclosure](#).

We Mean Business

In 2015, we became the first energy company in the world to sign up to the first seven commitments of the We Mean Business coalition, which is dedicated to accelerating corporate action on climate change. See our website for details on our progress towards our commitments.

External assurance

EY has provided limited assurance on certain greenhouse gas emissions and other metrics within this report. Its limited [assurance statement](#) includes a full list of data assured.

Report feedback

We welcome your thoughts and feedback. Email us at sustainability@originenergy.com.au.



We recognise Aboriginal and Torres Strait Islander peoples as the Traditional Owners and Custodians of the land on which we operate, and we pay our respects to Elders past, present and future.

A message from the Chief Executive Officer



Welcome to our 2022 Sustainability Report

Frank Calabria
Chief Executive Officer

I am pleased to present Origin's 2022 Sustainability Report.

FY2022 has been another extraordinary year, presenting us with both challenges and opportunities. It has underscored the importance of keeping a strong focus on our ambition to lead the energy transition through cleaner energy and customer solutions.

Changes that were already underway in world energy markets have collided with macroeconomic and geopolitical factors, causing significant volatility and challenges to energy security and commodity prices. This has reinforced the central challenge facing society, in balancing energy affordability, reliability and security, with decarbonisation goals.

The energy transition presents Origin with great opportunities to grow renewable energy and storage, and supply cleaner and smarter solutions to customers, while maximising the value of our existing business.

Our ambition to lead the energy transition

In FY2022, our absolute Scope 1 and 2 greenhouse gas equity emissions reduced by 4 million tonnes compared to FY2021. We have achieved the absolute emissions reduction planned for our short-term target over three years within the first two years.

Over the medium-term, we have set a new emissions intensity target to reduce our Scope 1, 2 and 3 equity emissions by 40 per cent by 2030, from our FY2019 baseline.¹ This target is consistent with the goals of the Paris Agreement to limit global warming to 1.5°C above pre-industrial levels.² We are also targeting an absolute reduction of 20 million tonnes of Scope 1, 2 and 3 equity emissions by 2030, from a FY2019 baseline.

These targets support our long-term ambition to be net zero Scope 1, 2 and 3 emissions by 2050. The targets, our strategy to decarbonise Origin, and the governance that underpins our approach, are explained in detail in Origin's first Climate Transition Action Plan. This plan reflects our commitment to transparent and ongoing engagement with our stakeholders, and will be put to a non-binding, advisory vote of shareholders at our Annual General Meeting (AGM) on 19 October 2022.

¹ Excluded from these targets are the potential future emissions from any development of new gas fields like the Beetaloo Basin. This is because there has been no decision, nor are we close to a decision, to produce those gas resources. However, any development would only occur where it was consistent with our net zero emissions by 2050 ambition.

² Pursuant to the methodology set out in the [Climate Transition Action Plan](#).



Decarbonising our business

In February, we announced we will accelerate our exit from coal-fired power generation, with the potential closure of Eraring Power Station brought forward, to as early as August 2025. This is the most significant step we have taken to decarbonise our business – in FY2022, Scope 1 emissions from Eraring were 10.7 million tonnes CO₂-e.

We have been exploring alternative uses for the Eraring site and received NSW Government planning approval for a large battery of up to 700 megawatts (MW). As part of our strategy to contribute to the replacement of Eraring's capacity, we have accelerated the acquisition and development of renewable energy options within our portfolio, with around 1,600 MW of solar farm development projects secured to date.

We have also been progressing opportunities in the emerging hydrogen industry. This includes partnering with Orica and others to develop a potential green hydrogen project and associated value chain in the Hunter Valley.

Providing cleaner energy solutions for customers

This year we have taken many steps to offer cleaner and smarter energy solutions to our customers large and small. We launched Origin Zero, a business unit dedicated to supporting our large business customers with their energy needs, with a focus on providing a range of solutions to help them achieve their own decarbonisation goals. The aim is to partner with customers over the long term, to optimise their energy use and costs, and provide tailored renewable energy solutions that deliver tangible emissions reduction.

We continue to grow our virtual power plant, which connects thousands of energy assets across many separate locations and aggregates them to help us manage the demand and supply in the electricity market – and in the process, offer additional benefits to customers. Our virtual power plant is now 258 MW and we aim to grow this to 2 gigawatts (GW).

We have also launched an electric vehicle sharing service, 360 EV Car Share, for residents of apartments and commercial buildings. In addition, our new Solar Assessment Tool helps prospective customers understand exactly how solar can support their energy needs, encouraging further uptake of rooftop solar by Australians.

Supporting our communities

I am proud of Origin's efforts to support our communities. The continuing effects of the COVID-19 pandemic, repeated flooding events on the east coast, and the rising cost of living, have all placed pressure on communities, and we have taken action to help.

At a time when energy prices have increased for customers, we have continued to work with vulnerable members of our communities to provide access to affordable energy. This includes supporting those experiencing reliable housing issues and domestic violence.

The Origin Energy Foundation contributed \$2.6 million in FY2022 to organisations that use education to help young people reach their potential. We also donated more than 7,000 hours to Australian charities through the Foundation's employee volunteering program.

As part of our wider commitment to support a just energy transition, in FY2022 we allocated a \$5 million community fund for Eraring, to support a range of activities in the area as we accelerate our exit from coal-fired generation.

Reconciliation

We acknowledge that Aboriginal and Torres Strait Islander cultures are the oldest surviving continuous cultures in the world and we are committed to creating a culture of respect and inclusion across all parts of our organisation. We have advocated in support of the Uluru Statement from the Heart, including establishing a First Nations Voice to Parliament and enshrining it in the Australian Constitution, along with a Makarrata Commission for the purpose of treaty making and truth-telling.

In FY2022, we completed our first Stretch Reconciliation Action Plan (Stretch RAP), which details how we set about embedding social change in our workplace, in alignment with Reconciliation Australia's three pillars of relationships, respect and opportunities. Achievements will be reported in our second Stretch RAP, currently being developed and due to begin in early 2023.

The past year has certainly posed a series of challenges to our business, customers and the economy. I am very pleased that despite this, we have continued to achieve significant progress across our business and our employees remain focused on our purpose: getting energy right for our customers, communities and planet.

As the energy transition continues to accelerate, we will work hard to make the right choices for our stakeholders to appropriately balance energy security, reliability and affordability, with emissions reduction.



Frank Calabria
Chief Executive Officer

Our purpose



Customers



As a leading retailer of essential services, we provide customers with a range of products and solutions to power and connect homes, businesses, and communities. Our focus is on delivering great customer experiences and providing affordable, sustainable and smarter energy solutions – for today and tomorrow.

Planet



We care about our impact on the environment. Our ambition is to achieve net zero Scope 1, 2 and 3 emissions by 2050.

Communities



We play an important role in communities – working to provide reliable and affordable energy, employing around 5,000 people across Australia and the Pacific, and supporting educational opportunities through the Origin Energy Foundation. We aim to work responsibly and respectfully with our local communities and identify opportunities for Origin and our employees to make a positive difference.

People and culture



We are embedding a purpose-led and values-driven business, where all our people are motivated to be their best every day. We promote safety, health and wellbeing; foster diversity and inclusivity; and work to ensure we all act lawfully, honestly, ethically and with integrity.



Our values

Our values help guide how we make decisions, balance priorities and work together.



Work as one team,
one Origin



Be the customer
champion



Care about
our impact



Being accountable



Find a better way

Our strategy

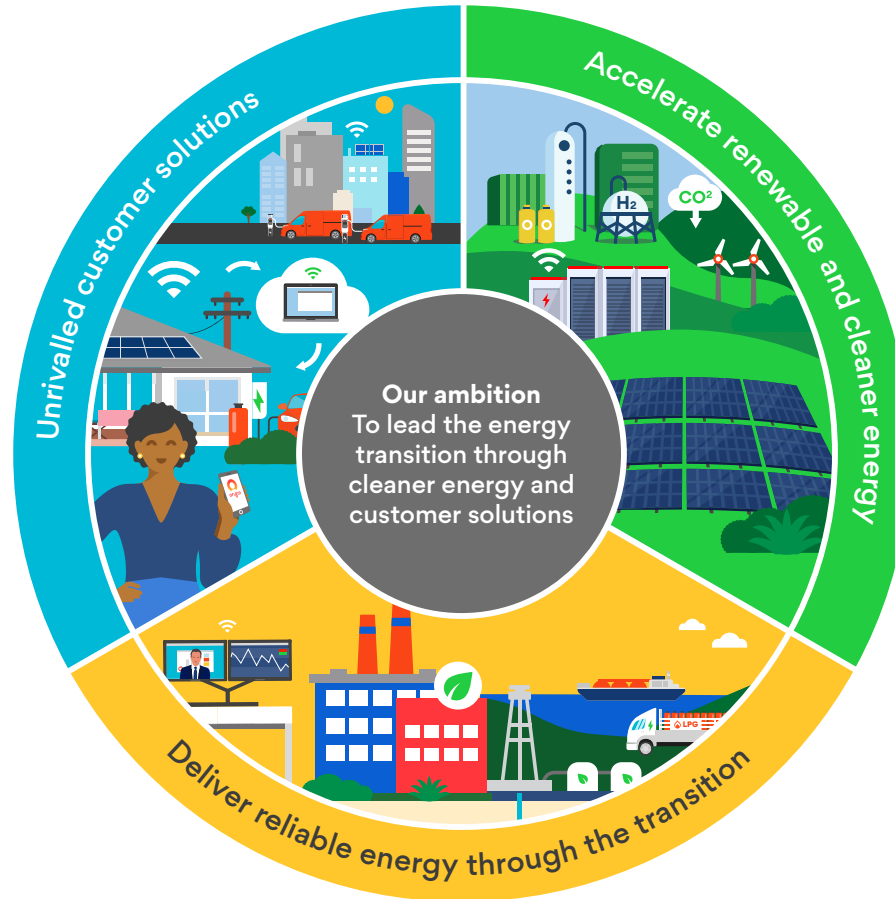


Our ambition to lead the energy transition through cleaner energy and customer solutions is supported by our strategic pillars designed to drive decarbonisation and evolve our portfolio.

Unrivalled customer solutions



- Leading brand providing lowest cost and superior customer experience
- Smart, connected and low carbon solutions to enable customers' transition to net zero
- Significantly grow customer scale and breadth of offering



Accelerate renewable and cleaner energy



- Accelerate growth in renewable energy supported by peaking generation
- Invest in storage to support growth and renewable energy
- Grow in-house Virtual Power Plant
- Develop scalable domestic and export hydrogen business

Deliver reliable energy through the transition



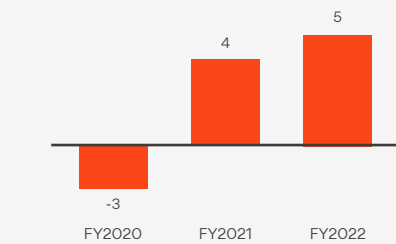
- Provide the energy customers require at competitive cost
- Decarbonise portfolio consistent with 1.5°C pathway
- Any new gas supply to be consistent with our net zero emissions ambition

FY2022 performance summary

Customers



Strategic Net Promoter Score¹



258 MW

under orchestration in our virtual power plant, up from 159 MW in FY2021

- Supported residential and small business customers in financial distress due to COVID-19, and the floods in New South Wales and Queensland
- Achieved almost 340,000 customer accounts across our GreenPower, Green Gas, Green LPG and Origin Go Zero products, up from 260,000 in FY2021
- Attained carbon neutral certification from Climate Active for our Origin Go Zero (electricity), Carbon Neutral Solar, and Carbon Neutral Demand Response products
- Launched Origin Zero, dedicated to supporting large business customers on their decarbonisation journey
- Improved our processes after we failed to meet some key regulatory obligations.

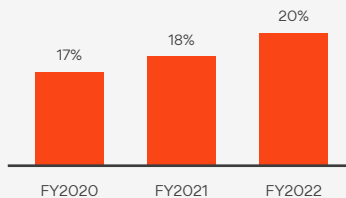
Communities



>\$2.6m

contributed to the community by the Origin Energy Foundation

Regional procurement spend as % of total spend

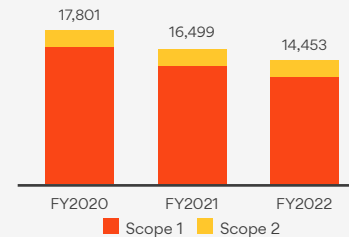


- Spent \$318 million directly with regional suppliers, or 20% of our procurement spend
- Spent \$17 million directly and indirectly with Indigenous suppliers.
- Provided almost \$800,000 to support various local community programs and events
- Donated more than 7,000 hours and \$720,000 to Australian charities through the Origin Energy Foundation's Give Time employee volunteering and Give2 matched giving programs
- Committed to a \$5 million community fund as part of our support for the community as we transition out of coal-fired generation at Eraring.

Planet



Scope 1 and Scope 2 GHG emissions (kt CO₂-e equity basis)



1,600 MW

of solar farm development projects secured to date

- Developed a new medium-term equity emissions intensity target,³ consistent with a 1.5°C pathway envelope⁴
- Developed our first Climate Transition Action Plan, which we will put to a non-binding advisory vote at our 2022 AGM
- Announced the accelerated closure of Eraring Power Station, from as early as August 2025
- Achieved the absolute emission reductions planned for our short-term emissions target over three years within the first two years
- Total Scope 1 and 2 equity emissions down by 12 per cent compared to FY2021.

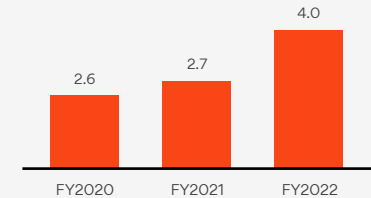
People and culture



40.8%

female Senior Leaders, up from 34.6% in FY2021

Total Recordable Injury Frequency Rate (TRIFR)



- Achieved a reduction in process safety Tier 1 and Tier 2 events to 2, from 11 in FY2021
- TRIFR increased to 4.0 from 2.7 in FY2021, due to a rise in the number of recordable injuries, although severity of injuries decreased
- Employee engagement score down 6 per cent to 68 per cent – remains 7 per cent above the Australia and New Zealand energy industry average
- Awarded 'Gold employer status' at the Australian LGBTQ Inclusion Awards
- Announced support for the Uluru Statement from the Heart.

³ Excluded from this target are the potential future emissions from any development of new gas fields like the Beetaloo Basin. This is because there has been no decision, nor are we close to a decision, to produce those gas resources. However, any development would only occur where it was consistent with our net zero emissions by 2050 ambition.

⁴ Pursuant to the methodology set out in the [Climate Transition Action Plan](#).

Origin at a glance



ASX TOP
100

Leading integrated energy company

Listed on the Australian Securities Exchange in 2000



Climate transition embedded in our strategy

2030 emissions intensity target⁵ consistent with 1.5°C pathway envelope⁶



Supporting Australian communities

The Origin Energy Foundation has contributed more than \$35 million over 12 years



4.5 million customer accounts

Electricity, gas, LPG and broadband customers across Australia and the Pacific



Powering Australia

7,300 MW generation portfolio, including 1,245 MW owned and contracted renewables and storage



Driving future energy innovation

20% interest⁷ in Octopus Energy, investing in new technology, start-ups and future fuels



5,000 employees

Inclusivity in the workplace, leading parental support



27.5% interest in Australia Pacific LNG

Continue to be a significant contributor to the east coast gas market



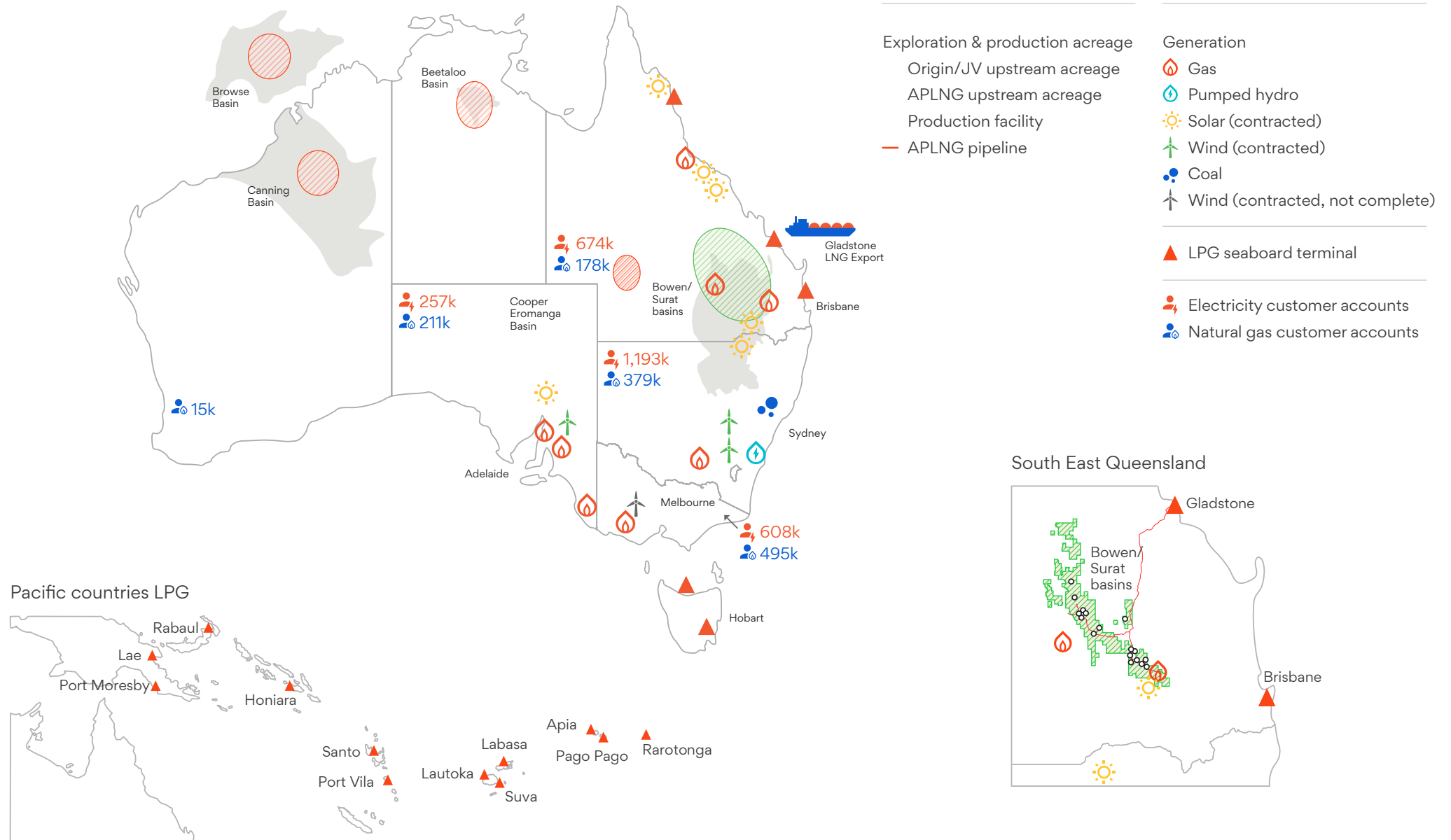
Exploration and appraisal

Positions in three large prospective onshore basins: Beetaloo, Canning and Cooper-Eromanga

Where all good change starts

- 5 Excluded from this target are the potential future emissions from any development of new gas fields like the Beetaloo Basin. This is because there has been no decision, nor are we close to a decision, to produce those gas resources. However, any development would only occur where it was consistent with our net zero emissions by 2050 ambition.
- 6 Pursuant to the methodology set out in the [Climate Transition Action Plan](#).
- 7 Following CPPIB investment in Octopus Energy during December 2021, Origin accounted for its interest in Octopus Energy at 18.7 per cent from 1 December 2021 (previously 20 per cent). An additional \$163 million (£94 million) was invested to restore its 20 per cent interest in August 2022.

Where we operate



Customers



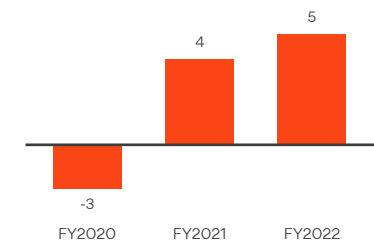
As a leading retailer of essential services, Origin provides customers with a range of products and solutions for their homes and businesses. Our focus is on delivering great customer experiences and providing affordable, sustainable, and smarter energy solutions – for today and tomorrow.



Performance at a glance

- Supported residential and small business customers in financial distress due to COVID-19, and the floods in New South Wales and Queensland
- Achieved almost 340,000 customer accounts across our GreenPower, Green Gas, Green LPG and Origin Go Zero products, up from 260,000 in FY2021
- Attained carbon neutral certification from Climate Active for our Origin Go Zero (electricity), Carbon Neutral Solar, and Carbon Neutral Demand Response products
- Launched Origin Zero, dedicated to supporting large business customers on their decarbonisation journey
- Improved our processes after we failed to meet some key regulatory obligations

Strategic Net Promoter Score*



* 12-month average as at June

258 MW

under orchestration in our virtual power plant, up from 159 MW in FY2021

UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs:



Management approach

Find out more about our approach to getting energy right for our customers



Customers

Delivering superior customer experiences

Customers are at the heart of everything we do – that is why our strategy focuses on leading customer experience and satisfaction. We are working to deliver great customer experiences that are simple, seamless, and increasingly digital.

Transforming the customer experience

As at 30 June 2022, we had successfully migrated more than 2.2 million customer accounts to the Kraken platform, licensed through our partnership with Octopus Energy. We are on track to complete the transition of our retail electricity and gas customers to the Kraken platform by the end of 2022.

Kraken is delivering benefits for our customers by providing one point of service, simpler processes, and the ability to integrate services into a single account. Customers are serviced by small teams of Energy Specialists, each with accountability for providing end-to-end service for their unique customer base.

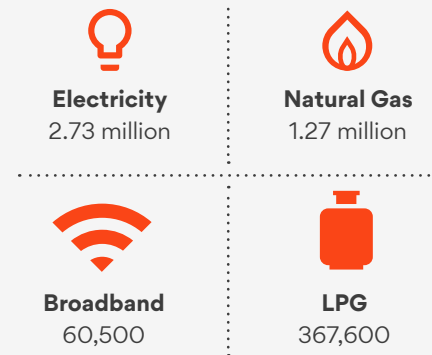
Making it easier with digital

With 96 per cent of our customers choosing to engage with us through a digital channel, we continue to focus on our digital platforms.

In FY2022, this included redesigning our website home page to make it easier for customers to find information and complete tasks. We also added a number of enhancements to My Account and to our app. To help create a more seamless experience for customers, we connected LPG accounts to Origin's My Account, allowing LPG customers to access all of their Origin services in the one place online.

We also made it easier for our solar customers to use My Account to assess their solar system. Customers can view their solar system status as well as data about their household energy usage, including what times of the day they are using energy, how much energy comes from their solar panels, and costs and carbon savings achieved by using their solar system.

Origin customer accounts*



* As at 30 June 2022

Customer satisfaction

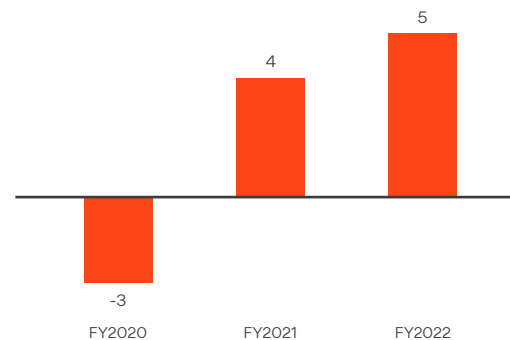
One of our key customer satisfaction measurement tools is the Net Promoter Score (NPS), which measures customer advocacy and helps us understand what our customers are saying about their experience with us. We measure NPS as a business (at the strategic level) and after a customer has a conversation or digital experience with us (at the interaction level).

Our Strategic NPS was 5 in FY2022, up from 4 in FY2021, and remains the top score among Tier 1⁸ energy providers. To more accurately reflect our performance, in FY2022 we moved from reporting our final quarter score to reporting an average over the year.

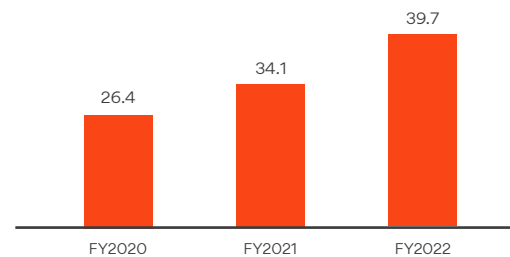
At the interaction level, our NPS was 39.7 in FY2022, an improvement from 34.1 in FY2021. Since we began measuring Interaction NPS in FY2016, our performance has improved from a score of 12.3. This is due to our focus on improving customer experiences across our channels and improving our processes to make it quicker and easier to resolve customer enquiries.

Following a survey of 12,000 broadband users, Canstar Blue awarded Origin's broadband product the 2022 Most Satisfied Customers Award. And we have an 'excellent' rating on Trustpilot, an independent measure of customer satisfaction, with almost 13,000 customer reviews.

Strategic Net Promoter Score

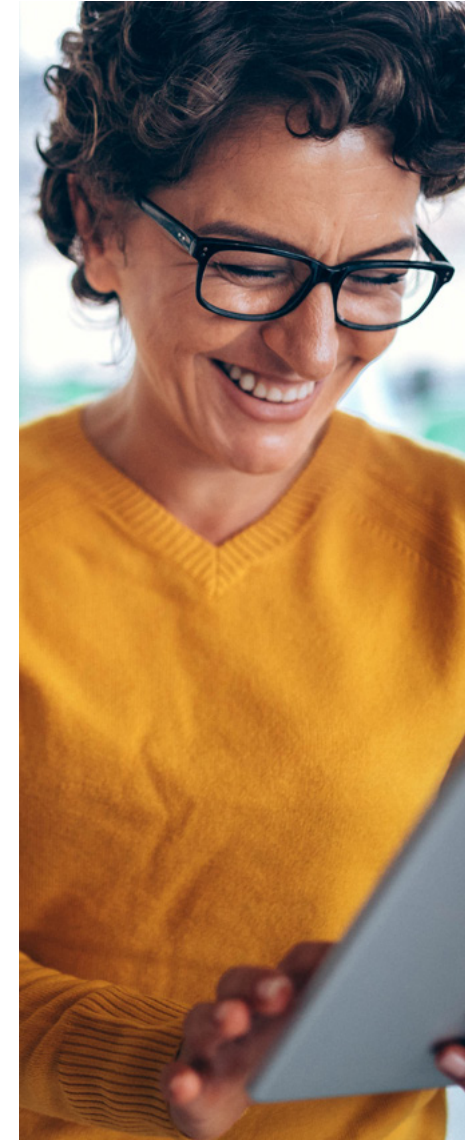


Interaction Net Promoter Score



Large business customer satisfaction

Our strategic customer experience score for our commercial and industrial (C&I) customers was 71 in FY2022, improving by 7 points since FY2021. At the interaction level, our C&I NPS for our customer service teams ended the year at 50. This represented a significant improvement from the starting position of 22 at the end of September 2021, which reflects an increased focus on responsiveness and proactive communication.



⁸ A Tier 1 retailer is an energy provider that has more than 10% of the market share in a network region (that is, a distribution network owned and maintained by a particular energy distributor).

▲ Origin's broadband product was awarded the 2022 Most Satisfied Customers Award from Canstar Blue.

Championing the customer

Our Consumer Advocacy Panel regularly engages with consumer groups that represent the interests of customers. The panel is chaired by the Executive General Manager, Retail, and meets around every four months. Topics discussed in FY2022 included compliance, pricing, product ranges, and customer onboarding processes.

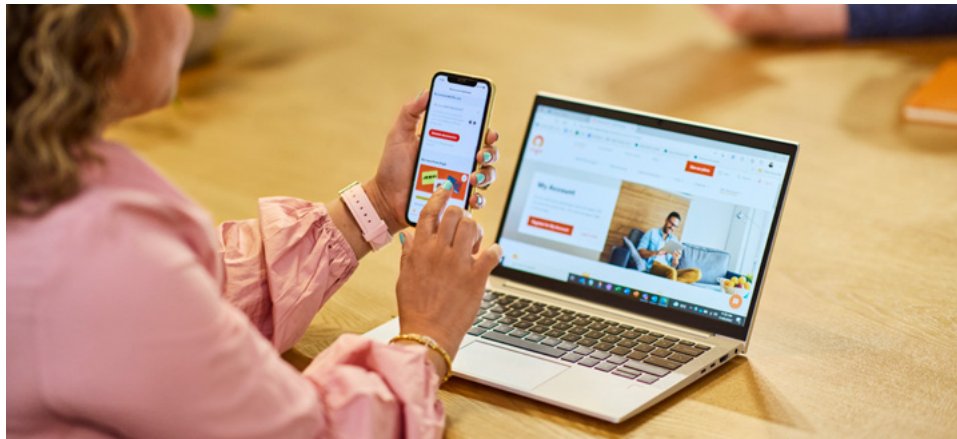
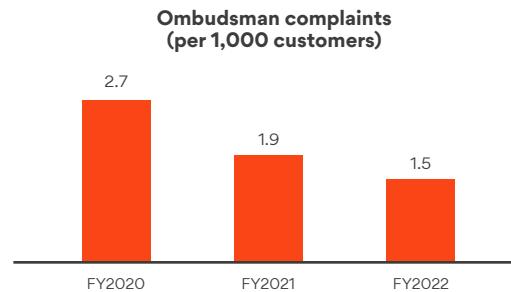
We also ensure that customers' views are represented in our business decisions by consulting with the Origin Exchange Customer Insights Community Research Panel. Throughout this year, we have continued to grow the panel from around 3,000 customers in FY2021 to more than 4,500 in FY2022 by bringing LPG customers into the community. The panel provides insights and feedback on a range of projects in development, which this year included the addition of LPG services to My Account, loyalty and fuel offers, and ideas around the potential of residential renewable energy.

Complaints and resolutions

We try to resolve customer complaints quickly and to identify learning opportunities to improve our service delivery and customer experience.

If, despite our best efforts, a customer feels that we have not sufficiently addressed their issue or concern, they can have the matter reviewed by the relevant ombudsman in their state or territory.

In FY2022, the number of ombudsman complaints per 1,000 Origin customers was 1.5, representing a steady improvement over the past three years. During this time, we have focused on ways to resolve complaints quicker, and review and address the root causes of ombudsman complaints. This work has led to a number of initiatives, including anytime self-meter reads. We have also created a new role to analyse complaint trends and customer pain points, and to make it easier for our customers to understand the ombudsman complaint process overall.



Regulatory compliance

We strive to meet all of our compliance obligations. We regret that we have not always achieved this and have been the subject of enforcement action by the Australian Energy Regulator (AER) and the Essential Services Commission of Victoria (ESC) over the past year. We are committed to getting this right for all of our customers and are taking significant steps to improve our compliance systems and training.

In June 2022, in proceedings taken by the AER, the Federal Court of Australia found that Origin had breached some of its obligations to customers in financial hardship under the National Energy Retail Laws and Rules. The Court made orders against Origin, including imposing a \$17 million penalty. The breaches related to three automated processes used by Origin in our Power On hardship program – which were introduced with the aim of improving administration processes – and to our dealings with 18 individual customers. Origin cooperated with the AER's investigation, admitted liability, and made joint submissions with the AER to the Court in relation to the penalty and other orders. Origin ceased the relevant automated processes in October 2021.

We deeply regret that the breaches occurred and acknowledge they meant that some of our customers did not receive a number of the important protections to which they were entitled under the National Energy Retail Law and Rules. Origin is committed to supporting customers in financial hardship through our Power On program and to ensuring we meet our compliance obligations. To that end, we have taken significant steps to improve our compliance processes and training relating to hardship to ensure our customers receive the assistance they are entitled to. We are also taking steps to compensate customers who may have been disconnected following our conduct.

In October 2021, Origin paid \$5 million in respect of penalty notices issued by the ESC. The penalty notices alleged that we had wrongly included a clause allowing us to charge exit fees in some of our Victorian small business contracts between June 2016 and September 2020. When we discovered this issue, we self-reported it to the ESC, apologised, credited the accounts of current Victorian small business customers who were charged the fee, and offered refunds to former customers.

In August 2021, Origin paid \$450,000 in respect of penalty notices issued by the ESC. The penalty notices alleged that we had wrongfully disconnected customers between February 2019 and February 2020 because the text messages we sent to customers before disconnecting them did not fully satisfy requirements in relation to the provision of clear and unambiguous information about the payment assistance customers were entitled to under Victoria's payment difficulty framework. We updated our SMS messaging to fully comply with the requirements and also compensated customers who had been wrongfully disconnected.

Privacy and cyber security

We are committed to protecting our customers' privacy and managing their personal information in accordance with the requirements of the *Privacy Act 1988 (Cth)*. In FY2022, as per previous years, we had no reportable privacy matters (see our [sustainability performance data tables](#)). For more information, visit originenergy.com.au/privacy.

We recognise that cyber security risk can have a material impact on our business. We are committed to continuously improving our security resilience and safeguarding our critical assets and our customers' data. During FY2022, we undertook several exercises to ensure that our incident management processes were up to the task. In addition, an independent audit was conducted on Origin's ransomware controls and our readiness to comply with the requirements of the Security Critical Infrastructure Act (recent amendments). Neither audit identified any high-risk findings.

We invest in cyber security controls in response to the changing threat landscape and to ensure that Origin is safely adopting modern technologies across the company. Considering current geopolitical and regional tensions, we expect an increase in cyber threats over the coming years. To safeguard against this, we are undertaking a number of control uplifts and strengthening our 24/7 security monitoring and response capabilities.

Energy affordability and support for vulnerable customers

Affordability is an important issue for our customers, and we continue to focus on how we can help them manage their energy costs.

Power On hardship program

We continue to support customers through our hardship program, Power On. For more than 18 years, this program has helped vulnerable customers by providing them with extensions, personalised payment plans, home energy efficiency advice, and referrals to financial counsellors.

Participating customer accounts in Power On increased from 26,707 on June 2021 to 47,055 as at June 2022, with more customers requiring hardship assistance as COVID-19 support mechanisms ended.

We focused on normalising the use of payment plans in our communications to customers showing signs of financial stress to make it easier for them to seek assistance. This saw a 12 per cent improvement on customer engagement, and a large increase in the number of people choosing to set up a payment plan or join our Power On program.

Through Power On, we supported residential and small business customers who were affected by floods in Queensland and New South Wales in FY2022. We also provided additional bill relief where a customer's property had been destroyed or they were unable to live or work in their property for an extended period.

Supporting vulnerable communities

We work with various organisations and initiatives to identify opportunities to support access to energy in our communities, including helping those affected by domestic violence; vulnerable groups in our community; and people in Indigenous, migrant, and regional and remote communities. For example, in FY2022, we began working with Women's Property Initiatives, a not-for-profit community housing organisation in Victoria that provides permanent and affordable homes for women and children at risk of homelessness. The organisation owns over 100 homes accommodating more than 230 women and children, and we provide these households with access to our Power On program.

In FY2022, Origin also partnered with Nunga Mi:Minar to waive disconnection and reconnection fees for Aboriginal and Torres Strait Islander women and children fleeing domestic violence. Origin also partnered with Uniting Communities to waive connection fees for long-term homeless people moving from transitional housing to long-term housing.

With COVID-19 restrictions lifting, we were able to return to face-to-face community events in FY2022. These included financial counsellor conferences, where we engaged with counsellors that support our hardship customers. We also attended government-run 'Bring Your Bills' days, where we helped people understand their bills, reviewed whether they were on the best energy plan for them, and provided energy saving tips.

We continued our partnership with the New South Wales Government to deliver the Solar for Low Income Households program, installing free 3 kilowatt (kW) solar systems to low-income households. The program aims to help participants save up to \$600 a year on their electricity bills, and we have installed more than 500 solar systems since it began in 2019.

To date, we have helped more than 100,000 concession cardholders through the South Australian Government's Concessions Energy Discount Offer. We also continued to provide a loyalty discount offer to our concession customers in the Australian Capital Territory (ACT) for Origin Standing, Supply and Basic products.

Prices

Most electricity customers in New South Wales, Queensland and South Australia saw price decreases on 1 July 2021 and so paid less in FY2022 compared to the previous year. The ACT variable market rate increased in July 2021, while natural gas prices for customers in New South Wales, Queensland, South Australia and the ACT increased from 1 July 2021, mainly due to higher wholesale costs. Most Victorian electricity customers on variable rate offers received bill increases in early 2022 due to network cost changes. Natural gas prices for Victorian customers also increased in January 2022.

After many years of relatively stable electricity prices, and with electricity costs in 2021 reaching their lowest point in eight years,⁹ FY2022 saw significant increases in the wholesale cost of energy. This was driven by several factors, including a global spike in coal and gas costs and a number of power plant outages across the National Energy Market (NEM).

These price increases went beyond what has been factored into the regulated price caps for standing offer customers. For many retailers, those regulated tariffs do not provide adequate allowance to recover their costs. As providers of an essential service, energy retailers faced the challenge of balancing the need to recover the much higher cost of supplying energy to customers, while being mindful of the cost-of-living pressures affecting the community.

To help minimise the impact of price changes on our customers, we absorbed some higher energy costs to make sure that most Origin customers paid no more than the Default Market Offer on 1 July 2022 after product benefits. Additionally, we intend to protect customers in our Power On hardship program from electricity and gas price increases in FY2023.

⁹ Source: ACCC's Inquiry into the National Electricity Market, November 2021



With COVID-19 restrictions lifting, we were able to attend government-run Bring Your Bills days in FY2022.

Energy reliability

In June 2022, possible electricity shortfalls due to a combination of many factors – including particularly cold weather, overcast days leading to below average solar output, fuel supply issues caused by reduced coal stockpiles and rail supply issues, and approximately 5,000 MW of scheduled and unscheduled baseload outages within the NEM – led the NSW and Queensland governments to issue warnings of potential blackouts and load shedding along the Australian east coast due to electricity shortfalls.

Origin's generation fleet played an important role in keeping the lights on by helping to cover electricity supply shortages in the market, with output from Eraring Power Station rising by 30 per cent in the final quarter of the financial year compared to the previous quarter, and output from our gas peakers surging by 82 per cent. We worked with the New South Wales Government to address some of the coal supply issues affecting the sector, including prioritising rail deliveries to coal-fired power stations needing supply during this time.

Australia Pacific LNG, in which Origin has a 27.5 per cent shareholding, directed additional gas into the domestic market so it could be used for gas-fired power generation and provided additional pipeline capacity, helping to alleviate the forecast shortfall in supply identified by the Australian Energy Market Operator (AEMO).

Retailer of Last Resort

Volatile energy prices and retail price caps, which limited retailers' ability to recover higher energy costs, has seen five retailers fail since May 2022.¹⁰ For the first time in many years, AEMO used the Retailer of Last Resort mechanism, which is designed to ensure consumers continue to receive energy when their energy retailer goes out of business. Origin was the nominated Retailer of Last Resort in a number of areas. Australia Pacific LNG responded to requests from Retailers of Last Resort for the supply of additional gas.

RERT mechanism

In FY2022, Origin and some of our large commercial customers started participating in the Reliability and Emergency Reserve Trader (RERT) mechanism to help ensure a reliable energy supply. The RERT gives AEMO a tool to help it maintain power system reliability and system security by asking RERT participants to reduce their grid electricity use if forecast electricity supply does not meet forecast demand. In FY2022, there were five RERT events, including four in June.

Eraring Power Station

In February 2022, we announced plans to accelerate our exit from coal-fired generation, submitting notice to AEMO to retire Eraring Power Station, potentially as early as August 2025 (previously 2032). The closure timing of all four units will be determined closer to 2025.

The replacement of Eraring's capacity and the energy it provides will need to be carefully managed to help maintain reliable energy supply. We are aiming to grow renewable and storage capacity within our generation portfolio by 4 GW by 2030.¹¹ We are progressing plans for a 700 MW battery on the Eraring site and have acquired around 1,600 MW of renewable energy development projects to date. Combined with the growth in our virtual power plant (VPP), these actions, when delivered, will help replace the capacity from Eraring with lower emissions energy sources.

See [Eraring and the energy transition](#) for more information.

Smart, connected and lower-carbon solutions

Our ambition is to lead the energy transition through cleaner energy and customer solutions. Key to this is delivering smart, connected and lower-carbon solutions that can help our customers transition to net zero.

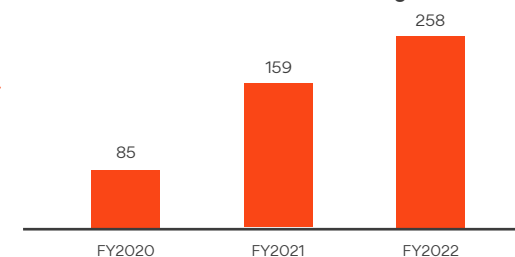
Smart products

Technology is increasingly offering customers the opportunity to have more control over their energy usage and costs. We are providing more personalised products and services that deliver value to customers by helping them make their energy assets in their homes and business more affordable and sustainable.

Origin Spike is a behavioural demand response program that rewards customers for reducing their energy use during peak periods, called Spike Hours. Almost 75,000 customers have signed up, receiving a total of more than \$3.8 million in reward points since the program was launched in August 2020. Over that time, we have held more than 2,800 Spike Hours, with an overall participation rate of 69 per cent, and a total energy reduction of 342 megawatt-hours (MWh).

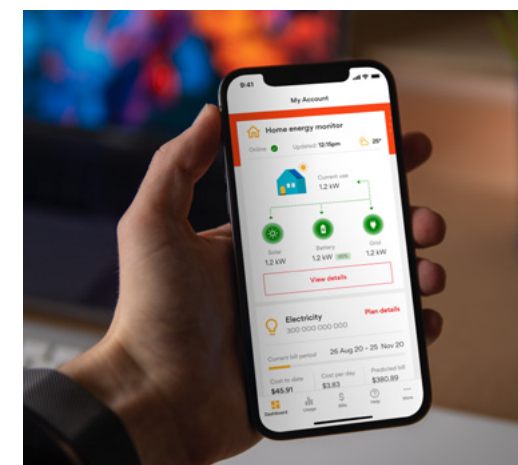
We continue to grow our VPP, Origin Loop, reaching 258 MW from more than 120,000 connected services in FY2022. Loop orchestrates distributed energy assets across many separate locations, providing Origin with an important tool to manage the supply and demand balance in the electricity market. Loop uses artificial intelligence to optimise these assets and shifts demand from periods of high demand and high emissions intensity to times when renewable generation is high and electricity prices are low, reducing the cost of energy and carbon intensity.

MW under orchestration in Origin VPP



We worked collaboratively with Gasbot to develop a solution that helps customers to never run out of LPG. Smart devices (telemetry) installed onto our bulk cylinders tanks collect and send data from the field and automatically update our systems with the quantity of LPG in a customer's cylinder or tank, triggering an order when a customer is running low. We have rolled out more than 10,500 of these smart devices, predominantly to our business customers in Australia and expect to have approximately 25,000 units in place by the end of FY2023.

- 10 As at 25 August 2022, with three Retailer of Last Resort events in FY2022.
- 11 This is inclusive of current portfolio position and previous announcements.



Lower-carbon customer solutions

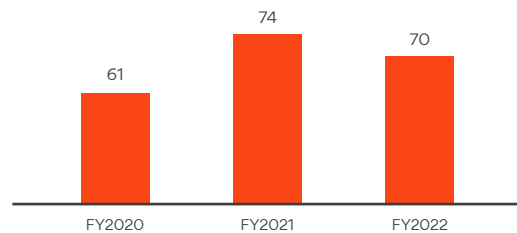
We offer solar and renewable energy, carbon offset products, and electric vehicle solutions, and work with our customers to develop and deliver cleaner energy solutions.

Solar energy

We are a Clean Energy Council-accredited retailer of solar energy. In the year to December 2021, we were the second largest installer of solar in terms of overall capacity, and the second largest in the commercial (15-100 kW) category.

During FY2022, we installed almost 8,000 solar systems on the roofs of Australian homes and businesses, with a capacity of around 70 MW, down 5 per cent on FY2021. This small decline follows several years of strong growth and reflects the impacts of COVID-19 lockdowns as well as supply chain cost increases. At 30 June 2022, around 558,000 Origin customers had solar installed at their properties.

Capacity of solar systems installed (MW)



In FY2022, we introduced the Origin Solar Assessment Tool to make it easier for prospective customers¹² to make decisions when considering a solar energy solution. Developed in collaboration with Accenture and Google Cloud, the tool uses 3D data visual, artificial intelligence and advanced analytics to provide customers with an accurate and tailored assessment of how solar will support their household's energy requirements, in just 10 minutes.



This includes solar power generation forecasts, estimates of system and installation costs, potential energy and bill savings, and details on a household's investment 'break-even' point. Calculations are based on a customer's specific household energy consumption and details such as roof pitch, area and shading by obstructions. Since we launched the tool in December 2021, customers have requested over 3,200 quotes, resulting in over 600 sales.

There has been continued interest in solar energy from business customers wanting to achieve their own climate aspirations. In FY2022, our team installed a 160 kW solar system at JB Hi-Fi's new store in Holmesglen, Victoria. We also provided a live dashboard installed behind the payments counter that tells customers and staff how much solar power is being generated by the store's rooftop panels; how much energy is being drawn from rooftop solar and from the grid; the volume of carbon emissions being avoided through the store's use of solar; and the energy independence rating for the store. Read more about the project in our case study.

Renewable and carbon neutral products

We have almost 340,000 customer accounts on our GreenPower, Green Gas, Green LPG and Origin Go Zero (electricity) products, up from 260,000 in FY2021. This growth was driven by process changes that we implemented to make it easier for customers to select lower-carbon options, as well as targeted campaigns.

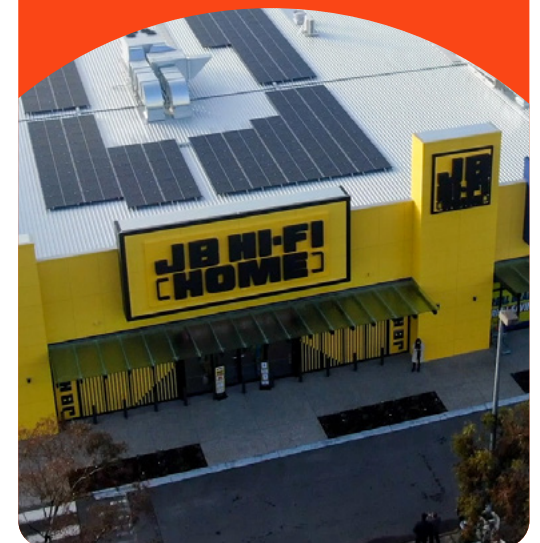
We are one of Australia's largest GreenPower providers¹³ with over 205,000 customers' accounts signed up to our GreenPower product in FY2022, up from around 190,000 in FY2021. When customers choose GreenPower, they can select the percentage of their electricity they would like Origin to match with an equivalent amount of electricity from GreenPower-accredited renewable sources, which is added to the electricity grid.

In FY2022, we added Origin Go Zero, Carbon Neutral Solar, and Carbon Neutral Demand Response to our suite of products that have been certified carbon neutral by Climate Active, a partnership between the Australian Government and Australian businesses. This is in addition to Green Gas and Green LPG, which is currently the only Climate Active certified LPG product in Australia. For these products, we offset the relevant emissions associated with the customer's consumption of natural gas, LPG, electricity, the extraction, manufacturing, transport, installation and maintenance of a solar PV system, or production and consumption of alternative fuel use in a demand response event, as part of our Climate Active commitments.

Case study

JB Hi-Fi solar partnership

We are working with JB Hi-Fi to reduce its energy costs and carbon emissions by using solar and have installed a live in-store dashboard so customers can see how they are tracking.



¹² Within 100 kilometres of Adelaide, Brisbane, Canberra, Melbourne, and Sydney

¹³ [GreenPower 2020 Annual Audit Report Final](#)

Electric vehicles

Supporting large and small customers with the transition to electric vehicles (EVs), and helping these customers manage the charging of their vehicles, is central to Origin's ambition to lead the energy transition. We are a member of EV100, a global initiative that brings together companies committed to playing a leadership role in helping to accelerate the uptake of EVs.

In FY2021, we partnered with Custom Fleet to launch Origin 360 EV Fleet, which aims to make it easier for Australian businesses to make the switch to EVs, helping them lower their carbon footprint and their operating costs. We are aiming to have at least 5,000 EVs under management by FY2026. Since launch we have received strong interest from organisations looking to start their EV fleet transition and have signed leases with a number of organisations across a range of industries.

In FY2022, we hosted two of nine planned EV Drive Day events, with support from the NSW Government. This series of Origin 360 EV Drive Days gives businesses the opportunity to test drive a range of EVs and speak to industry experts about their business needs, including key considerations when looking to transition their fleet. Origin has also successfully obtained funding under the NSW Government's EV Fleet Incentive Program to subsidise 130 EVs for businesses.

We are continuing to work towards transitioning all of our passenger and light commercial vehicles to EVs by 2030 and are looking to replace vehicles in our fleet with EVs at the conclusion of their lease. Vehicle supply shortage in Australia has resulted in delays in EVs being delivered and deployed in the Origin fleet but we continue to work with EV manufacturers to understand when EVs will be available.

We launched an EV sharing service in FY2022, 360 EV Share, for residents and tenants of apartments and commercial buildings to book and access an exclusive EV via a digital app, providing a seamless digital car-sharing experience. Since its launch, Origin has seen strong interest from property developers and owners looking to use this service to enhance the sustainability credentials of their buildings.

The smart charging trial we started in 2021 with the Australian Renewable Energy Agency (ARENA), continues to make progress with over 200 chargers rolled out to EV owners and fleets across Australia. The chargers are connected to Origin Loop, our VPP, to minimise energy consumption during the evening peak period and maximise EV charging during the middle of the day when there is excess renewable energy and have been integrated in the Origin app. We will report to ARENA on the results of the trial at the end of 2022.



▲ We are aiming to have at least 5,000 EVs under management by FY2026 as part of Origin 360 EV Fleet.

Origin Zero

○ ○ ○ ○

Our large business customers are becoming increasingly focused on their sustainability goals

As the energy transition accelerates towards a net zero future, our customers' needs and expectations are rapidly changing. This is particularly the case for our large business customers, which use as much energy as our 4 million residential customers combined but only make up around 1 per cent of our customer base. These businesses are becoming increasingly focused on their sustainability goals and looking for optimised energy solutions that can help achieve them.

We established a new business unit in early 2022 called Origin Zero, which is intended to assist large business customers on their decarbonisation journey.

Origin Zero will create long-term partnerships with customers, helping to optimise their demand and match it with tailored renewable energy solutions. We are focusing on:

- reducing carbon emissions and cost through demand side services such as EV fleet management, energy efficiency, and carbon assessments;
- providing lower carbon supply solutions, including solar, storage, renewable energy, and firming; and
- ongoing optimisation and orchestration of assets to hit long term objectives, and offering monitoring, maintenance, and demand response, including installing behind-the-meter solutions connected to our VPP.

Origin Zero helps customers shift from traditional energy supply agreements to tailored, flexible energy solutions. Our services are supported by our data and analytics, allowing customers a clear line of sight to improvements in energy efficiency and costs, and helping them understand how they are reducing their carbon footprint.

For example, in FY2022 we worked with PwC Australia to develop a tailored three-year 100 per cent renewable electricity solution for its offices nationally, with large-scale generation certificates sourced from Origin's Stockyard Hill Wind Farm offtake agreement. We also developed offers for PwC employees on a range of cleaner and connected energy solutions.

We aim to offer services and solutions that go beyond energy supply and are targeting a broader service offering for more than one third of our business customers by FY2026. This could include renewable energy, along with emissions reduction, load management and demand response solutions.

See also our [case study](#) on our partnership with JB Hi-Fi for another example of how Origin Zero is helping customers to decarbonise.



Communities



We play an important role in communities – working to provide reliable and affordable energy, employing around 5,000 people in Australia and the Pacific, and supporting educational opportunities through the Origin Energy Foundation. We aim to work responsibly and respectfully with our local communities and to identify opportunities for Origin and our employees to make a positive difference.



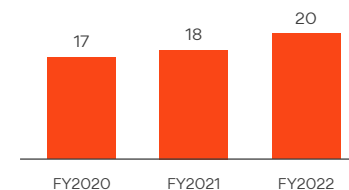
Performance at a glance

- Spent \$318 million directly and indirectly with regional suppliers, or 20% of our procurement spend
- Spent \$17 million directly and indirectly with Indigenous suppliers
- Provided almost \$800,000 to support various local community programs and events
- Donated more than 7,000 hours and \$720,000 to Australian charities through the Origin Energy Foundation's Give Time employee volunteering and Give2 matched giving programs
- Committed to a \$5 million community fund as part of our support for the community as we transition out of coal-fired generation at Eraring

>\$2.6m

contributed to the community
by the Origin Energy Foundation

Regional procurement spend as % of total spend



UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs:



Management approach

Find out more about our approach to getting energy right for our communities



Communities



Procurement

Working with communities

We respect the rights and interests of the communities in which we operate. We consult with them to understand and manage the environmental, economic and social impacts of our activities and maximise the benefits.

Our assets – such as power stations, gas fields, processing facilities and pipelines – can have a lifespan of several decades, which means we have a long-term presence in the communities in which we operate. Our projects can deliver a range of benefits for local communities, including employment for people living in the region; opportunities for local suppliers; financial payments for landholders and Native Title holders; and taxes, levies and royalties for governments.

While we engage with communities across our sites, our most significant interactions occur at our Australia Pacific LNG operations in Queensland, our Beetaloo Basin exploration project in the Northern Territory, and our power stations, the largest of which is Eraring in New South Wales.

Australia Pacific LNG

As upstream operator of Australia Pacific LNG, we regularly engage with local councils, chambers of commerce, economic development groups and other community organisations. Our business also proactively engages with our landholders through dedicated stakeholder liaison officers.

Conduct and Compensation Agreements (CCAs) between Origin and landholders set out how we will enter the land to carry out our activities and how landholders will be compensated. We negotiated and signed 75 CCAs with landholders in FY2022.¹⁴ These CCAs bring the total number of agreements signed since the Australia Pacific LNG project began to 1,385.

Engaging with Traditional Owners

We work closely with several Traditional Owner groups in the Surat Basin in Queensland, collaborating to protect cultural heritage. We instigated more regular meetings with representatives from Traditional Owner groups in FY2022 to provide information about planned work programs, identify any need to train additional cultural heritage officers (who assess proposed developments for areas of cultural significance), and help to maintain strong working relationships.

Australia Pacific LNG holds Native Title Agreements and Indigenous Land Use Agreements (ILUAs) with Traditional Owners, which recognise native title

rights and interests, and help to identify sustainable social and economic development opportunities, including learning, mentoring and employment. ILUAs are voluntary agreements between native title parties and other people or bodies about the use and management of areas of land and/or waters. We agreed a new ILUA with the Iman People in FY2022 and are now seeking approval for registration.

During FY2022, Australia Pacific LNG was not associated with any incidents of non-compliance with ILUAs or Cultural Heritage Management Plans. Refer to our [Communities management approach](#) for more information on how we engage with Traditional Owners.

We continue to identify opportunities to build cultural awareness among our people and communities. For example, during NAIDOC Week in July 2021, team members were privileged to walk with Traditional Owners and community members in reconciliation and healing as the Star of Taroom, an important Aboriginal artefact, was returned to Iman Country. During National Reconciliation Week, we held events with local school children, providing educational opportunities through dance, music, art and storytelling.



¹⁴ The number of Australia Pacific LNG CCAs, as defined by Queensland's *Mineral and Energy Resources (Common Provisions) Act 2014* signed during the 12-month period. This excludes non-operated sites.

▲ A smoking ceremony was conducted by Iman Elder Uncle John Waterton to welcome our new camp service provider ESS at our Spring Gully village.

Beetaloo Basin exploration project

We have been engaging with community members across the Northern Territory since we became the operator of the Beetaloo Basin permits in 2014. We work constructively and transparently with those within our permit areas, including Native Title holders for the area of our exploration activity.

In FY2022, we further strengthened our team with the addition of a Community Liaison Officer based in Elliott, who is working to deepen Origin's engagement with the community in Elliott and Marlinja. As well, we employed a regionally based Asset Field Officer, who is also a Native Title holder within the area of Origin's activities, to conduct maintenance, inspection and monitoring activities at site, including water sampling activities.

We work closely with the Northern Land Council (NLC) and Native Title holders for the area of Origin's exploration activity. In FY2022, we began preparing for negotiations on a development and production ILUA.

Sacred site surveys

During the year, Native Title holders and NLC anthropologists, conducted sacred site clearance and avoidance surveys of our potential future work areas. No work can be undertaken without a survey and approval from the Aboriginal Areas Protection Authority.

During this work, an archaeological site containing numerous stone artefacts was identified and action was taken to protect the site. We notified the NLC, as the representative of the Native Title holders, and discussed the find with Native Title holders at on-country meetings. We set up a no-go buffer zone of 500 metres around the find and relocated proposed well and seismic survey locations away from the area, consistent with our site avoidance approach. We shared an archaeological report with the Northern Territory Heritage Branch and the NLC, and consultations are underway with Native Title holders as to whether any further site protection measures are needed.

Community engagement

In May and June 2022, we participated in meetings on Country with Native Title holders and the NLC. We discussed our upcoming work program, the results of our previous work program and potential employment opportunities, and answered questions from participants, which related to the topics discussed and also the archaeological site identified during surveys. Origin employees involved in these meetings included personnel from field operations, drilling and hydraulic fracturing operations, groundwater monitoring, water management, social performance and senior management. We followed up these meetings with additional engagement from our subject matter expert on Northern Territory hydrogeology, who answered further questions on groundwater protection and monitoring.

We plan to continue expanding our community engagement in the coming year, facilitating community visits to our sites and using additional channels of communication to further expand the sharing of project information.

Site inspections are an important opportunity for Native Title holders to spend time with on-site specialists and see for themselves how exploration activity is conducted. As part of our efforts to engage with the broader community, Origin will be offering facilitated community bus tours to site to residents of Elliott, Marlinja, Borroloola and Minyerri in FY2023 so they can see our exploration activity first-hand and discuss any concerns with site personnel.

More information on our practices for engagement with the Native Title holders of areas where we are undertaking exploration work during FY2022 and plans for forthcoming engagement can be found in our [Beetaloo Native Title Holder Engagement – 2022 Update](#).

Eraring Power Station

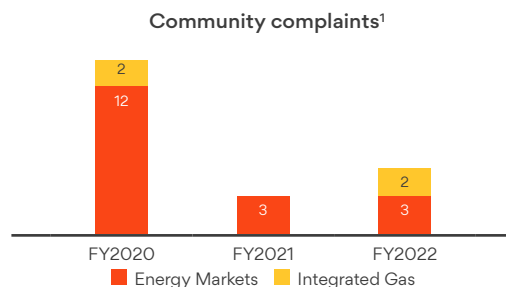
Immediately following the announcement to potentially bring forward the closure of Eraring, we began a program of communications and briefings for employees, contractors and suppliers, government, industry, media and other stakeholders. Key activities included Eraring site employee and contractor briefings; Origin-wide internal communications; government and industry engagement, including federal, state and local representatives; and community and supplier engagement.

See [Eraring and the energy transition](#) for more details on our community engagement plans, including establishing a community fund with \$5 million committed between now and 2032.

Responding to complaints

Origin has grievance mechanisms in place to allow community members to share feedback and concerns, and to have these addressed. We monitor complaints, our response times, and resolution of these matters.

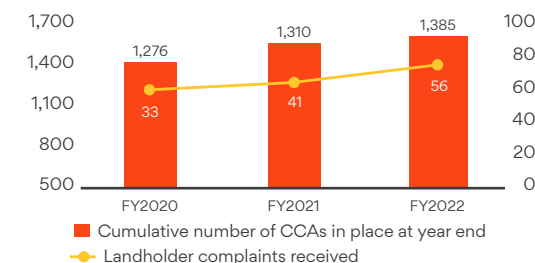
In FY2022, community complaints concerned operational impacts such as noise, and incidents while accessing landholder properties.



1. The Energy Markets figures do not include complaints from customers, which is covered in [Customers](#). The Integrated Gas figures exclude complaints from landholders with whom we have negotiated or are negotiating a CCA.

During the year, we received 56 complaints from landholders with whom we have negotiated or are negotiating a CCA, with new processes leading to better recording of complaints in our system. Most of these related to land access issues and the failure to either close or leave open farm gates. Each complaint is carefully investigated, and we are working to improve our performance and reduce the number of complaints. In response to an increase in complaints regarding gates, we rolled out training sessions to operational teams and are trialling alternative gate lock options, aiming to reduce the number of gate incidents. The sustained wet weather in FY2022 also saw increased complaints regarding property access track damage and meant that repair works were delayed.

Conduct and Compensation Agreements and landholder complaints



Supporting communities

We contribute to communities by providing emergency and crisis support, through local and national community investment and through the Origin Energy Foundation. We work to protect customers experiencing hardship. We are also committed to supporting those affected by domestic violence, vulnerable groups in our community, and people in Indigenous, migrant, and regional and remote communities. See [Customers](#) for more information.

We also support communities by buying from local suppliers, providing financial incentives for our people to 'live local', and offering local apprenticeship and traineeship opportunities.

Emergency and crisis support

We donated \$100,000 in FY2022 to the BizRebuild program to support flood-affected

communities. BizRebuild provides vouchers worth up to \$2,000 to small businesses to buy replacement equipment and offers an additional \$500 for local legal, accounting and business advisory services to help with business recovery plans.

Community investment

Our national community programs include Little Big Idea, an annual competition that seeks Australia's next generation of inventors. We also assist Netball Australia to support players at all levels across the country – from local clubs to the world-leading Australian Diamonds.

In FY2022, we announced our sponsorships of the Sydney Swans and Melbourne City FC, supporting the clubs to take action to reduce their carbon footprints and meet their sustainability goals. The clubs join Netball Australia in our Good Change Club initiative, which aims to educate, inspire and incentivise sports fans to make small acts of good change that collectively make a big difference towards a cleaner energy future.

Local community programs

Our investments in local communities target four priority areas: creating safe, vibrant and inclusive communities; building great places to live and work; caring for our environment; and delivering economic benefits. We also provide financial and in-kind support, and encourage employee volunteering and charitable donations, which are managed through the Origin Energy Foundation.

During FY2022, Origin contributed around \$800,000 to various local community programs, through multi-year partnerships, and support for important services and events.

For example, following the devastating bushfires of recent years, we continued our support of local fire brigades by helping to fund the development and ongoing maintenance of a 1.7-kilometre air strip for the Wallumbilla Combined Emergency Services Group in south west Queensland. Opened in FY2022, the air strip is connected to a water bore with quick fill points at each end to assist water bombing aircraft in bushfire season.

Recognising the impact of COVID-19 on communities, in FY2022, we continued our support of mental health initiatives. This included activities to raise awareness and break the stigma around suicide with mental health advocacy group Let's Talk in Mortlake, Victoria, and support for Men's Sheds, where men can meet, talk and work on community projects together, in Uranquinty and Mortlake. We have also supported projects that seek to address isolation or loss of community connection. For example, in south east Queensland, we are partnering with Western Downs Regional Council and the Murilla Community Centre to expand a successful local newsletter to neighbouring regions.

In Chinchilla in the Western Downs, we have partnered with Chinchilla Community Commerce and Industry, including helping to fund a dedicated business manager to assist the community in developing a five-year strategic plan and drive local initiatives. One such initiative in FY2022 was a buy local campaign that saw 23,000 entries into a prize draw for purchases at participating local businesses, representing a local spend of more than \$460,000. See our case study for more information on the partnership.



Origin volunteer Caitlin helps students build a prosthetic hand for an amputee in the developing world through Origin Energy Foundation's partnership with the Helping Hands program.



Case study

Helping Chinchilla with its 20-year vision

Enabling local communities to drive their own growth is key to their long-term sustainability. Origin is supporting one Queensland town's local business association, Chinchilla Community Commerce and Industry, to do this through targeted funding and in-kind assistance.

Case study

Illuminating Communities with SolarBuddy

The partnership between the Origin Energy Foundation and SolarBuddy has resulted in more than 8,000 solar lights donated to children living in energy poverty. Now the two organisations have joined forces in a new initiative, starting in the Torres Strait.



Origin Energy Foundation

Established by Origin in 2010, the Origin Energy Foundation supports education programs that help break the cycle of disadvantage and empower young Australians to reach their potential. The Foundation distributes funds drawn from interest on a \$55 million corpus provided by Origin. We also fund the running costs, ensuring that all the investment income goes to community programs.

Through grants, volunteering, in-kind donations and workplace giving programs, the Foundation distributed more than \$2.6 million to the community in FY2022. It has provided more than \$35 million to support community organisations since its inception.

In FY2022, we introduced the Origin Energy Foundation Board Observer Program, a professional development program for senior Origin leaders who can join the program as an observer for 12 months. Each year, one or more observers with a diverse skill set and a genuine interest in the community sector will be selected to bring their experience and energy to the Foundation while gaining insight into the boardroom.

Working with community partners

Through its grants program, the Foundation provides funding to Australian non-profit organisations that work to increase diversity in science, technology, engineering and maths (STEM) education, and equality of educational opportunity for Indigenous students and young people living in regional, rural and remote Australia.

As a founding partner in the Illuminating Communities program, led by Australian charity SolarBuddy, the Foundation and Origin volunteers were invited to the Torres Strait in April 2022 to run SolarBuddy's 'Lights for learning' program in some of Australia's most remote schools.

The Foundation also funded solar-powered lighting for the multi-purpose centre at Tagai State College, the Strait's only high school, to bring the community together safely after dark. The program focuses on creating opportunities for young people and providing solar power to communities impacted by energy poverty. See our [case study](#) for more information.

The Foundation also supports capacity-building for the Australian non-profit sector, to help improve its social impact. In FY2022, the Origin Energy Foundation, along with the Paul Ramsay

Foundation, funded *Paying What it Takes*, a report by Social Ventures Australia, Centre for Social Impact and Philanthropy Australia, which examined the underfunding of Australian charities and called for a substantial shift in funding systems to ensure the long-term effectiveness of Australia's non-profit sector.

Supporting employee giving

A key element of the Foundation's work is our employee volunteering program, Give Time. This year, our participation rate of 41 per cent saw employees donate more than 7,000 hours to various STEM and mentoring programs, reaching around 5,300 students.

Through our workplace giving program, Give2, the Foundation matched employee donations dollar-for-dollar, providing more than \$725,000 to around 280 Australian not-for-profit organisations.

Responsible procurement

Our supply chain includes the supply of goods and services, wholesale commodities and the distribution of energy. It encompasses nearly 3,700 direct suppliers with which we spent around \$10.5 billion in FY2022.¹⁵ Our direct suppliers are mainly in Australia, with 10 per cent based internationally. The goods and services segment represents approximately 20 per cent of our overall supply chain spend and accounts for approximately 90 per cent of our direct suppliers.

We strive to improve our supply chain's social and ethical footprint, and work with suppliers that share our values. We expect our suppliers to comply with all applicable laws and to demonstrate that they have the attributes set out in our Supplier Code. We recognise the opportunity to create a positive impact on communities by making considered choices about how and where we source the goods and services we need to operate our business.

Our responsible procurement plan focuses on four areas:

- identifying, assessing, and addressing modern slavery risks;
- supporting regional communities;
- increasing Indigenous participation; and
- supporting small businesses.

Identifying, assessing, and addressing modern slavery risks

Origin rejects any form of slavery and will only partner with suppliers and stakeholders who are committed to preventing, identifying, addressing and remediating issues where they may have caused or contributed to an adverse impact to people in our supply chain.

In FY2022, we focused on building our understanding of modern slavery and capabilities to address risk, improving our policies and processes, and enhancing our engagement with suppliers. We rolled out human rights awareness training to 98 per cent of our employees and contingent workers via our refreshed Code of Conduct.

We also worked to better understand the risks associated with the production of polysilicon in China, required to manufacture solar modules, following widely reported allegations¹⁶ of forced labour. Limited transparency of supply chain practices has made it difficult to accurately assess the validity of these allegations, however, we have taken a number of steps to better understand and manage the issue, including engaging with our existing supplier of solar modules to determine its current controls for managing modern slavery risks. As well, we contributed to the Clean Energy Council's Risks of Modern Slavery Working Group to progress an industry position and response and worked with the Human Rights in Resources and Energy collaborative to understand experiences and approaches.

Our assessments to date have not identified any known modern slavery practices in our operations or supply chain, however, we recognise there are potentially issues deeper in our supply chain and that uncovering these issues requires ongoing vigilance. For more information, see our [2022 Modern Slavery Statement](#).

¹⁵ Supply chain spend is approximate annualised third-party spend excluding taxes, government charges, joint ventures, intercompany transfers and landowner compensation payments.

¹⁶ [Energy of Freedom](#)

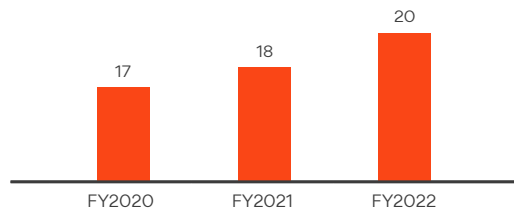
Supporting regional communities

Procuring goods and services from local and regional suppliers is an important way to share economic benefits with the communities in which we operate. We seek to procure local goods and services wherever possible and work with our major contractors to do the same.

We have a growing network of service providers with a local presence in the Maranoa and Western Downs regions, supporting Australia Pacific LNG assets. In FY2022, to continue this commitment, we signed a new three-year agreement with Coho Resources, a key service provider to our well drilling operations, which operates hubs in Roma and Miles, and actively contributes to the local community.

Overall, we spent \$318 million directly and indirectly with regional suppliers this year. Our proportion of regional spend increased to 20 per cent.

Regional procurement spend as a percentage of total procurement spend



Increasing Indigenous participation in our supply chain

We are committed to increasing the participation of Aboriginal and Torres Strait Islander businesses in our supply chain. Origin's Stretch Reconciliation Action Plan (Stretch RAP) includes measurable targets to increase the diversity and quantity of goods and services procured directly and indirectly from Aboriginal and Torres Strait Islander-owned businesses.

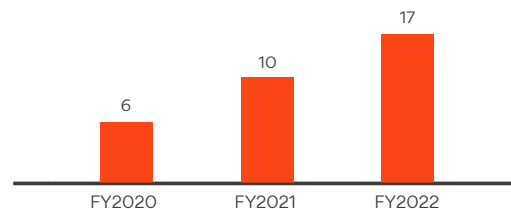
In FY2022, our spend with Indigenous suppliers was \$17 million,¹⁷ exceeding our Stretch RAP target of \$12.2 million and bringing our cumulative spend under our three-year Stretch RAP to \$32.6 million.

We expanded the breadth of Indigenous business capability in our supply chain to include solar installation and IT services, while continuing to build on our relationships with our Indigenous suppliers in civil construction, facilities maintenance, office supplies and personal protective equipment suppliers.

We have included Indigenous Participation Commitments (IPCs) in contracts with key suppliers since 2018 to help facilitate more opportunities for Indigenous businesses. In FY2022, 33 new IPCs were agreed, adding to the 22 existing IPCs. Collaborating with our major contractors to promote opportunities through IPCs has resulted in around \$4.5 million in additional indirect spending with Indigenous businesses in FY2022. Employing these businesses via IPCs allows Indigenous businesses to participate in our supply chain indirectly, growing industry and employment opportunities for Aboriginal and Torres Strait Islander people.

We support and participate in opportunities to build our network of local and Indigenous suppliers. For example, in FY2022 we took part in the Northern Territory Energy Club's 'Meet the Buyer' event in Darwin and supported the Aboriginal Economic Development Forum held in Alice Springs, which provides an opportunity for Indigenous-owned businesses from across the Northern Territory to showcase their products and services.

Goods and services procured from Aboriginal and Torres Strait Islander-owned businesses (direct and indirect spend) (\$m)



Many Rivers Marketplace

In FY2022, through our long-term not-for-profit partner, Many Rivers, we introduced a Marketplace project to help identify and break down barriers that prevent emerging Indigenous businesses from



Indigenous sunscreen products business, Ochre Sun, secured a contract with Origin after participating in the Many Rivers Marketplace program.

entering corporate supply chains, and to build a pipeline of local Indigenous businesses to support our operations, and those of other corporates.

Around 50 businesses attended drop-in sessions to discuss their business ideas with Many Rivers and Origin representatives in six locations across Queensland, and we are working with them to upskill and develop the capabilities necessary to apply for corporate supply opportunities. This includes Ochre Sun, an Indigenous sunscreen products business, which successfully secured a contract to supply SPF50+ sunscreen products to Origin.

Supporting small business

As a signatory to the Business Council of Australia's voluntary Australian Supplier Payment Code, we are committed to making on-time payments to around 2,000 small businesses that supply Origin.

We implemented a new organisation-wide system in FY2022 to simplify and automate payment processes for our suppliers.

¹⁷ Progress towards achieving our Stretch RAP objective is measured by monitoring direct procurement spend (paid by Origin) and indirect spend (sub-contractors to Origin). This figure includes indirect and direct spend.

Planet

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We care about our impact on the environment. Our ambition is to achieve net zero Scope 1, 2 and 3 emissions by 2050.



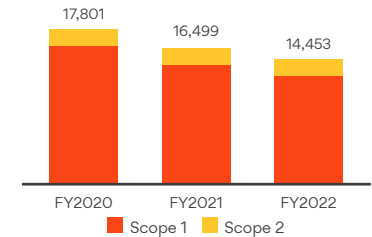
Performance at a glance

- Developed a new medium-term equity emissions intensity target,¹⁸ consistent with a 1.5°C pathway envelope¹⁹
- Developed our first Climate Transition Action Plan, which we will put to a non-binding advisory vote at our 2022 AGM
- Announced the accelerated closure of Eraring Power Station, from as early as August 2025
- Achieved the absolute emissions reductions planned for our short-term target over three years within the first two years
- Total Scope 1 and 2 equity emissions down by 12 per cent compared to FY2021

¹⁸ Excluded from this target are the potential future emissions from any development of new gas fields like the Beetaloo Basin. This is because there has been no decision, nor are we close to a decision, to produce those gas resources. However, any development would only occur where it was consistent with our net zero emissions by 2050 ambition.

¹⁹ Pursuant to the methodology set out in the [Climate Transition Action Plan](#).

Scope 1 and Scope 2 GHG emissions
(kt CO₂-e, equity basis)



1,600 MW

of solar farm development
options secured to date

UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs:



Management approach

Find out more about our approach to getting energy right for the planet



**Climate Transition
Action Plan**



Environment

Energy and climate change

Climate change remains one of the most significant challenges facing society. As a leading energy company, the climate transition is embedded in our strategy and key to delivering on our purpose.

We believe the world must pursue efforts to limit global average temperature rise to 1.5°C above pre-industrial levels. Our long-term ambition is to achieve net zero Scope 1, 2 and 3¹⁸ emissions by 2050.

Scope 1 emissions are greenhouse gas (GHG) emissions released to the atmosphere as a direct result of our activity. These are sometimes referred to as direct emissions; examples include emissions from electricity generation and gas production. Scope 2 emissions are GHG emissions resulting from purchased electricity we consume to power our offices and operating sites. Scope 3 emissions are indirect GHG emissions, other than Scope 2, relating to our value chain that we do not own or control, including wholesale purchases of electricity from the NEM that we sell to our customers and also the use of our sold products such as LNG and domestic gas sales.

To achieve our targets and our net zero ambition, we must reduce emissions from our operations (Scope 1 and 2) and our value chain (Scope 3).

Climate Transition Action Plan

Underpinning everything we do is a commitment to transparent and ongoing engagement with our stakeholders on our strategy, priorities and the progress we are making in the energy transition. This includes our customers, communities, people, and shareholders.

Following our commitment to support the Say on Climate initiative in FY2021, we have released our first [Climate Transition Action Plan \(CTAP\)](#) and will put this to a non-binding, advisory vote of shareholders at our 2022 AGM.

Scope 3 emissions account for the majority of our total emissions. However, as these are indirect emissions that come from sources that Origin does not control, they are more challenging to address. Reducing our Scope 3 emissions will mean working hard, including with our partners, to identify, measure and mitigate emissions within our value chain, and working with our customers and suppliers to help them achieve their decarbonisation goals.

We will work with our customers, both residential and business, to provide them with a growing portfolio of low-carbon products and cleaner energy solutions, such as renewable electricity, electric vehicles and hydrogen, to help them achieve their decarbonisation goals.

The transition to a low-carbon world will affect communities in different ways. We aim to support our people, communities and customers through the energy transition while contributing to an orderly, secure, reliable and low carbon energy system.

Origin recognises the importance of governance to support the consideration of climate-related risks and opportunities. We are continuously improving the way we identify, assess, manage and govern climate-related risks and opportunities for our business. Origin has been reporting against the TCFD framework since FY2018 and is committed to ongoing development of its climate-related financial disclosures. See our [TCFD Disclosure Index](#) and our Climate Transition Action Plan for more information.

The report outlines our ambition to lead the transition to net zero and the pathway to achieving this, including our updated emissions reduction targets and decarbonisation strategy. The report also discusses the methodology we used to align our decarbonisation plan and targets with the goals of the Paris Agreement, scenario analysis results and insights, Origin's capital allocation framework, climate change governance and our approach to the just transition.

Our net zero ambition and emissions reduction targets

We have set new short and medium-term targets for increased emissions reduction across Origin, towards our long-term ambition to be net zero Scope 1, 2 and 3 emissions by 2050.

We believe our updated medium-term intensity target and our long-term ambition are consistent with the goals of the Paris Agreement, to limit the increase in

the average global temperature to 1.5°C above pre-industrial levels. Our Climate Transition Action Plan outlines the methodology and approach we used to set our targets.²⁰

²⁰ Origin has relied on data, analysis and methodologies prepared by the Intergovernmental Panel on Climate Change (IPCC), the International Energy Agency and the Science Based Targets initiative among others, in calculating its 1.5°C envelope and has not sought to verify those materials. Our approach to setting our medium-term emission intensity target for Scope 1, 2 and 3 was independently assured on a limited basis by EY for its alignment with a 1.5°C pathway envelope. EY's limited assurance statement is included in our Climate Transition Action Plan.

Our long-term ambition is to achieve net zero Scope 1, 2 and 3 emissions by 2050¹

Our targets to support our net zero ambition:

By 2023

8 mt

cumulative reduction in Scope 1 equity emissions between FY2021-FY2023, against FY2017 baseline

By 2030

40%

reduction in Scope 1, 2 and 3 equity emissions intensity against FY2019 baseline^{1,2,3}

By 2030

20 mt

reduction in absolute Scope 1, 2 and 3 equity emissions against FY2019 baseline^{1,2}

- ¹ Covers all material Scope 1, 2 and 3 emissions.
- ² Excluded from these targets are the potential future emissions from any development of new gas fields. This is because there has been no decision, nor are we close to a decision, to produce those gas resources. However, any development would only occur where it was consistent with our net zero emissions by 2050 ambition.
- ³ Subject to limited assurance by EY.

Performance against existing targets

For the FY2022 reporting period, our medium-term emissions reduction targets were to:

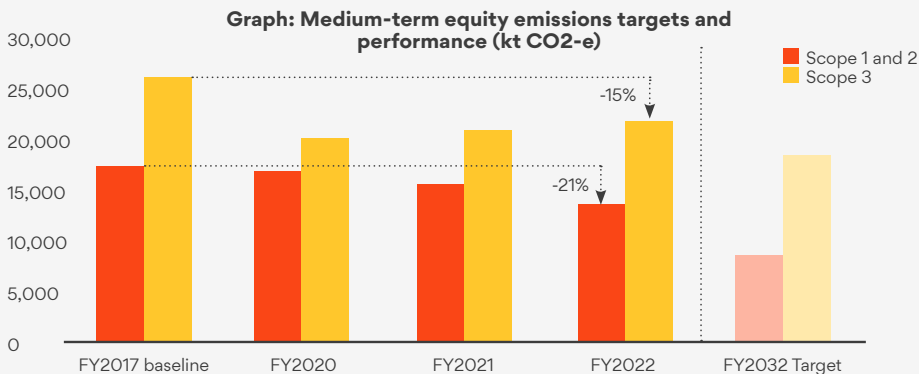
- reduce Scope 1 and Scope 2 equity emissions by 50 per cent by 2032, from our FY2017 baseline; and
- reduce Scope 3 equity emissions by 25 per cent by 2032 from our FY2017 baseline.²¹

Our performance against these targets is shown below.

In 2020, we introduced a short-term target to reduce our Scope 1 equity emissions by an annual average of 10 per cent between FY2021 and FY2023, compared to our FY2017 baseline. The target was set over a period of three years.

We have achieved the absolute emission reductions planned over the three years within the first two years. In FY2022, Scope 1 equity emissions declined by 22 per cent against the FY2017 baseline. Scope 1 equity emissions have declined by an average of 16 per cent over FY2021-FY2022 against our FY2017 baseline, or a cumulative reduction of 5.6 million tonnes.

We have set a new short-term target to reduce Scope 1 equity emissions by a cumulative 8 million tonnes CO₂-e between FY2021-FY2023, against the FY2017 baseline.²²



²¹ Our SBTi-approved Scope 3 target covered a minimum two-thirds of our total Scope 3 equity emissions in the baseline. It covered all supply chain emissions incurred within the domestic market, including the electricity and gas that our Energy Markets business sells to customers and the Origin equity gas Australia Pacific LNG sells to domestic customers. It did not include Australia Pacific LNG's LNG exports.

²² Our short-term target continues to use our original 2017 SBTi base year as the target was set two years ago, prior to our new base year decision, and was designed to run consecutively over a three year period. We note that this is the only target with a 2017 baseline.

Our strategy to transition to net zero

We are focusing our decarbonisation efforts in three key areas aligned to our strategy. We plan to:

- **Reduce** emissions from our existing operations
- **Grow** our portfolio of renewables and cleaner energy
- **Enable** customers to decarbonise



Reduce emissions of our existing operations

Accelerate the exit from coal-fired generation

In February 2022, we announced plans to accelerate our exit from coal-fired power generation at Eraring Power Station, potentially as early as August 2025. Bringing forward our exit from coal-fired power generation is the most significant step we have taken towards achieving our emissions targets.

In FY2022, Scope 1 emissions from Eraring were 10.7 million tonnes CO₂-e.

Reduce emissions from our gas operations

We continue to target a reduction in absolute operational methane emissions over the next three years. We aim to drive emissions reductions through replacing equipment and devices with more efficient and advanced technologies, retrofitting facilities to reduce methane venting, and further reducing flaring using targeted planning and the implementation of artificial intelligence tools to minimise flaring during planned shutdown and maintenance events.

In our LPG business, we are lowering our carbon emissions with three new LPG-powered carrier ships for transporting LPG along Australia's eastern seaboard. These are the first ships of this size in the world to be powered by LPG and generate around 20 per cent lower emissions compared to ships run on conventional marine fuel.

We are also working with our customers to decarbonise their businesses by switching to LPG. See our case study for more information.

Reducing our Scope 2

As a signatory to the We Mean Business global coalition, we committed to sourcing 100 per cent of energy from renewable sources for our office premises and, where possible, all other operations by 2050. To help achieve this, we have a program to identify opportunities to run our sites on renewable energy. In FY2022, we completed installation of around 180 kW of solar across our Mortlake and Quarantine power stations, bringing the total combined capacity across 17 sites to over 700 kW.



Case study

Decarbonising business operations with LPG

We are working to decarbonise our business operations and helping our customers to do the same by replacing other fuel sources with LPG.

Eraring and the energy transition



In February 2022, we announced plans to accelerate our exit from coal-fired power generation, submitting notice to AEMO to retire Eraring Power Station, potentially as early as August 2025 (previously 2032). The closure timing of all four units will be determined closer to 2025.

This decision reflects the rapidly changing conditions in the NEM, which is increasingly unsuited to traditional baseload power stations, challenging their viability. In the years since 2013, when Origin acquired Eraring from the NSW Government, a significant amount of renewable energy has entered the electricity market, with renewable generation output nearly doubling from 34.7 GWh in 2013 to 63 GWh in 2021.²¹

The growth of grid-scale roof top solar and wind generation has placed pressure on the economics of coal-fired power stations like Eraring, particularly during the middle of the day when lower cost, renewable generated energy is generally plentiful.

Bringing forward our exit from coal-fired power generation is the most significant step we have taken towards achieving our emissions targets.

Exiting coal, not Eraring

With an overall generating capacity of 2,922 MW, Eraring has helped meet nearly a quarter of NSW's energy needs since operations began in the 1980s. But while coal-fired generation at Eraring will cease, we intend to find new ways to use the site to help support the market's continued transition to renewables.

The Eraring site is ideally suited to future electricity generation and storage options.

It has significant grid connection and ancillary infrastructure already in place. We are well advanced in our plans to install a grid-scale storage battery, securing the NSW Government's approval for a battery at the site in May 2022. It will have an overall capacity of up to 700 MW and a dispatch duration of four hours, making it Australia's largest battery project to receive planning approval to date.

The Eraring battery is part of our broader plan to bring online additional renewable and storage capacity in Australia. This includes the potential expansion of our Shoalhaven pumped hydro scheme and around 1,600 MW of renewable energy development projects to date. Combined with the growth in our virtual power plant, these actions, when delivered, will help replace the capacity from Eraring with low emissions energy sources.

Supporting our people

While bringing forward the closure of coal-fired power generation at Eraring does not immediately change its operation, we recognise the importance of moving quickly to support site employees during the initial phase of the transition.

We have established a program for supporting our employees throughout Eraring's transition to provide them with ongoing learning, career and wellbeing support, as well as up-to-date information, resources and events. In FY2022, this included engaging a specialist local career consultancy to conduct one-on-one career conversations with Eraring employees to identify their personal and career ambitions, potential reskilling and/or upskilling needed to achieve those goals, and to develop a detailed people transition plan. We supported employees to prepare for their one-on-one career conversations, with general and tailored superannuation information workshops,

the opportunity to seek independent financial advice, and a series of on-line webinars and career workshops.

The career conversations have been offered to all affected employees, and, as at the end of June 2022, we had held one-on-one conversations with 92 per cent of impacted employees.

A Transition Consultation Committee has been set up with employee, union, and site leader representatives. We are providing regular transition and consultation updates to all Eraring employees, including fortnightly updates with details on employee consultation, transition planning and the support available. We also currently share updates on Eraring transition activities to employees, contractors, unions and government officials.

Engaging with the community

We have begun initial consultations with community groups and representatives, including the Eraring Power Station Community Forum, Lake Macquarie City Council, the local member of the NSW Parliament, the Eraring Residents' Association and Eraring's Community Consultative Committee. Our initial engagement with these key community and government stakeholder groups indicates their areas of focus include how we will:

- support employees, contractors and suppliers who may be impacted by the closure;
- repurpose the site and what other uses might be envisaged; and
- approach site rehabilitation, including the ash dam.

We continue to work towards a full community engagement strategy for Eraring that will be informed by community feedback.

To date, we have pledged to continue with our community commitments, sponsorships and donations, and established a community fund with \$5 million committed between now and 2032.

Environmental management

Origin remains committed to responsibly managing our operations and minimising our impact on the environment, which includes maintaining our existing environmental controls.

We have a restoration and rehabilitation provision of \$221 million in place for the Eraring site. This will be reviewed regularly and is expected to be incurred over several years after any closure, with the timing dependent, in part, on a potential battery investment, other generation and storage options, and the ongoing management and rehabilitation of Eraring's ash dam.

21 Clean Energy Report 2013 and 2021





Grow our supply portfolio of cleaner energy

Renewables and storage

We are aiming to grow renewable and storage capacity within our generation portfolio to 4 GW by 2030. We are pursuing a range of opportunities at varying stages of development, with a focus on large-scale solar and wind and batteries. Our most advanced project is the Eraring battery.

To date, we have secured around 1,600 MW of solar farm development projects. In April 2022, we acquired the Yarrabee Solar Farm development project located in the Riverina district in south west NSW. The first stage is expected to include 450 MW of solar generation, with the potential for up to 900 MW.

We also acquired the Carisbrook Solar Farm, a 74 MW solar development project located in central Victoria. Carisbrook has planning approval and connection agreements in place.

Future fuels

Origin expects green hydrogen to play an important role in the future global energy mix, particularly in hard-to-abate sectors such as heavy industry and maritime transport. We are exploring both domestic and export market opportunities for green hydrogen and ammonia through a number of projects.

In FY2022, we partnered with Orica to assess the potential of a 'Hunter Valley Hydrogen Hub' green hydrogen production facility and associated value chain. The hub would produce green hydrogen from sustainably sourced water and renewable electricity from Origin's portfolio, using a grid-connected 55 MW electrolyser. Produced hydrogen could fuel trucking and passenger bus operations in the Hunter Valley, Central Coast and Greater Sydney regions. We have received a \$41 million grant under the Australian Government's Clean Hydrogen Industrial Hubs Program to support the project.

We submitted a report to the Tasmanian Government into the feasibility of our concept for a large-scale green hydrogen and ammonia plant at Bell Bay in FY2022. We successfully secured an additional \$3 million from the government to continue working on the concept.

We also secured \$1.2 million to continue working on a joint initiative with the Japanese energy company ENEOS to conduct further feasibility studies into providing an affordable and stable supply of green hydrogen to Japan. The project could result in a clean hydrogen hub being established in Gladstone.



Enable customers to decarbonise

We are providing customers with a growing portfolio of simple, affordable low-carbon products and cleaner energy solutions. Today, this includes rooftop solar and batteries, renewable and carbon-neutral energy, EV solutions, renewable power purchase agreements (PPAs), and load and demand management. We are also developing a suite of future energy customer offerings, including green hydrogen and ammonia, and carbon management solutions.

See [Customers](#) for more information on our FY2022 activities.

Climate policy engagement

Origin works constructively with governments and industry associations to advocate for a sound climate change policy that is consistent with the goals of the Paris Agreement.

During FY2022 we advocated for energy policy that supports private investment as we transition to net zero emissions by 2050. This includes backing of the NEM 2025 reforms, gas policy that supports the transition here and overseas, and climate change policy that supports growth in renewables, EVs, and hydrogen.

We review our industry association memberships for policy alignment, and cost and benefits annually. In FY2022, our review found we were aligned on climate change positions, including strong commitments to the Paris Agreement and net zero emissions by 2050. The Australian Energy Council and the Business Council of Australia have also strengthened their interim climate change targets, which are now more ambitious than both major federal political parties.

For more information, see our [Industry Association Review](#).

Supporting a just energy transition

We unequivocally support the Paris Agreement, which recognises the importance of a just transition.

We recognise that we have a responsibility to manage the impact of our path through the energy transition in a way that minimises adverse outcomes for those impacted and promotes the opportunities that will come from the energy transition.

Aligning to our purpose and taking into consideration feedback we have received following the announcement to accelerate Eraring's closure, in FY2022 we developed a set of overarching principles to support a just energy transition. These principles will guide us as we work with our stakeholders to develop a tailored approach for priority areas and assets, build partnerships and develop the skills for the future energy system.

Refer to our [Climate Transition Action Plan](#) for more details on our approach to a just transition.

Principles for a just energy transition

Customers



We will provide low-carbon solutions to support our customers' transition and strive to provide affordable and reliable energy through the energy transition, while supporting the most vulnerable customers with access to energy.

Communities



We will promote opportunities to create economic value and development by engaging with local communities, Traditional Owners, governments and our value chain on the energy transition.

Our people

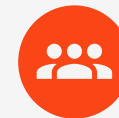


We will support our people through the energy transition, providing career planning and upskilling, and seeking redeployment opportunities for those whose roles are directly affected by the transition.

Planet



We aim to lead the energy transition and will take actions to preserve biodiversity and restore the environment.



Open, inclusive and transparent engagement

We will develop and act on a tailored approach through inclusive, open, informed and ongoing consultation with our stakeholders, including advocating for policies and regulation to support a just transition.

Creating sustainable value for shareholders and stakeholders

Greenhouse gas emissions

We report our greenhouse gas emissions on both an equity and operational control basis.

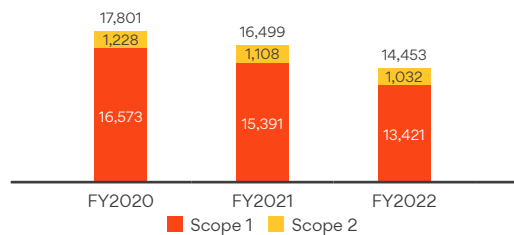
Emissions reported on an equity basis captures the emissions relating to the assets we own, including our generation fleet, and our share of Australia Pacific LNG, which includes the downstream operations and non-operated areas. Our share of Australia Pacific LNG was 37.5 per cent up to 18 February 2022, after which it was 27.5 per cent following completion of Origin's sale of a 10 per cent stake.

Our operational control emissions are those from our operated assets (our generation fleet and 100 per cent of the upstream operations at Australia Pacific LNG).

Scope 1 and Scope 2 emissions

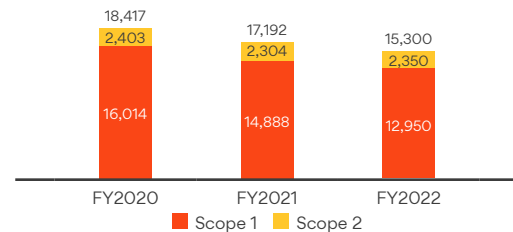
Our total Scope 1 and Scope 2 equity emissions were 14,453 kt CO₂-e, down by 12 per cent compared to FY2021. Our Scope 1 equity emissions declined by 13 per cent year-on-year reflecting lower output from Eraring. Scope 2 equity emissions declined by 7 per cent due to the decrease in our equity share of Australia Pacific LNG.

GHG emissions by Scope (kt CO₂-e)
– equity basis



Our total Scope 1 and Scope 2 operational control emissions were 15,300 kt CO₂-e down by 11 per cent compared to FY2021 emissions.

GHG emissions by Scope (kt CO₂-e)
– operational control basis

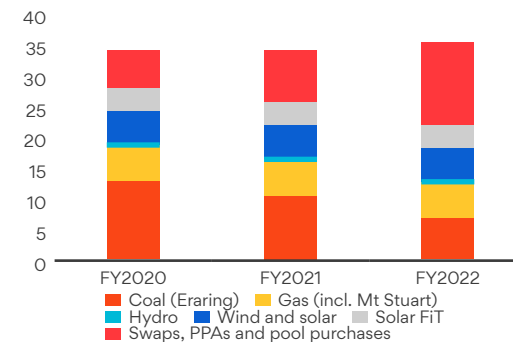


Energy Markets

On an operational control basis, Energy Markets' Scope 1 and Scope 2 emissions were 12,346 kt CO₂-e in FY2022, a 14 per cent decrease on the previous year. This decrease is principally due to a 16 per cent decline in generation output from Eraring, largely owing to coal supply constraints.

The amount of generation sourced from our customers' renewable PPAs and solar feed-in tariffs ('solar FiTs') has grown to 5.5 terawatt hours (TWh) combined, or 15 per cent of our total electricity procurement.

Origin's electricity sources (TWh)

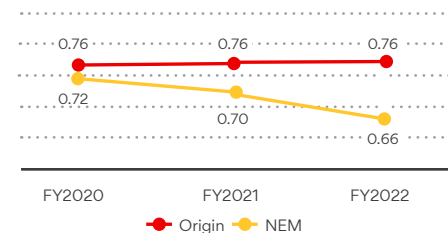


Emissions intensity – Energy Markets

Our Scope 1 and Scope 2 emissions intensity for power generation,²³ including contracted renewables, was steady at 0.71 tonnes of CO₂-e per MWh in FY2022.

To enable a valid comparison of our performance against the NEM, where intensities consist of Scope 1 and Scope 3 emissions, we also report our emissions intensity in this format. The emissions intensity of our electricity generation portfolio, including contracted renewables, was maintained at 0.76 tonnes of CO₂-e per MWh in FY2022 for Scope 1 and Scope 3 emissions, which was higher than the NEM average.

Average emissions intensity of the NEM versus Origin
(tonnes CO₂-e per MWh, Scope 1 and Scope 3)



The NEM continues to decarbonise. It is moving rapidly from a centralised system of large coal and gas generation towards a mixture of smaller scale, widely dispersed wind and solar generators, and grid-scale batteries, with consumers having more control over how and when they use energy. During 2021, 2,086 MW of new large-scale wind and solar generation capacity was added to the NEM.

The emissions intensity of Eraring, calculated using Scope 1 emissions only, increased slightly to 0.96 tonnes of CO₂-e per MWh in FY2022, from 0.94 tonnes of CO₂-e per MWh in FY2021. The increase was mainly due to reduced output at Eraring, which is running at lower loads, as ramping units up and down results in less efficient output.

²³ Based on sent out generation, which is electricity that is sent from the station gate (revenue meter).



Integrated Gas

On an operational control basis, Integrated Gas produced total Scope 1 and Scope 2 emissions of 2,943 kt CO₂-e in FY2022, a three per cent increase on FY2021. In FY2022, the emission estimation reporting methods set out in the National Greenhouse and Energy Reporting (NGER) Measurement Determination, 2008 changed for some of our fugitive emission sources. The legislative amendment reclassified some emissions that were previously reported under venting as leakage and increased the default leakage factors for gas production and processing, causing an uplift in our reported Scope 1 emissions. The increase in Scope 1 emissions was partly offset by reductions in fuel consumption and flaring, and implementation of other emission reduction initiatives.

Emissions from flaring, venting and leaks

Emissions from flaring, venting and leaks are determined using a combination of estimation methods, including regulatory emission factors, metering and engineering calculations. Emissions totalled 351 kt CO₂-e in FY2022, or 3 per cent of our total Origin Scope 1 operated emissions.

Emissions from flaring are comprised mainly of CO₂-e, as most of the methane is combusted during the flaring process. Flaring is mainly associated with unplanned downtime at gas processing facilities and is also used during production testing of exploration wells. We introduced flaring in place of cold venting methane gas during live workovers of CSG wells in FY2022 to reduce emissions.

Through planning and implementation of gas field turn-down tools that use artificial intelligence, we have minimised flaring at our Australia Pacific LNG gas processing facilities during planned shutdown and maintenance events. This contributed to a 28 per cent reduction in emissions from flaring, compared to FY2021 and a 72 per cent decline since FY2019.

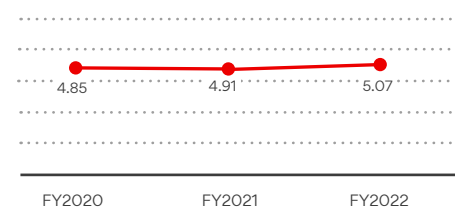
Emissions reported from venting and leaks, mostly methane, totalled 303 kt CO₂-e in FY2022, an increase of 31 per cent on FY2021. This increase was mainly due to the change in the NGER calculation methods described earlier.

Australia Pacific LNG's methane intensity in FY2022 was 0.10 per cent of metered gas sales. This is lower than the methane intensity ambition of the Oil and Gas Climate Initiative of well below 0.2 per cent by 2025.

Emissions intensity – Integrated Gas

The Scope 1 and Scope 2 emissions intensity of Integrated Gas on an operational control basis was 5.07 tonnes of CO₂-e per terajoule (TJ) of sales gas in FY2022, the uplift from FY2021 mainly due to the change in NGER calculation methods.

Integrated Gas emissions intensity (t CO₂-e/TJ)



Monitoring and studies

During the year we continued conducting the Picarro sniffer truck infrastructure survey and fugitive emissions research with the CSIRO. In addition to surveying our infrastructure for methane emissions, the sniffer truck was also deployed to monitor landscape emissions in future development fields, focusing on abandoned coal exploration holes. This enables us to identify and potentially remove any emission sources before development. As the upstream operator for Australia Pacific LNG, we are not responsible for the ongoing management of old coal industry exploration bores, however, we work with coal companies, landowners and government on a case-by-case basis to remediate them for environmental and safety reasons.

In FY2022, we supported the CSIRO in collecting methane emission measurements from our CSG processing facilities. The results of this fugitive emissions research will provide an independent Australian CSG data set that will inform emissions factors under the NGER legislative framework. We anticipate that the final report will be released in second half of 2022.

We continue to collaborate with CSIRO's Gas Industry Social and Environmental Research Alliance (GISERA) to establish independent evidence-based data on fugitive emissions levels during unconventional shale development activities.

Beetaloo

The Scope 1, 2 and 3 greenhouse gas emissions for the exploration and appraisal activities in the Beetaloo Basin for calendar year 2021 have been neutralised using Australian Carbon Credit Units. The carbon credits are sourced from an Indigenous carbon farming project in the NT, which provides significant community, cultural and biodiversity co-benefits. This activity has been independently verified carbon neutral, with 7,391 t CO₂-e carbon credits retired. Origin will continue to offset emissions from planned exploration and appraisal activities to June 2023 and obtain independent verification that these activities are carbon neutral.

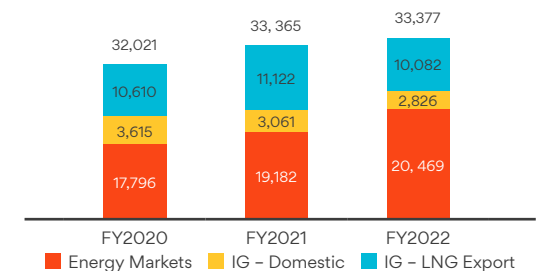
Scope 3 emissions

In FY2022, Energy Markets' Scope 3 emissions increased by 7 per cent. This was partly due to an increase in net electricity purchases from the NEM and external sources due to lower output from our owned and contracted generation, including Eraring.

Scope 3 emissions from Integrated Gas's domestic operations declined by 8 per cent due to the sale of a 10 per cent stake in Australia Pacific LNG in FY2022. This reduced our share of domestic gas sales.

Similarly, our estimated equity share of Scope 3 emissions from Australia Pacific LNG's LNG exports was down by 9 per cent to 10,082 kt CO₂-e reflecting the sale of our equity interest.

Scope 3 emissions¹
equity basis (kt CO₂-e)



¹ Reported Scope 3 GHG emissions exclude some of Origin's joint venture holdings. The exclusions have been applied to align with the approach adopted for our 2017 SBTi baseline, and to reflect sufficiently robust measurement approaches. As we look to revise our targets and reporting methodology, we will review inclusion of these sources moving forward.

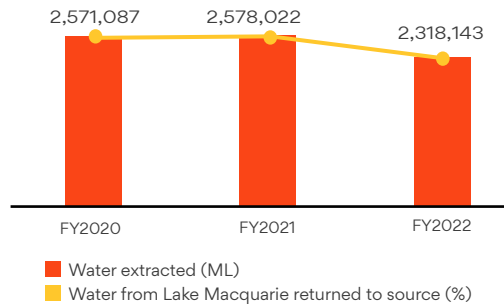
Water

We mainly use water for cooling while generating electricity, primarily at Eraring Power Station. We also extract water while developing natural gas at Australia Pacific LNG operations.

Energy Markets

Eraring draws salt water from Lake Macquarie as cooling water for its generating units. The water is returned to the lake after use in accordance with environmental requirements. This represents most of the water use in our Energy Markets business. Water is also used at our gas-fired power stations, which require much less water to operate than Eraring. We use water to generate electricity at our Shoalhaven pumped hydro station; however, this usage is excluded from our data as pumped storage is not considered a water withdrawal because the water circulates in a closed loop.

Eraring's water use (ML)



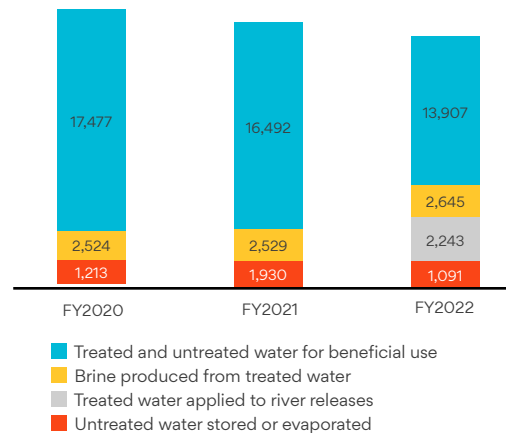
Australia Pacific LNG

Australia Pacific LNG's operations extract groundwater (CSG water) and gas from coal seams and small volumes of water from other sources like dams and bores for project use. In FY2022, we extracted 20,268 megalitres (ML) of water through Australia Pacific LNG's operations, of which 20,031 ML was from CSG production.

Each year, around 90 per cent of extracted CSG water is treated through reverse osmosis and made available for a number of beneficial uses. This includes crop irrigation and injection into aquifers to increase available groundwater. Treated CSG water directed for beneficial use must meet regulatory water quality criteria and requirements set out in environmental approvals. The remaining untreated CSG water is either used for project activities, stored awaiting treatment or lost through natural evaporation.

A total of 16,201 ML of treated water was available for beneficial use in FY2022 (with 1,185 ML stored or evaporated and 2,645 ML stored in ponds as brine). Due to prolonged wet weather reducing demand for treated water for irrigation purposes, 13,907 ML was applied to a beneficial use, and we released 2,243 ML from authorised release points.

Australia Pacific LNG's produced CSG water use (ML)



Aquifer injection

In FY2022, 2,453 ML was injected into the Great Artesian Basin's Precipice Sandstone aquifer at the Australia Pacific LNG Reedy Creek and Spring Gully assets. This represents 79 per cent of the water produced at the Reedy Creek and Combabula gas fields, and all of the produced water at Spring Gully gas fields in excess of what is directed to the crop irrigation scheme.

Water use across Origin's portfolio (ML)

	FY2020	FY2021	FY2022
Total water withdrawn	2,592,920	2,599,206	2,338,516
Energy Markets, of which:	2,571,219	2,578,109	2,318,242
» Water consumed	2,143	2,097	2,646
Integrated gas, of which:	21,680	21,093	20,268
» Fresh water consumed	434	72	237
» Produced CSG water, of which:	21,246	21,020	20,031
• Applied to beneficial use (treated and untreated)	17,477	16,492	13,907
Corporate	21	4	6
Total water consumed	23,843	23,194	22,920

Case study

Replenishing water supplies from gas production

Treated water from coal seam gas mining production in Queensland is being used to replenish groundwater supplies in the Great Artesian Basin, with more than 37 gigalitres of treated water injected into underground aquifers since the project began in 2015.



Since the project began in 2015, Origin has injected more than 37 gigalitres of treated water into the aquifer – the same volume as about 15,000 Olympic sized swimming pools. Groundwater decline has been observed in the Great Artesian Basin over the past 100 years as water has been withdrawn for town water use and to sustain pastoral and other industries and businesses. In FY2022, the Queensland Government's Groundwater Impact Assessment for the area found that groundwater levels in the aquifer have risen since the operational phase of the injection project began. Read more about the development of the scheme and its benefits in our [case study](#).

Regulatory compliance

During FY2021, we resolved two statutory clean up notices that we received as the upstream operator of Australia Pacific LNG.

These notices relate to losses of saline-impacted stormwater during a large storm event from two produced water tanks we were decommissioning.

We self-reported the incidents, remediated the sites to a standard where there was no residual risk of environmental harm, and adjusted procedures to reduce the potential for recurrence. The Queensland environmental regulator commenced related prosecutions in June 2021 and we received a penalty of \$60,000 in July 2022. Origin cooperated with the regulator throughout the matter.

Following a regulatory compliance audit undertaken in March 2021, the Queensland Government's Department of Environment and Science issued a penalty infringement notice to Origin as upstream operator of Australia Pacific LNG for alleged contraventions of conditions in relation to the requirement to establish and maintain a regulated dams register. The penalty infringement notice was accompanied by a fine of \$13,345.

Following an investigation into a loss of containment incident from a Pilot Pond leak detection tank in August 2020, the Department issued an environmental protection order in December 2021. We have been meeting the reinstatement and rehabilitation requirements by the required timeframes set out in the order.

Protecting groundwater resources

We seek to protect water resources in the natural environment and responsibly manage our water consumption, including mitigating any impacts on local water supplies.

Australia Pacific LNG

Within our gas operations, production wells are installed to extract gas from below water aquifers generally used by other users such as local landholders. As part of the installation process, and in accordance with regulation, steel casing is cemented into place to preclude aquifer interconnection during operations.

We continuously monitor for interconnection at our Australia Pacific LNG operations. It can be detected by observing changes in the groundwater levels of shallower aquifers surrounding the gas production well and in the quality of water pumped from the water well.

We hydraulically fractured 24 wells at our Australia Pacific LNG operations in FY2022. Hydraulic fracture stimulation is the process designed to release gas trapped in coal seams or dense shale rocks deep underground. There were no groundwater impact incidents caused by hydraulic fracturing at any of our operations in FY2022.

The Queensland Department of Environment and Science conducted a compliance audit of our hydraulic fracturing operation this year. As per the audit conducted on our operations in FY2021, the regulator identified no evidence of non-compliance with the environment authority or the *Environmental Protection Act (1994)* (Qld).

To date, we have installed 224 bores to monitor groundwater levels and water quality around our Australia Pacific LNG operations. We submit these results to the Queensland Government as part of its regional monitoring and management program.²⁴

Beetaloo Basin

Origin uses engineered barriers and controls as well as natural geological barriers to isolate and protect underground water sources at Beetaloo Basin. We design our wells to protect aquifers and we test controls before proceeding with work.

During FY2022, we completed a production test at the Kyalla 117 well, drilled a new vertical well on the Velkerri 76 lease pad, and completed a second production flow test at our Amungee NW1H well.

A groundwater monitoring program was established in 2014 to provide a baseline of the natural variability in water levels and water quality, and to assist in detecting any impacts associated with gas exploration activity in the Beetaloo Basin. This monitoring has found no evidence of any impact from our work to date. There are currently eight compliance monitoring bores in the program, however, in addition we routinely assess approximately 25 other landholder bores.

For more information on our approach, including the safeguards we have put in place to protect land and water in the Northern Territory, see our [Environment management approach](#).

24 See [Underground Water Impact Report for the Surat Cumulative Management Area](#).



▲ Water quality testing at Reedy Creek Water treatment facility where CSG water from the gas field is treated for beneficial use.

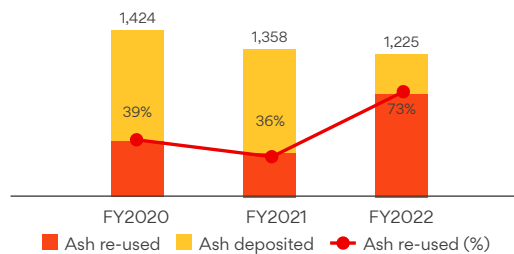
Waste

We are committed to effectively managing waste across our entire business. Our two most significant waste-generating activities are Earing and the upstream operations of Australia Pacific LNG.

Earing Power Station

The main by-product from burning coal at Earing is fly ash. The fly ash we produce has numerous applications across the industrial and construction sectors. We supply it to multiple customers for a range of end uses or deposit it in our ash dam adjacent to the power station. In FY2022, the amount of ash produced at Earing was down by almost 10 per cent due to lower output.

Ash produced, re-used and deposited at Earing (kilotonnes)



Earing ash dam

The Earing ash dam occupies around 250 hectares north of the main power station and is a critical part of operations of Earing.

Our Long Term Ash Management Strategy outlines our commitment to improve the efficiency of, and reduce environmental impacts associated with, the operation of Earing and the ash dam. We are committed to minimising the quantity of coal ash sent to the ash dam, consistent with the NSW Department of Planning and Environment's annual ash re-use goal of 80 per cent.

During FY2022, Earing's ash re-use rate was 73 per cent, up from 36 per cent in FY2021. We were on track to reach our 80 per cent target until May 2022, when our largest ash customer requested that we temporarily cease ash supply until it could resolve engineering issues at its site.

We are also actively engaging with key government and industry stakeholders to identify and facilitate new markets for ash products and re-use. In FY2022, we worked with the NSW Environment Protection Authority to amend approvals to maximise the potential for ash reuse, including for large government projects, such as Transport for NSW road projects.

To effectively manage the risk of dusting – when strong wind can carry ash from the dam – we have implemented a program of controls. These include installing dedicated water tanks, 200 misting sprayers, 20 mobile water cannons and five articulated water carts for spraying the ash to help with dust suppression. We have also capped and revegetated more than 80 hectares. We had no reportable dusting events in FY2022, despite significant winds during the December 2021 period.

Australia Pacific LNG brine management

The main waste product from Australia Pacific LNG's upstream operations is brine, which is stored in engineered ponds. The ponds are built to regulatory standards and inspected annually by certified engineers.

Each Australia Pacific LNG water treatment facility has multiple brine ponds. The total volume of stored brine at the end of FY2022 was around 7,130 ML. Australia Pacific LNG did not record any loss of containment events at the ponds.

In FY2022, we joined with the Queensland Government's Department of Environment and Science, community stakeholder groups, and other CSG companies to form a working group to investigate long-term management approaches for brine. The group contributed to a draft action plan that outlines key principles and actions for the management of brine. The plan promotes continued research and investigation into alternative options for brine management in keeping with the Queensland Government's policies and approach. We expect the Department to release the final Brine Management Action Plan in the second half of 2022.

Our current approach to brine management is outlined in our [Environment management approach](#).

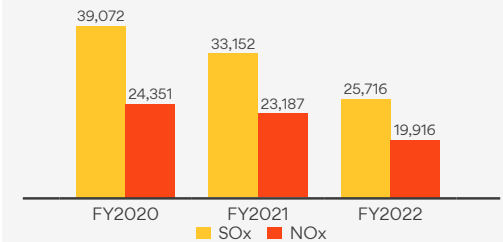
Air emissions

Our main air emissions are from generating electricity at our power stations and producing natural gas.

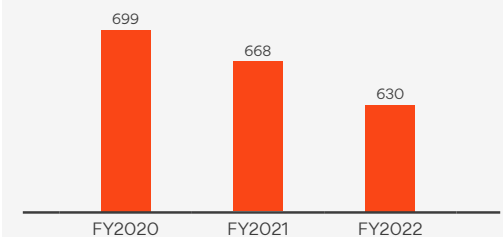
Electricity generation at Earing produces the majority of our nitrogen oxide (NOx), sulphur oxides (SOx), and particulate matter (PM) emissions. Our operations at Australia Pacific LNG produce most of the volatile organic compounds (VOCs).

Our total air emissions decreased in FY2022, mainly due to lower output at Earing during the year. Earing is one of the few coal generators in NSW that has low NOx burner technology installed, which reduces NOx emissions by 40 per cent per megawatt hour.

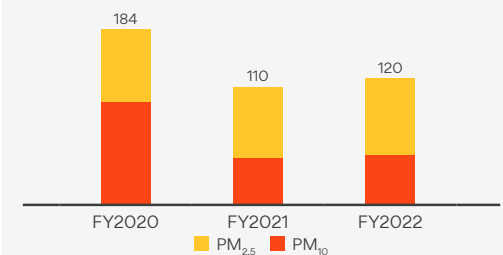
NOx and SOx emissions (tonnes)



VOC emissions (tonnes)



Particulate matter (tonnes)¹



¹ PM₁₀ includes Earing Power Station and Integrated Gas. PM_{2.5} is a subset of PM₁₀ from Earing Power Station only.



▲ We work with community groups such as the Miles District Fishing and Recreation Club to improve local biodiversity and develop effective management plans.

Biodiversity

We are committed to minimising the impacts of our activities on biodiversity in the areas where we operate.

We engage with local communities and biodiversity experts on ways to reduce our disturbance footprint. We also work with communities to restore and protect the local biodiversity through programs such as tree planting and fish restocking.

Australia Pacific LNG

The greatest footprint of our activities is in the Surat and Bowen basins in Queensland through our role as the upstream operator of Australia Pacific LNG. We conduct biodiversity assessments during the design phase of a project and then develop site construction plans that minimise and mitigate the impact of the project. These plans consider matters such as cultural heritage, landowner needs, erosion risk and constructability.

We also implement offset initiatives for projects where we cannot avoid having a significant impact on biodiversity. To date, we have secured more than 5,000 hectares of land for this purpose, either through a direct purchase or long-term lease agreements with landholders.

In FY2022, we identified a further 7,000 hectares of potential habitat for Matters of National Environmental Significance on Australia Pacific LNG owned land using a mix of desktop and field assessments. These areas have been set up as exclusion zones and will be used to provide additional offsets for future Australia Pacific LNG activities. The identified biodiversity values include habitat for koalas, greater gliders, Australian Painted Snipe and Yakka Skink as well as brigalow, coolibah and poplar box communities.

Our largest offset property is the 4,500-hectare Dukes Plain in central Queensland, which contains active grazing paddocks. To better understand the impact of cattle grazing, 171 hectares of cattle exclusion zones were established in FY2022, across various types of vegetation communities and habitat. These will enable us to identify impacts and effects of excluding cattle compared to control areas where grazing can occur.

Having identified the importance of recreational fishing to the local community and economy near Australia Pacific LNG operations in Miles, Queensland we established a multi-year partnership with the Miles District Fishing and Recreation Club in FY2022. It will support the development of waterway rehabilitation plans and improve biodiversity in the local waterways, working with the Queensland Department of Agriculture and Fisheries.

Rehabilitation

We seek to understand and protect any area we disturb, ensuring that it can be returned to its original condition, or better use, balancing the expectations of our landholder and community stakeholders, Traditional Owners, and commitments to regulators.

As upstream operator of Australia Pacific LNG, we undertake a rehabilitation monitoring program each year to assess the status of areas that have been rehabilitated following the conclusion of activity. We conduct a wide range of checks to protect the environment, including diversity of plant species growing, level of ground cover, the presence of weeds, and erosion damage. In FY2022, we conducted field surveys at 6,500 monitoring points. The information gathered informs maintenance requirements such as weed and erosion control and can help with decision-making around fencing and allowing cattle grazing by the landholder.

In FY2022, we successfully completed the decommissioning of our LPG Terminal in Port Botany in Sydney after 40 years of operations. This included removing 18 LPG tanks, each of which was around 38 metres long and able to hold 235 tonnes of gas. With a focus on recycling and reusing wherever possible, we recycled 30,000 tonnes of soil and 1,800 tonnes of steel, and stored much of the LPG equipment for reuse. The pipeline from ship to site is being repurposed by a site neighbour.

For more information see our [Environment management approach](#).

People and culture



We are continuing to embed a purpose-led and values-driven business, where all our people are motivated to be their best every day. We promote safety, health and wellbeing; foster diversity and an inclusive culture, and work to ensure we all act lawfully, honestly, ethically and with integrity.



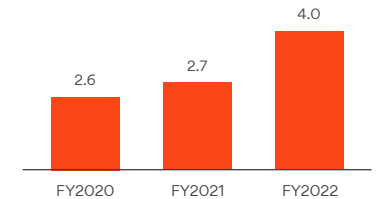
Performance at a glance

- Achieved a reduction in process safety Tier 1 and Tier 2 events to 2, from 11 in FY2021
- TRIFR increased to 4.0 from 2.7 in FY2021, due to a rise in the number of recordable injuries, although severity of injuries decreased
- Employee engagement score down 6 per cent to 68 per cent – remains 7 per cent above the Australia and New Zealand energy industry average
- Awarded 'Gold employer status' at the Australian LGBTQ Inclusion Awards
- Announced support for the Uluru Statement from the Heart

40.8%

female Senior Leaders, up from 34.6% in FY2021

Total Recordable Injury Frequency Rate (TRIFR)



UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs:



Management approach

Find out more about our approach to getting energy right for our people



People and culture



Health, safety and wellbeing

Safety, health and wellbeing

One of our values is caring about our impact – on each other, on the environment and on the communities in which we operate. We are committed to preventing fatalities and injuries and working to keep our people, environment and communities safe.

In FY2022, with COVID-19 lockdowns and travel restrictions continuing across many parts of Australia, we continued to comply with the evolving government requirements to protect our people, minimise the spread of the virus in our communities, and meet the needs of our customers.

Our COVID-19 response included extensive workplace health controls, such as requiring COVID-19 testing for personnel working in specific situations, a temporary COVID-19 Vaccination Policy and detailed social distancing and hygiene controls.

We also provided 10 days of pandemic leave, which has been accessed by over 2,000 employees since its inception in April 2020.

Our COVID-19 response also included support for employee and community vaccinations. In the Northern Territory, Origin provided support to regional healthcare workers in their roll-out of the territory's COVID-19 vaccination program for remote communities, including communications, supplies and logistical support to the Health Clinic. Following this, the communities of Elliott and Marlinja increased their double vaccination rate to approximately 95 per cent. We also supported our LPG shipping crews to access COVID-19 vaccines.

The safety of our people continued to be a core focus in FY2022. During recent floods on the Australian east coast, we used mapping tools to monitor flooding to help ensure employee safety and manage any plant-related risks. We restricted employee travel in flood affected areas and offered special leave to employees not able to work due to the floods. Origin also closely monitors the civil environment in the regions in which we operate to ensure employee safety. Civil unrest in the Solomon Islands last year prompted us to close the Origin LPG terminal and retail locations temporarily, as well as use police escorts to maintain deliveries to key locations such as hospitals.

Employee health and wellbeing

With many of our employees experiencing prolonged pandemic related lockdowns in FY2022, our online Health and Wellbeing Hub provided a schedule of events covering topics such as managing anxiety and stress, supporting teams through lockdown and returning to work. We also conducted a number of mental health and wellbeing check-ins and partnered with one of Australia's leading health and fitness experts to offer a free fitness and nutrition program to all employees.

Mental health awareness training is available to people leaders to help them recognise warning signs of mental health issues in team members and where to find support. We improved escalation processes and provided guidance materials to assist people managers.

In FY2022, more than 100 employee volunteers received training through our peer support program to help them support work colleagues experiencing work-related or personal difficulties. These volunteers provide confidential, informal, short-term assistance, such as referring colleagues to appropriate sources of help, resources, or other specialist services in our employee assistance program.

Life Saving Controls

In FY2022, we completed the roll out of our Life Saving Controls program at operational sites across Origin. With a focus on continuous learning, the program empowers leaders and supervisors to test our critical controls using a consistent set of verification questions, and to have safety conversations with their teams on the ground.

In FY2022, we completed more than 5,500 Life Saving Control verification activities, with activities related to road transport, working at heights and falling objects representing the highest risk.

Board site visits

Members of the Origin Board regularly undertake site visits to observe safety standards and operational procedures. Board directors also regularly undertake HSE-specific site visits, which provide an opportunity for a two-way discussion on safety and highlight the importance to the Board of safe operations and the wellbeing of our people.

Due to ongoing COVID-19 restrictions, site visits were conducted virtually except for the visit to Eraring Power Station.

Reedy Creek, Combabula and Peat Asset, Queensland

In September 2021, Chairman of the Safety and Sustainability Committee Maxine Brenner and Directors Mick McCormack and Steve Sargent attended a SiteRep meeting to review the latest incidents, hazards identification, and corrective actions taken. They also attended a virtual familiarisation site trip of the water treatment facility. The directors also met with the facilities team and were provided with an asset overview presentation of Reedy Creek.

Bulwer Island LPG Terminal, Queensland

In November 2021, Maxine Brenner attended a virtual walk-around of the terminal, which provided her with insight into operational functions across the storage and cylinder terminals. Ms Brenner met members of the team and was briefed on key HSE issues, performance and Life Saving Controls.

Osborne Legacy Gasworks Sites, South Australia

In December 2021, Chairman Scott Perkins and Maxine Brenner participated in a virtual site tour with focus on remediated boundary areas, proximity to water and residential areas, the state of overlaying vegetation, and surface debris.

Eraring Power Station, New South Wales

In June 2022, Maxine Brenner, Mick McCormack and Bruce Morgan met with senior plant managers at Eraring Power Station and discussed the response of staff, contractors and the community to the accelerated closure of Eraring. Other key areas of focus included construction options for the ash dam stability works and options being explored for repurposing the site post retirement from coal.



▲ Origin Board Directors at Eraring Power Station.

HSE performance

Origin aims to prevent harm to people and the environment as a result of our business activities. We use several performance indicators across the company to measure and manage our performance. These include Actual serious incidents, which aims to prevent harm to people and the environment, and Learning incidents, which aims to prevent Actual serious incidents by encouraging learning from incidents that have the potential to cause harm.

In FY2022, we recorded five Actual serious incidents – all were injuries to people, none of which included a fatality, and identified 36 opportunities to share the learnings from HSE incidents.

We continue to measure our Total Recordable Injury Frequency Rate (TRIFR), which measures the number of company-wide work-related recordable injuries per million hours worked for employees and contractors.

This year, our TRIFR increased to 4.0 compared to 2.7 in FY2021. This is because while the number of hours worked fell, the number of recordable injuries sustained by our workforce rose to 50, compared to 35 in the prior year. The increase in injuries occurred during a major change activity in our Integrated Gas business, the Eraring Power Station outage, and additional work completed that was rescheduled as a result of the COVID-19 pandemic. We will work with our contracting partners to review the increase in recordable injuries and look to improve our performance. While the number of recordable injuries has increased, the severity of injuries has decreased compared with previous years.

As a member of the Safer Together industry initiative, we have continued our work to support employees to become safer leaders. In FY2022, this included developing learning tools to help leaders implement effective incident investigation processes, and training to enable effective safety conversations on site.

Process safety

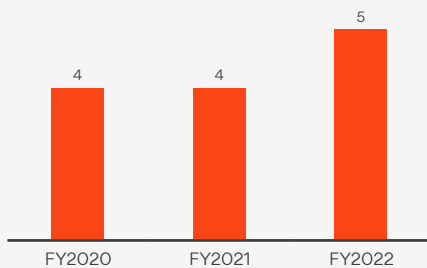
In FY2022, we experienced a significant improvement in our process safety performance with two Tier 2²⁵ process safety events, compared to 10 Tier 2 events in FY2021. There were no Tier 1 process safety events in FY2022. This result was supported by a range of activities focused on reducing risk, including increasing awareness of safety process management and building technical capability among teams, and improving discipline around reporting and preventative actions.

Case study

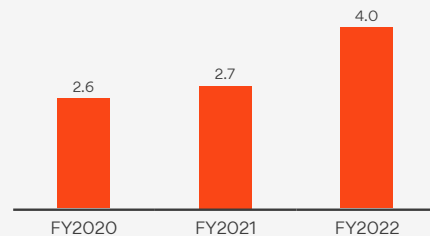
Eraring maintenance outage

At Eraring Power Station, a crucial maintenance outage was planned for one of the plant's four units ahead of the 2021 summer peak period to conduct inspections and any required repairs. This was a significant piece of work with worker safety being a central consideration. More than 2,600 safety observations were recorded, and 32,000 on-the-job safety checks completed.

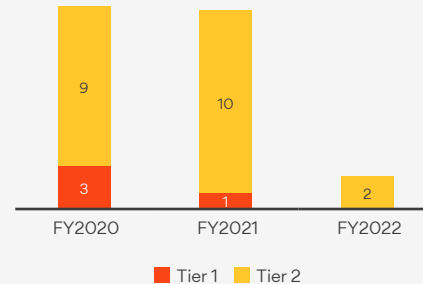
Actual serious incidents



Total Recordable Injury Frequency Rate (TRIFR)



Process safety events



²⁵ We use the International Association of Oil and Gas Producers (IOGP) definition of Tier 1 and Tier 2 process safety events, which can occur as a result of an unintentional release of chemicals, energy or materials to a volume threshold of a Tier 1 (greater consequence) or Tier 2 (lesser consequence). See iogp.org/bookstore/product/process-safety-recommended-practice-on-key-performance-indicators/ (pages 19-20).



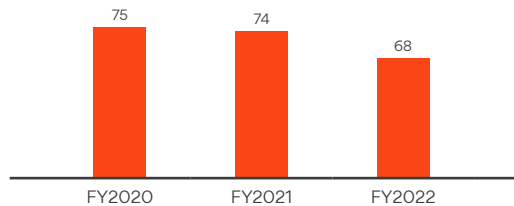
How we work

Employee engagement

We recognise that an engaged and high-performing workforce is essential for the success and growth of our business.

In FY2022, Origin's engagement score was 68 per cent, down 6 per cent from last year but remaining 7 per cent higher than Origin's 2019 (pre-COVID-19) score of 61 per cent, and 7 per cent above the Australia and New Zealand energy industry average. Around 84 per cent of our employees participated in the annual engagement survey.

Employee engagement score (%)



Learning and development

We provide a variety of learning opportunities for employees, including our dedicated online learning and development hub, LinkedIn Learning portal, and mentorship and leadership programs.

In FY2022, we concluded a 12-month pilot sponsorship program in which senior leaders supported talented employees looking to progress their careers. During the pilot, Origin supported two employees to start MBAs and promoted five others. All employees built their internal networks for future growth. The learnings from the pilot will guide the development of a future program.

Following feedback from employees that they would like to see more opportunities for career development, we launched Career@Origin in FY2022.

Led by employees and supported by managers, the program provides opportunities for learning, developing new skills, growing personal networks, and experiencing different parts of our business.

We have increased the visibility of career opportunities by creating new channels for our people to connect and share open roles and developed an internal recommendation campaign to help employees encourage their colleagues to apply. We have also held sessions with expert speakers on career development, provided tools and guidance for people to craft career stories that make an impact, and spotlighted career stories of employees at different levels.

Since launching Career@Origin, we saw a four-point lift in the area of 'career opportunities' in the 2022 employee engagement survey results. We also achieved an increased mobility rate, which measures the number of promotions, redeployment, secondments, transfers or higher duties employees took on, from 25 per cent to 34 per cent, and doubled the number of promotions from 3 per cent in FY2021 to 6 per cent in FY2022.

Working ethically

Our Code of Conduct builds on our purpose and values and sets standards that guide us in making the right choices when we act, solve problems and make decisions. Code of Conduct training is mandatory for all employees and contractors, with a 99 per cent completion rate in FY2022.

There were no reported incidents of bribery or corruption in FY2022.

For more information on how we work, including our approach to anti-bribery and corruption and how employees can escalate a concern, see our [People and culture management approach](#).



Inclusion

Inclusion at Origin means we strive to enable our employees to feel comfortable, safe, and able to bring their whole self to work every day.

Having a diverse workplace and diversity of thought allows us to embrace our differences, and be better at listening, learning, collaborating and making unbiased decisions. When we are inclusive, we innovate, solve problems and better serve the needs of our diverse customers. To help support this, we continue to build on our policies supporting gender equity, reconciliation, and our LGBTIQ+ colleagues.

At Origin, we encourage our people to call out behaviour that does not align with our intention of being a fair and inclusive workplace.

Gender diversity

In July 2021, we became a signatory to 40:40 Vision, an investor-led initiative targeting gender balance in executive leadership by 2030. The initiative identifies gender balance as having 40 per cent male, 40 per cent female and 20 per cent any gender representation at the senior level across the organisation. As part of the 40:40 Vision initiative, we are committed to

achieving and maintaining a minimum 40:40:20 gender balance across the Board and CEO Level-1 (CEO plus executive leadership that reports to CEO), and have extended that to also apply to CEO Level-2 (roles directly reporting to CEO Level-1), and Senior Leaders (captures the three reporting levels below CEO and includes roles with base salaries exceeding approximately \$200,000 per annum) by 2030.

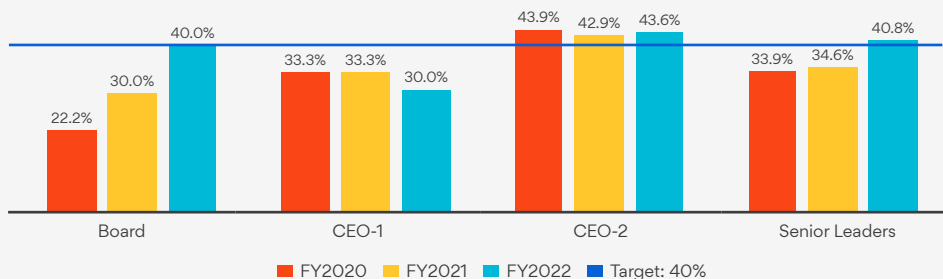
In FY2022, we achieved 40.8 per cent of women in the senior leaders cohort, up from 34.6 per cent in FY2021. Female Board representation also increased to 40 per cent from 30 per cent in FY2021.

Origin has continued to focus on delivering equal average pay for men and women at each job grade, with the overall differential within our policy tolerance of ± 1 percentage point in FY2022.

Read our [Corporate Governance Statement](#) for more information on our gender diversity targets.

We were ranked 38th globally and in the top 10 in Australia in Equileap's 2022 Gender Equality Global Report & Ranking, which assessed 4,000 companies worldwide across 19 criteria as part of its Gender Equality Scorecard.

Female representation within Origin (%)



Supporting with Pride

We are committed to creating an inclusive culture in which people of all genders, sexes and sexualities feel respected, included and understood.

The Pride@Origin Committee works to create a supportive, safe and inclusive workplace for our LGBTIQ+ communities.

It focuses on aligning us to the Australian Workplace Equality Index (AWEI), as our external benchmark. At the Australian LGBTQ Inclusion Awards 2022, run by Pride in Diversity, Origin was named an AWEI Gold Employer in recognition of the initiatives we have introduced to help champion our LGBTIQ+ communities and ensure we have the systems and processes in place to support diverse genders, sexes and sexualities. See our case study for more information.

In December 2021, Origin signed the Darlington Statement, a joint consensus statement by Australian and Aotearoa/New Zealand intersex organisations and independent advocates. It sets out the priorities of the intersex human rights movement in our countries. These are categorised as human rights and legal reform; health and wellbeing; peer support; allies; and education, awareness and employment. Intersex Human Rights Australia facilitated an awareness session with our employees to broaden their understanding of intersex people's experiences.

We installed all gender bathrooms in our Melbourne office in FY2022 to help ensure the comfort and safety of all employees and visitors. There are plans to introduce all gender toilets to other Origin offices over the next several years.

Case study

A gold award for Pride@Origin

Founded in December 2017 by Origin employees, our Pride@Origin Network has championed the right to feel safe - and celebrated - at work. This year their work was recognised when Origin was awarded 'Gold employer status' at the Australian LGBTQ Inclusion Awards.



Reconciliation

Origin acknowledges that Aboriginal and Torres Strait Islander cultures are the oldest surviving continuous cultures in the world, and we are committed to creating a culture of respect and inclusion across all parts of our organisation.

In FY2022, we announced our support for the Uluru Statement from the Heart. The statement is an invitation to all Australians from First Nations Australians, asking them to help build a better future by supporting the establishment of a First Nations Voice to Parliament enshrined in the Australian Constitution and to establish a Makarrata Commission for treaty making and truth-telling.

We completed our first Stretch Reconciliation Action Plan (Stretch RAP) in FY2022. Our Stretch RAP aligns with Reconciliation Australia's three pillars of relationships, respect and opportunities, and outlines how we plan to embed social change in our workplace.

We will launch our second Stretch RAP in FY2023, outlining and building on our achievements so far.

Building the cultural knowledge and capability of our employees was fundamental to our Stretch RAP. Our employee cultural awareness learning, built with the help of our Indigenous Employee Network, had a 98 per cent completion rate. This year we also partnered with Mirri, an Aboriginal-owned cultural awareness organisation, to extend cultural learning to our people leaders through workshops.

We continued our programs to support Indigenous employment, helping seven students in FY2022 through the Career Trackers 10x10 program, and seven traineeships. These programs, with the help of a dedicated Indigenous Recruitment Consultant at Origin, have seen us grow our Indigenous talent base, from 35 Aboriginal and Torres Strait Islander employees at the beginning of our Stretch RAP in FY2018 to 73 in FY2022.

Our Indigenous Employee Network continues to support Aboriginal and Torres Strait Islander employees to engage, discuss issues, share knowledge and provide peer-to-peer support. The network also helps drive our reconciliation activities. A survey of network members in November 2021 showed 96 per cent of respondents felt accepted by their team members and 92 per cent would speak positively about and recommend Origin to friends and family. Respondents cited career development and progression as key areas to improve. See our case study for more information on the achievements of the network.

Case study

Origin's Indigenous Employee Network

Our Indigenous Employee Network now has over 70 members helping to create a supportive and culturally safe space to work in.



▲ Mura Biri Gururu Aboriginal Dancers run a school-based cultural immersion activity as part of National Reconciliation Week in Chinchilla, Queensland, supported by Origin.



Our reporting



Our 2022 Sustainability Report outlines what we are doing to get energy right for our customers, communities and planet. We report on our performance in the financial year 2022, focusing on the material topics that matter most to our stakeholders.



Environmental, social and governance (ESG) ratings

Australian Council of Superannuation Investors

Comprehensive rating (category previously 'Leading') for disclosure of ESG risks and opportunities in 2009-2011, 2013-2022.

Carbon Disclosure Project

Origin has participated in the CDP climate change survey since 2006. The survey is conducted globally and reported in arrears.



Origin's 2021 CDP climate change performance score (covering FY2020) was 'A-', an improvement on our previous 'B'. We were also awarded an 'A-' for CDP's Supplier Engagement Rating, which assesses how effectively companies are engaging with suppliers on climate change.

In 2022, we participated in the climate change survey, which covers our performance during the FY2021 reporting period. These responses are expected to be available on the CDP website in late 2022.



FTSE4Good

2004-2022

FTSE Russell (the trading name of FTSE International Limited and Frank Russell Company) confirms that Origin Energy has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to become a constituent of the FTSE4Good Index Series.²⁶



MSCI

MSCI ESG's A rating

In 2021, Origin received a rating of A (on a scale of AAA-CCC) in the MSCI Ratings assessment.²⁷



Sustainalytics

In 2022, Origin's ESG Risk Rating was assessed by Sustainalytics at 34.0, within Sustainalytics' high-risk band for experiencing material financial impacts from ESG factors.

²⁶ Created by the global index provider FTSE Russell, the FTSE4Good Index Series is designed to measure the performance of companies demonstrating strong ESG practices. The FTSE4Good indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.

²⁷ The use by Origin Energy of any MSCI ESG Research LLC or its affiliates (MSCI) data, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement, recommendation, or promotion of Origin Energy by MSCI. MSCI services and data are the property of MSCI or its information providers, and are provided as-is and without warranty. MSCI names and logos are trademarks or service marks of MSCI.

Stakeholder engagement

We engage with our stakeholders in a variety of ways throughout the year to listen, learn and respond to their needs and expectations. Some examples of our stakeholder engagement in FY2022 include:

Stakeholder	Areas of interest	How we engaged
Shareholders	<ul style="list-style-type: none"> Sustainable earnings Identification and management of risks Climate change and GHG emissions Engagement with Traditional Owners Approach to a Just Transition Remuneration 	<ul style="list-style-type: none"> Held investor meetings, briefings and roadshows, including with members of the ELT and Board, on various matters, including climate change, engagement with Native Title holders in the Beetaloo, our approach to managing the closure of Eraring Power Station and executive remuneration Participated in various investor and broker conferences Responded to investor enquiries and undertook surveys to gather investor feedback Responded to sustainability-related information requests and participated in benchmark surveys Met with investor proxy advisors
Customers	<ul style="list-style-type: none"> Energy affordability Quality of our service Ease of interacting with Origin Climate change and emissions Lower-carbon energy solutions Energy reliability 	<ul style="list-style-type: none"> Provided support to customers affected by the COVID-19 pandemic and floods Received feedback on a range of projects in development from more than 4,500 customers through our Origin Exchange Customer Insights Community Research Panel Sought feedback from our Customer Advocacy Panel on a range of topics from digital services to residential renewables Asked our customers what mattered to them via our RepTrak™ survey, as part of ascertaining our Strategic NPS score, and after each interaction, which provides our Interaction NPS score
Communities	<ul style="list-style-type: none"> Impact on local communities Environmental management Land access and coexistence Sharing economic benefits Response to COVID-19 and natural disasters 	<ul style="list-style-type: none"> Engaged with landholders as upstream operator of Australia Pacific LNG, including negotiating 75 Conduct and Compensation Agreements, and Traditional Owners, including updates on work programs Communicated and engaged with Native Title holders as part of our Beetaloo Basin project, including meetings on Country and site inspections Began initial consultations with Eraring community groups and representatives following the announcement to bring forward the potential closure of Eraring Power Station Supported community partners through the Origin Energy Foundation, including more than 7,000 hours donated by Origin employee volunteers
Suppliers	<ul style="list-style-type: none"> Climate change and emissions Workforce health and safety Working ethically Business resilience Cyber security 	<ul style="list-style-type: none"> Supported small, emerging Indigenous businesses in partnership with Many Rivers through our Marketplace initiative Engaged with suppliers with high inherent modern slavery risk to identify gaps in risk controls and develop improvement actions Collaborated with suppliers to manage COVID-19 health risks at our workplaces and operating locations Promoted our upcoming tender opportunities with local chambers of commerce and continued to develop our database of local supplier capability
Our people	<ul style="list-style-type: none"> Climate change and emissions Our impact on communities Working ethically Resilience of our business Career and development opportunities 	<ul style="list-style-type: none"> Held virtual forums hosted by the Executive Leadership Team, with opportunities for employees to ask questions Conducted our annual engagement survey, to give employees the opportunity to provide feedback on culture and engagement and help shape their future working environment Shared information on how we are delivering on our purpose via various channels, including CEO emails and videos, posts on our internal social media platform, and live Q&A sessions with subject matter experts Sought employee feedback on communication related to the COVID-19 pandemic, health and wellbeing resources, and team engagement, to help inform ongoing support for employees
Government	<ul style="list-style-type: none"> Reliability of energy Affordability of energy Climate change and emissions Our engagement with Traditional Owners Our plans for our operations 	<ul style="list-style-type: none"> Advocated directly and through peak industry associations for sound policy outcomes on energy and climate policy Hosted key ministers and others in government to help them understand our assets and projects, including Traditional Owner engagement Met with governments, regulators and non-government organisations on topics such as the energy transition, the role of gas, and climate change action Participated in forums, workshops and conferences with government, non-government organisations, think tanks and others on the energy transition and challenges facing energy markets

Our material sustainability issues

We conduct a materiality assessment each year to determine the most important sustainability issues for our stakeholders and use the findings to guide our sustainability strategy, inform and prioritise our activities and ensure we have meaningful metrics against which to measure our performance. The analysis provides a basis for the structure and content of this report as well as the annual review of our management approaches.

Our materiality process

Our materiality process considers Origin's economic, environmental and social impacts and the consequences and risks associated with these, in consultation with our stakeholders.

1. Identify

We review the previous year's list of material topics and definitions, reflecting on peer material topics and sustainability challenges, media coverage of the industry, relevant ESG frameworks and standards (including GRI, SASB and TCFD), and any shifts in or updates to Origin's key risks, policies, strategies, goals and targets. Through this process we develop an updated list of sustainability issues relevant to Origin and our stakeholders.

2. Engage

Key to the materiality process is taking into account the interests and expectations of Origin's stakeholders, such as investors, banks, insurers, customers, local communities, employees, government, non-governmental organisations and suppliers.

We engage with our stakeholders on an ongoing basis through various channels, including face-to-face and virtual meetings, briefings, workshops, surveys, research and by responding to queries and concerns. (See Stakeholder engagement for details on our FY2022 engagement). The feedback we gather throughout the year informs our materiality assessment. As well, we survey key stakeholder groups, including employees, investors and customers, and ask them to rank our list of sustainability issues by importance to them.

4. Review

Our list of material topics is reviewed by our risk team, senior management and the Board.

The material topics in FY2022 did not change significantly from FY2021, however, we have redefined some of our material topics.

3. Assess and prioritise

The results of the surveys are assessed along with other stakeholder inputs, requiring consideration of competing views and priorities. In determining the final list of material issues, we consider the data with respect to what is important to Origin and how can we best contribute to sustainable development.

Through this process we identified 14 material topics as well as a number of important and emerging topics on which we also report.

2022 material topics

Customers

Affordability of energy
Customer experience
Lower-carbon customer solutions
Reliability of energy

Communities

Impacts to communities
Land access and coexistence
Rights and cultural heritage of Indigenous peoples

Planet

Climate change and greenhouse gas emissions
Biodiversity and ecosystem services
Water management
Waste management and resource efficiency

Our people and culture

Health and safety
Diversity and inclusion
Ethical business practices

Other important and emerging issues

Cyber security
Supporting vulnerable customers

Closure planning of sites/assets
Human rights
Responsible supply chain

Air emissions
Policy and regulation








Governance
Workforce training, development and engagement

United Nations Sustainable Development Goals (SDGs)

In 2015, the United Nations adopted the 17 Sustainable Development Goals (SDGs) to end poverty, protect the planet and ensure prosperity for all by 2030.

Our purpose of getting energy right for our customers, communities and planet is aligned with many of the SDGs. We have mapped the SDGs to the four sections of our report and outlined our aims and overarching approach in these areas. The table below maps some of the actions we have taken in FY2022 that support the SDGs.

SDG	Actions in FY2021 that support the SDGs	Location in sustainability reporting	SDG	Actions in FY2021 that support the SDGs	Location in sustainability reporting
 3 GOOD HEALTH AND WELL-BEING	<ul style="list-style-type: none"> Focused on learning from incidents and sharing insights with employees across our business and partner organisations. Continued our Pandemic Leave Policy to support our people, with up to 10 days paid leave available for employees who have been impacted by the pandemic, including for vaccination appointments (linked to SDG8). Achieved a reduction in process safety Tier 1 and Tier 2 events to 2 in FY2022, from 11 in FY2021. Supported LPG shipping crews through the challenges of the COVID-19 pandemic by facilitating access to adequate vaccines. Rolled out a set of Life Saving Controls at operational sites across Origin with a focus on continuous learning. 	<u>Safety, health and wellbeing</u>	 7 AFFORDABLE AND CLEAN ENERGY	<ul style="list-style-type: none"> Provided more than \$3.8 million in rewards to Origin Spike customers for reducing their energy use during peak periods, (linked to SDG 9 and 12). Close to 340,000 customers across our GreenPower, Green Gas, Green LPG and Origin Go Zero products, up from 260,000 in FY2021. Grew our Virtual Power Plant to 258 MW across 120,000 connected services. Installed 70 MW of solar. Supported access to energy through our Power On program. Continued our partnership with NSW Government to deliver the Solar for Low Income Housing program to provide, free of charge, 3 kW solar systems to low-income households (linked to SDG10). Advanced plans to install a grid scale storage battery at Eraring with an overall capacity of up to 700 MW and a dispatch duration of four hours, making it Australia's largest battery project to achieve planning approval to date. 1,600 MW of solar farms development projects secured in our portfolio. 	<u>Smart, connected and lower-carbon solutions</u> <u>Energy affordability and support for vulnerable customers</u> <u>Energy and climate change</u>
 4 QUALITY EDUCATION	<ul style="list-style-type: none"> The Origin Energy Foundation distributed over \$2.6 million to charity partners in FY2022. Continued to support the transition of Indigenous students to the workplace through our partnership with CareerTrackers, (linked to SDG10). Reached 5,300 students through our employee volunteering program. Donated solar lights to children living in energy poverty, working with the Origin Energy Foundation and its partner SolarBuddy. 	<u>Supporting communities</u> <u>Inclusion</u>	 8 DECENT WORK AND ECONOMIC GROWTH	<ul style="list-style-type: none"> Spent 20 per cent of our total direct and indirect spend with regional suppliers. (linked to SDG 10). Spent \$17 million directly and indirectly with Indigenous suppliers, up from \$10 million in 2021 (linked to SDG10). Supported regional apprentice schemes to build local workforce capacity through training and development. 	<u>Responsible procurement</u> <u>Supporting our communities</u>
 5 GENDER EQUALITY	<ul style="list-style-type: none"> Achieved 40.8 per cent of women in senior roles in FY2022 and continue to deliver equal average pay for men and women at each job grade (linked to SDG8). The Pride@Origin Committee worked to create a supporting, safe and inclusive workplace for our LGBTIQ+ communities, focussing on aligning Origin to the Australian Workplace Equality Index (AWEI) as our external benchmark (linked to SDG10). Ranked Top 10 in Australia in Equileap's 2022 Gender Equality Global report & Ranking. Awarded AWEI Gold Employer at the Australian LGBTQ Inclusion Awards 2021 run by Pride in Diversity. 	<u>Inclusion</u>			

SDG	Actions in FY2021 that support the SDGs	Location in sustainability reporting	SDG	Actions in FY2021 that support the SDGs	Location in sustainability reporting
	<ul style="list-style-type: none"> Installed 200 smart chargers in homes and businesses across NSW, Victoria, Queensland and South Australia as part of the ARENA trial (linked to SDG 7 and 13). Launched Origin Zero, a business unit dedicated to supporting large business customers their decarbonisation journey. Hosted two EV Drive Day events, with support from the NSW Government. Progressed our green hydrogen and renewable ammonia opportunities, including commencing a feasibility study in Bell Bay, Tasmania (linked to SDG 7 and 13). Held our annual Little Big Idea competition, which encourages creativity and innovation in students. 	<p><u>Smart, connected and lower-carbon solutions</u></p> <p><u>Energy and climate change</u></p> <p><u>Supporting communities</u></p>		<ul style="list-style-type: none"> Rolled out human rights awareness training to 98 per cent of our employees and contingent workers via our refreshed Code of Conduct. 	<p><u>Responsible procurement</u></p>
	<ul style="list-style-type: none"> Launched our cultural awareness learning framework to build awareness of Aboriginal and Torres Strait Islander cultures, histories and achievements. Completed our first Stretch RAP in FY2022, and will launch our second Stretch RAP in FY2023 (linked to SDG8). 73 Origin employees voluntarily self-identified as Aboriginal or Torres Strait Islander, an increase from 35 at the beginning of our Stretch RAP in FY2018. Announced our support for the Uluru Statement from the Heart and the establishment of a First Nations Voice to Parliament enshrined in the Australian Constitution and Makarrata Commission for the purpose of treaty making and truth-telling. 	<p><u>Inclusion</u></p>		<ul style="list-style-type: none"> The Origin Energy Foundation partnered with not-for-profit organisations to break the cycle of disadvantage and empower young Australians to reach their potential. Origin employees donated more than 7,000 hours to good causes through the Origin Energy Foundation. The Foundation, along with Paul Ramsay Foundation, funded Paying What it Takes, a report that examined the underfunding of Australian charities and called for a substantial shift in funding systems to ensure the long-term effectiveness of Australia's non-profit sector. The Foundation is partnering with SolarBuddy to provide affordable energy in the form of solar lights to children living in energy poverty globally (linked to SDG 4). Joined with the Queensland Government's Department of Environment and Science, community stakeholder groups, and other CSG industry companies to form a working group to investigate long-term management approaches for brine. Established a multi-year partnership with the Miles District Fishing and Recreation Club to support the development of waterway rehabilitation plans and improve biodiversity in the local waterways, working with the Queensland Government's Department of Agriculture and Fisheries. 	<p><u>Supporting communities</u></p> <p><u>Waste</u></p> <p><u>Biodiversity</u></p>
	<ul style="list-style-type: none"> Provided 13,907 ML of treated produced water for beneficial use. Launched an EV sharing service, 360 EV Share, for residents and tenants of apartments and commercial buildings to book and access an exclusive EV via a digital app, providing a seamless digital car-sharing experience (linked to SDG 7). Safely demolished site structures and recycled and re-used materials wherever possible with the decommissioning of our site at Port Botany. This includes removing 30,000 tonnes of soil for re-use, recycling more than 1,800 tonnes of steel, reuse of the ship line, and recovering 15 pallets of equipment for re-use as spares and for future projects. 	<p><u>Water</u></p> <p><u>Smart, connected and lower-carbon solutions</u></p> <p><u>Biodiversity</u></p>			
	<ul style="list-style-type: none"> Updated our emissions reduction targets and ambitions. Actively engaged in responsible engagement in climate policy. Announced the early closure of Eraring Power Station, potentially from August 2025. Introduced the Origin Solar Assessment Tool to help reduce the effort for prospective customers considering buying a solar energy solution. 	<p><u>Energy and climate change</u></p> <p><u>Smart, connected and lower-carbon solutions</u></p>			
	<ul style="list-style-type: none"> Worked with communities to restore and protect the local biodiversity through programs such as fish restocking in local waterways. Monitored and managed our biodiversity offset initiatives, including Duke's Plain in central Queensland. 	<p><u>Biodiversity</u></p>			

Key sustainability performance measures

The following table provides a five-year summary of our current key non-financial performance metrics.

Performance across these measures is considered as part of the Origin Board's 'underpin' review process to support long term remuneration decisions. Origin believes consistent strong performance in key ESG metrics is important to building sustainable shareholder value over the long term.

	FY2018	FY2019	FY2020	FY2021	FY2022
Customers					
Total customer accounts (electricity, gas, LPG and broadband) ('000)	4,178	4,199	4,233	4,266	4,458
Customer accounts across our GreenPower, Green Gas, Green LPG and Origin Go Zero products ('000)	152	135	118	260	338
Ombudsman complaints (per 1,000 customers)	2.8	2.7	2.7	1.9	1.5
Net Promoter Score – strategic ²⁸	(19.0)	(9.0)	3.0	4.0	5.0
Net Promoter Score – interaction	21.7	24.7	26.4	34.1	39.7
Reputation (RepTrak™ score)	63.6	63.3	66.0	67.7	66.9
Successful Power On payment plan completions ²⁹	42,107	48,659	33,102	35,336	11,352
Communities					
Community complaints received	86	12	14	3	5
Landholder complaints received	51	25	33	41	56
Regional procurement spend (%)	–	16	17	18	20
Foundation funds distributed (\$m)	2.4	2.4	3.2	3.0	2.6
Indigenous supplier spend (Stretch RAP target) (\$m)	–	3.3	5.5	10.2	17.0
Employee volunteering through the Origin Energy Foundation (hours)	8,002	9,153	6,758	8,466	7,112
Planet (climate change, environment)					
Scope 1 emissions (equity basis, kt CO ₂ -e) ²⁹	18,681	18,430	16,573	15,273	13,421
Scope 2 emissions (equity basis, kt CO ₂ -e)	1,028	1,188	1,228	1,108	1,032
Generation emissions intensity (owned and contracted) (tCO ₂ -e/MWh)	0.76	0.78	0.76	0.76	0.76
Integrated Gas emissions intensity (tCO ₂ -e/TJ)	5.17	5.10	4.85	4.91	5.07
Capacity of solar PV systems installed (MW)	43	48	61	74	70
Environmental consequence incidents	0	0	2	0	0
Fugitive emissions (flaring, leaks and venting) (ktCO ₂ -e) ²⁹	506	459	300	296	351
Ash re-used at Eraring (%)	30	35	39	36	73
Air emissions (NO _x , SO _x , VOC, PM ₁₀) (tonnes)	67,100	74,139	64,367	57,348	67,115
People					
Total Recordable Injury Frequency Rate (TRIFR) ³⁰	2.2	4.4	2.6	2.7	4.0
Actual serious (or above) incidents ³¹	–	9	4	4	5
Learning incidents ³²	–	38	69	52	36
Process safety incidents (Tier 1 and 2) ³³	12	8	12	11	2
Employee engagement score (%) ³⁴	61	61	75	74	68
Female representation (%)					
Board	25.0	22.2	22.2	30.0	40.0
CEO-1	20.0	25.0	33.3	33.3	30.0
CEO-2	33.8	40.6	43.9	42.9	43.6
Senior leaders	34.2	34.4	33.9	34.6	40.8
Indigenous representation (voluntarily self-identified)	35	41	46	70	73
Reported incidents of bribery or corruption ³⁵	0	1	0	0	0

28 12-month average at 30 June 30. Restated for FY2018-FY2021.

29 FY2022 data reflects changes in the emission estimation reporting methods set out in the National Greenhouse and Energy Reporting Measurement Determination, 2008.

30 Measures the number of company-wide work-related recordable injuries per million hours worked for employees and contractors.

31 Metric introduced in FY2019 and includes incidents rated with a rating as a Risk Consequence of 3-Serious Actual (or above) on the Origin Risk Matrix.

32 Metric introduced in FY2019 and includes incidents rated with a rating as a Risk Consequence of 4-Major Potential (or above) on the Origin Risk Matrix. Note: Excludes incidents already counted under the Actual Serious Consequence metric.

33 Include all incidents that resulted in Tier 1 or Tier 2 events as per the IOGP Process Safety Recommended Practice on Key Performance Indicators, Report No. 456. Disclosures for prior years only include Tier 1 and 2 events that resulted in an outcome of serious and above.

34 Kincentric's methodology.

35 FY2019 incident has been included in our reporting due to the broad definition of 'corruption' in the GRI Standards, that includes fraud, in this case fraud by an individual employee.

EY Assurance Statement



Independent Limited Assurance Statement to the Management and Directors of Origin Energy Limited

Our Conclusion:

Ernst & Young ('EY', 'we') have been engaged by Origin Energy Limited (Origin) to perform a limited assurance engagement, as defined by Australian Standards on Assurance Engagements, here after referred to as a 'review', over selected disclosures included in Origin's 2022 Sustainability Report and Performance data tables (the 'Report') for the year ended 30 June 2022. Based on our review, nothing has come to our attention that caused us to believe that the selected disclosures presented below have not been prepared and presented fairly, in all material aspects, in accordance with the criteria detailed below.

What our review covered

We reviewed selected sustainability disclosures, listed below, disclosed in the Report for the year ended 30 June 2022.

Selected disclosures	Value
Communities	
Community complaints received (#)	5
Planet	
Total Scope 1 emissions (operated) (ktCO ₂ -e)	12,950
Total Scope 2 emissions (operated) (ktCO ₂ -e)	2,350
Total Scope 1 emissions (equity) (ktCO ₂ -e)	13,421
Total Scope 2 emissions (equity) (ktCO ₂ -e)	1,032
Total Scope 3 emissions (equity) (ktCO ₂ -e)	33,377
Emissions intensity (Scope 1 and Scope 2 emissions per TJ, operational control) – Integrated Gas (tCO ₂ -e/TJ)	5.07
Emissions intensity (Scope 1 and Scope 3 emissions per MWh electricity sent to the grid, operational control) – Energy Markets (tCO ₂ -e/MWh)	0.76
Total volume of water withdrawn (ML)	2,338,516
Total volume of produced CSG water applied to beneficial use by Australia Pacific LNG (ML)	13,907
People and culture	
Female representation: Senior leaders (%)	40.8%

Criteria applied by Origin

In preparing the selected disclosures, Origin applied:

- ▶ National Greenhouse and Energy Reporting ('NGER') Act 2007, NGER Regulations 2008, and NGER (Measurement) Determination 2008
- ▶ Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard
- ▶ Sustainability Accounting Standards Board (SASB) Standards
- ▶ Global Reporting Initiative (GRI) Standards
- ▶ Origin's own publicly disclosed criteria as detailed in the Report.

Key responsibilities

EY's responsibilities

Our responsibility is to express a limited assurance conclusion on selected disclosures included in the Report based on the evidence we obtained. We were also responsible for maintaining our independence and confirm that we have met the requirements of the APES 110 Code of Ethics for Professional Accountants including independence and have the required competencies and experience to conduct this assurance engagement.

We conducted our review in accordance with the *Australian Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* ('ASAE 3000'), *Assurance Engagements on Greenhouse Gas Statements* ('ASAE 3410') and the terms of reference for this engagement as agreed with Origin on 6 May 2022.

Those standards require that we plan and perform our engagement to obtain limited assurance about whether, in all material respects, the Subject Matter is presented in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

EY Assurance Statement



We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

Origin's responsibilities

Origin's management ('Management') was responsible for selecting the Criteria, and for presenting the selected disclosures in accordance with that Criteria. This responsibility included establishing and maintaining internal controls, adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

EY's independence and quality control

We have maintained our independence and confirm that we have met the requirements of the *APES 110 Code of Ethics for Professional Accountants* including independence and have the required competencies and experience to conduct this assurance engagement.

Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of Management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the selected disclosures and related information, and applying analytical and other review procedures including:

- ▶ Conducting interviews with key personnel to understand Origin's process for collecting, collating and reporting the selected disclosures during the reporting period

- ▶ Checking that the Criteria has been reasonably applied in preparing the selected disclosures
- ▶ Checking the reasonableness of assumptions
- ▶ Inquiring of personnel to identify risks of underreporting and quality controls
- ▶ Undertaking data analytics to check the reasonableness of the data supporting disclosures, such as analysis of month-on-month changes in the consumption of various energy sources
- ▶ Performing recalculations of performance metrics to confirm quantities stated were replicable, such as performing a recalculation of greenhouse gas emissions using source data and the relevant emissions factor as defined by the Criteria
- ▶ Assessing evidence on a sample basis, such as selecting a sample of coal purchases and assessing whether the reported amounts aligned with the support provided
- ▶ Checking aggregation of selected disclosures and transcription to the Report
- ▶ Checking the appropriateness of the presentation relating to the selected disclosures in the Report.

Use of our Assurance Statement

We disclaim any assumption of responsibility for any reliance on this assurance statement, or on the selected disclosures to which it relates, to any persons other than the management and the Directors of Origin, or for any purpose other than that for which it was prepared. Our review included web-based information that was available via web links as of the date of this assurance statement. We provide no assurance over changes to the content of this web-based information after the date of this assurance statement.

Ernst & Young
Melbourne, Australia
25th August 2022

Meg Fricke
Partner

Glossary

Ash dam

A pond used for storing coal ash generated by burning coal in coal-fired power plants.

Cleaner energy

Includes solar, wind, hydro, green hydrogen, battery storage, bioenergy, and energy efficiency.

CO

Carbon monoxide.

CO₂

Carbon dioxide.

CO₂-e

Carbon dioxide equivalent (CO₂-e) is a measure for describing how much global warming potential a given type and amount of greenhouse gas may cause, using the functionally equivalent amount or concentration (CO₂) as the reference.

CSG

Coal seam gas. Natural gas contained within coal seams.

Electricity measures:

Watt (W)

A measure of power when one ampere of current flows under one volt of pressure.

Kilowatt (kW)

One kW = 1,000 watts.

Kilowatt hour (kWh)

Standard unit of electrical energy representing consumption of one kilowatt over one hour.

Megawatt (MW)

One MW = 1,000 kW or one million watts.

Megawatt hour (MWh)

One MWh = 1,000 kilowatt hours.

Gigawatt hour (GWh)

One GWh = 1,000 megawatt hours or one million kilowatt hours.

Terawatt hour (TWh)

One TWh = 1,000 gigawatt hours, or one million megawatt hours.

Flaring

A process to release gas by burning the methane in specially designed flares within infrastructure. Flaring converts methane to carbon dioxide, which is a less potent greenhouse gas than methane.

Fugitive emissions

Fugitive emissions are the gases that leak or are vented or flared while extracting, producing, processing, storing, transmitting or distributing certain fossil fuels. The Australian regulatory definition for fugitive emissions includes flaring but excludes landscape emissions.

Gas measures:

Joule (J)

Standard unit of measurement for energy.

Gigajoule (GJ)

One GJ = 10⁹ joules.

Terajoule (TJ)

One TJ = 10¹² joules.

Petajoule (PJ)

One PJ = 10¹⁵ joules.

GHG emissions

Greenhouse gas emissions mainly refers to carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons and perfluorocarbons.

GHG emissions intensity

The level of greenhouse gas emissions per unit of economic activity.

kt

One kilotonne = 1,000 tonnes.

Leaks

Gas can leak from infrastructure, particularly at pipe joints, valves and actuators.

LNG

Liquefied natural gas.

LPG

Liquefied petroleum gas.

National Electricity Market (NEM)

The wholesale electricity market for the electrically connected states and territories, with the exception of Western Australia and the Northern Territory.

NGERs

The National Greenhouse and Energy Reporting Act, 2007 introduced a single national framework for reporting and disseminating company information about greenhouse gas emissions, energy production and energy consumption.

NO_x

Nitrogen oxide.

PM_{2.5}

Particulate matter that is 2.5 micrometres or less in diameter.

PM₁₀

Particulate matter that is 10 micrometres or less in diameter.

Process safety event

An unplanned or uncontrolled Loss of Primary Containment (LOPC) of any material, including non-toxic and non-flammable materials from a process, or an undesired event or condition that under slightly different circumstances, could have resulted in LOPC.

Reverse osmosis

A process that uses a membrane under pressure to separate relatively pure water (or other solvent) from a less pure solution.

SBTi

The Science-Based Targets Initiative is an independent body made up of representatives from the World Resources Institute, the Carbon Disclosure Project, the World Wildlife Fund and the UN Global Compact.

SO_x

Sulphur oxide.

Scope 1 emissions

GHG emissions released to the atmosphere as a direct result of our activity. These are sometimes referred to as direct emissions; examples include electricity generation and gas production

Scope 2 emissions

GHG emissions resulting from purchased electricity that we consume to power our offices and operating sites.

Scope 3 emissions

Indirect GHG emissions, other than Scope 2, relating to our value chain that we do not own or control, including wholesale purchases of electricity from the NEM and the use of our sold products such as LNG and domestic gas sales.

Venting

The process that relieves pressure in the system, releasing gas to atmosphere.

VOC

Volatile organic compound.

Water measures:

Kilolitre (kL)

One kL = one thousand litres (1,000 L).

Megalitre (ML)

One ML = one million litres (1,000,000 L).

About our reporting

In this report a reference to 'Origin', 'Origin Energy', 'Group', 'Origin Group', 'Company', 'we', and 'our' is to Origin Energy Limited and its controlled entities and joint venture arrangements as outlined in our 2022 Annual Report.

Unless otherwise stated, Origin Energy's 2022 Sustainability Report provides a summary of Origin's performance on material social and environmental sustainability aspects for the period 1 July 2021 to 30 June 2022 (FY2022). It's scope is limited to the assets we operate (including those under exploration, projects in development or execution phases, sites and closed operations). The exception is emissions performance, which we report on both an operational control and equity basis, in line with regulatory and reporting norms.

Origin is the upstream operator of Australia Pacific LNG and 27.5 per cent shareholder.

Forward-looking information

This report contains forward looking statements, including, but not limited to: Origin's plans, strategies and objectives with respect to sustainability and generally; statements regarding trends in commodity prices and supply and demand for commodities; and statements regarding potential regulatory and policy developments.

Where this report contains forward-looking statements, including statements of current intention, statements of opinion and predictions as to possible future events and future financial prospects, these statements are not statements of fact and there can be no certainty of outcome in relation to the matters to which the statements relate. Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other important factors that could cause the actual outcomes to be materially different from the events or results expressed or implied by such statements, and the outcomes are not all within Origin's control.

The forward-looking statements in this report are based on management's current expectations and reflect judgements, assumptions, estimates and other the information available as at the date of report and/or the date of Origin's planning processes or scenario analysis processes. There are also inherent limitations with scenario analysis and it is difficult to predict which, if any, of the scenarios might eventuate. Scenarios do not constitute definitive outcomes or probabilities, and scenario analysis relies on assumptions that may or may not be, or prove to be, correct and may or may not eventuate. Scenarios may also be impacted by additional factors to the assumptions disclosed.

Except as required by applicable regulations or by law, Origin does not undertake any obligation to publicly update or review any forward-looking statements, whether as a result of new information or future events. Forward looking statements speak only as of the date of this report or the date planning process assumptions or scenario analysis assumptions were adopted, as relevant. Past performance cannot be relied on as a guide to future performance.

Approach to reporting

All monetary amounts are in Australian dollars unless otherwise stated.

We report our Scope 1 and Scope 2 emissions under the National Greenhouse and Energy Reporting Act, 2007 (NGER). We calculate Scope 3 emissions based on the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard and Scope 3 guidance documents.³⁶

Due to the inherent uncertainty and limitations in measuring emissions under the calculation methodologies used in the preparation of such data, all emissions data or references to emissions volumes (including ratios or percentages) in this report are estimates. Where data is not available due to timing, we apply a reasonable estimation methodology. Where applicable, we revise prior year data in the Sustainability Report to update prior estimates and align with external reporting requirements such as NGER.

36 ghgprotocol.org/standards/scope-3-standard

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Further information about Origin's performance can be found on our website:

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