

To	Company Announcements Office	Facsimile	1300 135 638
Company	ASX Limited	Date	17 August 2023
From	Helen Hardy	Pages	52
Subject	Sustainability Report		

Please find attached a release on the above subject.

Authorised for lodgement by:



Helen Hardy
Company Secretary
02 8345 5000

Creating sustainable value

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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.

- [2023 Annual Report](#)
Details our financial and operating performance.
- [2023 Corporate Governance Statement](#)
Summarises our corporate governance practices.
- 2023 Sustainability Report
Details our sustainability performance.
- [Sustainability Performance Data](#)
Includes our sustainability performance data for the past five years.
- [2023 Modern Slavery Statement](#)
Outlines our processes for identifying, assessing and addressing the risk of modern slavery in our operations and supply chain, and actions taken.
- [2022 Tax Contribution Report](#)
Details the taxes we paid in the 2022 and 2021 financial years.

We have also published the following:

- [Climate Transition Action Plan \(2022\)](#)
Outlines our ambition to lead the energy transition and details targets to accelerate emissions reduction across our business.
- [Industry Association Review 2023](#)
Reviews our industry association memberships and their respective positions on climate change and climate-related policies.

Reporting frameworks

This report follows the SASB Standards and references the Global Reporting Initiative (GRI) 2021 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 index](#).

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 on our [website](#).

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.

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



Origin Energy acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Owners of the lands. We acknowledge the continuous connection to land, water, sea and sky and pay our respects to Elders past and present.

A message from the Chief Executive Officer



Welcome to our 2023 Sustainability Report

Frank Calabria
Chief Executive Officer

It is a pleasure to present Origin's 2023 Sustainability Report.

Over the past year we continued to execute our strategy at pace, against an ambition to lead the energy transition through cleaner energy and customer solutions. There were many highlights, including approving construction of Origin's first large-scale battery, at the site of Eraring Power Station, and progressing several renewable and large-scale battery development options. We supplied more of our business customers with cleaner energy solutions like solar and electric vehicles and completed the migration of customers to the market-leading Kraken platform to support our aim to deliver superior customer experience at lower cost, and differentiate Origin in the market.

We achieved this progress against the backdrop of an increasingly dynamic operating environment. The energy transition presents many opportunities to evolve all aspects of the energy supply chain, and this past year it also brought to light new challenges. We welcome the broad-based political and community alignment on climate action, including the long-term commitment to be net zero by 2050 or sooner, and the increased urgency to achieve our nation's targets, which is galvanising effort.

What has also become clear is the staggering challenge ahead to build enough new renewables, transmission and firming infrastructure by 2030 to achieve Australia's climate ambitions. National

progress has been slower than required, with projects delayed, facing inflationary and supply chain pressures, along with community and landholder opposition.

At the same time, our customers are facing cost-of-living pressures, including the contribution of higher energy prices. With significant investment needed in new energy infrastructure, we are conscious of the potential for this to place additional pressure on prices in future periods, and the need for governments and industry to support those less able to pay.

These challenges, weighed against the prospect of significant coal plant capacity retiring over the coming decade, has prompted a renewed focus on the need to balance energy security and affordability through the transition.

To be clear, we should not shy away from our climate goals; rather we must recognise the need for governments, the market operator and industry to work closely and efficiently together to get clean energy projects built faster. At the same time, we must carefully manage how coal plants exit the system.

We think deeply about these moving parts at Origin, particularly as Eraring, our only coal-fired power station, is the next coal plant scheduled to retire as early as August 2025. Our exit from coal-fired generation will be a major contributor to achieving Origin's emissions reduction goals.



We continue to engage with the market operator, the New South Wales Government, our people, and the local community regarding plans for the plant's closure. We continue to assess the market, and this will help inform the final timing for the closure of all four units.

We remain focused on the need to exit all coal-fired power generation as soon as it can be achieved. Yet we do not want there to be fear that the lights will go out. As a result, our emissions may fluctuate periodically as we respond to energy market requirements. We saw this in FY2023, when Origin increased output from Eraring to support the market, including at times under direction from the market operator, resulting in increased emissions. Despite this we remain committed to achieving emissions reductions and our 2030 targets.

Concerns about power security indicates governments, regulators and industry have more work to do to build community confidence in the path ahead, reassuring that we will carefully manage the exit of coal-fired generators to achieve climate goals, but not at the risk of security and reliability of supply. We are also mindful of balancing our exit and the outcomes for a wide range of stakeholders, and the responsibility we have to contribute to a just transition.

FY2023 performance highlights

Through the remainder of this report, we discuss in detail our activities and performance for FY2023 in relation to our customers, communities, environment and people.

We include an update on our Climate Transition Action Plan (CTAP). Our first CTAP was released in August 2022, receiving overwhelming shareholder support. This is our first opportunity to detail the progress we've made since its release, which includes achieving our short-term cumulative emissions reduction target. We also provide an update on our strategic priorities, as we look to accelerate renewables and cleaner energy in our portfolio, help customers to decarbonise through simple, affordable lower-carbon products and solutions, and deliver reliable energy.

In the customer section, we highlight the impact of cost-of-living pressures on customers, including rising energy prices, and note the significant

increase in support for our customers in hardship. We are targeting \$45 million to support customers in hardship over the next year, on top of the \$30 million spent in FY2023. In recent years we have made a material investment in our customer platform, and we review our progress migrating customers to Kraken so we can deliver a better customer experience at lower cost. We continue to focus on embedding Kraken and our new retail operating model. For our large customers, our Origin Zero business rolled out several new products and services to help them better manage their energy use, costs and emissions, including a new energy monitoring platform and a range of solutions to support a seamless transition to electric vehicles.

In addition, we explain the importance of supporting communities and review some of our investment programs. The centrepiece of our community contribution is the Origin Energy Foundation, which contributed \$2.1 million this year towards education programs for young Australians, while our people volunteered 7,000 hours supporting community partners. In procurement, we highlight the \$24.4 million spent with First Nations suppliers, a significant increase on FY2022.

In relation to our people, we provide an update on employee engagement and the continuing steps we are taking to make Origin a more enjoyable and rewarding place to work. We introduced a new, regular employee survey to help capture feedback in real time and enable us to respond more quickly. We continue to expand our diversity and inclusion programs, and launched our latest Stretch Reconciliation Action Plan, which highlights how we can use our strengths as an integrated energy provider to support Indigenous reconciliation. Consistent with our commitment to reconciliation, we have publicly articulated our support for the Uluru Statement from the Heart, including the Voice to Parliament, and we continue to share a range of resources with our people to help inform them ahead of the referendum.

Conclusion

It is an incredibly exciting time for the energy sector as the transition accelerates. This change creates many opportunities to create and share value with our stakeholders. It also creates

challenges, which must be overcome if we are to achieve our nation's climate goals while maintaining security and affordability of supply for customers. This will require strong ambition, huge amounts of capital, better coordination across governments, industry and market operators, good policy, and effective execution.

We recognise that Australia also needs leadership from energy companies like Origin, and we relish this opportunity.



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 striving to provide affordable, more sustainable and smarter energy solutions.

Planet



We care about our impact on the environment. Our long-term ambition is to achieve net zero Scope 1, 2 and 3 emissions by 2050. We are working to progressively decarbonise our business and are investing in technologies to help our customers do the same.

Communities



We play an important role in communities by working to provide reliable and affordable energy, employing more than 5,500 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 culture, in which 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.



Our values

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



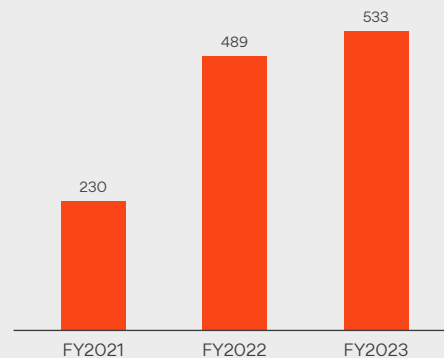
FY2023 performance highlights



Customers



Volume of GreenPower sales (GWh)



65%

Customer Happiness Index score

- Completed the migration of all residential and small business customers to our new customer service platform, Kraken
- Strategic Net Promoter Score declined from 5 in FY2022 to -2, reflecting a shift in attitudes in response to rising cost-of-living pressures and increasing energy prices
- Customer Happiness Index score – new metric measuring the proportion of satisfied customers after an interaction with Origin – at 65 per cent
- Provided around \$30 million in support to our most vulnerable customers, including those on our Power On hardship program
- GreenPower electricity sales volumes grew by 9 per cent to 533 GWh, driven by growth in large business customers.

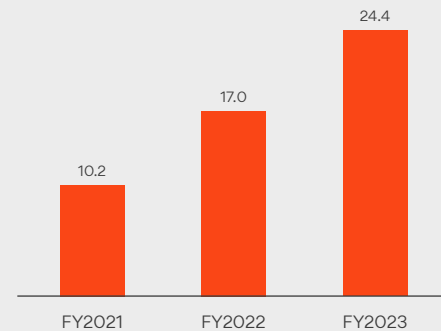
Communities



>\$2.1m

contributed to the community by the Origin Energy Foundation

Spend with First Nations suppliers (direct and indirect) (\$m)

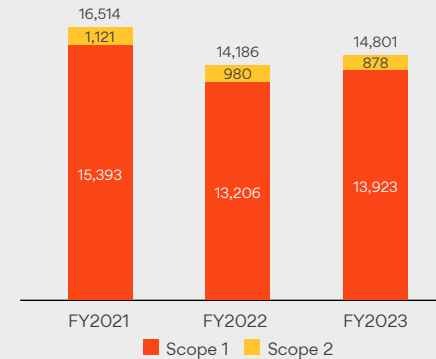


- Spent \$421.1 million directly and indirectly with regional suppliers, 20 per cent of our procurement spend
- Spent \$24.4 million with Indigenous suppliers, a 44 per cent increase on FY2022
- Employee volunteering participation rate of 42 per cent with more than 7,000 hours of volunteering for various community programs
- Donated our 10,000th SolarBuddy light since we joined the program in 2018
- Origin Energy Foundation's volunteering program awarded gold in the Best Pro Bono/Workplace Volunteering category of the 2022 Australian Workplace Giving Awards.

Planet



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



9 mt

cumulative reduction of CO₂-e between FY2021 and FY2023, against FY2017 baseline, achieving short-term target

- Released our first Climate Transition Action Plan, with 94.5 per cent of shareholder votes cast in favour of the plan
- Achieved our short-term emissions target, with cumulative reduction of 9 million tonnes CO₂-e between FY2021 and FY2023, against FY2017 baseline
- Total Scope 1 and 2 equity emissions increased by 4 per cent in FY2023, as improved coal supply enabled increased generation output from Eraring to support the needs of the market
- Final investment decision taken on 460 MW first stage of Eraring battery
- Virtual Power Plant grown to 815 MW across more than 276,000 connected services, up from 258 MW at the end of FY2022.

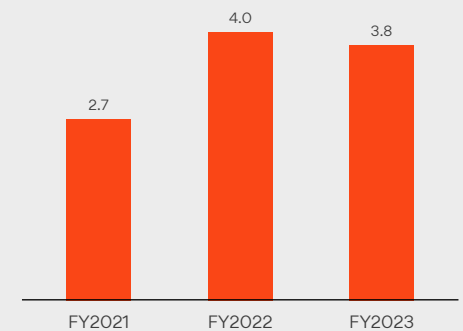
People and culture



46.0%

female Senior Leaders, up from 40.8% in FY2022

Total Recordable Injury Frequency Rate (TRIFR)



- Steady overall personal safety performance, with TRIFR declining from 4.0 in FY2022 to 3.8
- Increase in Tier 1 and Tier 2 process safety incidents to 7, up from 2 in FY2022
- Maintained 40 per cent female representation in three of the four leadership cohorts
- Employee engagement score of 7.7 (out of 10) – above the sector average
- Launched our second Stretch Reconciliation Action Plan to guide the strategic direction of our reconciliation efforts.

Origin at a glance



ASX TOP
50

Leading integrated energy company

Listed on the Australian Securities Exchange in 2000



Powering Australia

7,800 MW generation portfolio, including 1,515 MW owned and contracted renewables and storage



Climate ambitions embedded in our strategy

2030 emissions intensity target consistent with 1.5°C pathway envelope¹



4.5 million customer accounts

Electricity, gas, LPG² and broadband customers across Australia and the Pacific



27.5% interest in Australia Pacific LNG

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



Driving future energy innovation

20% interest in Octopus Energy, investing in new technologies, start-ups and future fuels



>5,500 employees

Inclusivity in the workplace; leading parental support



Transitioning our business to net zero

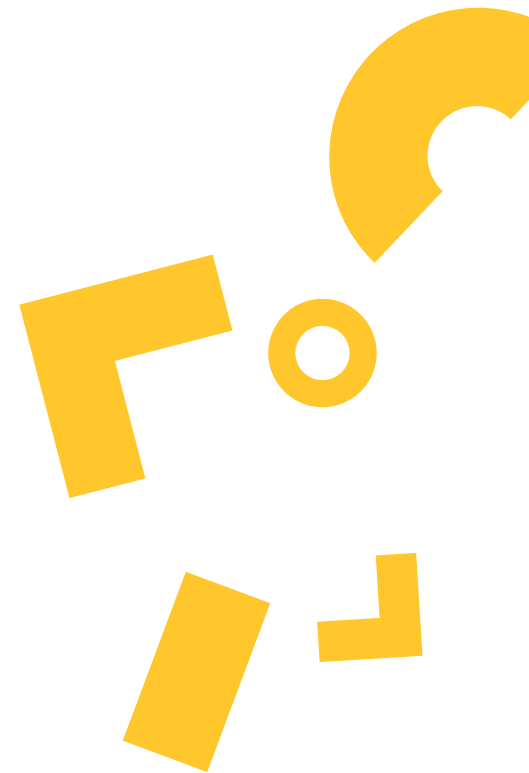
Growing our portfolio of renewables and cleaner energy solutions



Supporting Australian communities

The Origin Energy Foundation has contributed more than \$37 million since inception

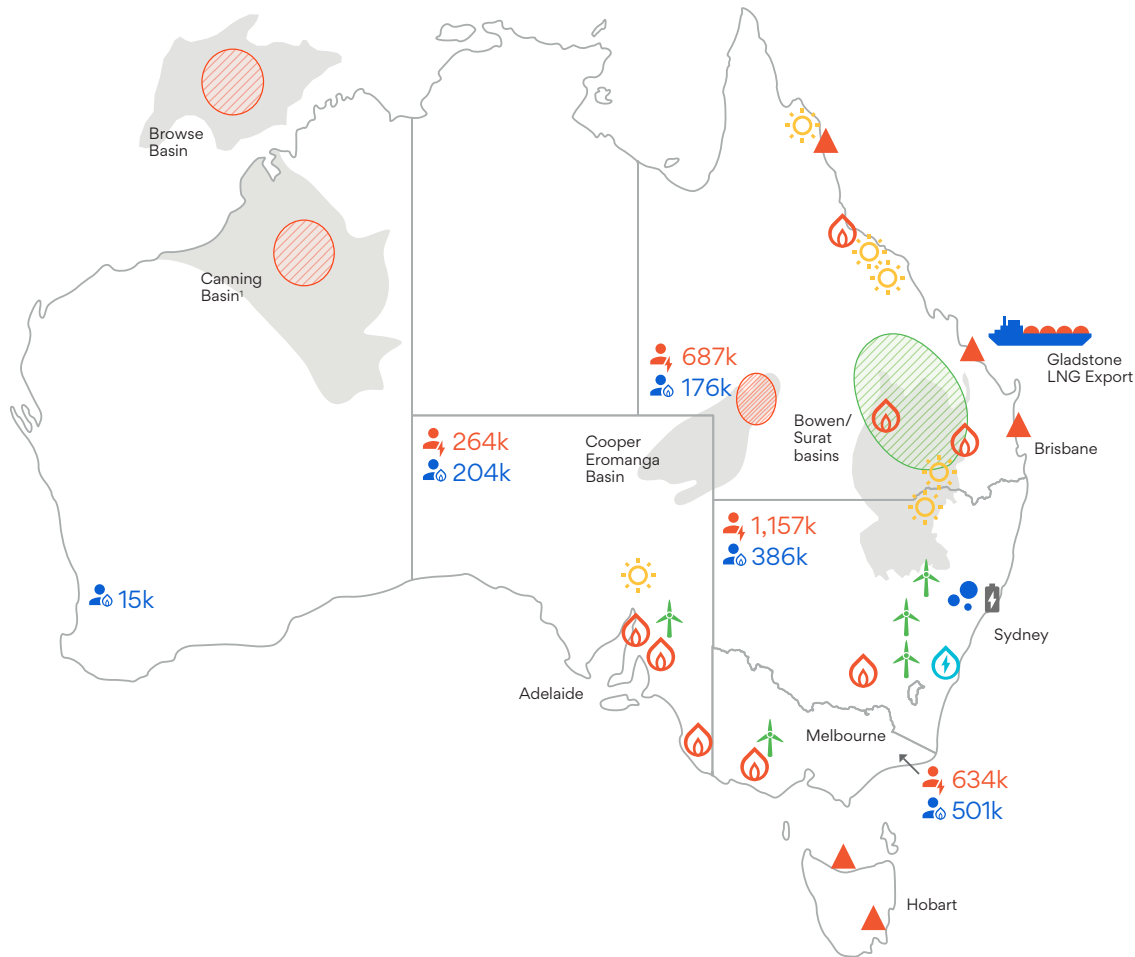
Where all good change starts



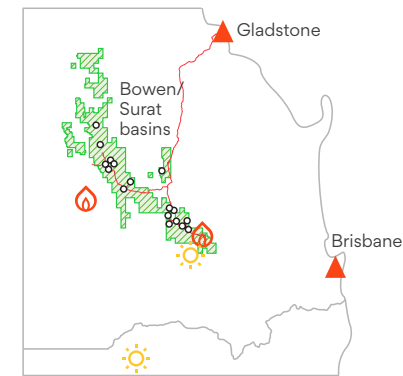
¹ Pursuant to the methodology set out in the [Climate Transition Action Plan](#).

² On 8 November 2022, Origin entered into an agreement to sell Origin's LPG business in the Pacific

Where we operate



South East Queensland



Pacific countries LPG²



Generation

- Gas
- Pumped hydro
- Solar (contracted)
- Wind (contracted)
- Coal
- Storage (under construction)

LPG seaboard terminal

- Electricity customer accounts
- Natural gas customer accounts

Exploration & production acreage

- Origin/JV upstream acreage
- APLNG upstream acreage
- Production facility
- APLNG pipeline

¹ An agreement has been executed with Buru Energy Limited to exit Origin's interest in Canning Basin, and with Bridgeport Energy (Qld) Pty Ltd to exit Origin's joint venture interests in the Cooper Eromanga Basin.

² On 8 November 2022, Origin entered into an agreement to sell Origin's LPG business in the Pacific.

Customers



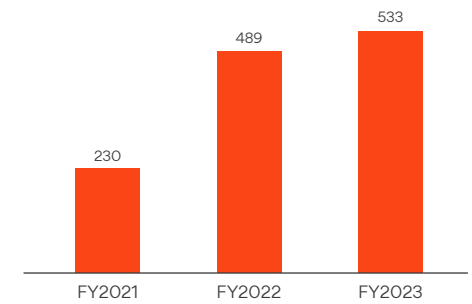
As a leading retailer of essential services, Origin provides customers with a range of products and solutions for their homes and businesses. Our focus is on delivering great customer experiences and striving to provide affordable, more sustainable, and smarter energy solutions.



Performance at a glance

- Completed the migration of all our residential and small business customers to our new customer service platform, Kraken
- Strategic NPS declined from 5 in FY2022 to -2, reflecting a shift in attitudes in response to rising cost-of-living pressures and increasing energy prices
- Customer Happiness Index score – new metric measuring the proportion of satisfied customers after an interaction with Origin – at 65 per cent
- Provided around \$30 million in support to our most vulnerable customers, including those on our Power On hardship program
- Grew our GreenPower sales volume by 9 per cent, driven by growth in large business customers.

Volume of GreenPower sales (GWh)



65%

Customer Happiness Index score

UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs, as detailed on our [website](#):



Management approach

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

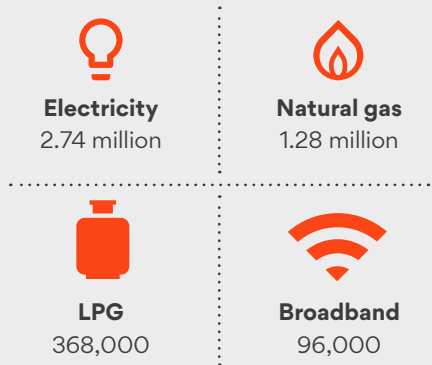


Customers

Focusing on the customer experience

Our customers are at the heart of everything we do. We are working to deliver great customer experiences that are simple, seamless, and increasingly digital.

Origin customer accounts¹



¹ As at 30 June 2023. Our total customer accounts also include 37,000 Home Assist customers.

We completed the migration of all our residential and small business customer accounts to the Kraken platform in FY2023. Licensed through our partnership with Octopus Energy, Kraken will deliver benefits for our customers and teams by providing one point of service, simpler processes, and the ability to integrate services into a single account.

For more information, see [Driving innovation in customer service with Octopus](#).

Customer satisfaction

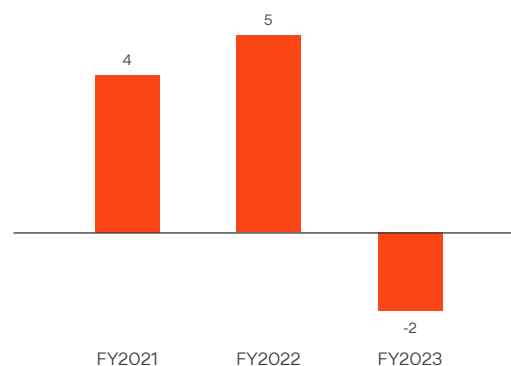
We use a combination of customer satisfaction metrics to measure customer advocacy, including how our customers feel about the business at the strategic level, as well as after an interaction with us.

Residential and small business customers

One of our customer satisfaction measurement tools is the Strategic Net Promoter Score (NPS), which is a best practice methodology where electricity customers from a range of providers are asked to rate their likelihood of recommending their electricity provider to family and friends on a scale of zero to 10. This metric is calculated by taking the percentage of promoters (score 9–10) minus the percentage of detractors (score 0–6) to provide a monthly measure of customer advocacy and helps us understand how our customers feel about their experience with us, and benchmark Origin's performance against competitors.

Our Strategic NPS for residential and small business customers was –2 in FY2023, down from 5 in FY2022. This score places us in the middle of Tier 1¹ energy providers and reflects a general shift in attitudes towards the energy industry in response to rising cost-of-living pressures and energy prices. We recognise the challenges our customers are experiencing, and we are committed to supporting them in managing their energy costs. See [Energy affordability and supporting vulnerable customers](#) for more information on our approach.

Strategic Net Promoter Score



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

As we completed our migration to the Kraken platform, we ceased measuring Interaction NPS and adopted the Customer Happiness Index (CHI), used by Octopus to measure customer satisfaction. Customers are asked to rate their interaction – via voice calls, email, and live chat channels. The CHI score is measured as the proportion of satisfied customers over the previous 12 months.

Our CHI score was 65 per cent as at 30 June 2023, compared to 67 per cent as at 31 December 2022. The migration of our final cohorts of more complex customer accounts resulted in billing issues and longer wait times when contacting us – which impacted our CHI score. We are now stabilising operations post-migration and targeting a CHI of 70 per cent in FY2024.

Customer ratings and reviews play an increasingly important role in shaping consumer purchasing decisions. We actively monitor, respond to, and encourage customers to rate us on product review sites.

Our total number of five-star reviews has increased from around 3,100 in FY2021 to more than 24,700 in FY2023. We have an 'excellent' rating on social review platform Trustpilot, with 83 per cent of the 17,500+ customer reviews giving Origin five stars. In FY2023, we reached a rating of four stars on Product Review. This is up from 1.3 stars in FY2022 and is based on almost 7,300 five-star reviews.

Large business customers

Our Strategic Net Promoter Score for large business customers was -14 in FY2023, up from -27 in FY2022, driven by improvements in price and service. Our Strategic Customer Satisfaction (CSAT) score, which measures overall satisfaction with Origin based on the responses of a focus group of 100 of our customers, held steady at 71.

Customer engagement and advocacy

Our Consumer Advocacy Panel regularly engages with consumer groups that represent the interests of customers. The panel is chaired by Origin's Executive General Manager, Retail, and meets approximately every four months. Topics discussed in FY2023 included cost-of-living pressures, cyber security risks and mitigation, and our engagement strategy for supporting vulnerable communities.

We also consult with customers through the Origin Exchange Customer Insights Community Research Panel. We have continued to grow the panel, increasing membership from around 3,000 customers in FY2021 to more than 6,600 members in FY2023.



Driving innovation in customer service with Octopus



Origin's partnership with Octopus Energy is transforming our customer service

At Origin, we believe that the future of energy retailing lies in delivering superior customer experience at the lowest cost, and seamlessly integrating products and services, enabled by new technologies.

In recent years, we had focused on accelerating our digital transformation to improve the customer experience but recognised that becoming a truly customer-focused retailer would be challenging when all our operating systems were centred around the meter, and not the customer. So, in May 2020, Origin established a strategic partnership with United Kingdom (UK) retailer and emerging technology business Octopus Energy to help us transform our retail operations by embedding an operating model designed around the customer.

We acquired a 20 per cent equity interest in Octopus and a perpetual licence to its customer platform, Kraken, in Australia. While the foundational changes to our digital customer platforms helped make dealing with Origin simpler and easier, Kraken will take our customer service to the next level.

A customer-focused platform and culture

Founded in 2016, Octopus has disrupted energy retailing through award-winning

customer service at lowest cost, enabled by its purpose-built Kraken platform and customer-centric operating model. Since our partnership began, Octopus customer accounts in the UK have grown from approximately 1.5 million to 10 million and the number of customer accounts contracted to Kraken now exceeds 30 million, including licences with European utilities, EDF UK, E.ON and Plenitude. In addition, Kraken provides Octopus customers with demand-response solutions through its Virtual Power Plant platform, Kraken Flex, with over 5 GW contracted onto the platform.

Kraken provides a holistic view of a customer's services, including electricity and gas, and empowers customer service teams to manage any aspect of a customer's account. In contrast to other operating models constructed around internal departments – such as sales, service, and credit – small teams of 10 'energy experts' service their own designated group of customers, looking after all their needs.

Agility and connectedness

Kraken will also enable us to seamlessly add more data-driven and personalised solutions over time. Completely cloud-based, Kraken allows much faster integration of customer solutions than traditional platforms – enhancing our agility and driving greater customer security.

As part of our focus on digital transformation, we have invested in solutions, such as our VPP, that will plug directly into Kraken and our digital customer platforms to provide customers with seamless, intuitive and smart energy solutions, and work to support a smarter, cleaner energy grid.

Implementation at Origin

We successfully completed the migration of our residential and small business electricity and gas customers to Kraken in FY2023. This is a significant milestone for both Origin and Octopus. In parallel, we transformed our operating model following the Octopus blueprint, with dedicated energy specialists

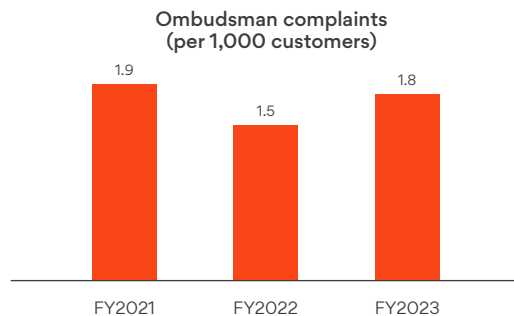
servicing all our customers' needs. Following a period of stabilisation, we will be ready to accelerate our future energy agenda, with Kraken and the broader Octopus strategic partnership at the heart of creating more customer-centred solutions for a rapidly evolving energy landscape.



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 FY2023, the number of ombudsman complaints per 1,000 Origin customers was 1.8, up from 1.5 in FY2022, driven by a rise in the number of billing complaints related to the migration of our customers and complaints about price increases.



Regulatory compliance

We strive to meet all our compliance obligations. We continue to identify opportunities to improve our compliance governance, systems, and training in our retail business.

In July 2022, Origin paid penalties totaling \$72,696 in respect of two penalty notices issued by the Essential Services Commission of Victoria. One notice alleged breaches of life support requirements in relation to Origin failing to register a customer for life support due to the customer's life support requirement not being properly recorded by the sales agent at the time the customer signed up to Origin.

The other notice alleged breaches of Victoria's payment difficulty framework occurring in circumstances where a customer's authorised financial counsellor contacted Origin via email to request payment assistance for the customer, but the email was not processed in time to prevent the

customer being disconnected the following day. Origin reconnected the customer on the same day they were disconnected and, after becoming aware of the email, investigated the disconnection, reported the error and cleared the customer's outstanding debt.

Privacy and cyber security

Origin acts to protect our customers' privacy and manage their personal information in accordance with the requirements of the *Privacy Act 1988* (Cth). Our [Privacy Policy](#) explains how we manage personal information.

We recognise that a cyber security incident could have a material impact on our business and customers, and that cyber security risk continues to evolve rapidly. We are committed to continuously improving our security resilience and safeguarding our critical assets and our customers' data.

During FY2023, several large organisations experienced significant data breaches in Australia. As part of our continuing risk management, we studied these events and reviewed our cyber risk profile, assessing likely cyber incident causes, consequences, controls, and improvement opportunities. We developed a program of work to implement the lessons learned, including increasing the frequency of independent security testing, reviewing our customer data and processes for managing and purging sensitive or unessential data, and improving existing incident response and communications processes to provide the best possible support for customers in the event of a breach.

We hold regular exercises to review and improve our ability to respond to potential cyber incidents. To improve the security for customers using our online MyAccount portal, we introduced one-time passwords that offer additional protections compared to static passwords that may be weak or reused across multiple sites. Our digital services are also subject to 'bug bounty' programs, where we provide financial incentives to vetted security researchers to identify security vulnerabilities and weaknesses in our systems. This is performed in addition to continual scanning and independent security testing.

Energy affordability and supporting vulnerable customers

Affordability is an important issue. We appreciate that many Australian households and businesses are experiencing increased cost pressures, and energy bills can represent a significant portion of their budgets. We continue to focus on how we can help our customers manage their energy costs.

Prices

Energy retailers face the challenge of balancing a range of factors, including wholesale costs, network costs, renewable energy schemes, retail costs and margin, as well as any relevant issues in the wider energy market, with the pressures customers are facing, including increases in their costs of living and doing business.

Most of Origin's electricity customers on variable rate market contracts saw price increases from 1 July and 1 August 2022. Considering a period of high prices and cost of living pressures, Origin made a decision not to price any variable rate market customers higher than what was allowed for standing customers after taking into account product benefits (such as solar feed in tariffs). Our customers on fixed rate plans did not see a price change and we protected customers in our Power On hardship program from electricity and gas price increases.

Supporting affordability

Increasing prices is never a decision we take lightly. We are mindful of the impact it can have on our customers and communities.

We are committed to supporting our customers and helping them find the energy plan that works best for them, including advising them to check their eligibility for concessions or rebates and alerting them to independent sites, such as [Energy Made Easy](#), that compare plans across different retailers.

We have several offers and discounts to support our customers, including:

- a wide range of energy plans, such as our Origin Everyday Rewards Plan, where customers earn points for every dollar they spend on energy. As at the end of June 2023, more than 4 billion Everyday Rewards points, valued in excess of \$20 million, had been issued to Origin customers across our gas, electricity, broadband and solar plans;
- our energy savings rewards program, [Origin Spike](#), which helps customers save energy and earn reward points that can be redeemed for PayPal cash or gift cards; and
- our fuel discount offer at EG Ampol locations, which has grown to around 80,000 redemptions per month since its launch in July 2022. To date, our customers have saved the equivalent of approximately \$1.25 million on fuel.

In FY2023, we were the first energy company to go live with Consumer Data Right, a government-led initiative that allows customers to share their data with accredited third parties such as comparison sites to access more personalised offers or services. Customers decide if they want to share their data, and if so, what data, for how long, and with whom. Energy retailers are required to facilitate this data sharing.

Supporting vulnerable customers and communities

With the rising cost of living, it is important that our customers – especially those facing financial hardship – know help is available when it comes to paying their energy bills.

We support vulnerable customers through tailored solutions, including providing payment plans to pay off debt and additional bill relief, and helping them access concessions and other government or community support. We welcome the direct energy bill relief support provided by the Australian Government to concession holders and low-income households and will work with state and territory governments to facilitate the bill relief smoothly and efficiently.

We encourage any customers who are having difficulty with their energy bills to reach out to us, so we can talk to them about how we can help. We also attend 'Bring Your Bills' and other community assistance days to provide customers with the opportunity to discuss support options with an Origin representative face-to-face. Many people experiencing hardship live in regional and remote communities and do not have access to such face-to-face events. We continuously look for alternative opportunities to provide support, such as Legal Aid's annual Law Week, where in FY2023 our energy specialists provided direct support to customers via video calls across four north-west New South Wales locations.

We also regularly engage with financial counsellors, who can provide vital support to those facing tough times, from helping customers prioritise debts to accessing grants. In FY2023, we contributed toward a multimillion-dollar cross-sector donation to the Financial Counselling Foundation in support of its work.

Hardship and financial assistance

We provided more than \$30 million in support to our most vulnerable customers in FY2023 and we expect to spend an additional approximately \$45 million in FY2024 for customers in financial hardship who may be struggling with their energy bills.

Origin's hardship program, Power On, offers flexible payment options, tailored bill relief, home energy audits, energy efficiency advice, referrals to financial counselling services and access to government grants and concessions. We work with customers entering this program to reduce their energy usage to sustainable levels and repay their debt over a longer period.

The Power On program is open to all residential customers living in the Australian Capital Territory, New South Wales, Queensland, South Australia and Western Australia who find it hard to pay their energy bills due to hardship. As at June 2023, there were around 44,400 participating customer accounts in Power On, up from around 35,500 in FY2022, with more customers requiring hardship assistance as COVID-19 support mechanisms ended and cost of living increased.

In Victoria, we offer payment assistance under the Payment Difficulty Framework, which entitles customers to a range of assistance options to help them pay their energy bills, including payment extensions, arrangements or plans, and advice and information related to energy costs and government concessions. As at 30 June 2023, we were supporting around 26,600 customer accounts in Victoria through tailored assistance options, including payment plans to help manage debt, up from 22,600 in FY2022.

Natural disasters

Through Power On, we supported residential and small business customers who were affected by floods in FY2023. 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. In Lismore, New South Wales, which was significantly impacted by flooding, we provided free electricity and donations to local organisations supporting the community.

Following complaints from customers affected by flooding who received estimated bills while not being able to access their property, we are working with affected communities to consider how best to respond after such events and are looking at ways to improve processes.

In times of natural disasters, such as floods, we place billing blocks on postcodes for affected areas. Where customers still have power going to their property and we are not aware of their circumstances, they will be issued bills based on estimated reads provided to us by networks or meter providers. If we have been made aware that a property or meter has been destroyed, we have processes in place to finalise the account, so that these customers do not receive further bills.

Working with community partners

We work with governments, communities and other industry partners to help build more resilient communities across Australia.

We reviewed our approach to community partnerships in FY2023, and engaged with our stakeholders, including financial counsellors, social services networks and our Consumer

Advocacy Panel, to refine our community engagement strategy. This led to a focus on three key areas – family violence, natural disasters, and homelessness – where we believe we can work with community partners to help affected customers and communities transition from crisis to recovery.

To support this strategy, this year we developed new partnerships with the following organisations:

- **Thriving Communities Partnership**, a not-for-profit organisation that aims to make sure all Australians have access to the services they need to thrive in contemporary society. With a particular focus on supporting those experiencing financial distress, this partnership allows us to work with other corporate members to help drive change.
- **The Salvation Army**, a national organisation that provides long-term solutions to vulnerable people. In FY2023, we supported its 'Light the way' Christmas appeal in collaboration with other energy retailers, providing more than 660 families experiencing financial hardship with household essentials, vouchers and toys.

- **StreetSmart**, which raises funds to support grassroots organisations addressing homelessness in communities. In FY2023, our support for StreetSmart helped to fulfil grants to frontline agencies, providing 265 new households with essentials such as whitegoods, bedding and kitchen appliances.

We continued our partnerships with the Queens Fund, the Victorian Homeless Fund and the Women's Property Initiative, which assist women and children in crisis. In FY2023, we launched a new project with the Victorian Homeless Fund to help finance a new house for a family made homeless due to family violence. Our support included an Origin solar system and 12 months' worth of free electricity, gas and broadband.



Origin energy specialists supported customers living in regional NSW via video calls as part of Legal Aid's annual Law Week.

Maintaining energy reliability

It is essential that existing generation is performing well if we are to meet the needs of customers reliably and affordably during the energy transition. In FY2023, our combined fleet of power plants were in service for more than 54,000 hours and produced more than 14,800 gigawatt hours (GWh) of electricity, providing essential power to millions of Australian households and businesses. We achieved more than 98 per cent start reliability across 3,900 starts, ensuring our assets were available to the market when they were needed.

In February 2022, we announced plans to accelerate our exit from coal-fired generation, submitting notice to the Australian Energy Market Operator (AEMO) to retire Eraring Power Station, potentially as early as August 2025. See [Energy and climate change](#) for how we are approaching this, including considering the continued supply of reliable energy to the National Energy Market (NEM).

Our joint venture, Australia Pacific LNG, continues to play an important role in providing secure gas supply to customers on Australia's east coast. It supports Australian manufacturing through gas sales agreements with large business customers as well as east coast gas retailers. Australia Pacific LNG's average realised domestic sale price remains well below international netback price.

As domestic marketing agent for Australia Pacific LNG, Origin works with customers to help maintain energy security. For example, in FY2023, we were advised that the gas supply of one of Australia Pacific LNG's major manufacturing customers was interrupted due to pipeline infrastructure issues. We sought alternative methods outside our standard operations to bring gas into this customer's network, helping to avoid dramatic reductions in the customer's manufacturing capacity.

Demand response

When it comes to the energy transition, demand-side management has an important role to play in reducing emissions, maintaining reliability, and managing costs.

Demand response refers to a mechanism where a customer reduces their electricity demand from the grid for a short period. We manage demand response through our VPP, which connects energy assets across many separate locations providing a tool to optimise the supply and demand balance in the electricity market. Demand response solutions through our VPP can also contribute to decarbonisation goals by shifting demand from periods of high emissions intensity to times when renewable generation is high, reducing carbon intensity.

Our large business customers have been increasingly taking up the option to join our VPP and participate in our demand response programs, with more than 200 MW managed by Origin as at 30 June 2023, up from 55 MW at the end of FY2022.

Our retail customers can participate in regular energy-saving challenges through Origin Spike, which rewards customers for reducing their energy use during periods of high demand.

Origin Spike

Origin Spike is a demand management program that helps to reduce pressure on the electricity network during periods of high demand. Customers who join and meet their energy saving goals are rewarded with points that can be redeemed for PayPal cash, gift cards or credit towards their electricity bill.

Since its inception in FY2021, our Spike participants have earned more than \$7 million in rewards points and saved more than 560,000 kilowatt hours.

Our 133,000 Spike customers are invited to reduce their energy use during SpikeHours, scheduled during peak periods. We have held more than 4,300 SpikeHours since the program launched, with an overall participation rate of 66 per cent in FY2023.

We surveyed Spike members this year and asked them what benefits the program offers, beyond earning points and rewards. 85 per cent of respondents shared that they feel more in control of their energy use, while 87 per cent said they feel like they are saving money on their electricity bill.

New South Wales-based Origin customer, Kim, and her family of three, were early adopters of the program, having joined Spike in August 2020. They have saved more than \$930 on their energy bills in that time. Like the 81 per cent of respondents in our survey who believed they had changed the way they use energy around the house on a daily basis, Kim's family now practices energy-saving behaviours beyond SpikeHours, frequently reducing their energy use at home by enjoying energy-free meals, taking off-peak showers, turning off power points, and using candles instead of lights.



Helping our customers to decarbonise

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 residential and business customers in their transition to net zero.

We offer renewable and carbon offset products, roof-top solar and battery storage products, and electric vehicle (EV) solutions, and we also work with our customers to develop and deliver cleaner energy solutions. We are exploring the potential of future energy offerings, including hydrogen and ammonia, biofuels such as biogas and bioLPG, and carbon management solutions.

Origin Zero

Our Origin Zero business launched in FY2022, and is gaining momentum with new products, services and commercial models aimed at accelerating the decarbonisation journey for large business customers. Origin Zero's offerings include renewable electricity, installing behind-the-meter solutions that are connected to our VPP, providing full end-to-end EV fleet management solutions, and combining orchestration and data analytics to provide an end-to-end energy efficiency solution.

For example, during FY2023, we worked with BaptistCare, a leading for-purpose care provider across Australia, to identify opportunities to reduce its energy use and carbon emissions. We delivered 630 kW of rooftop solar across three aged care sites in NSW, and BaptistCare was also our first energy monitoring customer. We developed and trialed the energy monitoring platform this year to help customers visualise their energy consumption across their business, create a baseline for tracking energy performance, set up alerts and controls to manage peak demand or shift usage to off-peak times, and receive tailored recommendations from Origin to further optimise performance. We will install the technology at one of BaptistCare's sites, aiming to help the organisation reduce energy demand and cost by 15 per cent, with lessons

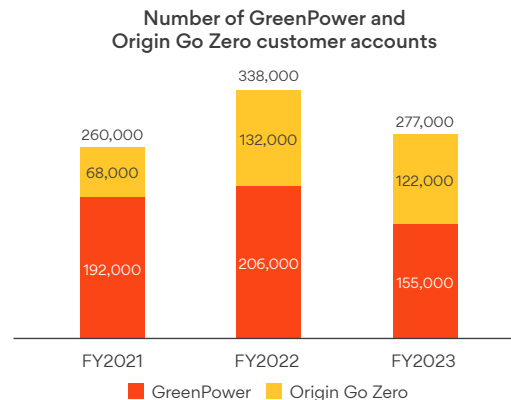
learned from the platform potentially applicable to other locations across its portfolio.

GreenPower and Climate Active-certified products

For more than 20 years we have been giving our customers the option to support renewable energy generation by choosing GreenPower, where they select the percentage of the electricity they would like Origin to match with an equivalent amount of electricity generated from GreenPower-accredited renewable sources.

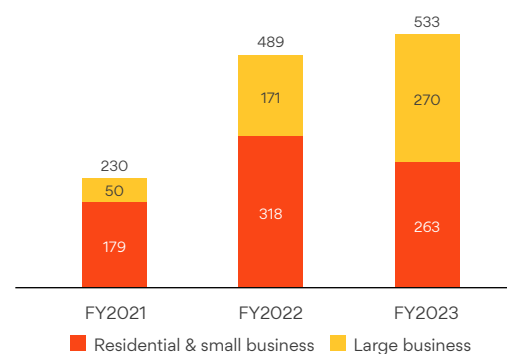
Our Origin Go Zero Electricity, Origin Go Zero Natural Gas, and Origin Go Zero LPG products are certified carbon neutral by Climate Active, a partnership between the Australian Government and Australian businesses. As part of our Climate Active obligations, we purchase and surrender eligible carbon offset certificates in respect of the relevant emissions associated with the customer's consumption of electricity, natural gas and LPG. Around 122,000 customers took up these products in FY2023, offsetting approximately 217,000 tonnes² of carbon emissions.

Our total number of GreenPower and Origin Go Zero customer accounts fell to approximately 277,000 in FY2023, from around 338,000 in FY2022, with fewer retail customers choosing these products. Where some of these products were previously included in our Everyday Rewards plan at no additional cost, in FY2023 we introduced a charge for adding them to a plan.



While the total number of our GreenPower customers fell, our GreenPower sales volumes grew by nine per cent in FY2023, to 533 GWh.³ This was driven by our large business customers, with growing numbers selecting a GreenPower product in FY2023, and many choosing 100 per cent GreenPower. For example, we are working with property management company, Goodman Group, to reduce its carbon emissions, including providing 100 per cent GreenPower, representing over 44 GWh per annum across offices in Victoria, NSW and Queensland.

Volume of GreenPower sales (GWh)

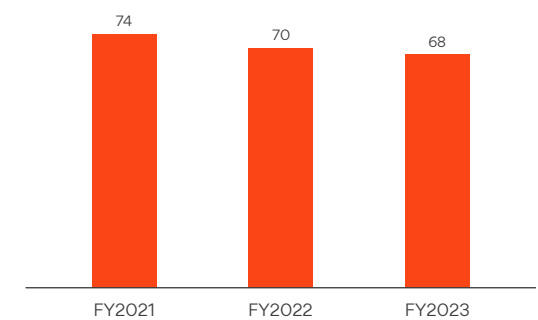


Solar energy and battery storage

Origin is a New Energy Tech approved seller of solar energy. Launched in FY2023, the New Energy Tech Consumer Code (NECC) is a set of standards designed to protect consumers when purchasing technology such as solar, batteries and EV chargers. The NECC program replaces the previous Clean Energy Council approved solar retailer program.

During FY2023, we installed 7,828 solar systems on the roofs of Australian homes and businesses, with a total capacity of around 68 MW, compared to 70 MW in FY2022. This flat year-on-year performance is consistent with market trends, with the number of sales affected by cost-of-living pressures. As at 30 June 2023, around 602,000 Origin customers had solar installed at their properties.

Capacity of solar systems installed (MW)



In December 2022, we were recognised as having installed the highest volume of solar power systems in terms of capacity between 2001 – when government data on installations first became available – and the end of 2022,⁴ installing more than 500,000 kW of solar over this period.

We are working with multiple network companies on a trial to install up to 80 community batteries in Queensland and NSW, providing battery storage products to up to 1,500 customers who would not typically have access to battery storage in their homes due to the capital outlay required. The batteries are intended to charge during the day when solar generation is at its maximum, and discharge during peak evening periods, helping to lower both the cost and carbon intensity of the electricity. The grid requires significant battery storage to support growing intermittent wind and solar generation, and this trial is designed to help identify the network, wholesale market and customer benefits of community batteries.

² We complete the surrender of certificates annually on a calendar-year (CY) basis. FY2023 values have been extrapolated using CY2022 and CY2023 data.

³ GreenPower data is submitted for audit on a CY basis. FY2023 values have been extrapolated using CY2022 and CY2023 data.

⁴ Origin is a Top Volume Solar Retailer for 2001-2022 – Sunwiz – Solar Energy Consultants

Electric vehicles

Supporting our customers with the transition to EVs is an important part of our ambition to lead the energy transition through cleaner energy and customer solutions.

We have developed a complete suite of products to assist customers at every step of their EV journey – from leasing, subscription and car-sharing solutions to smart charging and energy solutions. As at 30 June FY2023, we had more than 400⁵ EVs under our management, through customer leases or subscriptions.

Origin 360 EV Subscription

In FY2023, we launched Origin 360 EV subscription, our all-inclusive salary-packaged plan that enables customers to accelerate the switch to EVs through month-to-month subscriptions. We trialled the product with our own employees before launching to our customers. The all-inclusive subscription fee covers access to the EV as well as registration, insurance, scheduled maintenance and tyres, and accident management.

Origin 360 EV Fleet

Origin 360 EV Fleet aims to make it easier for Australian businesses to switch to EVs, helping them lower their carbon footprint and operating costs. Origin has also been successful in obtaining funding from the NSW Government and from the Australian Renewable Energy Agency (ARENA) to help reduce the cost of transition to EVs for fleet customers.

We have seen strong interest from organisations looking to start their EV fleet transition. For example, we helped a healthcare business to access NSW Government funding and lease four EVs to trial in its fleet to reduce transport-related emissions. Our support included the supply of fully managed vehicles as well as the supply, installation and commissioning of EV smart chargers to power the vehicles.

360 EV Car Share

Cost can be a barrier to making the switch to an EV, which is why we are focused on providing affordable and flexible alternatives to car ownership and making it cheaper for customers to charge their vehicles.

Our EV car-sharing service, 360 EV Share, enables residents and tenants of apartments and commercial buildings to book and access an EV via a digital app, providing a seamless digital car-sharing experience. More than 10,000 hours of trips have been booked through the service in FY2023.

EV charging and energy

In FY2023, we launched our 360 EV Energy Plan, which provides five hours of free electricity between 10am and 3pm to eligible EV owners to encourage EV charging at times when solar generation is high, meaning charging with lower-cost and lower-carbon energy.

We have a partnership with public charging network JOLT, in which we supply it with 100 per cent GreenPower to match the electricity consumed at their network of charging stations. We have also partnered with Audi to offer new Audi EV owners access to our 360 EV Energy Plan with 100 per cent GreenPower for 12 months, combined with a discount on smart EV chargers.

As part of an ARENA-funded trial, we are supplying 100 per cent GreenPower to 50 EV chargers to be installed on street-side power poles in NSW for EV owners without off-street parking.

We are also increasing accessibility for customers in apartment blocks through communal EV-charging infrastructure. Our focus in FY2023 has been on enabling existing and new high-rise residential buildings to future-proof their developments based on growing EV demand. We work with developers and owners' corporations to find technical and commercial solutions for EV-charging infrastructure that will help accommodate the exponential growth in EV demand, without over-investing in infrastructure now.



5 Includes contracts that are awaiting delivery of vehicles.

Communities



We play an important role in communities by working to provide reliable and affordable energy, employing more than 5,500 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 to identify opportunities for Origin and our employees to make a positive difference.



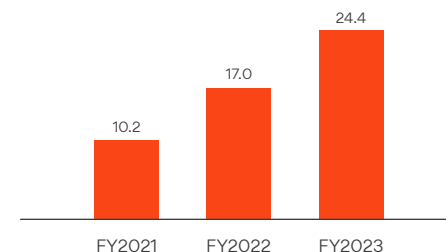
Performance at a glance

- Spent \$421.1 million directly and indirectly with regional suppliers, equating to 20 per cent of our procurement spend
- Spent \$24.4 million with Indigenous suppliers, a 44 per cent increase on FY2022
- Employee volunteering participation rate of 42 per cent, with more than 7,000 hours volunteered with community programs
- Donated our 10,000th SolarBuddy light since we joined the program in 2018
- Origin Energy Foundation's volunteering program awarded gold in the Best Pro Bono/Workplace Volunteering category of the 2022 Australian Workplace Giving Awards.

>\$2.1m

contributed to the community by the Origin Energy Foundation

Spend with First Nations suppliers (direct and indirect) (\$m)



UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs, as detailed on our [website](#):



Management approach

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



Communities



Procurement

Working with communities

Our assets – including 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 taxes, levies and royalties for governments.

Our most significant interactions with communities occur at our Australia Pacific LNG operations in Queensland, and our power stations, the largest of which is Eraring in New South Wales.

Australia Pacific LNG

As upstream operator for Australia Pacific LNG, we respect the rights and interests of the communities in which we operate and we regularly engage with local councils, Traditional Owners, landholders, chambers of commerce, economic development groups and community organisations. We consult with them to understand and manage the environmental, economic, and social impacts of our activities and maximise the benefits.

Our program of leasing Australia Pacific LNG-owned agricultural properties to local landholders and farmers has provided benefits to the community and broader region through the creation of local jobs and improved land productivity for agriculture.

Since the program began in 2021, 15 Australia Pacific LNG-owned agricultural properties in the Maranoa and Western Downs regions have been leased to neighbours, local landholders and farmers to cultivate and manage the properties. Lessees have built over 32 kilometres of fencing, repaired and moved into previously vacant residences, undertaken erosion repair and constructed cattle yards. The initiative has seen 13 full-time employees hired across the properties, and the use of local contractors for capital improvements has contributed to the local economy and improved the usability and value of the land.

Working with landholders

Conduct and Compensation Agreements (CCAs) between Origin (as upstream operator for Australia Pacific LNG) and landholders set out how we enter land to carry out our activities and compensate landholders. We negotiated and signed 33 CCAs with landholders in FY2023,⁶ bringing the total number of CCAs signed with landholders since the Australia Pacific LNG project began to 1,418.

We proactively engage with our landholders through dedicated stakeholder liaison officers and continuously work to improve our processes. In FY2023, we launched a digital land access tool using QR codes to replace the paper-based property sign-in processes. The installation of QR codes on multiple property access points improves the traceability of our teams and provides additional transparency to landholders.



▲ Lessee Guy Campbell with his cattle on the Australia Pacific LNG Greenlea property

Engaging with Traditional Owners

We collaborate with several Traditional Owner groups in the Surat Basin, Queensland, to protect cultural heritage and to identify opportunities for employment, skills development, maintaining strong relationships and contractor engagement.

In FY2023, we continued to work closely with representatives from Traditional Owner groups, including the Wulli-Wulli, Iman, Mandandanji, Barunggam and Western Wakka Wakka discussing our existing and planned work programs. We took landowners from the Condamine and Chinchilla areas to a cultural burning workshop held by Gidarjil rangers to learn about traditional land management and protection practices. As part of our relationship with the Port Curtis Coral Coast Traditional Owner group, we supported

and attended the 1770 Cultural Connections Immersion Festival and provided information about employment opportunities at Origin.

We also identified opportunities to build cultural awareness among our people and communities. During NAIDOC Week in July 2022, we supported and attended events across the Maranoa and Western Downs regions, and the Banana Shire. During National Reconciliation Week 2023, we held events in Western Downs and Maranoa with local school children, providing educational opportunities through music, dance, art and storytelling.

For more information on how we are working to build the cultural knowledge and capability of our employees and our reconciliation efforts, including our Stretch Reconciliation Action Plan, see [Reconciliation](#).

Eraring Power Station

We created a Community Engagement Strategy during FY2023 to provide the framework for Origin's engagement with community members and stakeholders during Eraring's pre- and post-closure periods.

We also reconfigured the Eraring Community Forum, which aims to provide a channel for community members and other stakeholders to provide meaningful input into proposed development activities at Eraring and to improve our understanding of community issues.

See [Supporting Eraring's transition](#) for more information.

Responding to complaints

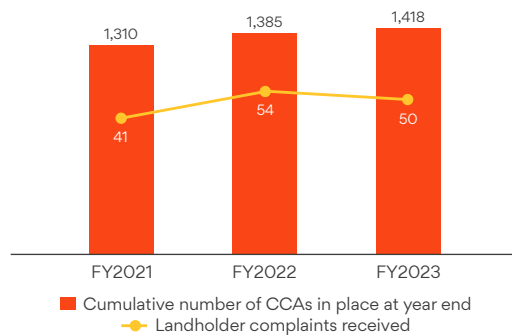
Origin has grievance mechanisms in place to allow community members and landholders to share feedback and concerns, and to have these addressed. We monitor complaints, our response times and the resolution of these matters. Each complaint is carefully investigated and actions undertaken where required.

⁶ As defined by Queensland's *Mineral and Energy Resources (Common Provisions) Act 2014*. This excludes non-operated sites.

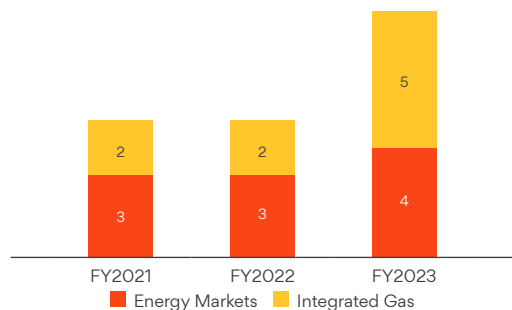
In FY2023, we received 50 complaints from landholders with whom we have negotiated or are negotiating a CCA. These mainly related to issues around land access, for example, gate use, use of access tracks, and noise. We continue to identify opportunities to improve our performance and reduce the number of complaints with initiatives this year including employee awareness programs on land access and gate management, use of onsite QR codes, and improved locking mechanisms.

We received nine complaints from community members, which mainly concerned operational impacts such as dust, noise from equipment and use of vehicles. Each complaint is investigated, and we revisit the controls we have in place as well as use feedback from our stakeholders to continuously improve our processes.

Conduct and Compensation Agreements and landholder complaints



Community complaints⁷



Supporting communities

We contribute to communities by providing emergency and crisis support, through local and national community investment, and the Origin Energy Foundation. We also support communities by buying from local and regional suppliers, providing financial incentives for our people to live local, and offering local apprenticeship and traineeship opportunities.

We work to protect customers experiencing hardship and are committed to helping build more resilient communities, focusing on supporting customers and communities affected by family violence, natural disasters and homelessness. See [Supporting vulnerable customers and communities](#) for more information.

Emergency and crisis support

In FY2023, we donated \$100,000 to community organisations, including the Australian Red Cross, Salvation Army, and Foodbank, providing emergency support to New South Wales residents affected by flooding, and also matched Origin employee donations to relief efforts. We provided direct support to affected customers through our Power On hardship program, payment extensions and payment plans.

Community investment

Our national community programs include support for Netball Australia, the Sydney Swans and Melbourne City FC as part of our Good Change Club initiative. This initiative aims to educate, inspire, and incentivise sports fans to do small acts of good change that collectively make a big difference towards a cleaner energy future.

We have a Community Fund of \$5 million to help support the Eraring community via sponsorships, grants and partnerships from 2023 to 2032. See [Supporting Eraring's transition](#) for more information.

Local community programs

During FY2023, Origin contributed around \$2.4 million and more than 1,200 employee volunteering hours to various community programs, through multi-year partnerships and support for important services and events.

In recognition of the events of the past few years on communities, including the impact of COVID-19, a series of devastating natural disasters, and significant rises in the cost of living, many of our programs have focused on supporting mental health, building capacity and resilience, and encouraging vibrant communities through community events and tourism.

For example, we held community discussion forums on mental fitness and suicide prevention with @Gotcha4Life, founder Gus Worland in Miles, Roma and Dalby in Queensland, attended by more than 100 people. In Eraring, volunteer support group Talk2mebro spoke to Origin employees and members of the local community on male mental health and suicide prevention.

We also provided grants to local community groups supporting members of the community doing it tough, including Southlake Community Services and Southlakes Incorporated in NSW's Lake Macquarie region, which provides food, toys and entertainment to local families. We continued our three-year partnerships with Drought Angels, which supports farming families affected by natural disasters with financial assistance, food hampers, care packs, and mental wellbeing support.

Run in partnership with Silver Lining, our Thank You Small Business competition is an initiative inviting Australians to nominate small business owners who have shown resilience, determination and creativity in making outstanding contributions to their communities. Lilier Lodge, a cancer patient accommodation house in Wagga Wagga, NSW, was named the national winner in FY2023 in recognition of its outstanding support for recovering cancer patients. We provided Lilier Lodge with a fully installed 10kW solar system to help it reduce ongoing power costs.



⁷ Energy Markets figures do not include complaints from customers; these are covered in Customers. Integrated Gas figures exclude complaints from landholders with whom we have negotiated or are negotiating a CCA.

▲ Good Change Club ambassador and Australian Diamond Jo Weston, visited the local netball club and schools in Roma to share her experience and inspire young players.

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 of the Foundation, ensuring that all investment income is distributed to the community.

Through grants, volunteering, in-kind donations and workplace giving programs, the Foundation distributed more than \$2.1 million to the community in FY2023. It has provided more than \$37.3 million to community organisations since its inception.

Working with community partners

The Origin Energy Foundation also provides funding to Australian not-for-profit organisations through its grants program, focusing on work that grows diversity in science, technology, engineering and mathematics (STEM) education, and promotes equal education opportunities for First Nations students and young people living in regional, rural and remote Australia.

In FY2023, the Foundation launched a five-year program of support for the Wuyagiba Study Hub, located between the remote First Nations communities of Ngukurr and Numbulwar in South East Arnhem Land. In partnership with Macquarie University, Wuyagiba increases opportunities for local First Nations students to access university education.

Recognising the education gap experienced by many children in Australia, in FY2023 the Foundation funded the Grattan Institute's report *Tackling under achievement in Australian schools*. Its research highlighted the need for implementing high-quality, targeted educational support to students found to be falling behind. This report builds upon the research Grattan Institute undertook in 2020, also funded by the Foundation, to understand the impact of lockdowns and school closures relating to COVID-19 on learning for students experiencing disadvantage. On the back of this work, state governments committed

\$1.7 billion for tuition programs in Victoria, New South Wales and South Australia.

Another Foundation partner, Raise Foundation, delivers mentoring programs to young people across Australia, prioritising Year 8 students in public secondary schools who are most at risk of disengagement or poor wellbeing. The Foundation has been working with Raise in a volunteering capacity since 2021, with 32 Origin employees volunteering as mentors during this time. The Foundation extended its support this year by providing communications and advocacy expertise when it learned that Raise was having difficulty recruiting enough mentors to its programs. The Foundation developed a two-week communications campaign that led to a significant reduction in the number of schools at risk of not being able to participate in the program.

Supporting employee giving

The Origin Energy Foundation's volunteering program, Give Time, provides employees with opportunities to participate in impactful volunteering programs with several community partners. It was awarded gold in the Best Pro Bono/Workplace Volunteering category of the 2022 Australian Workplace Giving Awards.

In FY2023, we achieved a volunteering participation rate of 42.8 per cent, supported by unlimited volunteer leave, with employees donating more than 7,000 hours. Through various STEM and mentoring programs, including our work with Raise Foundation, our volunteers supported more than 5,000 students.

We continued our long-running partnership with SolarBuddy, inspiring the next generation of scientists and engineers in Australian schools and addressing energy poverty by providing children with solar-powered lights so they can study after dark. Origin volunteers ran 32 SolarBuddy Lights for Learning sessions at schools during the year, reaching the milestone of our 10,000th SolarBuddy light since we started the program in 2018.

Through our workplace giving program, Give2, the Foundation matched employee donations dollar-for-dollar, providing more than \$775,000 to around 260 Australian not-for-profit organisations.

Origin's legal pro bono program

Through the Origin Energy Foundation's Give Time volunteering program, Origin employees have access to unlimited volunteer leave to donate their time and skills to the Foundation's not-for-profit partners.

Origin's in-house legal team recognised they had a unique skillset to offer and explored how they could provide legal pro bono services to help meet the critical legal needs of some of our Foundation partners and other not-for-profit organisations.

The Origin Legal Pro Bono Program launched in April 2021 with an available pool of over 30 lawyers. The program aims to understand the culture and strategy of its partners and

works with them to identify the areas of their business that would benefit from pro bono legal support.

Since its launch, the Origin legal team have provided more than 180 hours in pro bono work to a growing list of partners, including SolarBuddy, Raise Foundation, Autism Queensland, and the Foundation for Rural and Regional Renewal.

The benefits of skilled volunteering are not only realised by the not-for-profit organisations that we work with, but also by our employees, who make a highly rewarding and meaningful impact.



Origin employees have helped school students assemble more than 10,000 SolarBuddy lights since 2018.

Responsible procurement

Our supply chain includes the supply of goods and services, wholesale commodities and the distribution of energy. It encompasses nearly 3,800 direct suppliers with which we spent around \$12.1 billion in FY2023.⁸ Our direct suppliers are mainly in Australia, with 9 per cent based internationally.

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 from where, we source the goods and services we need to operate our business. Our responsible procurement plan focuses on four key areas:

- Identifying, assessing, and addressing modern slavery risks;
- Supporting regional communities;
- Increasing Indigenous participation in our supply chain; and
- Supporting small businesses.

Identifying, assessing, and addressing modern slavery risks

Origin aims to work with suppliers and stakeholders who are committed to preventing, identifying and addressing risks to people that may exist within their supply chains. We recognise the UN Guiding Principles on Business and Human Rights' continuum of involvement. We understand that our operations and supply chain could cause, contribute or be directly linked to adverse impacts to people, such as modern slavery practices.

Our assessments to date have not identified any confirmed modern slavery practices within our own operations or direct supply chain, however, there is a high likelihood of modern slavery issues in some products manufactured by renewable energy suppliers.

We increased our focus on the risk of modern slavery practices related to some components in renewable energy equipment this year by working with eight global solar panel suppliers to obtain traceability and visibility of the participants in their extended supply chains. This included considering where they operate and what actions they have taken to manage modern slavery risks, and whether they had conducted independent social audits.

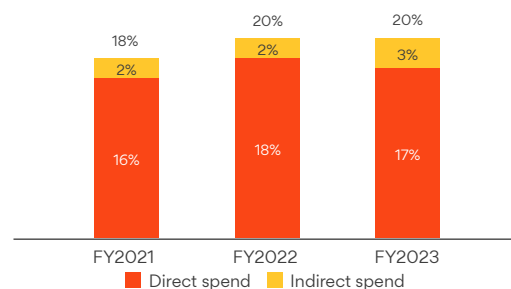
In FY2023, we published our [Social Audit Protocol](#), which outlines our approach to social audits – including when they are required and how we share and address findings – and commissioned two social audits of battery manufacturers. More information on this and other activities related to modern slavery risk, including our work with the Clean Energy Council's Risks of Modern Slavery Working Group, can be found in our [2023 Modern Slavery Statement](#).

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 encourage our suppliers 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 FY2023, we purchased from 35 new suppliers in the area, offering products and services as diverse as helicopter services, concrete products, and photography.

Regional procurement spend (direct and indirect) as a percentage of total procurement spend⁹



Overall, we spent \$421.1 million directly and indirectly with regional suppliers¹⁰ this year. Our proportion of regional spend as a percentage of our total procurement spend, which was \$2.1 billion in FY2023, remains at 20 per cent, consistent with the FY2022 result.

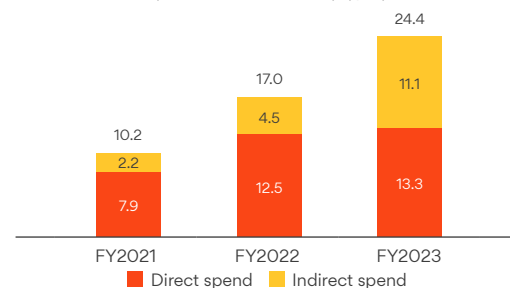
Increasing Indigenous participation in our supply chain

We are committed to increasing the participation of First Nations businesses in our supply chain.

Origin's second [Stretch Reconciliation Action Plan](#) (Stretch RAP) was launched in FY2023 and includes a new target that aims to increase our First Nations procurement spend by 20 per cent year on year, from a baseline of \$17 million in FY2022.

In FY2023, our spend with First Nations suppliers¹¹ increased to \$24.4 million, a 44 per cent increase from FY2022. We have increased the value of both our direct spend, for example with Queensland-based Indigenous civil maintenance providers, and our indirect spend with suppliers offering services such as vegetation management, non-destructive testing, and software solutions.

Spend with First Nations suppliers (direct and indirect) (\$m)



Since 2018, we have included Indigenous Participation Commitments (IPCs) in contracts with key suppliers to help facilitate more opportunities for Indigenous businesses. In FY2023, 56 new IPCs were agreed. Collaborating with our major contractors to promote opportunities contributed to around \$11.1 million in additional indirect spending with Indigenous businesses in FY2023. 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.

In FY2021, we launched the Marketplace project with our long-term not-for-profit partner, Many Rivers, to support the commercial development of small Indigenous businesses in Queensland. Several First Nations businesses have secured contracts with Origin or our suppliers through this program, including Chinchilla-based paint protection, insulation and scaffold business, Kitja Services. Kitja, which employs around 20 Indigenous and non-Indigenous technicians, was initially introduced to Origin suppliers and this year signed a contract with Origin to supply paint, coating and insulation services to our gas assets.

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 business suppliers.

We report under the Australian Government's new Payment Times Reporting Scheme, which aims to improve payment times for small businesses. For the reporting period from July 2022 to December 2022, Origin paid 89 per cent of invoices within 30 days. We have continued to make technology and process enhancements to our payment platforms to improve our performance.

⁸ Supply chain spend is approximate, annualised third-party spend, including commodity related transactions and excluding taxes, government charges, joint ventures, intercompany transfers and landowner compensation payments. It includes 100 per cent of our spend as upstream operator of Australia Pacific LNG.

⁹ Total procurement spend includes Origin procurement invoices. It does not include payments to Local Government Agencies, the Australian Tax Office, joint venture partners, intercompany transfers, employees, land owners, donations or sponsorships, or commodity related transactions.

¹⁰ Direct spend refers to payments made directly by Origin with suppliers whose primary place of business is in a regional local government area or postcode. Indirect spend refers to payments made by non-regional Origin suppliers using Origin funds to another supplier whose primary place of business is in a Local Government Area outside of a Metropolitan Area.

¹¹ Classified as a business in which an Aboriginal and/or Torres Strait Islander person or persons have ownership of at least 50 per cent, in alignment with the Supply Nation membership criteria <https://supplnation.org.au/benefits/supplier/>

Planet

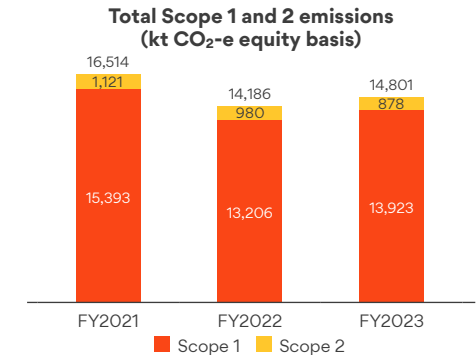
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We care about our impact on the environment. Our long-term ambition is to achieve net zero Scope 1, 2 and 3 emissions by 2050. We are working to progressively decarbonise our business and investing in technologies to help our customers do the same.



Performance at a glance

- Released our first Climate Transition Plan, with 94.5 per cent of shareholder votes cast in favour of the plan
- Achieved short-term emissions target, with a cumulative reduction of 9 million tonnes CO₂-e between FY2021 and FY2023, against FY2017 baseline
- Total Scope 1 and 2 equity emissions increased by 4 per cent, as improved coal supply enabled increased generation output from Eraring to support the needs of the market
- Final investment decision made on 460 MW first stage of Eraring battery
- Virtual Power Plant grown to 815 MW across more than 276,000 connected services, up from 258 MW at the end of FY2022.



9 mt

cumulative reduction of CO₂-e between FY2021 and FY2023, against FY2017 baseline, achieving short-term target

UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs, as detailed on our [website](#):



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 energy transition is core to our strategy and is key to delivering on our purpose. Our ambition is to lead the energy transition through cleaner energy and customer solutions.

In March 2023, the Intergovernmental Panel on Climate Change (IPCC) published the latest climate science in its Sixth Assessment Report (AR6). AR6 outlines that greater ambition and action will be required by society to limit the global average temperature rise this century to 1.5°C above pre-industrial levels, consistent with the goals of the Paris Agreement.

As the energy sector accounts for around three quarters of global anthropogenic GHG emissions,¹² meeting climate change goals will require significant changes to the global energy system, and finding the right balance between achieving emissions reduction and maintaining reliable, secure and affordable energy supply.

In August 2022, we published our [Climate Transition Action Plan](#) (CTAP), which outlined our ambition to lead the energy transition through cleaner energy and customer solutions. The CTAP detailed our updated targets¹³ across Scope 1, 2 and 3 emissions to accelerate emissions reduction across our business and included our long-term ambition to achieve net zero Scope 1, 2 and 3 emissions by 2050.

Our CTAP was put to a non-binding shareholder advisory vote at Origin's Annual General Meeting in October 2022. We received strong shareholder support, with 94.5 per cent of votes cast in favour of the CTAP.

Our CTAP is a three-year plan, and we intend to report progress against key elements annually. Pages 24 to 32 of our Sustainability Report provide this progress update. Building on the scenario analysis presented in the CTAP, we have also undertaken a climate sensitivity analysis using a 1.5°C scenario in our FY2023 financial statements.

Our pathway to net zero emissions and achieving our targets is subject to uncertainties and risks. The risks to achieving our targets and our 2050 ambition outlined in the CTAP remain.

During FY2023, some of the risks noted in the CTAP were evident in the Australian energy industry with, for example, delays experienced in the construction of renewable and storage projects and transmission infrastructure. These highlight the significant challenges in transitioning Australia's electricity networks to a lower-emissions system and we will continue to assess these risks and review our pathway to net zero emissions as necessary.

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 when considering climate-related risks and opportunities. We continue to improve how 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 the continuing development of our climate-related financial disclosures. See our [TCFD index](#) and [Climate Transition Action Plan](#) for more information.



¹² IEA (2021), [Net Zero by 2050](#), IEA, Paris, page 13.

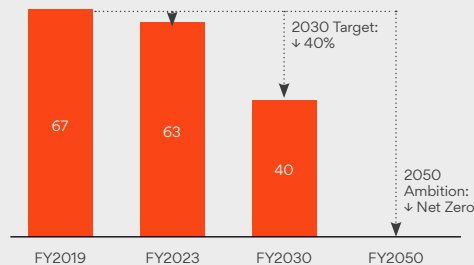
¹³ Origin relied on data, analysis and methodologies prepared by the Intergovernmental Panel on Climate Change (IPCC), the International Energy Agency and the Science Based Targets initiative among others, in calculating its 1.5°C envelope and has not sought to verify those materials. Our approach to setting our medium-term emission intensity target for Scopes 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 CTAP.

Progress on our Climate Transition Action Plan

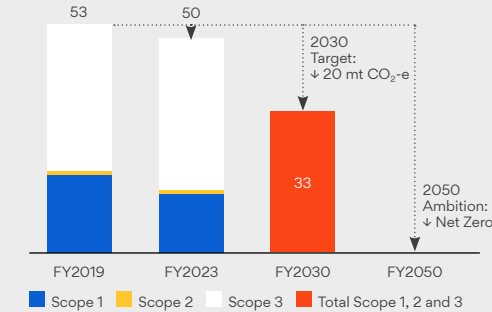
CTAP Progress Snapshot

Emissions reductions targets

Target: Reduce Scope 1, 2 and 3 equity emissions^{1,2} intensity by 40% by 2030 against FY2019 baseline (t CO₂-e/TJ)



Target: Reduce Scope 1, 2 & 3 absolute equity emissions^{1,2} by 20mt by 2030 against FY2019 baseline (mt CO₂-e)



Target: Reduce Scope 1 equity emissions by a cumulative eight million tonnes CO₂-e between FY2021–FY2023, against FY2017 baseline



Capital allocation

In accordance with our intention to ensure our capital expenditure portfolio is consistent with our emissions reduction targets:

- Interest in Beetaloo Basin exited and entered into agreements to exit Canning and Cooper-Eromanga Basins
- Final investment decision taken on first stage of Eraring battery, committing to approximately \$600 million over two years.

Just Transition

Consistent with our principles for a just energy transition:

- 93% of Eraring employees have Individual Support Plans in place
- Community Engagement Strategy in place and Community Engagement Forum meeting quarterly
- First round of applications for the \$5 million Eraring Community Fund commenced, first grants to be provided in the second half of 2023.

¹ Covers all material Scope 1, 2 and 3 emissions, including our equity share of Australia Pacific LNG's emissions. To ensure meaningful comparison of consistent data sets and emissions over time, our FY2019 baseline has been adjusted to reflect changes in our investments, activities and emissions boundaries.

² Acknowledging progress against our targets, we note that Scope 1 and 2 equity emissions increased by 4 per cent in FY2023 compared to FY2022. Refer to our discussion on equity emissions performance for more details.

Transitioning to net zero

Decarbonisation ambitions and priorities	FY2023 progress
<p>Reduce emissions from our existing operations</p>	<p>Accelerate Eraring closure</p> <p>We continued to run Eraring safely and reliably to support the NEM and assess the market to inform any final decisions on the closure timing</p>
<p>Reduce emissions from our existing operations</p>	<p>Reduce operational control methane emissions</p> <p>5 per cent increase in emissions from venting and leaks in part due to warmer weather leading to higher dehydration requirements</p>
<p>Grow our portfolio of renewables and cleaner energy</p>	<p>Grow renewables and storage capacity to 4 GW by 2030</p> <p>Announced final investment decision on 460 MW stage 1 of Eraring battery</p> <p>Established JV for Gippsland offshore wind and entered into an agreement to acquire New England REZ acreage for wind development</p> <p>Progressed possible development of Dapper and Yanco solar opportunities; continue to assess feasibility of other potential developments, including in light of transmission requirements</p>
	<p>Grow VPP to 2 GW under management</p> <p>815 MW at June 2023, up from 258 MW at June 2022</p>
	<p>Investments in Future Fuels</p> <p>Progressed Hunter Valley Hydrogen Hub, including hydrogen bus trial</p>
<p>Enable customers to decarbonise</p>	<p>Lower-carbon products and solutions</p> <p>GreenPower sales volumes grew 9% from 489 GWh in FY 2022 to 533 GWh in FY2023</p> <p>68 MW solar residential and business solar installations</p> <p>Launched several new EV products, including energy plans, chargers and employee subscription model; over 400 EVs under management</p>
	<p>Grow a portfolio of carbon credits</p> <p>Made initial investment in long-term, nature-based carbon supply</p>
	<p>Grow scale at Octopus</p> <p>Octopus now number two UK retailer following Bulb acquisition, with 9.7 million customer accounts</p>

Emissions reduction targets

Our CTAP outlined new, medium-term emissions reduction targets from a FY2019 baseline:

- a 40 per cent reduction in Scope 1, 2 and 3 equity emissions intensity by 2030; and
- a 20 million tonne reduction in absolute Scope 1, 2 and 3 equity emissions by 2030.

To ensure meaningful comparison of consistent data sets and emissions over time, our 2019 reported emissions data was adjusted to reflect changes in our investments, activities and emissions boundaries. These adjustments are outlined in the table below and will be the basis for reporting progress against our medium-term targets.

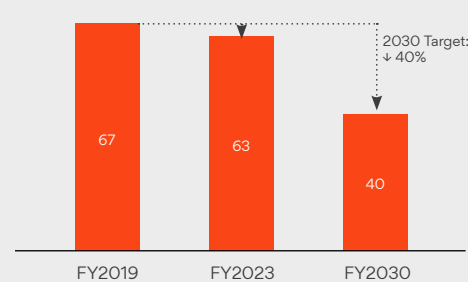
Total Scope 1, 2 and 3 emissions (mt CO₂-e, equity basis)

2019 Reported	54
Adjustments:	
APLNG 10 per cent equity sale	(4)
Other investments and acquisitions	1
Change to Scope 3 inventory boundary and improved measurement calculation methodology	2
2019 Target Baseline	53

Compared to our FY2019 baseline, both our Scope 1, 2 and 3 emissions intensity and absolute Scope 1, 2 and 3 emissions have declined by 6 per cent. The decline largely reflects a decrease in generation output from Eraring and our gas fleet over that time. This has been partly offset by an increase in Scope 3 emissions, in part due to higher purchases from the NEM.

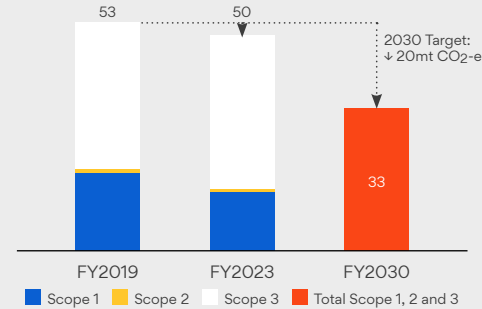
¹⁴ Our short-term target uses our original 2017 base year as the target was set three years ago, prior to our new base year decision, and was designed to run consecutively over a three-year period. We note that this is the only target with a 2017 baseline.

Scope 1, 2 & 3 emissions intensity target¹
(t CO₂-e/TJ, equity basis)



¹ For more information on this metric, see our [Climate Transition Action Plan](#)

Total Scope 1, 2 & 3 emissions target
(mt CO₂-e, equity basis)



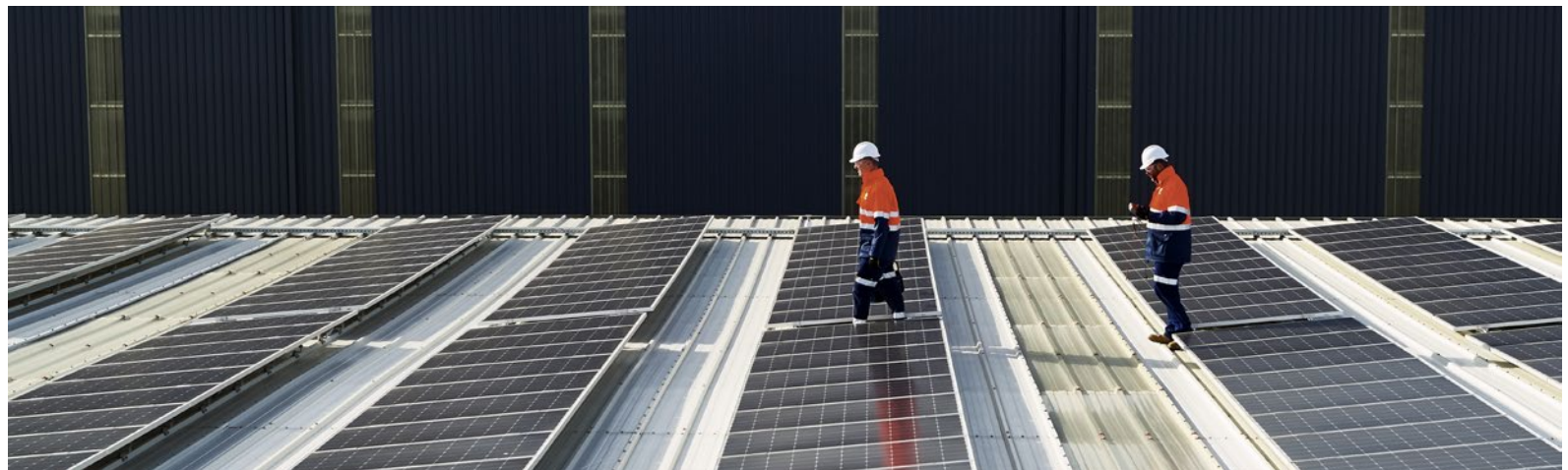
As noted in our discussion on equity emissions performance, our Scope 1 and 2 equity emissions increased by four per cent in FY2023 as compared to FY2022, as coal supply constraints experienced in FY2022 eased, enabling increased generation output from Eraring to support the needs of the market. For our 2030 medium-term emissions targets we have adjusted our FY2019 base year Scope 1, 2 and 3 emissions to reflect changes in our investments, activities and emissions boundaries in the period between FY2019 to

FY2023. Due to this adjustment, our reported FY2022 Scope 1, 2 and 3 emissions data does not provide a direct point of comparison to our FY2023 data.

Our CTAP also outlined an updated short-term target to reduce cumulative Scope 1 equity emissions by eight million tonnes CO₂-e between FY2021 and FY2023, from a FY2017 baseline.¹⁴ We achieved this target with a cumulative reduction of 9.1 million tonnes CO₂-e between FY2021 and FY2023.

The risk identified in the CTAP that Eraring and other generation could be required to run at higher output levels in the near term to meet customer demand and provide reliability to the market was evident during FY2023. Generation output from Eraring increased by 11 per cent in FY2023, as coal supply constraints experienced in FY2022 eased. This contributed to the year-on-year increase in Scope 1 and 2 equity emissions by four per cent noted previously.

We continue to expect that carbon offsets will play a limited role in meeting our 2030 emissions reduction targets, and only for residual emissions that are hard to abate. We continue to prioritise actions that enable direct emissions reductions, and we maintain our expectation that our targets will largely be achieved by directly reducing emissions in our operations, growing a portfolio of renewable assets, and providing cleaner energy solutions to our customers.



Our strategy to transition to net zero

In accordance with our CTAP, we are focusing our decarbonisation efforts in three key areas:

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



Reduce emissions from 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 the Eraring Power Station to potentially as early as August 2025. Bringing forward our exit from coal-fired power generation is the most significant step we expect to take towards achieving our emissions targets.

We will continue to assess the market to inform our decision on the timing of closure of all four units at Eraring. In the meantime, Eraring continues to support the security, reliability and affordability of power supply in the NEM, and we continue to look for ways to improve Eraring's performance.

As noted in our CTAP, we have been operating the Real Time Optimisation program at Eraring since FY2019, using artificial intelligence (AI) to improve the plant's overall heat rate – the fuel consumed per MW of electricity produced – which in turn can reduce the plant's emissions. During FY2023, the program is estimated to have avoided at least a further 50,000 tonnes of CO₂-e emissions, bringing the total estimated avoided emissions to more than 390,000 tonnes of CO₂-e since implementation.

Reduce emissions from our gas operations

During FY2023, the Australia Pacific LNG Board approved its position statement on climate change. In this statement, the Australia Pacific LNG joint venture established 2025 and 2030 emissions intensity reduction target ranges for Scope 1 and 2 emissions and committed to regularly reviewing performance against these targets. Australia Pacific LNG also incorporated a carbon price into

business processes to enable the evaluation of emissions reduction projects for implementation and potential carbon liabilities.

As upstream operator for Australia Pacific LNG, we continue to target a reduction in absolute operational methane emissions. Emissions from venting and leaks, which are mostly methane, increased by 5 per cent to 252 kt CO₂-e in FY2023, compared to 239 kt CO₂-e in FY2022. This was due to periods of warmer weather increasing the moisture content of the gas, which then requires more dehydration and related stripping gas, as well as higher amounts of produced water which emits methane, and increased operating activity (a more than 50 per cent increase in workovers during the year).

We use Australia Pacific LNG's marginal abatement cost curve process to evaluate emissions reduction projects. We aim to reduce fugitive emissions by replacing equipment and devices with more efficient and advanced technologies, retrofitting facilities to reduce methane venting, and using targeted planning and the implementation of AI tools to further reduce flaring during planned shutdown and maintenance events.

During FY2023, we continued work to optimise the dehydration system – the process of 'stripping', or removing, water from produced gas – at our gas processing facilities. The first phase involved minimising the use of methane as a stripping gas. Following this, we are trialling eliminating methane as stripping gas by replacing it with pure nitrogen in the dehydration system. If we achieve acceptable trial results, we will implement at our remaining, suitable gas processing facilities in FY2024.

Around three-quarters of our operational control emissions from the Australia Pacific LNG project are produced by the electricity purchased to run its operations. In FY2023, our equity Scope 2 emissions from Australia Pacific LNG were 3 per cent lower than our FY2019 baseline due primarily to the continued decline in the emissions intensity of the NEM, notwithstanding a larger operating footprint. As upstream operator for Australia Pacific LNG, our electricity supply strategy includes the assessment of renewable options such as power purchase agreements (PPAs).

Managing our Scope 3 emissions from our equity share of Australia Pacific LNG is challenging. We believe there will continue to be a long-term role for natural gas to maintain energy security and support the energy transition. We recognise that Scope 3 emissions arise as a consequence of natural gas use, and we will continue to support Australia Pacific LNG's endeavours to engage through its supply chain and industry, understand its customers and explore partnership opportunities.

Exiting upstream exploration portfolio

In September 2022, we announced our decision to divest our interest in the Beetaloo Basin, as well as our intention to exit our remaining upstream exploration permits (excluding our interests in Australia Pacific LNG). The sale of our interest in the Beetaloo Basin was completed in November 2022, and we have also entered into agreements to exit our interests in the Canning and Cooper-Eromanga Basins.

Increasing the efficiency of our gas-fired generation fleet

We believe our portfolio of gas-fired peaking plants will continue to play an important role in Australia's energy transition to support variable renewable output and maintain reliable electricity supply.

During FY2023, we increased the capacity at Uranquinty Power Station (by 7 MW for each of the four units) and Roma Power Station (by 3 MW for each of the two units). Increasing the peak output of individual units enables higher demand to be met by starting fewer units, thereby increasing the efficiency of the plants and reducing emissions per MWh.



▲ Talinga Gas Processing Plant



Grow our portfolio of renewables and cleaner energy

Renewables and storage

We aim to grow renewable and storage capacity within our generation portfolio to 4 GW by 2030. During FY2023, we continued to pursue a range of opportunities that are at varying stages of development, focusing on large-scale solar and wind, and batteries.

In April 2023, we made a final investment decision on the first stage of a large-scale battery at Eraring Power Station. We signed agreements for the supply and construction of Stage one of the battery, a 460 MW battery storage system with a dispatch duration of two hours – which is currently forecasted to come online in the final quarter of the 2025 calendar year. We have the option to increase the battery to 700 MW and four hours dispatch duration in the future. The Eraring battery is a key step in transforming the Eraring site for the future, as well as supporting renewable energy growth across the NEM.

We are also continuing to progress plans for large-scale batteries at Mortlake Power Station (up to 300 MW and three hours dispatch duration) and Darling Downs Power Station (up to 500 MW and four hours dispatch duration).

In June 2023, we acquired a five per cent interest in Allegro Energy and agreed to pilot its long-duration battery at Eraring. The 100 kW (800 kWh) pilot battery will utilise Allegro's Redox Flow Battery (RFB) water-based technology, which it believes to be safer and have less impact on the environment than other battery technologies, on the basis that its RFB technology does not rely on scarce materials and key components are recyclable. The pilot is targeted to be commissioned in late 2024, and if it is successful, a 5 MW (60 MWh) battery with an energy storage capacity of 12 hours is planned for the next stage of the RFB technology trial.

During the year, the 511 MW Stockyard Hill Wind Farm received approval to operate at full capacity, with Origin taking the entire output from 1 January 2023. We also entered into an agreement to acquire a property in the New England Renewable Energy Zone (REZ) in NSW, as a prospective greenfield wind development.

We have partnered with leading independent renewable company, RES, to form a joint venture to explore potential offshore wind opportunities. Through the joint venture, Origin and RES bid for two feasibility licences within the Gippsland declared offshore wind area in Victoria in April 2023, with the potential to deliver a total of 3 GW installed capacity to the NEM.

In the CTAP we noted our investment in renewable and storage opportunities, including a number of potential solar farm development projects that could accommodate, in total, a possible 1,600 MW.

During FY2023, we conducted a range of assessments and studies that will form part of the development application for the Dapper Solar Farm development project (250–300 MW) and we are currently in the process of seeking planning amendments to support the viability of the Yanco solar farm development project (60 MW).

We continue to consider the feasibility of potential Morgan and Carisbrook solar developments (referred to in the CTAP as accommodating a possible 250–300 MW and 74 MW, respectively). We are undertaking an assessment of the feasibility of the proposed Yarrabee solar development project (referred in the CTAP to be up to 450 MW first stage, with the potential for expansion up to 900 MW) to proceed at a reduced output, while we monitor the timing of potential transmission network upgrades that would be needed to support the proposed project's full output viability.

We completed the public exhibit of the environmental impact statement for the potential expansion of the Shoalhaven pumped hydro scheme during the year. However, we did not submit the Shoalhaven expansion for consideration in the NSW Government's Long-Term Energy Service Agreements funding application process in February 2023 due to higher than anticipated construction pricing estimates.

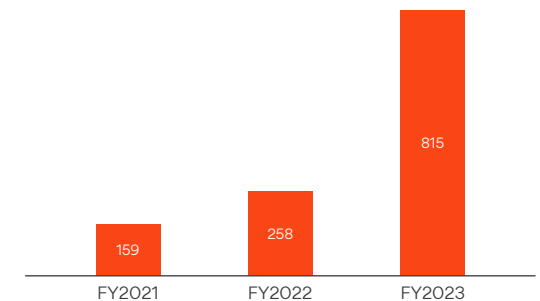
The delivery of renewables and storage and the supporting transmission and distribution infrastructure across the NEM could take longer than expected. National progress has been slower than required – during FY2023, delays were experienced, with projects facing inflationary and supply chain pressures, along with community and landholder opposition in regional areas. We continue to actively monitor the timing of transmission network upgrades and construction that support our solar development projects' viability and the broader build out of renewables and storage across the NEM.

Virtual Power Plant

As outlined in the CTAP, we expect our Virtual Power Plant (VPP) – Origin Loop – to play an increasingly important role in helping us optimise the supply and demand balance in the electricity market. Loop uses AI to optimise the use of distributed energy assets across many separate locations and shift 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.

Our residential and large business customers have a material number of distributed energy assets and we expect the scale of these assets to increase significantly over the coming years. To date, our VPP has grown to 815 MW across more than 276,000 connected services, up from 258 MW at the end of FY2022. We continue to aim to grow this to 2 GW under management by FY2026.

MW under orchestration in Origin Loop



Future Fuels

We continue to expect hydrogen to play an important role in the future global energy mix, particularly in hard-to-abate sectors such as heavy industry and some forms of transport. We are exploring both domestic and export market opportunities for hydrogen and ammonia through a number of projects, while recognising the early-stage nature of the hydrogen market in Australia and the technology advancements required.

In FY2022, we partnered with global mining and infrastructure services business, Orica, to assess the potential of the Hunter Valley Hydrogen Hub (HVHH) – a hydrogen production facility and associated value chain. The first stage of the potential HVHH consists of an electrolyser of up to 60 MW, which is expected to produce up to 5,500 tonnes of hydrogen per year. The intention is for the hydrogen to be generated using recycled water and grid-connected electricity, supported by the

surrender of large-scale renewable certificates. The majority of the hydrogen will be delivered to Orica's ammonia manufacturing facility, and will also be made available to mobility customers.

During FY2023, a decision was made to undertake Front-End Engineering Design (FEED) for the HVHH, and the environmental impact statement was prepared for submission. We were also awarded \$70 million in funding from the Australian Government to progress the proposed hub in July 2023, and we continue to assess technical and commercial feasibility. Pending a final investment decision, we would target first hydrogen production for domestic supply in 2026. The project is being designed with the potential to be scaled up to an export development in the future.

During FY2023, we continued to progress export supply opportunities including progressing feasibility assessments and concept work across our potential projects, including Bell Bay Tasmania and Gladstone Queensland.

Origin's first hydrogen supply activity

During FY2023, we participated in a hydrogen powered bus trial with Transport for NSW and Central Coast bus company, Red Bus Services.

The trial included delivery of a new bus supplied by ARCC (Aluminium Revolutionary Chassis Company) fitted with a hydrogen fuel cell, as well as refuelling infrastructure supplied by Origin and installed at the Red Bus depot.

Our refueller supplied over 400 kilograms (kg) of hydrogen into the ARCC bus over the four-month trial. The bus averaged ~16 km/kg for the over 6,000 kilometres (km) driven as part of the trial, a better than anticipated efficiency, with the longest run of 550 km extending over 16 hours between refuelling.

The trial is an important step towards understanding how the new hydrogen technology will work in Australian conditions and could pave the way for larger deployments of hydrogen fuel cell buses in the Central Coast and Hunter Valley regions as part of the Hunter Valley Hydrogen Hub.



Supplied: Office of Energy and Climate Change



Enable customers to decarbonise

We continue to provide customers with a growing portfolio of simple, affordable low-carbon products and cleaner energy solutions, including rooftop solar and batteries, renewable energy, EV solutions, renewable power PPAs, and load and demand management. We are also exploring the potential of a suite of future energy customer offerings, including hydrogen and ammonia, biofuels such as biogas and bioLPG, and carbon management solutions.

Our partner, Octopus, continues to grow – it is now number two in the UK market by customer accounts, supplying electricity sourced from 100 per cent renewable energy including wind, hydroelectric and solar power, to 9.7 million customer accounts and provides flexibility services through its virtual power plant, Kraken Flex, with over 5 GW contracted onto the platform.

Carbon portfolio and solutions

While we strive to prioritise actions that enable direct emissions reductions, we recognise that carbon offsets still play a role in the decarbonisation journey of many businesses.

We have a growing portfolio of carbon credits that can be sold to our customers directly, or via a suite of products under our Climate Active certification.

We also undertake direct carbon project investment and development. During FY2023, we invested in the Climate Asset Management – Nature Based Carbon Fund (NBCF). The NBCF partners with, and finances, global nature-based carbon credit projects, particularly those in the early stages of their development. We expect the carbon credits distributed from the NBCF investment will primarily be used to support Origin's product suite.

In addition to nature-based solutions, we are also considering projects developed under alternate sequestration methods, such as switching from diesel to gas, renewables, biogas/biofuels and carbon capture and storage solutions, to build a diverse portfolio.

Helping customers switch to lower emissions fuels

Our LPG business has a role to play in the energy transition, helping customers reduce emissions by switching from coal, diesel and fuel oil for their energy source to LPG. Over the past few years, we have helped our customers convert from coal, diesel and fuel oil to LPG.

We are also looking at the potential for alternative fuels such as biogas and bioLPG. Biomethane is considered a renewable gas because it captures biogenic methane emissions from the natural carbon lifecycle and substitutes them with a non-renewable gas molecule.

In March this year, we signed an agreement with Jemena to supply biomethane, making Origin the first company to supply Australian customers with a renewable gas via a regulated gas network. The biomethane is being produced at Sydney Water's Malabar wastewater treatment plant as part of a trial through a partnership between ARENA, Sydney Water, and Jemena. We have an agreement to purchase up to 110 TJ of biomethane per annum from the start of the trial in May 2023 until the end of 2024.

See [Helping our customers to decarbonise](#) for more information on our FY2023 customer activities.



Supporting a just energy transition

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

We acknowledge 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.

We aim to support our people, communities and customers through the transition while contributing to an orderly, reliable and low-carbon energy system, and minimising our impacts on the environment. We developed our principles for a just energy transition to guide our approach.

We intend to continue working with our stakeholders to develop tailored just transition plans for priority areas and assets, as well as build partnerships and develop skills for the future energy system, in line with our principles.

Operationalising our principles

The Origin Board endorsed our principles for a just energy transition and the Board Safety and Sustainability Committee maintains oversight of our activities and how we operationalise these principles.

We recognise that our principles for a just energy transition need to be integrated into strategy development, planning and decision making across our business. Our Just Transition Working Group (JTWG) is responsible for identifying opportunities to embed the principles across the business and putting in place governance processes to support the business to operationalise the principles.

The JTWG is sponsored by the Executive General Manager, Corporate Affairs, and includes representatives from across Origin. The JTWG reports periodically to Origin's Climate Change Forum, which is chaired by the Chief Executive Officer, and the Board Safety and Sustainability Committee.

Future developments

We are focused on developing a range of renewable and cleaner energy solutions, but recognise the potential for our activities to impact the regions, communities and environment we operate in. We employ the following when evaluating and pursuing such opportunities:

- **Environmental and social impact assessments and management plans** – we undertake project-specific studies and assessments to inform development designs and management plans to minimise potential environmental, social and cultural heritage impacts.
- **Stakeholder engagement** – we are consulting with affected communities and stakeholders on environmental, social and cultural heritage impacts as we develop new projects. Community and stakeholder engagement plans are developed for all renewable and future fuels development projects.
- **Social impact framework** – we have developed a Social Performance and Communities Framework for renewable and cleaner energy developments. During FY2023, we grew our social performance team for renewable energy projects and will look to build further internal capacity as future projects are sanctioned.
- **Jobs and skills for the transition** – in FY2023, we established a learning and development program to upskill our people in the future skills required for the energy transition. We work with local and state governments and agencies to identify and commit to supporting local, regional and Indigenous jobs and training.
- **Responsible procurement** – we work with selected contractors to maximise benefits for local, regional and Indigenous businesses, and minimise adverse impacts in our supply chain, including addressing modern slavery.

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.

Planet



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

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.



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

Supporting Eraring's transition



The Eraring Power Station transition is a key part of our ambition to lead the energy transition and our approach to it is guided and informed by our principles for a just energy transition.



Our people

We have a dedicated team to support our people through Eraring's transition and to contribute to its safe and reliable operations. We have three key areas of focus:

1. Health, wellbeing and employee relations: keeping health and wellbeing at the forefront and ensuring our workforce transition plans are phased and transparent.
2. Future capabilities: supporting individuals to achieve their future career and life goals.
3. Communications and consultation: ensuring our people feel listened to, respected, supported and valued.

Health, wellbeing and employee relations

We have a range of programs and resources to support our Eraring employees' mental health and wellbeing. We have developed a calendar in consultation with our employees to give our shift workers access to wellbeing support services,

resources, events and training. More than 80 per cent of our Eraring employees have participated in the 'Mates in Energy' workshops, an industry program to support general mental health and suicide prevention awareness.

To ensure safe and reliable operations at Eraring until its closure, we have put in place effective retention arrangements and use workforce planning practices that draw on operational needs, data insights and workforce changes.

Future capabilities

Our approach to our employees at Eraring has been to engage with and listen to the unique circumstances and future aspirations of each employee to help them work through what they want to do in the next stage of their career or life.

Career transition support has been provided through general and tailored superannuation information workshops, opportunities to seek independent financial advice, and a series of webinars and online career workshops on topics, including *Jobs of the future* and *Starting your own business*. Career coaching has also been offered to our employees, with 50 people choosing to participate to date.

We conducted initial one-on-one career conversations with Eraring employees in FY2022 to identify their personal and career ambitions and potential reskilling or upskilling requirements. In FY2023, an experienced career transition team was established on site to help develop Individual Support Plans (ISPs) for all Eraring employees who elected to participate, at a pace and trajectory suited to each individual. The ISPs include details on current skills and qualifications, reskilling and support requirements, and an agreed training and development activity plan. To date 93 per cent of Eraring employees have an ISP in place (some employees have elected not to participate).

Ongoing coaching support is available and six-monthly check-ins are held to review progress and update plans if needed.

We have supported employees to take up a wide range of learning opportunities, including university courses, small business skills, vocational education and short upskilling courses. As at June 2023, 108 training courses had been approved from more than 68 different providers, including local and Indigenous organisations.

More than 10 per cent of long serving employees at Eraring have indicated they are likely to retire before the potential closure and many advised that they do not require career transition support. Retiring employees are provided with transition to retirement support and continue to have access to the full range of transition program offerings.

We committed to funding the completion of all apprenticeships and traineeships in place at the time the accelerated closure of Eraring was announced. New apprenticeships were taken on during FY2023, and we remain committed to funding their completion as well. There are currently 19 electrical, mechanical and fabrication apprentices hosted on-site.

Communications and consultation

We established several communication channels for the timely sharing of information with Eraring employees and stakeholders on transition support and plans, including a monthly newsletter.

During FY2023, members of the Board or Executive Leadership team visited the site and met with employees five times. We also conduct regular on-site employee briefings on key decisions impacting the site.

A Transition Consultation Committee (TCC) was established with employee, union, and site leader representatives to explore solutions, ideas and

ways of working associated with the transition, and to provide a forum for genuine two-way communication. Twelve TCC meetings were held in FY2023, and the outcomes of all meetings shared with employees via a monthly newsletter.



Communities

Community engagement

We created a Community Engagement Strategy during FY2023 to provide the framework for Origin's engagement with community members and stakeholders during Eraring's pre- and post-closure periods. The strategy outlines our principles for engagement, a monitoring framework and a consideration of social risks.

We reconfigured the Eraring Community Forum in early 2023 with representatives from local and state government, community groups, the local Aboriginal Land Council, and business, educational, and environmental organisations. Chaired by an independent person, the role of the forum is to enhance communication between Origin and the local community and to improve our understanding of community issues.

Meetings are held quarterly, with two held in FY2023. Key topics of interest for the community and our stakeholders include Eraring's transition, community investment, support for our employees and the Eraring battery project.

Community investment

In FY2022, we established a Community Fund of \$5 million to fund local community initiatives through sponsorships, grants and partnerships over 2023–2032.

During FY2023, we developed a Community Investment Strategy to support the delivery of the Fund, overseen by the Community Investment Fund Advisory Panel (a subset of the Community Forum). The Advisory Panel will evaluate and provide advice on applications, facilitating investment of \$500,000 per year, on average, for 10 years, running two funding rounds per year.

The first round of applications commenced in May 2023. We received significant interest from local groups and initiatives, with areas of focus including community wellbeing and community resilience. We will provide the fund's first grants in the second half of 2023.

Contractors and suppliers

We recognise that our local contractors and suppliers will be impacted by the accelerated closure of Eraring, and we aim to provide support as the transition progresses.

We undertook an initial process to identify which contractors and suppliers may require our support during the transition. Many of our contractors and suppliers are larger partners with a national or even global presence and are able to manage the transition within their existing operations.

We are committed to engaging with our smaller, local providers via our site-based workforces to understand their specific circumstances and will provide targeted assistance where possible, which may include access to wellbeing and career transition support and learning and career skills resources.

We will also seek to identify opportunities for local and Indigenous contractors and suppliers to participate in the construction and associated works for the Eraring battery.

Governments and other forums

We believe governments have an important role to play in supporting workers and communities in the transition to a low-emissions economy. We welcome the establishment of the Australian Government's Net Zero Authority in April this year and look forward to working constructively with it to build on our engagement with key local stakeholders as part of our planning for the closure of Eraring.

We maintain a continual dialogue with several government agencies at local, state and federal levels, including Lake Macquarie City Council, the state member for Lake Macquarie, the NSW Electricity Infrastructure Jobs Advocate, Department of Regional NSW, TAFE NSW, Training Services NSW, and the Australian Government departments of Employment and Workplace Relations, and Education, Skills and Employment.



Planet

We have commenced planning for the transition of the site, including restoration and rehabilitation. We intend to maximise the reuse, repurposing and recycling of materials from the existing plant, and pursue re-development opportunities for the site.

The announced Eraring battery has been strategically located at the Eraring site to enable direct connection to existing infrastructure with minimal disturbance. The battery footprint has been designed to minimise impact to vegetated areas, with the site located in an area of previous disturbance.

Approximately 15 hectares of vegetation clearing will be required. The biodiversity impacts associated with the vegetation clearing and battery development will be offset according to the approved Biodiversity Development Assessment Report prepared as part of the battery project's Environment Impact Statement.



Customers

Our generation portfolio, particularly Eraring Power Station, has continued to play an important role in maintaining electricity system reliability and affordability during FY2023.

We recognise that there is some concern in the community about the pathway to exiting coal-fired generation, and we need to consider affordability and reliability of energy supply for our customers and the community as part of the energy transition.

There is a significant amount of planning and preparation needed to ensure the continued supply of reliable energy to the NEM once Eraring closes. We will continue to assess the market over time, and this will help inform any final decisions on the timing of closure of all four units at Eraring. We will also continue to engage with the market operator, NSW Government, our people and the local community regarding plans for Eraring's closure.



Members of the Eraring Community Forum touring Eraring Power Station.

Capital allocation

We continue to aim to deploy capital in areas that deliver value to shareholders and are aligned with our strategy, targets and ambition.

In FY2023, we progressed a number of strategic initiatives to accelerate our cleaner energy ambitions and to deliver the reliable energy required today.

Our decisions to divest our interest in the Beetaloo Basin and enter into agreements to exit our interests in the Canning and Cooper-Eromanga Basins were made to enable greater flexibility to allocate capital towards our strategic priorities to grow cleaner energy and customer solutions, and to deliver reliable energy through the transition.

In April 2023, we made a final investment decision on the first stage of the Eraring battery, committing to an investment of approximately \$600 million over the next two years, with the option to increase the battery size from 460 MW to 700 MW and from two hours to four hours duration in the future.

We continued to invest in renewable energy development projects during FY2023. We established joint ventures with RES to bid for two feasibility licences in offshore Victoria, progressed our existing portfolio of solar farm development projects through feasibility studies and assessments, and entered into an agreement to acquire a property near Armidale, NSW, as a prospective greenfield wind development opportunity.

With the Stockyard Hill Wind Farm able to operate at full capacity during the year and Origin taking the entire output from 1 January 2023, our electricity purchases from renewable PPAs and our customers' solar feed-in tariffs grew to 5.7 terawatt hours (TWh), or 16 per cent of our total electricity procurement, up from 5.5 TWh in FY2022.

Climate policy engagement

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

Government policy engagement

We work constructively with the Australian and state and territory governments to progress co-ordinated carbon emissions policies and targets for the electricity sector and other parts of the economy. This provides the market with the confidence it needs to make the necessary investments to facilitate the transition to net zero emissions by 2050.

We believe that gas use in power generation will decline over time, but that gas has an important role to play in keeping the electricity system reliable and secure as variable renewable energy grows to dominate the power system. We advocate for policy that supports the responsible development of Australia's gas resources, consistent with the goals of the Paris Agreement.

Regular dialogue is maintained with representatives from both state and federal governments and ministerial departments, including with our Chairman, CEO, senior executives and members of Origin's Corporate Affairs team.

We also make submissions on policy matters and attend key conferences to understand policy direction and to ensure Origin's views are understood. During FY2023, we advocated for energy policy that supports private investment and a least-cost approach, and the need for governments and industry to support those less able to pay for increasing energy prices. We have made submissions on several policy fronts, including support for the following:

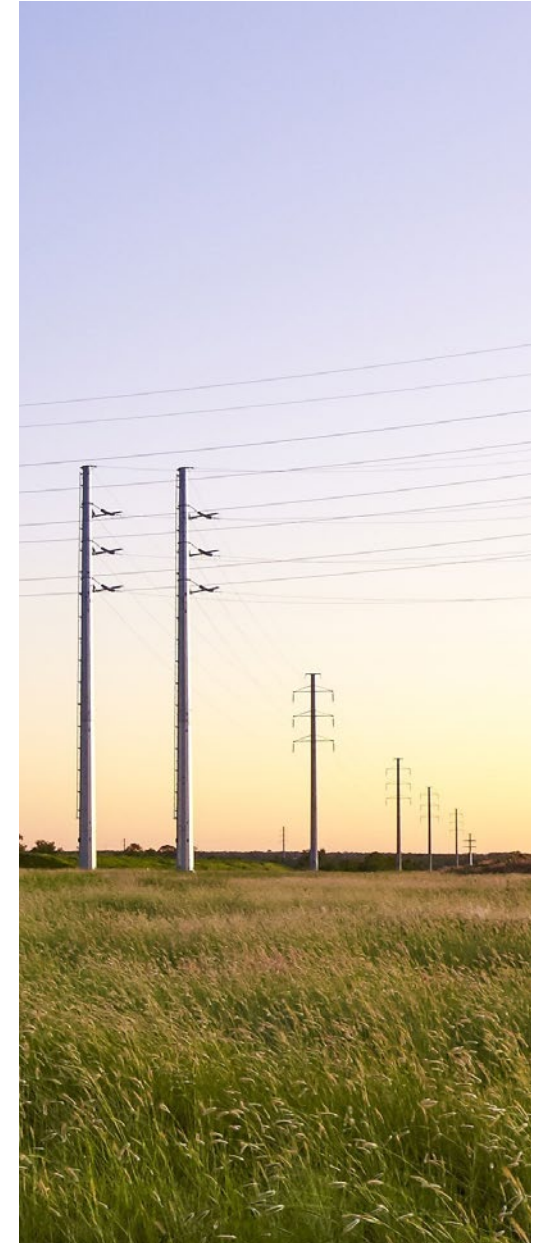
- a reformed Safeguard Mechanism that contributes a proportional share to Australia's emissions reduction commitments;
- gas policy that supports the energy transition;
- the drafting of a Hydrogen Guarantee of Origin scheme and associated Renewable Electricity Guarantee of Origin scheme;

- an ambitious National Electric Vehicle Strategy including a robust national fuel-efficiency standard to be implemented expeditiously;
- new climate-related bodies such as the National Reconstruction Fund, Powering the Regions Fund and the Net Zero Authority; and
- continual scrutiny and improvement to promote high quality carbon offset schemes such as Australian Carbon Credit Units (ACCUs).

Industry associations

We review our industry association memberships for policy alignment, as well as cost and benefits, annually. In FY2023, our review found we were aligned on climate change positions, including strong commitments to the Paris Agreement and net zero emissions by 2050.

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



Greenhouse gas emissions

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

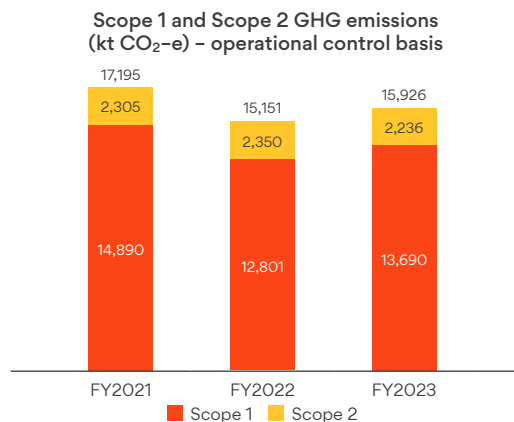
Emissions reported on an equity basis capture the emissions relating to the assets we own, including our generation fleet and our 27.5 per cent share of Australia Pacific LNG, which includes the downstream operations and non-operated areas.

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).¹⁵

In November 2022, Origin completed the sale of its interest in the Beetaloo Basin. Emissions related to our activities in the Beetaloo Basin do not form part of our FY2023 emissions reporting obligations under the *National Greenhouse and Energy Reporting Act, 2007* (NGER).

Operational control emissions

Our total Scope 1 and Scope 2 operational control emissions were 15,926 kt CO₂-e, an increase of five per cent compared to FY2022.



Energy Markets

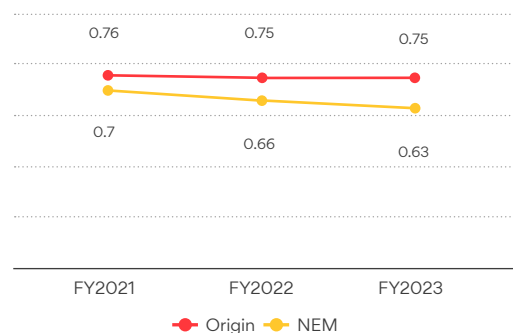
Energy Markets' Scope 1 and 2 operational control emissions were 13,209 kt CO₂-e in FY2023, an eight per cent increase from the previous year. This is due to an increase in generation output at Eraring by 11 per cent, partly offset by a 32 per cent decline in output from our gas generation fleet, as coal supply constraints experienced in FY2022 eased, enabling increased generation output from Eraring to support the needs of the market.

Emissions intensity – Energy Markets

Scope 1 and 2 emissions intensity for electricity generation,¹⁶ including contracted renewables, was 0.71 tonnes of CO₂-e per MWh in FY2023, up from 0.70 in FY2022

The emissions intensity of our electricity generation portfolio, including contracted renewable generation, was 0.75 tonnes of CO₂-e per MWh in FY2023 for Scope 1 and 3 emissions. This was higher than the NEM average of 0.63 tonnes of CO₂-e per MWh, which continues to decarbonise. During 2022, 2,500 MW¹⁷ of new large-scale wind and solar generation capacity was added to the NEM.

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



The emissions intensity of Eraring, calculated using Scope 1 emissions only, increased to 0.98 tonnes of CO₂-e per MWh in FY2023, from 0.95 tonnes of CO₂-e per MWh in FY2022. This was mainly due to an increase in generated electricity used for on-site power needs and was also influenced by coal quality.

Integrated Gas

On an operational control basis, Integrated Gas produced total Scope 1 and 2 emissions of 2,714 kt CO₂-e in FY2023, a six per cent decrease on FY2022.

Scope 2 emissions from the electricity purchased to run Australia Pacific LNG's upstream operations accounted for around three-quarters of our reported emissions from Integrated Gas in FY2023 and declined by eight per cent due to the continued decline in the intensity of the NEM.

Scope 1 emissions for FY2022 have been restated lower, from 777 kt CO₂-e previously reported in FY2022, to 715 kt CO₂-e. This was mostly due to a calculation error following implementation of changes to emission estimation methods that were introduced last year by the Clean Energy Regulator.

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 283 kt CO₂-e in FY2023, or two per cent of Origin's total Scope 1 operated emissions.

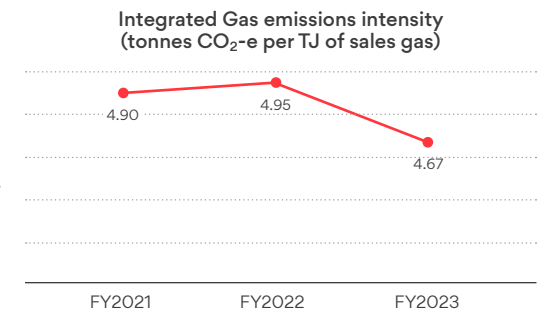
Flaring is mainly associated with unplanned downtime at gas processing facilities and is also used during production testing of exploration wells. Flaring emissions declined by 35 per cent in FY2023, continuing the downward trend of the last five years. Improvements in FY2023 were achieved through a reduction in unplanned downtime, as well as the continued optimisation of planned downtimes using field turn down tools, which included transferring gas to other assets.

Emissions reported from venting and leaks, mostly methane, totalled 252 kt CO₂-e in FY2023, a five per cent increase on FY2022. Methane reduction initiatives implemented during the year were partly offset by an increase in venting and leaks due to periods of warmer weather increasing the moisture content of the gas, which then requires more dehydration and related stripping gas, as well as higher amounts of produced water which emits methane, and increased operating activity (a more than 50 per cent increase in workovers during the year).

Australia Pacific LNG's upstream methane intensity in FY2023 was 0.085 per cent of metered gas sales.

Emissions intensity – Integrated Gas

The Scope 1 and 2 emissions intensity of Integrated Gas on an operational control basis was 4.67 tonnes of CO₂-e per terajoule (TJ) of sales gas in FY2023, reflecting the continued decline in emissions intensity of the electricity grid.



Monitoring and studies

During the year we continued the Picarro sniffer truck infrastructure survey for methane emissions.

We also continued to support a Commonwealth Scientific and Industrial Research Organisation (CSIRO) study that compares methane at upstream gas facilities in the Surat Basin to studies from the United States, and will inform emissions factors under the NGER legislative framework.

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 development activities. New GISERA research projects were approved in FY2023, aiming to further increase knowledge on methane sources in Queensland and to apply CSIRO's innovative sampling and analytical methods.

¹⁵ Also includes Cogent and LPG.

¹⁶ Based on sent out generation, which is electricity that is sent from the station gate (revenue meter).

¹⁷ Source: [Clean Energy Regulator](#)



Landscape emissions

Methane gas emissions can occur naturally from areas of shallow coal formations in the gas fields area through naturally occurring geological pathways, also called seeps. Australia Pacific LNG has installed targeted intercept wells around the Condamine River to capture methane before it reaches the pathway to the surface and direct it to production facilities. Following flooding events at the Condamine River, more than half our intercept wells were offline for several months, initially as a safety precaution and subsequently to repair damage caused by the floods. All impacted intercept wells were back online at the end of September 2022.

Equity emissions

As described in [emissions reduction targets](#), for our 2030 medium-term emissions targets we have adjusted our FY2019 base year Scope 1, 2 and 3 emissions to reflect changes in our investments, activities and emissions boundaries in the period between FY2019 to FY2023. Due to this adjustment, our reported FY2022 Scope 1, 2 and 3 emissions data does not provide a direct point of comparison to our FY2023 data.

Our total Scope 1 and 2 equity emissions in FY2023 were 14,801 kt CO₂-e, an increase of four per cent on FY2022.

Total Scope 1 equity emissions increased by five per cent to 13,923 kt CO₂-e, mostly due to increased generation output at Eraring, as noted earlier.

Total Scope 2 equity emissions declined by 10 per cent in FY2023. Integrated Gas Scope 2 equity emissions were lower due to a full year reflecting the change in ownership of Australia Pacific LNG from 37.5 per cent to 27.5 per cent (from December 2021) as well as the continued decline in the intensity of the NEM. This was partly offset by higher Energy Markets Scope 2 emissions due to increased generation output (and electricity required for pumping water) from Shoalhaven.

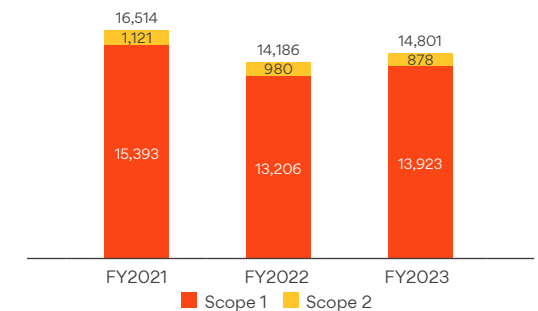
Reported Scope 3 emissions increased by five per cent increase in FY2023. The 16 per cent increase in Energy Markets' Scope 3 emissions reflects the change in our investments, activities and emissions boundary noted above. This was partly offset by a

decline in net electricity purchases from the NEM and external sources due to increased output from our owned and contracted generation portfolio, including Eraring, as well as a lower intensity in the NEM.

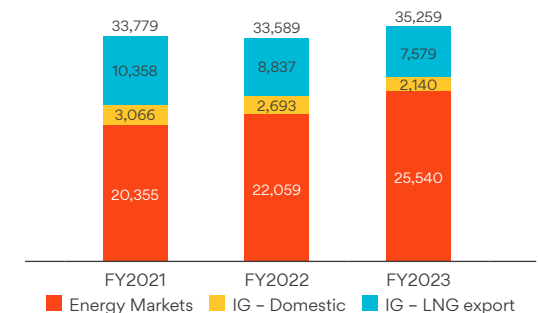
As Australia Pacific LNG sells LNG 'free-on-board' from Gladstone, we must rely on emissions factors when calculating the associated emissions from LNG exports. These emissions factors inherently require a number of assumptions and estimations, and we have used an LNG emission factor prepared by an independent environmental engineering firm to calculate our LNG export Scope 3 emissions, based on the volume of LNG exported.

Reported Scope 3 emissions from Integrated Gas declined by 16 per cent due to a full year reflecting the change in ownership of Australia Pacific LNG, as well as a lower domestic gas and LNG export sales.

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



Scope 3 emissions (kt CO₂-e, equity basis)



Water

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

Energy Markets

On average, Eraring draws around 7,000 megalitres (ML) of salt water per day from Lake Macquarie for cooling water. All the water is returned to the lake after use in accordance with water quality and temperature limits as set out in government requirements. This represents most of the water use in our Energy Markets business.

Approximately 5 ML of water is used each day to create steam to drive the generation turbines. Of this, around 3 ML come from a microfiltration and reverse osmosis system that is used on site to further purify secondary treated effluent from the nearby Dora Creek sewerage plant, reducing the consumption of potable water at Eraring.

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.

In total, our Energy Markets business consumed 2,740 ML of water in FY2023 – equivalent to 0.1 per cent of total water withdrawn – including 957 ML of wastewater.

Australia Pacific LNG

Australia Pacific LNG's operations extract groundwater (produced water) and gas from coal seams and small volumes of water from other sources such as dams and bores for project use. In FY2023, we extracted 20,532 ML of water through Australia Pacific LNG's upstream operations,¹⁹ of which 20,492 ML was from CSG production, with 40 ML of fresh water consumed.

Each year, around 90 per cent of produced water is treated through reverse osmosis and made available for several beneficial uses, providing

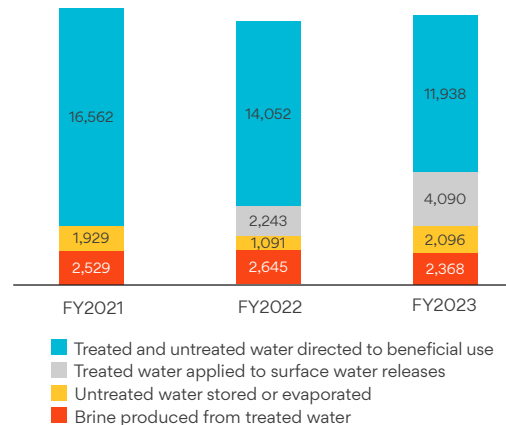
it meets regulatory water quality criteria and requirements set out in environmental approvals. Beneficial uses include crop irrigation, water for animal stock, and injection into aquifers that increases groundwater pressure for bores and springs. The remaining untreated produced water is either used for project activities, stored for later treatment, or lost through natural evaporation.

A total of 11,938 ML of treated and untreated water was applied to beneficial uses in FY2023, with 7,577 ML supplied to landholders via irrigation pipelines, 3,817 ML injected into the Great Artesian Basin's Precipice Sandstone aquifer at the Australia Pacific LNG Reedy Creek and Spring Gully assets and 544 ML used for other Australia Pacific LNG upstream activities.

Due to prolonged wet weather reducing demand for treated water for irrigation purposes, we released 4,090 ML to surface waters from authorised release points. These releases occur in compliance with applicable laws and approvals – which prescribe that we monitor the watercourse to confirm the protection of local aquatic environmental values – and can help re-establish environmental flows.

2,368 ML of brine – a by-product of the reverse osmosis process – was stored in ponds, and 2,096 ML of untreated produced water was stored or evaporated.

Australia Pacific LNG's produced water use (ML)



We seek to protect water resources in the natural environment and to manage our water consumption responsibly, including mitigating any impacts on local water supplies. To date, we have installed 234 bores to monitor groundwater levels and water quality around our Australia Pacific LNG upstream operations. We submit these results to the Queensland Government's Office of Groundwater Impact Assessment as part of its regional monitoring and management program.²⁰

Regulatory compliance

Following an investigation into a loss of containment incident from a Pilot Pond leak detection tank in August 2020, the Queensland government issued an environmental protection order (EPO) to Australia Pacific LNG in December 2021. To date, we have met all reinstatement and rehabilitation requirements and are on track to complete works within the required timeframes set out in the order. The site works include decommissioning of the pond and rehabilitation of the location to its original land use as per environmental approval obligations for any significant disturbance undertaken. Groundwater impact assessments completed under the EPO shows that groundwater was not affected, and no remediation of ground water is required.

As upstream operator of Australia Pacific LNG, we also received a Penalty infringement notice for an alleged contravention of the *Waste Reduction and Recycling Act (Qld), 2011*, at the Spring Gully-Wybara Irrigation Scheme. A regulatory compliance audit found that the soil sampling requirements for the irrigation scheme, where treated produced water is applied to a tree plantation and cultivation, did not meet the requirements of the Resource Monitoring and Management Plan. However, independent soils monitoring conducted in the irrigation area after the audit in April 2023, showed that the physical properties of the soil remain in good condition and that there have been no adverse impacts on the soil resource from the irrigation practices.

Water use across Origin's portfolio (ML)

	FY2021	FY2022	FY2023
Water withdrawn	2,599,205	2,338,348	2,627,419
Energy Markets, of which:	2,578,109	2,318,242	2,606,875
Extracted from and returned to Lake Macquarie for cooling water	2,576,012	2,315,596	2,604,135
Integrated Gas, of which:	21,092	20,100	20,538
Extracted as produced water	21,020	20,031	20,492
Corporate	4	6	6
Water consumed	23,193	22,752	23,284
Energy Markets	2,097	2,646	2,740
Integrated Gas ¹⁸	21,092	20,100	20,538
Corporate	4	6	6

¹⁸ It is determined that all freshwater withdrawn and all produced CSG water is consumed.

¹⁹ 20,538 ML of water withdrawn by Integrated Gas in FY2023 includes 6 ML extracted in the Beetaloo Basin under Origin's operatorship, prior to the sale of our interest in the Beetaloo Basin in November 2022.

²⁰ See [Underground Water Impact Report for the Surat Cumulative Management Area](#).

Waste

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

Eraring Power Station

The main by-product from burning coal at Eraring 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. The amount of ash produced at Eraring in FY2023 increased slightly from FY2022 due to increased production at the power station and variable coal quality.

Eraring ash dam

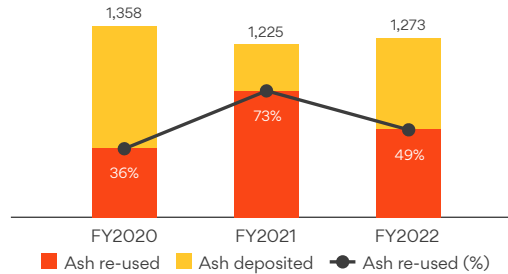
The Eraring ash dam occupies around 250 hectares north of the main power station and is a critical part of operations of Eraring.

Our [Long Term Ash Management Strategy](#) outlines our commitment to improve the efficiency of, and reduce environmental impacts associated with, the operation of Eraring 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 FY2023, Eraring's ash re-use rate was 49 per cent, down from 73 per cent in FY2022. Our largest ash customer requested we temporarily cease ash supply during FY2022 until it could resolve engineering issues at its site. This continued through FY2023 and affected our re-use rate, however, we are aiming to recommence contracted ash supply in early FY2024.

We are working to increase ash recycling opportunities, including exploring opportunities interstate with trials underway to send ash to Victoria. We are also progressing several projects to create additional storage options that can be used by customers, and we have committed to significant plant improvements to increase the availability of our products to market.

Ash produced, re-used and deposited at Eraring (kilo tonnes)



We are actively engaging with key government and industry stakeholders to identify and facilitate new markets for ash products and re-use. In FY2023, as a key member of the Ash Development Association of Australia, we worked with Lake Macquarie City Council and the NSW Government to further opportunities to use a blend higher in ash content when replacing local roads.

To effectively manage the risk of dusting – when strong winds can carry ash from the dam – we have implemented a program of controls. In FY2023, we implemented additional dust mitigation measures, including the installation of additional water tanks to supply water to the water cannon suppression system, which helps suppress dust in difficult to access areas. We also undertook grass seeding on non-operational areas to improve ground cover and to further reduce the risk of dusting.

Australia Pacific LNG

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 upstream water treatment facility has multiple brine ponds. The total volume of stored brine at the end of FY2023 was around 7,900 ML.

In FY2023, the Queensland Government Department of Environment and Science published its [Coal seam gas brine management action plan 2023-2033](#). This document was prepared following consultation with a working group

comprising community stakeholder groups and CSG companies, including Origin. The action plan acknowledges that salt encapsulation is currently the most feasible option for long-term CSG brine management. It includes a list of seven actions for government and industry, including public reporting of research and development into salt re-use and efforts to reduce brine volumes.

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

Air emissions

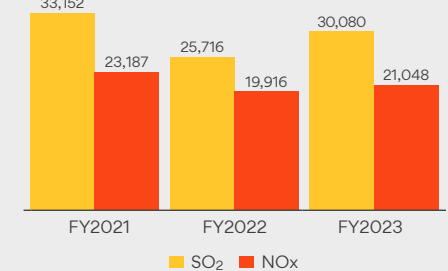
Our main air emissions are from generating electricity at our power stations and from producing natural gas.

Electricity generation at Eraring produces the majority of our nitrogen oxide (NOx), sulphur dioxide (SO₂), and particulate matter (PM) emissions. Our operations at Australia Pacific LNG produce most of the volatile organic compounds (VOCs).

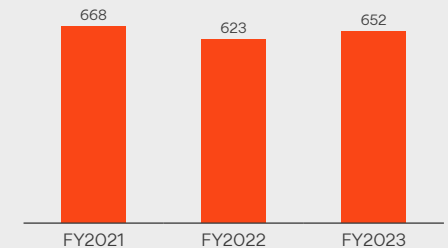
NOx and SO₂ emissions were higher in FY2023, mainly due to increased output at Eraring during the year, with SO₂ also influenced by coal quality. Annual particulate matter emissions data is estimated from limited periodic testing. Relative to FY2021 and FY2022, the limited periodic testing in FY2023 recorded higher particulate concentrations, resulting in higher estimated emissions in FY2023 when extrapolated on an annual basis. At all times particulate concentrations remained within licence emissions limits requirements, and we consider that our emission controls remain effective.

Air emissions (tonnes)

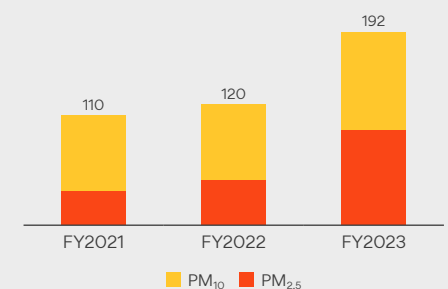
NOx and SO₂ emissions



VOC emissions



Particulate matter¹



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

Biodiversity

Our operations are located across a wide geographical area and include a variety of environmental settings with different biodiversity values. We are committed to preserving biodiversity and minimising the impacts of our activities in the areas where we operate.

Our greatest land footprint is our role as the upstream operator of Australia Pacific LNG, developing and operating the CSG fields in the Surat and Bowen Basins in Queensland. Our approach to managing biodiversity is governed by the requirements of federal and relevant state and territory laws and regulations. We are also required to comply with the legal and regulatory conditions of the specific operating licences for our activities regarding biodiversity management.

We conduct biodiversity assessments during the design phase of projects and then develop site construction plans that minimise and mitigate the impact of the projects. These plans consider matters such as cultural heritage, landowner needs, erosion risk and constructability. In FY2023 we began environmental impact studies at the proposed site for Dapper Solar Farm, including seasonal biodiversity studies and cultural heritage surveys. Once complete, these will inform final project design.

Offset initiatives

We implement offset initiatives where our projects may have a significant impact on a site's biodiversity. These initiatives are designed to align with stakeholder interests and counterbalance unavoidable disturbance.

Australia Pacific LNG has multiple properties that provide offsets for threatened ecological communities, endangered and of concern regional ecosystems, and threatened fauna habitat, as well as for relocating and transplanting threatened flora species. We aim to do this through active fire management practices to reduce the impact of bushfire, weed management, as well working with landholders to establish cattle exclusion zones.

To date, we have secured almost 8,500 hectares of land for this purpose as upstream operator of Australia Pacific LNG, either through direct purchases or long-term lease agreements with landholders. In FY2023, we extended the lease agreement for the Tooloombilla offset area in Central Queensland until the end of 2050. This offset area contains approximately 3,260 hectares of high biodiversity value, including two threatened ecological communities (Brigalow and Poplar Box), and habitat for eight threatened fauna species, including the greater glider, koala and Corben's long-eared bat.

Partnering with communities

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. In FY2023, we supported the ReLeaf Lake Mac Tiny Forest project in Lake Macquarie, NSW, which aims to create a dense pocket of diverse, native vegetation to reduce localised urban heat, create habitat for wildlife and support community connections.

We have a multi-year partnership with the Miles District Fishing and Recreation Club to improve biodiversity in local waterways near Australia Pacific LNG's operations. Through the partnership, in FY2023 the Department of Agriculture and Fisheries delivered a strategic rehabilitation plan for improving the quality and sustainability of river ecosystem health and recreational fishing between Gil and Miles town weirs.

Reporting on biodiversity

During FY2023, we participated in a pilot study and provided feedback on the learnings and existing barriers to adopting and implementing the Taskforce on Nature-related Financial Disclosures (TNFD) framework in the Australian context. We acknowledge the Department of Climate Change, Energy, the Environment and Water for sponsoring the pilot study. Building on our participation in the TNFD pilot, we plan to develop a biodiversity roadmap and action plan during 2024.



▲ Dukes Plain offset property in central Queensland contains active grazing paddocks as well as valuable habitat for flora and fauna.

People and culture



We are embedding a purpose-led and values-driven business, in which 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 that we all act lawfully, honestly, ethically and with integrity.



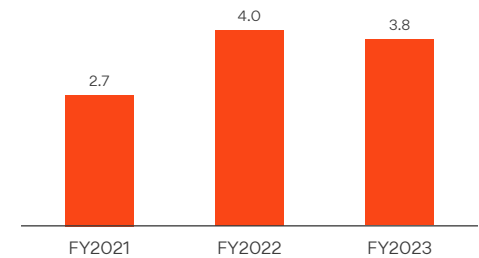
Performance at a glance

- Steady overall personal safety performance, with TRIFR declining from 4.0 in FY2022 to 3.8
- Increase in Tier 1 and Tier 2 process safety incidents to 7, up from 2 in FY2022
- Maintained 40 per cent female representation in the three out of four leadership cohorts
- Employee engagement score of 7.7 (out of 10) – above the sector average
- Launched our second Stretch Reconciliation Action Plan, which aims to use our strengths as an integrated energy provider by introducing energy-focused actions.

46.0%

female senior leaders, up from 40.8 per cent in FY2022

Total Recordable Injury Frequency Rate (TRIFR)



UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs, as detailed on our [website](#):



Management approach

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



People and culture



Safety, health and wellbeing

How we work

Everyone at Origin is required to act in accordance with the highest standards of personal safety and environmental performance, governance and business conduct. Origin has a number of policies that set out expectations around conduct and how we manage environmental and social risks and opportunities, covering topics such as anti-bribery and corruption, diversity, mental health and human rights. These can be found at originenergy.com.au/governance.

The Board

The Origin Board is supported by its committees in the oversight of sustainability-related risks and opportunities. The Safety and Sustainability Committee supports and advises the Board on Origin's strategies and performance related to safety and sustainability, covering areas such as health, safety and environment (HSE), climate change and a just transition, human rights, communities, cultural heritage, social impact, compliance, assurance, and disclosures. The Board Risk Committee is responsible for strategic and emerging sustainability-related risks, including climate change risk.

Further information on our governance framework, including governance around climate-related risks and risk management, can be found in our [Corporate Governance Statement](#) and in our management approaches.

Working ethically

Our [Code of Conduct](#) builds on our purpose and values and sets standards to guide us in making the right choices when we act, solve problems and make decisions. In FY2023, the completion rate for Code of Conduct training, mandatory for all employees and contractors, was 99.9 per cent.

There were no reported incidents of bribery or corruption in FY2023. 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](#).

Human rights

Origin is committed to respecting and promoting human rights. Our approach to human rights is underpinned by our purpose, values, behaviours, and the commitments we make to our stakeholders. Our human rights framework is governed by our [Code of Conduct](#) and [Human Rights Policy](#).

In FY2023, we undertook an assessment of our salient human rights issues drawing on internal expertise, stakeholder consultations and external review by an independent human rights expert. Identifying our salient human rights issues helps us to understand those human rights at risk of the most severe negative impact and to prioritise our efforts to ensure human rights are respected in connection with our activities and business relationships. The issues identified in the assessment will be used to guide the management of our activities.

Employee engagement

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

Following employee suggestions for more frequent feedback, in FY2023 we replaced our annual engagement survey with Officevibe – an online continuous listening platform that supports in-the-moment feedback through frequent pulse surveys and enables our people leaders to respond in real time.²¹ Officevibe was trialled with our Retail team before being rolled out across the organisation.

Our engagement score from 1 April to 30 June was 7.7 (out of 10), which matched the global Officevibe score of 7.7 for the same period and is slightly above the Utilities and Services sector average of 7.6. With 62 per cent of employees completing the survey, employee participation exceeds the current global Officevibe average (59 per cent) as well as the Utilities and Services Industry rate (58 per cent).

²¹ For more information on the Officevibe methodology, see [How are Engagement Scores Calculated? – Help Center \(officevibe.com\)](#)

Board site visits

Members of the Origin Board regularly undertake site visits to observe HSE standards and operational procedures as well as to discuss pertinent operational and community-related issues.

Eraring Power Station, New South Wales

All Board Directors visited Eraring during FY2023. Matters discussed by the Directors and onsite personnel included the site's closure and transition activities, its ash dam buttress and ground improvement works, site rehabilitation and repurpose opportunities, and our large-scale battery project.

Somerton Terminal, Victoria

In August 2022, a Director site visit was conducted at the Somerton LPG Terminal to discuss HSE issues, risk assessments, controls and learning opportunities with members of Origin's LPG team. A market overview and terminal tour was also provided, highlighting safety and operational matters.

Spring Gully and Reedy Creek, Queensland

In April 2023, Origin's full Board of Directors visited Integrated Gas assets and field operations in Reedy Creek and Spring Gully, including water treatment facilities and a gas processing plant, and viewed drill rigs in operation. They also met with onsite personnel to discuss operations, maintenance, HSE considerations, and engagement with local landowners.



▲ Origin Directors and management at Eraring Power Station.

Learning and development

We provide a variety of learning and development opportunities for employees, including our dedicated online learning and development hub, LinkedIn Learning portal and mentorship and leadership programs. In FY2023, our development priorities included talent development, career development, and building skills and capabilities critical to delivering our strategy.

We launched a talent acceleration program in FY2023, providing selected participants from across the business with tailored career coaching, professional development funding, and targeted learning and networking opportunities.

Following feedback from employees, we launched a company-wide mentoring program in FY2023 that expanded on existing business unit programs to help our people benefit from the experience of mentors from outside their teams and support their longer-term professional development goals. Of those who completed a survey at the end of the program, 97 per cent said they would recommend it to others.

In FY2023, we continued our enterprise leadership program to embed Origin's People Leadership Code. Due to increasing demand, this was extended to all levels within Origin, with over 1,600 attendances at 75 workshops.

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.

Employee health and wellbeing

Supporting our employees' mental health and wellbeing has been a specific area of focus for the organisation in FY2023.

We updated our HSE Management system in response to the recent amendments to Work Health and Safety Regulations and the Sex Discrimination Act 1984 (Cth) which require proactive management to ensure a safe and respectful workplace. As part of this process, we consulted our employees and contractors to identify potential hazards and understand what controls we need to put into place to keep our people free from psychosocial hazards and risks, including sexual harassment.

We held a series of wellbeing information sessions and activities focused on mental fitness, supported by information on our online health and wellbeing hub. These included discussions on mental fitness and suicide prevention with mental health awareness advocate, Gus Worland. Gus travelled to several Origin sites, including Darling Downs Power Station, where over 500 people attended his workshop.

Focus on safety

We aim to ensure that everyone at Origin is mindful of health and safety risks, empowered to manage them, and accountable for doing so. Our people are supported by our Authority to Stop Unsafe Operations, which is endorsed by our Executive Leadership Team and Board.

Our Life Saving Controls program, implemented across our operational sites in FY2022, empowers leaders and supervisors to use a consistent set of questions to verify and test our critical controls for activities with increased fatality risk. The controls cover 10 high-risk areas and sites are required to discuss hazards and controls, implement and verify the controls, and ensure ongoing improvement. In FY2023, we completed more than 8,000 Life Saving Control verification activities, with those related to road transport, working at heights, and interactions with mobile plant, such as forklifts, excavators and elevated work platforms, providing the greatest opportunities for improvement.

TouchBase Peer Support program

Having identified the need for additional support for our fly-in fly-out (FIFO) workers, we instigated a small, targeted program in 2015 that focused on developing peer support options to help these employees manage challenges while away from friends and families and other traditional support structures.

Following positive feedback, in 2019 we expanded the program company-wide and developed the TouchBase Peer Support Network. Peer supporters are trained and coached by psychologists and provide strictly confidential, informal short-term assistance, which may include referring colleagues to

other specialist services. There are currently 150 peer supporters from across the business.

Over the past year, the group held an estimated 1,000 confidential conversations with colleagues who reached out either in person, virtually or via the phone. Data is collected on themes that arise in the sessions to help shape the ongoing training of the peer supporters and identify opportunities to address issues more broadly at the team or business unit level. In FY2023, key themes included managing workload, dealing with conflict and the need for connectedness and social support.



Origin employees can reach out to our TouchBase Peer Supporters for a confidential chat.



We focus on improving the way in which we work and manage health, safety and environment (HSE) risk. For example, we are trialling the use of drones to complete tasks in the field typically completed manually, to reduce risk of harm to our people. In FY2023, our drones program carried out inspections of plants, structures and rooftops across 14 assets, reducing the risk of personnel having to work at heights. The program also facilitated inspections of more than 20,000 hectares of land, reducing the need for surveyors or other personnel to access remote or hazardous locations.

In our LPG business, we introduced a program to reduce the manual handling of LPG cylinders by using two trucks fitted out with stillages – or caged pallets – at our Somerton Terminal. The use of stillages significantly reduces handling risk by eliminating the requirement to carry and lift cylinders manually.

Sharing lessons learnt

We have continued our focus on learning throughout the year, including through our Origin-wide HSE learning forums. In FY2023, the forums covered themes such as repetition as a hazard and human error as a factor in HSE incidents.

In 2020, Origin employees created an Engineering and Technical Community of Practice for people across Origin to collaborate and share good practice, innovative solutions and learnings. Now comprising 186 members, the group meets monthly to consider specific issues or events and optimise operational and HSE improvements company wide. In FY2023, the group covered topics such as high-voltage electrical safety, and managing the integrity of older assets, and shared learnings from several safety incidents and loss of containment events.

HSE performance

We continue to focus on safety, and our FY2023 performance has remained largely consistent with FY2022.

Our Actual Serious Incidents²² metric aims to help us focus on reducing incidents that result in serious harm to people and the environment. In FY2023, we recorded four Actual Serious Incidents – all of which were injuries to people, and none of which included a fatality.

The Learning Incidents metric centres on preventing Actual Serious Incidents by encouraging learning from incidents that have the potential to cause harm and sharing the learnings across the business, such as through our HSE learning forums.

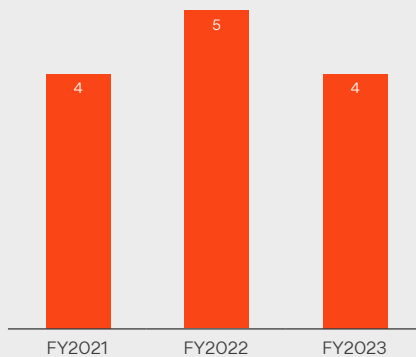
Our Total Recordable Injury Frequency Rate (TRIFR), which measures the number of company-wide work-related recordable injuries per million hours worked for employees and contractors, declined this year to 3.8 compared to 4.0 in FY2022.

In FY2023, we recorded two Tier 1 and five Tier 2 incidents.²³ This was a decline in performance compared to FY2022 but an improvement on the total number of process safety events compared with previous years. We continue to focus on process safety management, including prioritisation of maintenance inspections and repairs for critical controls, and ongoing governance, including regular review of all controls, technical assurance and support improvement initiatives.

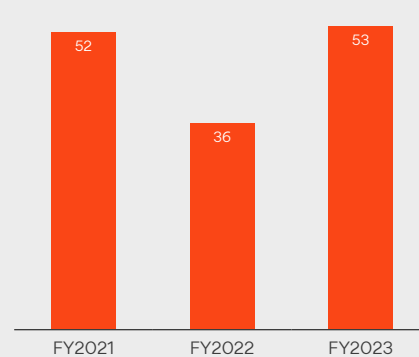
²² Incidents rated with a rating as a Risk Consequence of 3-Serious Actual (or above) on the Origin Risk Matrix.

²³ 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/](https://www.iogp.org/bookstore/product/process-safety-recommended-practice-on-key-performance-indicators/) (pages 19–20).

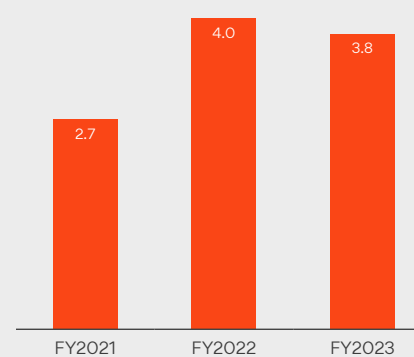
Actual Serious Incidents



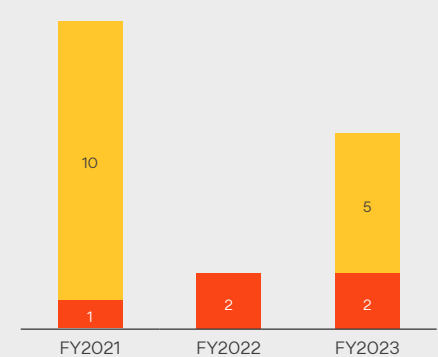
Learning Incidents



Total Recordable Injury Frequency Rate (TRIFR)



Process safety events



Inclusion

We strive to enable our employees to feel comfortable, safe, and able to bring their whole self to work every day.

We have continued to build on our policies supporting inclusion in FY2023, expanding our parental leave provisions to include five days of miscarriage leave and fertility treatment leave. We extended our inclusion strategy, focused on gender equity, reconciliation and our LGBTQ colleagues, to include three new pillars: life stages, cultural diversity, and accessibility. We established employee working groups responsible for developing associated success measures and determining programs of work for each of these new pillars.

Gender diversity

Origin is a signatory to the 40:40 Vision, an initiative led by superannuation fund HESTA targeting gender balance in executive leadership by 2030. The initiative identifies gender balance as having a minimum of 40 per cent male, 40 per cent female and 20 per cent any gender representation at the senior level across the organisation.

We are committed to achieving and maintaining a minimum 40:40:20 gender balance across the Board and CEO-1 level (the CEO plus the executive leadership that reports to the CEO), and we have extended that to also apply to the CEO-2 level (roles directly reporting to the CEO-1 level cohort) and senior leaders (the three reporting levels below the CEO, including roles with base salaries exceeding approximately \$200,000 per annum) by 2030.

We maintained a minimum of 40 per cent female representation in three leadership cohorts, however, representation in the CEO-1 cohort remained at 30 percent. To improve female representation at this level, we continue to focus on our internal leadership pipeline talent pool supported by succession planning.

We continue to focus on delivering equal average pay for men and women at each job grade. In FY2023, the overall differential remained within our policy tolerance of ± 1 percentage point.

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

In the 2023 Equileap Gender Equality Global Report & Ranking, Origin ranked 73 in the top 100 companies globally for gender equality.

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.

Origin's Pride@Origin Network works to provide both a welcoming space for identifying employees and allies of diverse genders, sexes, and sexualities to connect, and opportunities to celebrate days of significance on the Pride calendar such as IDAHOBIT, Wear it Purple Day and as Melbourne's Midsumma Pride Festival across Origin. It seeks to align us to the Australian Workplace Equality Index (AWEI), which serves as our external benchmark.

As a member of Pride in Diversity, the national not-for-profit employer support program for LGBTQ workplace inclusion, Origin provides specialised voluntary training to employees, to drive awareness by exploring the challenges often faced by LGBTQ employees.

Reconciliation

Reconciliation is about strengthening relationships between First Nations peoples and non-Indigenous peoples, for the benefit of all Australians. Key to this is understanding, respect, recognition, and action.

In FY2023, we launched our second Stretch Reconciliation Action Plan (RAP), which outlines how we plan to embed social change in our workplace and in our communities. See [Our Reconciliation Action Plan journey](#) for more information.

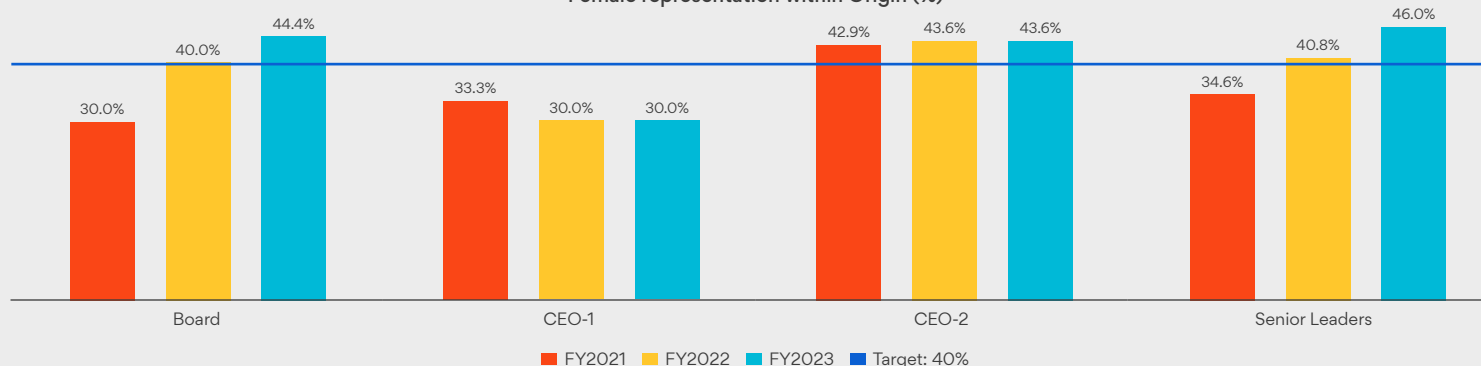
Origin's Indigenous Employee Network (IEN) supports First Nations employees to engage, discuss issues, share knowledge and provide peer-to-peer support. The IEN also helps drive our reconciliation activities and played a key part in the RAP's development. In FY2023, we launched our Reconciliation Champion Network, which aims to bring together like-minded people who are passionate about driving change and being champions for reconciliation. The group will work closely with our IEN to support reconciliation advocacy and events, and to help build a safe and inclusive environment at Origin.

Building the cultural knowledge and capability of our employees is fundamental to our RAP, and cultural awareness training is mandatory for all employees. Origin people have also been attending the GARMA Festival in north-east Arnhem Land for eight years to learn about the rich cultural, artistic and ceremonial traditions of the Yolngu peoples and share insights with their colleagues, with 13 attending in July 2022.

Our RAP outlines our goal to raise awareness of the Uluru Statement from the Heart. After announcing our support for the Statement in FY2022, we have provided employees with information about the proposed First Nations Voice to Parliament in advance of the planned national referendum.

As part of our RAP goal to establish and maintain mutually beneficial relationships with First Nations stakeholders and organisations, in FY2023, we announced a new partnership with Yalari, a not-for-profit organisation helping to set up education scholarships for First Nations children across Australia. Origin will fund scholarship programs for four students from years 7 to 12, providing them with access to education, mentoring and support.

Female representation within Origin (%)



Our Reconciliation Action Plan journey



We recognise that our reconciliation journey can help create meaningful change

We honour and respect First Nations peoples as having the oldest continuous culture on earth and recognise that our reconciliation journey can play an important role in helping to create meaningful change.

Our Stretch Reconciliation Action Plan (RAP), launched in FY2023, guides the strategic direction of Origin's reconciliation efforts and aims to use our strengths as an integrated energy provider by introducing energy-focused actions.

It builds on the achievements of our previous RAPs, including establishing our IEN, increasing First Nations employee representation, increasing our direct and indirect spend with First Nations suppliers, and creating cultural awareness learning tools for employees.

We also introduced cultural leave so that First Nations employees can meet their family and community obligations, and embedded cultural protocols across the organisation for Origin employees to follow when meeting and engaging with First Nations peoples.

Our latest RAP, which runs until 2026, sets out our goals and targets focusing on three areas:

- **Community:** Collaboratively and creatively designing energy solutions to support First Nations communities

- **Aboriginal and Torres Strait Islander businesses:** Increasing our First Nations procurement spend target by 20 per cent year on year from a FY2022 baseline (of \$17 million)
- **Our people:** Fostering a culturally and psychologically safe environment to ensure our Aboriginal and Torres Strait Islander employees feel valued and respected, and continuing to build the cultural understanding of all employees.

Our commitments include further developing mutually beneficial relationships with First Nations stakeholders and organisations, promoting reconciliation through our sphere of influence, building our cultural capability, and creating opportunities for First Nations people through recruitment, retention and professional development.

We aim to support energy self-security and decarbonisation for First Nations communities, businesses and customers by working with community groups to identify energy solutions and opportunities; piloting energy solutions for regional communities; and purchasing carbon credits from First Nations organisations.

To keep us on track, we govern RAP activities through regular Reconciliation Steering Committee meetings and building accountability and transparency of performance against our RAP targets. We are also working with Weavr, a First Nations-owned management system, which will allow us to track, report and assign actions from the RAP to the relevant stakeholders.



Origin CEO Frank Calabria joins Reconciliation Australia's Peter Morris and Origin team members Kate Jordan, Tania Carlos and Sheldon Moore for the Stretch RAP launch.

Our reporting



Our 2023 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 2023, focusing on our material sustainability topics.



Environmental, social and governance ratings

Australian Council of Superannuation Investors

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

CDP

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



Origin's 2022 CDP climate change performance score (covering FY2021) was 'A-', consistent with the prior year. We were also awarded a 'B' for CDP's Supplier Engagement Rating, which assesses how effectively companies are engaging with suppliers on climate change.

With the publication of our Climate Transition Action Plan, including our updated emissions reduction targets, in 2022, and our emissions performance data available on our [website](#), we elected to not participate in the CDP climate change survey in 2023.



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.²⁴



MSCI

MSCI ESG's A rating

In 2022, Origin received a rating of A (on a scale of AAA–CCC) in the MSCI Ratings assessment.²⁵



Sustainalytics

In 2022, Origin's ESG Risk Rating was assessed by Sustainalytics at 37.0, within Sustainalytics' high-risk band for experiencing material financial impacts from ESG factors.

²⁴ 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.

²⁵ 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 FY2023 include:

Stakeholder	Areas of interest	How we engaged
Shareholders	<ul style="list-style-type: none"> Potential acquisition of Origin Sustainable earnings Identification and management of risks Climate change, including our approach to a Just Transition 	<ul style="list-style-type: none"> Held investor meetings, briefings and roadshows, including with members of the ELT and Board, on various matters such as the potential acquisition of Origin, climate change, and our approach to managing the closure of Eraring Power Station – including in relation to a just energy transition. 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 / Pricing Cyber security Impacts of natural disasters Compliance obligations Climate change and emissions Energy reliability 	<ul style="list-style-type: none"> Provided support to customers affected by floods and vulnerable customers. Received feedback on a range of projects in development from more than 6,600 customers through our Origin Exchange Customer Insights Community Research Panel. Sought feedback from our Consumer Advocacy Panel on a range of topics from cyber security risks and mitigations to our engagement strategy for supporting vulnerable customers. 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 Customer Happiness Index score.
Communities	<ul style="list-style-type: none"> Impact on local communities Environmental management Land access and coexistence Sharing economic benefits Mental health and wellbeing 	<ul style="list-style-type: none"> Engaged with landholders as upstream operator of Australia Pacific LNG, including negotiating 33 Conduct and Compensation Agreements, and Traditional Owners, including updates on work programs. Continued consultations with Eraring community groups and representatives, including the reformation of the Eraring Community Forum. 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"> Impacts to local communities Climate change and emissions Engagement with Traditional Owners Responsible supply chain 	<ul style="list-style-type: none"> Worked with direct and indirect suppliers of renewable energy technology to complete modern slavery risk assessments. Engaged with industry peers to pursue collaborative approaches to global challenges through two key forums, Human Rights Resources and Energy Collaborative, and the Clean Energy Council's Risk of Modern Slavery Working Group. Continued to support small, emerging Indigenous businesses in partnership with Many Rivers through our Marketplace initiative. Worked with contractors to encourage them to utilise indigenous suppliers for delivery of work.
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. Transitioned from an annual engagement survey to a more continuous pulse survey to enhance our listening and feedback culture. Employees provide feedback to help shape their future working environment. Shared information on how we are delivering on our purpose and living our values via various channels, including leadership team emails and videos, posts on our internal social media platform, and interactive events and learning sessions with subject matter experts.
Government	<ul style="list-style-type: none"> Reliability of energy Affordability of energy Climate change and emissions Support for our customers 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. 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 customers and communities.

Our material sustainability issues

We conduct a materiality assessment each year to review and assess the key sustainability topics for Origin 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. The most material sustainability topics presenting a financial risk to Origin are reported in our 2023 Annual Report.

Our materiality process

In line with the Global Reporting Initiative's 2021 standards, this year we refined our materiality process to focus on Origin's impacts on the economy, environment and people, including impacts on human rights, across our value chain. This process is conducted in consultation with our stakeholders and draws on various stakeholder publications, internal assessments, and media analysis.

1. Identify

We review the previous year's list of material topics and definitions to assess whether it still reflects Origin's most significant actual and potential impacts on the economy, environment and people, including human rights. We draw on peer material topics and sustainability challenges, media coverage of the industry, relevant sustainability frameworks and standards (including ISSB, GRI, SASB and TCFD), and any shifts in or updates to Origin's activities, risks, policies, strategies, goals and targets.

2. Engage

Key to the materiality process is taking into account the views of Origin's stakeholders, such as investors, lenders, 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 FY2023 engagement.) The feedback we gather throughout the year informs our materiality assessment. We also survey key stakeholder groups each year, including employees, investors and customers, and ask them to review and rank our list of material topics.

4. Review

Our list of material topics is reviewed by our risk team, senior management and the Board. Our list of material topics did not change significantly from 2022 to 2023, however, as required by the GRI 2021 Standard, all topics considered significant are reported as material topics and we no longer make the distinction between 'material topics' and 'important and emerging issues'.

3. Assess and prioritise

The results of the survey are assessed along with other stakeholder inputs, requiring consideration of competing views and priorities. In determining the final list of material topics, we consider the data with respect to the severity and likelihood of the impact.

Through this process we identified 22 material topics.

2023 material topics

Customers

Affordability of energy	Cyber security
Reliability of energy	Supporting vulnerable customers
Lower-carbon customer solutions	Customer experience

Communities

Impacts to communities	Land access and coexistence
Closure planning of sites / assets	Responsible supply chain
Rights and cultural heritage of Indigenous peoples	Human rights

Planet





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

Our people and culture

Health and safety	Diversity and inclusion
Ethics and governance	Workforce training, development and engagement

Task Force on Climate-related Financial Disclosures index

Origin is a supporter of the TCFD and has been reporting against the TCFD framework since FY2018. The following table outlines where our TCFD disclosures can be found within our reporting suite.

TCFD recommended disclosure	Where to find more information	TCFD recommended disclosure	Where to find more information
Governance		Risk management	
The organisation's governance around climate-related risks and opportunities		The process used by the organisation to identify, assess and manage climate-related risks	
a. Describe the board's oversight of climate-related risks and opportunities	Corporate Governance Statement	a. Describe the organisation's process for identifying and assessing climate-related risks	Corporate Governance Statement
b. Describe management's role in assessing and managing climate-related risks and opportunities	Corporate Governance Statement	b. Describe the organisation's process for managing climate-related risks	Corporate Governance Statement
		c. Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management	Corporate Governance Statement
Strategy		Metrics and targets	
The actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning		The metrics and targets used to assess and manage relevant climate-related risks and opportunities	
a. Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long terms	Climate Transition Action Plan, Transitioning to net zero Annual Report, Risks related to Origin's future financial prospects	a. Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process	Sustainability Report, Planet, Greenhouse gas emissions
b. Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning	Climate Transition Action Plan, Transitioning to net zero Annual Report, Risks related to Origin's future financial prospects	b. Disclose Scope 1, 2 and, if appropriate, Scope 3 GHG emissions, and the related risks	Sustainability Report, Planet, Energy and climate change
c. Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios including a 2°C or lower scenario	Climate Transition Action Plan, Portfolio resilience Annual Report, Overview section of the notes to the financial statements	c. Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	Sustainability Report, Planet, Energy and climate change

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.

	FY2019	FY2020	FY2021	FY2022	FY2023
Customers					
Total customer accounts (electricity, gas, LPG and broadband) ('000)	4,199	4,233	4,266	4,458	4,525
Customer accounts across our GreenPower and Origin Go Zero products ('000)	135	118	260	338	277
Ombudsman complaints (per 1,000 customers)	2.7	2.7	1.9	1.5	1.8
Net Promoter Score – strategic ^{26, 27}	-9	-3	4	5	-2
Net Promoter Score – interaction ²⁸	24.7	26.4	34.1	40.4	n/a
Customer Happiness Index (%) ²⁹	n/a	n/a	n/a	n/a	65
Reputation (RepTrak Score)	63.3	66.0	67.7	66.9	65.5
Communities					
Community complaints received ²⁶	12	14	3	5	9
Landholder complaints received	25	33	41	54	50
Regional procurement spend (%) ²⁶	16	17	18	20	20
Indigenous supplier spend (\$m) ²⁶	3.3	5.5	10.2	17.0	24.4
Origin Energy Foundation funds distributed (\$m)	2.4	3.2	3.0	2.6	2.1
Employee volunteering through the Origin Energy Foundation (hours)	9,153	6,758	8,466	7,112	7,086
Planet					
Scope 1 emissions equity basis (ktCO ₂ -e) ²⁶	18,396	16,573	15,393	13,206	13,923
Scope 2 emissions equity basis (ktCO ₂ -e) ²⁶	1,188	1,230	1,121	980	878
Total Scope 1, 2, 3 emissions intensity (t CO ₂ -e/TJ, equity basis) ^{26, 30}	n/a	n/a	n/a	n/a	63
Generation emissions intensity (owned and contracted) (t CO ₂ -e/MWh)	0.78	0.76	0.76	0.75	0.75
Integrated Gas emissions intensity (t CO ₂ -e/TJ)	5.10	4.85	4.90	4.95	4.67
Capacity of solar PV systems installed (MW)	48	61	74	70	68
Environmental consequence incidents ³¹	0	2	0	0	0
Fugitive emissions (flaring, leaks and venting) (kt CO ₂ -e)	459	300	296	297	283
Ash re-used at Eraring (%)	35	39	36	73	49
Air emissions (NO _x , SO ₂ , VOC, PM ₁₀) (tonnes)	74,139	64,306	57,117	46,375	51,972
People and culture					
Total Recordable Injury Frequency Rate (TRIFR) ^{26, 32}	4.4	2.6	2.7	4.0	3.8
Actual serious (or above) incidents ²⁶	9	4	4	5	4
Learning incidents ^{26, 33}	38	69	52	36	53
Process safety incidents (Tier 1 and 2)	9	12	11	2	7
Employee engagement score (%) ³⁴	61	75	74	68	n/a
Employee engagement score ^{26, 35}	n/a	n/a	n/a	n/a	7.7
Female representation in senior roles (%) – Board	22.2	22.2	30.0	40.0	44.4
CEO-1	25.0	33.3	33.3	30.0	30.0
CEO-2	40.6	43.9	42.9	43.6	43.6
Senior leaders ²⁶	34.4	33.9	34.6	40.8	46.0
Indigenous representation (number self-identified)	41	46	70	73	99
Reported incidents of bribery or corruption ³⁶	1	0	0	0	0

²⁶ Metric has undergone limited assurance within the last three reporting periods.

²⁷ 12-month average at 30 June 2023.

²⁸ From FY2023, CHI replaced Interaction NPS as our measurement for customer satisfaction at the interaction level.

²⁹ New metric in FY2023. Replaces Interaction NPS. Rolling 12-month average.

³⁰ New metric in FY2023.

³¹ Number of environmental incidents that resulted in an actual consequence of a moderate short-term impact to the environment (or above).

³² Rolling 12-month average.

³³ 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. Excludes incidents already counted under the Actual Serious Consequence metric.

³⁴ Based on Kincentric's methodology until FY2022.

³⁵ New methodology using Officevibe from FY2023. Score out of 10.

³⁶ 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 sustainability disclosures (the 'Subject Matter') included in Origin's 2023 Sustainability Report and Performance data tables (the 'Report') for the year ended 30 June 2023. 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 the following Subject Matter listed below, and disclosed in the Report for the year ended 30 June 2023.

Selected disclosures	Value
Customers	
Net Promoter Score (NPS) – strategic (#)	-2
Communities	
Indigenous supplier spend (\$m)	24.4
Regional procurement spend as % of total procurement spend (%)	20
Planet	
Total Scope 1 emissions (operated) (ktCO ₂ -e)	13,690
Total Scope 2 emissions (operated) (ktCO ₂ -e)	2,236
Total Scope 1 emissions (equity) (ktCO ₂ -e)	13,923
Total Scope 2 emissions (equity) (ktCO ₂ -e)	878
Total Scope 3 emissions (equity) (ktCO ₂ -e)	35,259
Total absolute Scope 1, 2 and 3 emissions (equity) (ktCO ₂ -e)	50,061
Total Scope 1, 2 and 3 emissions intensity (equity) (tCO ₂ -e/TJ)	63
Total volume of water withdrawn (ML)	2,627,419
People and culture	
Employee engagement score (#)	7.7

Criteria applied by Origin

In preparing the selected disclosures related to Planet (emissions), 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.

In preparing the selected disclosures related to Customers, Communities, Planet (water withdrawn), and People and Culture, Origin applied:

- ▶ Origin's own internally developed criteria as detailed in the Report and informed by the Sustainability Accounting Standards Board (SASB) Standards and Global Reporting Initiative (GRI) Standards.

Key responsibilities

EY's responsibilities

Our responsibility is to express a conclusion on the Subject Matter based on our review.

We have complied with the independence and relevant ethical requirements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

EY applies Auditing Standard ASQM 1 Quality Management for Firms that Perform Audits or Reviews of Financial Reports and Other Financial Information, or Other Assurance or Related Services Engagements, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Origin's responsibilities

Origin's management ('Management') was responsible for selecting the Criteria, and for presenting the Subject Matter in accordance with that Criteria, in all material respects. 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.

Our approach to conducting the review

We conducted this review in accordance with the Australian Auditing and Assurance Standards Board's Australian Standard on Assurance Engagements Other Than Audits or Reviews of Historical Financial Information ('ASAE 3000'), Assurance Engagements on Greenhouse Gas Statements ('ASAE3410') and the terms of reference for this engagement as agreed with Origin on 31st of March 2023. Those standards require that we plan and perform our engagement to express a conclusion on whether anything has come to our attention that causes us to believe that the Subject Matter is not prepared, in all material respects, in accordance with the Criteria, and to issue a report.

Summary of review procedures performed

A review consists of making enquiries, primarily of persons responsible for preparing the Subject Matter and related information and applying analytical and other review procedures.

The nature, timing, and extent of the procedures selected depend on our judgement, including an assessment of the risk of material misstatement, whether due to fraud or error.



The procedures we performed included, but were not limited to:

- ▶ 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.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our review conclusion.

Inherent limitations

Procedures performed in a review 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 review 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.

The GHG quantification process is subject to scientific uncertainty, which arises because of incomplete scientific knowledge about the measurement of GHGs. Additionally, GHG procedures are subject to estimation (or measurement) uncertainty resulting from the measurement and calculation processes used to quantify emissions within the bounds of existing scientific knowledge.

Other matters

We have not performed assurance procedures in respect of any information relating to prior reporting periods, including those presented in the Subject Matter. Our report does not extend to any disclosures or assertions made by Origin relating to future performance plans and/or strategies disclosed in the Subject Matter and supporting disclosures online.

While 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.

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

M. Fricke

Ernst & Young
Melbourne, Australia
17 August 2023

Meg Fricke
Partner

Glossary

AEMO

Australian Energy Market Operator.

Ash dam

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

Biogas

A mixture of methane, CO₂ and small quantities of other gases produced by anaerobic digestion of organic matter in an oxygen-free environment.

BioLPG

Propane produced from renewable feedstocks such as plant and vegetable waste material.

Cleaner energy

Includes solar, wind, hydro, 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. For these purposes fugitive emissions 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 leaks 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 which 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.

SO₂

Sulphur dioxide.

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.

VPP

Virtual power plant.

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

Unless otherwise stated, 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 2023 Annual Report.

Unless otherwise stated, Origin Energy’s 2023 Sustainability Report provides a summary of Origin’s performance on material social and environmental sustainability aspects for the period 1 July 2022 to 30 June 2023 (FY2023). Its 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.

In November 2022 Origin completed the sale of its interest in the Northern Territory’s Beetaloo Basin. Emissions related to our activities in the Beetaloo Basin do not form part of our FY2023 emissions reporting obligations under the National Greenhouse and Energy Reporting Act, 2007 (NGER). Other sustainability data, including water, related to Origin’s ownership of Beetaloo for the period until completion of the sale is included in our FY2023 sustainability performance data.

The terms Aboriginal and Torres Strait Islander peoples, First Nations and Indigenous are used respectfully and interchangeably throughout this document when referring to First Nations peoples of Australia. These terms are used to respectfully encompass the diversity of cultures, identities, and preferences of Aboriginal and Torres Strait Islander peoples.

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 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 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.³⁷

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 data (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.

Additional emissions information is available in our [FY2023 Sustainability performance data](#).

Directory

Registered Office

Level 32, Tower 1
100 Barangaroo Avenue
Barangaroo NSW 2000

GPO Box 5376
Sydney NSW 2001

T (02) 8345 5000
F (02) 9252 9244

originenergy.com.au
enquiry@originenergy.com.au

Secretary

Helen Hardy

Share Registry

Boardroom Pty Limited
Level 8, 210 George Street
Sydney NSW 2000

GPO Box 3993
Sydney NSW 2001

T Australia 1300 664 446
T International (+61 2) 8016 2896
F (02) 9279 0664

boardroomlimited.com.au
origin@boardroomlimited.com.au

Auditor

EY

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

originenergy.com.au