

Good change starts here



Chau Le
General Manager
Strategy and E-mobility

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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.

- [2021 Annual Report](#)
Details our financial and operating performance.
- 2021 Sustainability Report
Details our sustainability performance.
- [Sustainability Management Approaches](#)
Describe our approach and policies on how we manage key aspects of our business.
- [Performance data](#)
Includes our sustainability performance data for the past five years.
- [2021 Modern Slavery Statement](#)
Outlines our processes for identifying, assessing and addressing the risk of modern slavery in our supply chain and actions taken.
- [2020 Tax Contribution Report](#)
Details the taxes we paid in the 2019 and 2020 financial years.
- Case studies on the [Origin blog](#)
A deeper look into some of the actions we are taking in key areas of sustainability.

We have also published the following reports on key issues:

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

UN Sustainable Development Goals

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

Reporting frameworks

This report is informed by the Global Reporting Initiative (GRI). Our [GRI content index](#) is available on our website.

The G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) has developed a set of voluntary recommendations for companies to disclose information about how they oversee and manage climate-related risks and opportunities. See our [TCFD disclosure](#).

We Mean Business

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

External assurance

EY has provided limited assurance on the greenhouse gas emissions, water and safety data within this report. EY's [assurance statement](#) is available on our website, including 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 our reporting can be found at originenergy.com.au



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

A message from the Chief Executive Officer



Welcome to our 2021 Sustainability Report

Frank Calabria
Chief Executive Officer

I am pleased to present Origin's 2021 Sustainability Report.

It has been another year of both achievements and uncertainty as Origin navigated its way through a rapidly changing energy market, against the backdrop of the COVID-19 pandemic.

Throughout the challenges of the pandemic, our purpose, *Getting energy right for our customers, communities and planet*, has guided us in our response. I am proud of how Origin and our people have acted during this period to protect the health, safety and wellbeing of our people and the communities in which we operate. We have done so while maintaining safe and reliable energy supply and supporting affected customers and communities.

As a provider of essential services, Origin has continued to support vulnerable customers who faced economic uncertainty because of the pandemic. In FY2021, we put temporary bill freezes in place for our residential and small business customers in financial distress, and helped more than 35,000 customers complete a payment plan through our hardship program, Power On.

In response to the global climate challenge, the world is rapidly accelerating towards lower emissions technologies and sources of energy. Origin, as one of Australia's leading energy companies, has an important role to play in helping Australia meet its international commitments to

reduce emissions. We are currently progressing work on updating our existing emissions reduction targets, consistent with a 1.5 degree pathway, and our long-term aim is to achieve net-zero Scope 1 and Scope 2 emissions by 2050.

Enhancing the customer experience

With the significant transition underway in our sector, Origin is well placed to respond to the convergence of data and energy. We are investing in digital and low-carbon customer solutions to help make energy easier, smarter and cleaner. An example of this innovation is Origin Spike, Australia's first mass market demand response program.

Spike uses gamification and rewards to encourage customers to power down during regular Spike Hour events. Since August 2020, more than 56,000 customers have signed up and earned more than \$1 million in reward points. They have reduced their energy usage by around half, on average, during each event, thereby taking pressure off the grid at peak times.

The response to Spike demonstrates that our customers are increasingly willing to play a more active role in deciding how and when they use electricity. We are working to meet that demand with other innovations and solutions, including home battery storage.



Another example of our innovation is the work of our E-mobility team, headed by Chau Le, who features on the front cover of this report. Chau and her team are working to support the uptake of electric vehicles (EVs) in Australia, through offerings such as Origin 360 EV Fleet, the first full-service EV fleet management solution of its kind in Australia. Origin 360 EV Fleet provides energy, charging solutions and infrastructure to help business customers transition their fleets to EVs as part of reaching their decarbonisation targets.

This year, we also continued to take important steps to improve our service offering to customers. We are doing this by implementing the Kraken platform – accessible through our strategic partnership with UK-based Octopus Energy – for our retail business. The platform gives a holistic view of all the services a customer has with Origin. These include electricity, gas, hot water and broadband, as well as data-driven services, such as virtual power plants, which will be an everyday part of people's lives in the very near future.

Kraken allows our customer service teams to manage any aspect of a customer's account, providing them with one point of service, simpler processes, and the ability to integrate services into a single account. We are excited to be able to deliver another step-change improvement in customer experience by the end of 2022, when all our electricity and gas customers are expected to be on the new platform.

Supporting our communities

Given the size and scope of our operations, Origin has a presence in many communities across Australia. Some of our most significant interactions involve our Native Title holders in the Beetaloo Basin in the Northern Territory, where we are undertaking exploration work. This year, we published a report on our Beetaloo Native Title Holder Engagement, which sets out our practices for engaging with Native Title holders in the Beetaloo. The report also details how those activities are guided by the principles of Free, Prior and Informed Consent and how sacred sites are respected and protected.

In a challenging year, it was more important than ever to help our local communities. One small way Origin was able to assist our communities in regional Queensland was to bring them the Be an Origin Diamond for a day netball program, designed to encourage girls to achieve through the power of sport. In May 2021, former Australian Diamond Caitlyn Nevins hosted a training session in Chinchilla, and Origin made a financial contribution to the club for new equipment.

The Origin Energy Foundation continues to support our communities, and in FY2021 contributed more than \$3 million to organisations that are making a difference in education, especially for young people in regional Australia and for those from a disadvantaged background. The Foundation does this through grants, volunteering and workplace giving programs. Despite the many hurdles created by the pandemic, Origin employees volunteered more than 8,400 hours to support the Foundation's partners in FY2021.

Protecting our planet

Managing the transition to a low-carbon economy is a strategic priority for Origin, which presents opportunities and risks for us as an organisation. We are focused on supporting our customers with a growing portfolio of cleaner energy solutions and technologies, including solar, EVs and renewable hydrogen opportunities.

This year, we continued to decarbonise our business by reducing our Scope 1 and Scope 2 equity emissions by eight per cent, compared to FY2020. We did this by lowering output at Eraring Power Station, Australia's largest coal-fired generator, continuing to run it more flexibly in response to greater renewable generation in the system. In doing so, we reduced the plant's emissions, while supporting reliability and stability in the National Electricity Market.

In Integrated Gas, we continued to focus on operational efficiencies, including upgrading equipment and adopting new technologies, to reduce emissions from our Australia Pacific LNG operations, where we saw a reduction in emissions from flaring of 13 per cent. We also plan to offset the greenhouse gas emissions associated with our Beetaloo exploration and appraisal activities in

2021 by purchasing Australian carbon credit units from a nearby Indigenous carbon farming project.

This year, we announced that we intend to provide shareholders with a non-binding advisory vote on the company's climate reporting at the 2022 Annual General Meeting. This will allow us to engage with our shareholders and stakeholders on the risks and opportunities climate change presents for the business, and the decarbonisation pathway for achieving our commitments.

One Origin

In FY2021, our staff engagement score was 74 per cent, placing us in the top quartile of organisations across Australia and New Zealand, and 13 points above the energy and utilities industry average engagement score. Origin's strong culture was also recognised with certification as a Great Place to Work® by a global workplace culture organisation, the Great Place to Work Institute. Further, we ranked in the Top 20 of LinkedIn's 2021 Top Companies Australia list, which assesses the best workplaces to grow your career.

Keeping our people safe is another important aspect of our business, and efforts to embed a safety culture across Origin are ongoing. Our personal safety measure – Total Recordable Injury Frequency Rate – was steady at 2.7 in FY2021. This coming year, we will continue to focus on shared learnings across the business to protect our workforce.

I am excited about tomorrow's challenges and the significant opportunities they bring for us. I hope this Sustainability Report – our 20th – gives you confidence that we are heading in the right direction.



Frank Calabria
Chief Executive Officer

Our purpose



Customers



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

Planet



We care about our impact on the environment. With an aim to achieve net-zero Scope 1 and Scope 2 emissions by 2050, we are committed to helping lead the transition to a low-carbon future by progressively decarbonising our business and investing in technologies to help our customers do the same.

Communities



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

People and culture



We are creating a great place to work where all of our people are led by our purpose and guided by our values. 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.



Work as one team,
one Origin



Be the customer
champion



Care about
our impact



Being accountable



Find a better way

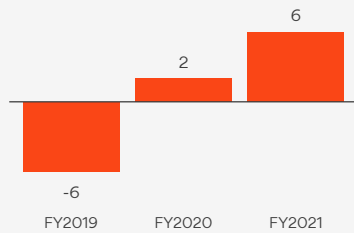
FY2021 performance highlights



Customers



Strategic Net Promoter Score



35,300

customer payment plans completed through our Power On hardship program

- Supported residential and small business customers in financial distress due to COVID-19
- Provided more than \$1 million in reward points to Origin Spike customers
- Grew our GreenPower and Green Gas customers to almost 260,000, up from 117,000 in FY2020
- Attained Climate Active carbon neutral certification for our Green Gas and Green LPG products
- Australia Pacific LNG supplied around 30 per cent of domestic east coast gas market

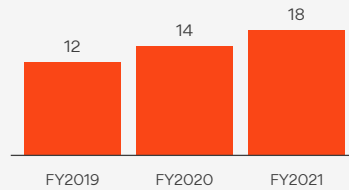
Communities



>\$3m

contributed to the community by the Origin Energy Foundation

Regional procurement spend as % of total spend

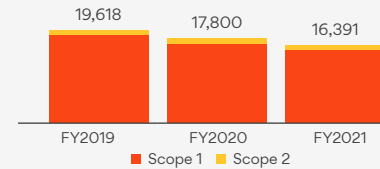


- Spent \$270 million directly with regional suppliers
- Spent \$10 million directly and indirectly with Indigenous suppliers
- Published our Beetaloo Native Title Holder Engagement report
- Provided more than \$1.36 million to support various local community programs and events
- Donated 8,400 hours to good causes through the Origin Energy Foundation's Give Time employee volunteering program

Planet



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



74 MW

residential and business solar installations, up from 61 MW in FY2020

- Total equity Scope 1 and Scope 2 emissions down by eight per cent compared to FY2020
- Progressing the update of our emissions reduction targets to a 1.5°C pathway
- Launched Origin 360 EV Fleet, the first full-service EV fleet management solution of its kind in Australia
- Progressed renewable hydrogen and renewable ammonia opportunities
- Signed a new agreement to supply 900,000 tonnes of ash from Eraring for re-use in the mining sector

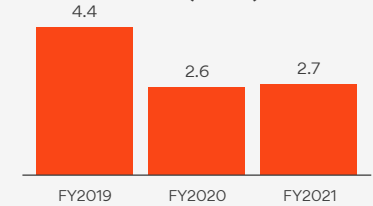
People and culture



74%

Employee engagement (top quartile for AU/NZ)

Total Recordable Injury Frequency Rate (TRIFR)



- Achieved our FY2021 target of 33 per cent women in senior roles, up from 32 per cent in FY2020
- Attained a Great Place to Work® certification from a global authority on workplace culture, the Great Place to Work Institute
- Ranked 19 in LinkedIn's annual list of Australia's Top Companies
- Became a signatory to 40:40 Vision, targeting gender balance in executive leadership by 2030

Origin at a glance



ASX TOP
100

Leading integrated energy company

Listed on the Australian Securities Exchange in 2000



Climate transition embedded in our strategy

Australia's first approved science-based emissions targets



Supporting Australian communities

The Origin Energy Foundation has contributed more than \$32 million over 11 years



4.3 million customer accounts

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



Powering Australia

7,500 MW generation portfolio, including 1,400 MW owned and contracted renewables and storage



Driving future energy innovation

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



5,000 employees

Inclusivity in the workplace, leading parental support



37.5% interest in Australia Pacific LNG

Exporting to Asia, supplies ~30% of Australian east coast gas demand



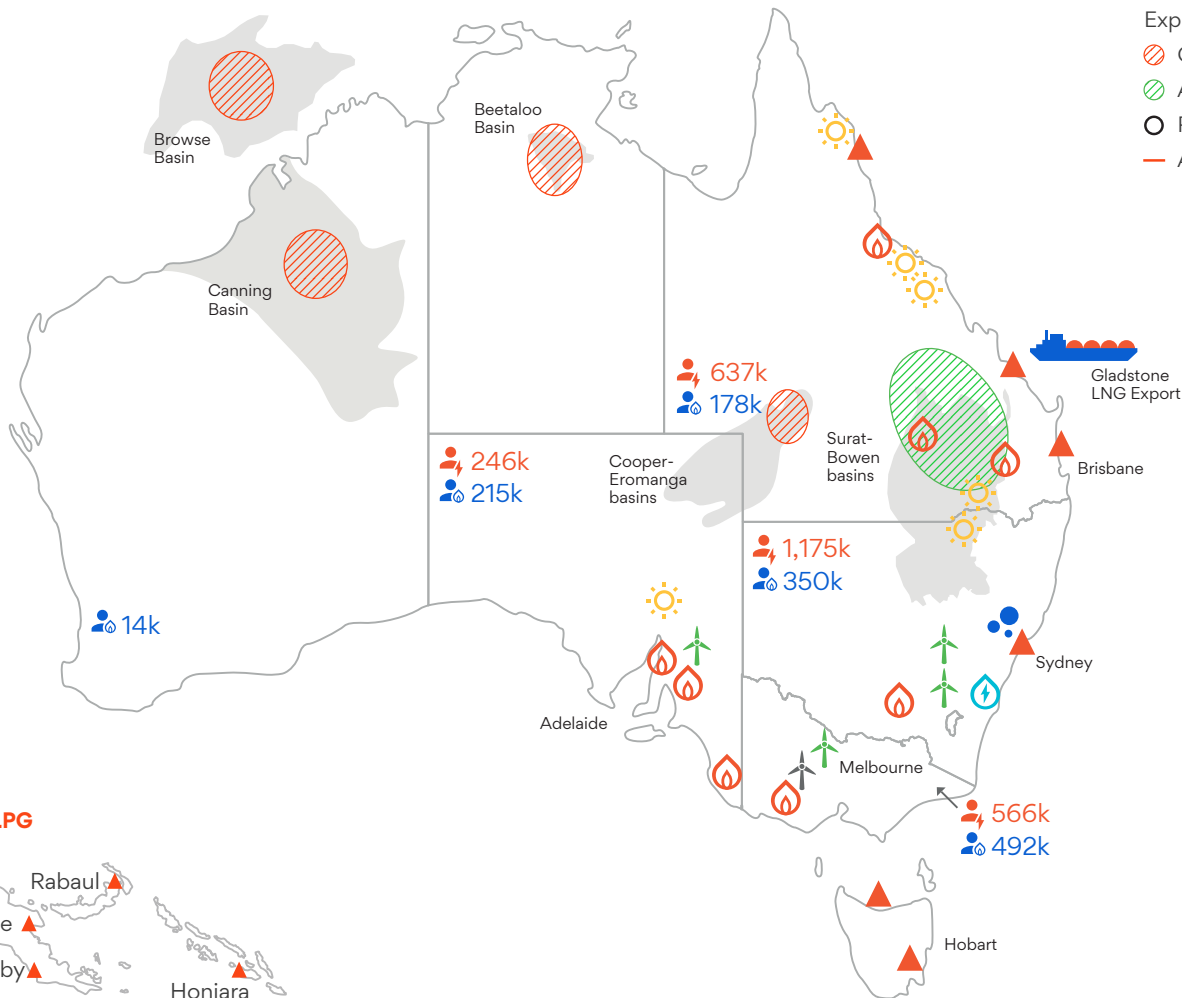
Exploration and development

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

Bringing
good energy
to everything
we say
and do.



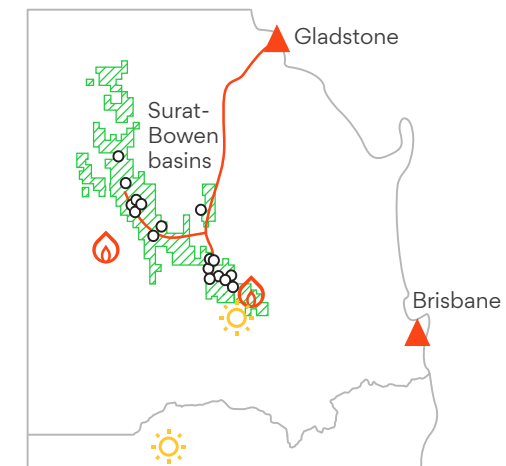
Where we operate



Pacific countries LPG



South East Queensland



Customers

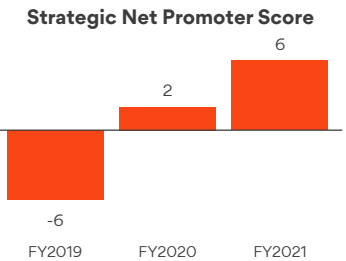


As a leading retailer of essential services, Origin provides customers with a range of products and solutions to power and connect homes, businesses, and communities. Our focus is on delivering great customer experiences and providing affordable, sustainable, and smarter energy solutions – for today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



Performance at a glance

- Supported residential and small business customers in financial distress due to COVID-19
- Provided more than \$1 million in reward points to Origin Spike customers
- Grew our GreenPower and Green Gas customers to almost 260,000, up from 117,000 in FY2020
- Attained Climate Active carbon neutral certification for our Green Gas and Green LPG products
- Australia Pacific LNG supplied around 30 per cent of domestic east coast gas market



35,300

customer payment plans completed through our Power On hardship program

UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs:



Management approaches

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



Customers

Making energy smarter and easier for our customers

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

Better customer experiences

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

During FY2021, 92.1 per cent of customers chose a digital channel when engaging with us, up from 89.6 per cent in FY2020. We have focused on making it as quick and easy as possible for customers to complete tasks with us and gain more control over their energy and costs. This includes continuing improvements to our customers' experience when they pay bills, set up direct debits and move home.

Rather than waiting until they receive their bill, we are giving customers greater visibility of their energy use and costs through anytime self-meter reads, allowing them to view their predicted bill. It builds on our existing service that allows customers who receive an estimated bill to submit a read and have their bill reissued. Since launching in mid-February 2021, customers have submitted around 33,000 incremental reads.

In FY2021, we launched new features in our Origin app to give our customers greater transparency and control over how they manage energy in their homes. This includes the Home Energy Monitor, which shows solar, battery and grid energy use in real time; the Energy Independence Monitor, which highlights the level of self-sufficiency and independence from the grid; and the Savings Tracker, which calculates savings made through solar and battery systems.

Origin customer accounts*



Electricity
2.6 million



Natural gas
1.2 million



LPG
359,000



Broadband
33,000

*As at 30 June 2021.

We also created My Business Account, a new digital portal to improve the customer experience for our commercial, industrial and large business customers. The portal provides instant access to bills, meter data and customised reports and analytics and has significantly reduced the number of requests we received for copies of bills and meter data in FY2021.

To make purchasing and managing essential services in homes and businesses as easy as possible, we are working to make Origin a one-stop shop. In FY2021, we launched Origin Home Assist, an energy plan that gives customers 24/7 assistance for 10 common home emergencies, with two call outs a year and a contribution of up to \$300 (including GST) per call out. We also introduced a guarantee to our Move Promise, offering customers a \$400 (including GST) credit per day for related expenses, in the event we cannot power their home the next business day.¹ Our Move Promise aims to help make moving easier by enabling customers to book online in minutes, get their power connected the next business day, receive SMS updates, and receive discounts on Origin broadband.

Smart products

Working with US start-up OhmConnect, we launched Origin Spike, Australia's first online energy savings program in August 2020. This program rewards customers for reducing their energy use during peak periods, called Spike Hours. The program has more than 56,000 customers, who have received more than \$1 million in reward points. We have held in excess of 1,200 Spike Hours, with an overall participation rate of 67 per cent and customers reducing their energy usage by around half during each event.

We continue to grow our virtual power plant (VPP), which connects energy assets across many separate locations and coordinates them to work together like a traditional power station. The VPP uses artificial intelligence to orchestrate distributed assets such as air-conditioning units, batteries, hot water systems and electric vehicle (EV) chargers, shifting demand to times when renewable generation is high and electricity prices are low. This provides grid stabilisation services to network businesses and enables personalised connected solutions for our retail and business customers. To date, the VPP has grown to about the size of a unit of a gas-fired power station – more than 159 megawatts (MW) across 79,000 connected services. We aim to increase this as we demonstrate the benefits to both customers and to the grid of optimising these distributed assets at critical times of market volatility.

Our partnership with Octopus Energy

In May 2020, we entered into a strategic partnership with UK-based energy retailer and technology business Octopus Energy, taking a 20 per cent equity share in the fast-growing company. We also gained a perpetual licence to its customer technology platform, Kraken, in Australia. In December 2020, we announced an additional investment in Octopus to maintain that equity interest following a partnership between Octopus Energy and Tokyo Gas that saw its launch in the Japanese market.

At 30 June 2021, we had successfully migrated more than 250,000 customer accounts to the Kraken platform. Kraken will deliver significant benefits for our customers by providing one point of service, simpler processes, and the ability to integrate

services into a single account. These customers are being serviced by small teams of Energy Specialists, each with accountability for providing end-to-end service for their unique customer base.

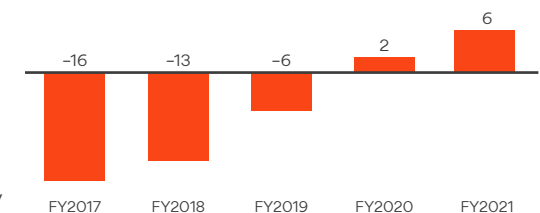
We are on track to complete the transition of our retail electricity and gas customers to the Kraken platform by the end of 2022.

Customer satisfaction

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

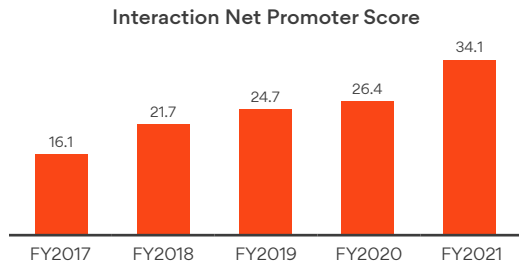
Our Strategic NPS was 6 in FY2021, an improvement of four points on the previous period. This is Origin's highest ever year-end score and the top score among Tier 1² energy providers. This follows a sustained focus on improving customer experience, offering competitive prices and rewards, as well as delivering energy solutions to our customers.

Strategic Net Promoter Score



- When booked online before 1pm Monday to Friday (excluding public holidays) – for more information, see our full terms and conditions.
- 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).

At the interaction level, our NPS was 34.1 in FY2021, an improvement from 26.4 in FY2020. Since we began measuring Interaction NPS in FY2016, our performance has improved from a score of 12.3. This is due to an improved customer experience as our digital tools and processes make it quicker and simpler to resolve customer enquiries.



We use RepTrak™, an independent benchmarking tool, to measure how our customers and others in the community view us across seven dimensions: products and services, innovation, governance, citizenship, leadership, performance, and workplace. Over the past three years we have seen a steady increase in our average RepTrak™ score, from 63.3 in FY2019 to 67.7 in FY2021, with improvements in all seven drivers.

For the third year in a row, Origin was rated the top energy provider by Reader's Digest, and, for the first time, the most trusted gas provider. Customer ratings and reviews play an increasing role in how consumers make purchasing decisions, so these are important in helping us to better serve our customers. With almost 2,000 customer reviews, Origin recently moved to an 'excellent' rating on Trustpilot, which is an independent measure of customer satisfaction.

Complaints and resolutions

We try to resolve customer complaints quickly and to identify learning opportunities to improve our service delivery and customer experience. If a customer feels that, despite our best efforts, 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 FY2021, the number of ombudsman complaints per 1,000 Origin customers was 1.9, a decline from 2.7 in the previous year.

In FY2021, we identified and reported breaches of compliance with regulatory requirements to the Australian Energy Regulator (AER), Essential Services Commission of Victoria, and the Queensland Competition Authority.

In November and December 2020 we paid penalties totalling \$246,000 in respect of infringement notices issued by the AER, in relation to alleged wrongful disconnections that occurred between March and August 2019 as a result of a systems issue, and by the ACCC, for allegedly misrepresenting the reason for our January 2020 residential price change in letters that went to Victorian customers.

We work to have processes in place to protect customers from wrongful disconnection, and we aim to achieve the highest standards of customer service, including transparent and accurate communication. Origin has identified and taken action to rectify systems issues relating to the root cause of these breaches, undertaken activities to remediate impacted customers, and where appropriate, updated processes with a view to preventing recurrence.

Privacy and cyber security

We are committed to protecting our customers' privacy and managing their personal information in accordance with the requirements of the *Privacy Act 1988* (Cth). For more information, visit originenergy.com.au/privacy

We recognise that cyber security risk can have a material impact on our business. We are committed to continuously improving our security resilience and safeguarding our critical assets and our customers' data. We have a cyber security strategy in place and regularly update it to cater for emerging threats, security regulations and stakeholder expectations.

We have increased our investment in cyber security controls over the last few years. During FY2021, we undertook an independent security penetration test to validate our controls in the context of ransomware risk. We also broadened and deepened our security monitoring capability to detect malicious activity across our digital and operating assets, including power generation plants and gas processing facilities.

Energy affordability and support for vulnerable customers

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

In response to the continuing economic uncertainty created by the COVID-19 pandemic, we continued to support our residential and small business customers in financial distress throughout FY2021. Temporary bill freezes for these vulnerable customers were in place until 30 June 2021, consistent with the AER's Statement of Expectations and the Essential Services Commission's advice to licensees during the pandemic.

We supported businesses doing it tough with payment extensions, payment plans and hardship support. In FY2021, we supported Let's Melbourne Again, an initiative to rebuild confidence and commerce in the Melbourne CBD, by crediting small and medium businesses in the 3000 postcode for their Spring 2020 supply charges.

We continue to support customers with payment extensions and flexible payment plans through our hardship program, Power On. For almost 18 years, this program has helped vulnerable customers with personalised payment plans, home energy efficiency advice and referrals to financial counsellors. In FY2021, Origin invested \$9.3 million in credits as part of the Power On program and \$8.6 million in price relief. As at 30 June 2021, we had 26,700 participating customer accounts and over the year, the program supported the completion of more than 35,300 customer payment plans.

This year, we also introduced a service to help hardship customers manage their tailored payment plan online. This improves our customers' experience by removing the need for them to call us and giving them better control over their energy payments.

In FY2021, we increased our support for customers in South Australia through the South Australian Government's Concessions Energy Discount Offer.



To date, we have helped more than 100,000 concession cardholders through this offer. We also continued to provide a loyalty discount offer to our concession customers in New South Wales (NSW) and the ACT on Origin Standing, Supply and Basic products.

Most Origin customers across NSW, Victoria, Queensland, South Australia and the ACT paid less for their electricity in FY2021. The amount of the reductions varied by location but in NSW, where electricity network costs had risen by around two to three per cent for residential customers, we absorbed some of these costs. This was at a time when there was increased pressure on household budgets due to the economic impacts of COVID-19 and higher electricity use due to people spending more time at home.

In Victoria, we reduced our electricity prices by an average of 11 per cent from 1 January 2021, which lowered electricity prices to pre-2016 levels. Natural gas prices for Victorian customers on variable market rates increased on 1 February 2021 after remaining steady for two years, mainly due to higher wholesale gas costs.

Championing the customer

In 2020, we re-established our Consumer Advocacy Panel to provide ongoing engagement with consumer groups representing the interests of our customers. The panel is chaired by the Executive General Manager, Retail, and meets around every four months. Topics discussed in FY2021 included hardship customer support, pricing, and new and emerging customer solutions.

Customers' views are also represented in our business decisions through our Origin Exchange Customer Insights Community Research Panel. The panel has grown from around 500 customers to more than 3,000 by proactively asking customers who complete a Voice of the Customer survey (at the end of an interaction with Origin) if they are interested in joining the panel. Customers provide insights and feedback on a range of projects in development, from reviewing web pages to end-to-end customer experiences to a new product proposition.

After two years as a member of the Energy Charter, we concluded our involvement in 2020 to focus

on engaging with our customers directly through the Consumer Advocacy Panel and supporting our more vulnerable customers directly. We have reinvested in our annual subscription to the Energy Charter in in-house support programs, including Power On.

Supporting vulnerable communities

To help address some of the barriers experienced by members of culturally and linguistically diverse (CALD) communities when managing their energy needs, we partnered with other energy companies in FY2021 to launch the Voices for Power Train the Trainer program. Delivered by civil society coalition Sydney Alliance, the program is training community leaders from CALD backgrounds to be able to assist community members take control of their energy, including how to understand bills, negotiate better deals with energy retailers, and use energy more affordably and safely.

We also continued our partnership with the NSW Government to deliver the Solar for Low Income Households program. Origin is an approved installer to provide, free of charge, three kilowatt

(kW) solar systems to low-income households in the Illawarra-Shoalhaven, Central Coast, and Sydney South regions. The program aims to help participants save up to \$600 a year on their electricity bills, and we have installed more than 350 solar systems since the program began in 2019.

We have also partnered with the NSW Government on its Home Energy Action program. We are co-funding and installing solar systems of up to five kW at two Indigenous communities in regional NSW.

Energy reliability and sustainability

The energy sector is rapidly transitioning towards a low-carbon future, with more renewables coming into the market every day. It is important that our industry gets this transition right so we can continue to deliver reliable, affordable and cleaner energy.

We will continue to adapt Eraring Power Station during the energy transition ahead of our exit from coal-fired generation by 2032. We are planning for how we will eventually replace Eraring's supply with renewables, firmed by large-scale batteries, gas-fired peaking generation and pumped hydro. In FY2021, we announced our intention to investigate installing a large-scale battery at Eraring, which would have an overall capacity of up to 700 MW and a dispatch duration of four hours.

Our fleet of gas-fired power stations will continue to play a vital role in supporting the increasing supply from renewables across the grid as, unlike coal, they can be switched on and off quickly and operated efficiently on an intermittent basis. We are also investing in our existing gas fleet to improve its reliability and flexibility.

One example of this is our project to upgrade many of our power stations to provide Frequency Control Ancillary Services (FCAS), which helps to maintain the correct system stability. This is particularly important as generation in the market is increasingly intermittent, with renewables

Case study

Adapting to a changing energy landscape

Darling Downs Power Station has reached a milestone, turning 10, and is embracing flexible modifications that allow it to support renewable generation.



Case study

Supporting vulnerable women in Victoria

Origin has been working with The Queen's Fund to help support women in crisis, particularly through the COVID-19 pandemic.



continuing to grow. We have added FCAS capability to many of our power stations, with over 1,600 MW of FCAS capacity registered across our portfolio. This work has improved the flexibility of our portfolio and our ability to manage volatility in the grid system.

See our case study on how our Darling Downs Power Station has responded to a changing market to support renewable generation.

Our joint venture, Australia Pacific LNG, supplies approximately 30 per cent of the Australian east coast gas demand. Australia Pacific LNG continues to support Australian manufacturing through gas sales agreements with commercial and industrial customers, including signing a multi-year deal with Queensland Nitrates Pty Ltd, based in regional Queensland, in FY2021. Origin also secured additional gas supply under a four-year agreement with Australia Pacific LNG. This, along with additional pipeline capacity, will help to alleviate a potential forecast shortfall in supply identified by the Australian Energy Market Operator and meet customer demand.

Policy advocacy

As one of Australia’s largest energy companies, we have long advocated for clear government policies to support Australia’s transition to a low-carbon economy and help make the transition easier for customers. We continue to advocate for coordinated and long-term energy policy at the national level to give industry the confidence to invest in new electricity generation and gas supply. Investment is critical to maintain reliability and improve affordability as we transition to a low-carbon energy system.

During FY2021, we advocated for investment in key low emission technologies through the NSW Government’s Technology Roadmap 2021–24 consultation process, including green hydrogen, electric vehicles, firming technologies for the electricity industry and the orchestration of distributed energy resources.

Supporting customers to take up cleaner energy solutions

We understand the importance of accessing cleaner energy. We offer solar energy, renewable and carbon offset products and EV solutions, and work with our customers to develop and deliver cleaner energy solutions.

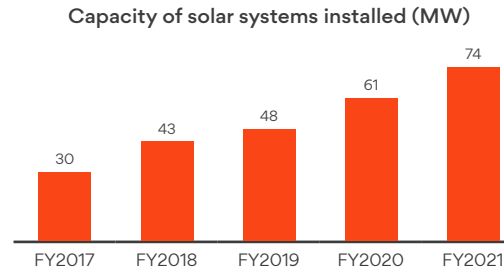
Solar energy

We are a Clean Energy Council-accredited retailer of solar energy. In the year to December 2020, we were the second largest installer of solar in terms of overall capacity, and number three in the commercial (15–100 kW) category.



▲ We installed around 74 MW of solar on the roofs of Australian homes and businesses in FY2021.

During FY2021, we installed around 74 MW of solar on the roofs of Australian homes and businesses, an increase of 21 per cent on the prior period. This increase reflects the growth in the overall rooftop solar market.



At 30 June 2021, 549,000 Origin customers had had solar installed at their properties, and we have also seen strong growth in the number of business

customers wanting to achieve their own climate aspirations through solar. We installed the largest rooftop solar system in Griffith, NSW, at Griffith Central Shopping Centre – a 600 kW system made up of 1,820 individual panels. Read more about the project in our case study.

For more than 10 years, we have been a leader in rooftop solar, installing nearly 1.7 million panels and offering new products to encourage greater uptake. We continue to offer our customers proactive maintenance services, including solar cleaning and health checks, to ensure solar systems are being used to their full capacity. We also offer solar repair services and a replacement system for customers with older installations.

Cleaner electricity and gas

We have been giving our customers the option to choose renewable energy products for more than 20 years. When customers choose our GreenPower product, they can select the percentage of their electricity they would like Origin to match with an equivalent amount of electricity from GreenPower-accredited renewable sources, which is added to the electricity grid. With our GreenPower products, we offer customers the option to offset up to 100 per cent of their electricity greenhouse gas emissions.

In January 2021, our Green Gas and Green LPG products were certified carbon neutral by Climate Active, an initiative backed by the Australian Government. Our Green LPG product is currently the only Climate Active-certified LPG product in Australia. When customers choose these products, we offset the relevant emissions associated with the customer’s consumption of natural gas or LPG as part of our Climate Active commitments.

We are one of Australia’s largest providers of GreenPower and Green Gas products, with almost 260,000 customers, up from 117,000 in FY2020. This growth was driven by our new Origin Everyday Rewards plan, which enables customers to benefit from 25 per cent GreenPower and 100 per cent Green Gas at no additional cost. The plan is in partnership with Woolworths and rewards customers for their everyday energy use with one Woolworths Everyday Rewards point for every dollar spent on energy.

Case study

Griffith Central switches on to solar

Origin is helping businesses like Griffith Central Shopping Centre in regional NSW, take advantage of the benefits of solar to meet its energy needs and reduce their carbon footprint.



Driving towards electric vehicles



We see electrification of transport as a major opportunity for Australians to get behind achieving net-zero emissions by 2050

After electricity generation and manufacturing, transport is Australia's third highest source of emissions.³ Electrification of transport is a major opportunity for Australia to reduce its emissions.

Helping Australians change gear

Australia has been relatively slow to take up EVs compared to the US and Europe, where the market has grown at a rapid rate. Various factors have contributed to weaker EV demand in Australia, including cost, how far you can drive an EV before needing to charge it, and the absence of subsidies, tax breaks or policies supporting greater take-up.

While many perceptions of EVs in the Australian market remain outdated, this is starting to change, and we want to help accelerate the shift to a different mindset. While EVs typically cost more up-front compared to a petrol vehicle, they are cheaper to run. At around \$0.04/km, electricity as a fuel is cheaper than petrol at around \$0.14/km.⁴ EVs require less maintenance and are less prone to mechanical issues than combustion engine vehicles, with no difference in performance. Also, EVs can now drive more than 500 kilometres on a single charge.

We are committed to playing a leadership role in helping to accelerate the uptake of EVs in Australia and this year became a member of EV100, a global initiative that brings together companies focused on this goal.

Driving the EV market forward

In FY2021, we partnered with Custom Fleet to launch Origin 360 EV Fleet, which aims to take the complexity out of making the switch to EVs for Australian businesses, helping them to lower both their carbon footprint and their operating costs.

The first full-service EV fleet management solution of its kind in Australia, Origin 360 EV Fleet offers business customers tailored EV implementation strategies, fully managed vehicles, charging infrastructure, load management and cleaner travel through inclusion of carbon offsets. Customers will also receive reporting and insights to help optimise fleet performance and emissions reduction.

Business fleets make up around half of all new vehicles sales in Australia. This means that by supporting businesses to transition their fleets to EVs, we can help reduce emissions in the transportation sector. As well, by stimulating demand for EVs in the fleet market, manufacturers will be more confident about releasing more models locally. We hope that as more EVs flow through to the second-hand market and more EVs are on the roads, private vehicle owners will be encouraged to make the switch.

We have 14 EVs operating in our own fleet, with a further four on order, and we have committed to transitioning all 600 of our passenger and light commercial vehicles to EVs by 2030. We plan to transition small to medium-sized passenger vehicles when existing leases expire and will continue to assess emerging zero direct emissions solutions for other vehicle types, such as large passenger and light commercial vehicles, as they become available in Australia.



Smart energy management

It is estimated that by 2050, the load from charging EVs will account for between 14 per cent and 25 per cent of annual electricity demand,⁵ which will have a significant impact on the future energy grid. This expected growth in demand could help us stabilise the grid, as smart charging of EVs could smooth energy consumption, taking it away from peak periods and spreading the charging load to absorb excess solar energy when energy demand is low.

This year, we began a smart charging trial with the Australian Renewable Energy Agency (ARENA) to roll out 150 smart chargers to EV owners and fleets across Australia. Since launching the trial, we have installed 103 smart chargers in homes and businesses across NSW, Victoria, Queensland and South Australia, gaining insights into how EV owners are charging their vehicles.

The smart chargers are connected to our VPP platform, with the objective of the two-year trial being to improve the economics of EVs by shifting charging times to off-peak periods when wholesale electricity prices are low. Lake Macquarie City Council, in NSW, is participating in our smart charging trial as part of its transition to low-carbon transportation. Throughout the trial, the council will smart charge nine of its EVs via our VPP to optimise charging sessions; for example, when excess onsite solar generation is available.

We will report to ARENA on the results of the trial in early 2023.

³ industry.gov.au/data-and-publications/national-greenhouse-gas-inventory-quarterly-update-december-2020

⁴ Electric Vehicle Council, Mythbusting, 'Expensive to run'.

⁵ Graham, P.W. and Havas, L. 2020, Projections for small-scale embedded technologies, CSIRO, Australia.

Communities



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



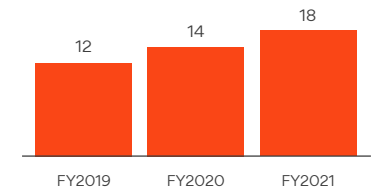
Performance at a glance

- Spent \$270 million directly with regional suppliers, or 18 per cent of our procurement spend
- Spent \$10 million directly and indirectly with Indigenous suppliers
- Published our Beetaloo Native Title Holder Engagement report
- Provided more than \$1.36 million to support various local community programs and events
- Donated 8,400 hours to good causes through the Origin Energy Foundation's Give Time employee volunteering program

>\$3m

contributed to the community by the Origin Energy Foundation

Regional procurement spend as % of total spend



UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs:



Management approaches

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



Communities



Procurement

Working with communities

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

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

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

Australia Pacific LNG

We regularly engage with local councils, chambers of commerce, economic development groups and other community organisations. Our business also proactively engages with our landholders through dedicated Stakeholder Liaisons.

Conduct and Compensation Agreements (CCAs) between Origin and landholders set out how we will enter the land to carry out our activities as upstream operator of Australia Pacific LNG and how landholders will be compensated. We negotiated and signed 34 CCAs with landholders in FY2021.⁶ These CCAs bring the total number of agreements signed since the Australia Pacific LNG project began to 1,310.

Engaging with Traditional Owners

Our ongoing engagement with Traditional Owners has focused on strengthening existing relationships and identifying opportunities for employment, capability building and contractor engagement.

Across our activities in the Surat Basin in Queensland, we work closely with several Traditional Owner groups, collaborating to protect cultural heritage. One such group is the Mandandanji people. At their request, in FY2021 we worked with them to transition from individual employment contracts directly with Origin to facilitate their cultural heritage work, to an employer organisation model where Mandandanji Cultural Heritage Services is the employer. This shift supports the business, which provides employment and learning opportunities for Mandandanji people across Queensland.

Mandandanji Traditional Owners conducted an Aboriginal smoking ceremony at the opening of our newly refurbished office in Roma in February 2021. The collaboration between Origin and local Aboriginal communities is reflected in artwork on display in the building and local Indigenous language used to designate meeting spaces.

In FY2021, we received approval from the Queensland Government for a new Cultural

Heritage Management Plan with the Kanolu people, for the Mahalo development in the Bowen Basin. When the development proceeds, this agreement will provide employment opportunities for the Kanolu people in helping to ensure cultural heritage is protected.

During FY2021, Australia Pacific LNG was not associated with any incidents of non-compliance with Indigenous Land Use Agreements or Cultural Heritage Management Plans. Refer to our [Communities management approach](#) for more information on our approach to engaging with Traditional Owners.

Beetaloo Basin exploration project

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

We temporarily paused our activity in the Beetaloo in March 2020 in response to the COVID-19 pandemic to help protect Northern Territory communities and people. Work resumed in September 2020, and late last year some of our Native Title holders visited the Kyalla well site near

Daly Waters during hydraulic fracturing operations. Our Native Title holders spent time with our onsite water specialists, hydraulic fracturing fluid expert and control-room team members, to see up close how hydraulic fracturing is safely undertaken. The group was led by two senior elders, who were supported by the next generation of family leaders.

We work closely with the Northern Land Council (NLC) and Native Title holders. During the year, we undertook sacred site clearance and avoidance surveys for future work with our Native Title holders and the NLC. In March 2021, we participated in on country meetings about our upcoming work program.

We have published a report on our [Beetaloo Native Title Holder Engagement](#), which sets out key practices for engagement with our Native Title holders where Origin is undertaking exploration activities, including applying the principles of Free, Prior and Informed Consent and protecting sacred sites.

Eraring Power Station

With representatives from the community and Origin, the Eraring Power Station Community Forum aims to enhance understanding of both the power station and community issues by providing an opportunity to share updates, raise concerns and discuss proposed community investment and impact management activities. Due to the continuing impacts of the COVID-19 pandemic, we engaged with the forum and our community partners via our newsletter and will reconvene meetings when forum members feel it is safe to do so.

As part of the Eraring ash dam expansion project, we established a Community Consultative Committee. Comprised of seven community members and representatives from Origin and Lake Macquarie City Council, the Committee has met regularly since May 2020 and provides a forum for open discussions between us and representatives of the local community, local councils and other stakeholder groups on issues directly related to the project. Due to the COVID-19 pandemic, meetings were held virtually this year, although we were able to hold a face-to-face session in May 2021, including providing a detailed onsite inspection of the Eraring ash dam.



◆ Origin Stakeholder Liaison, Matt Harland, with one of our landholders in the Maranoa region in Queensland.

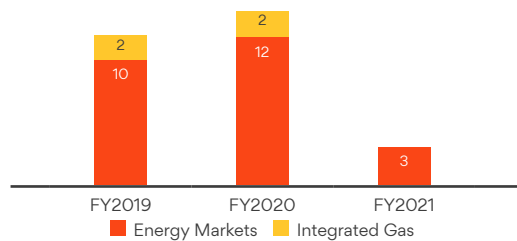
⁶ The number of Australia Pacific LNG CCAs, as defined by Queensland's *Mineral and Energy Resources (Common Provisions) Act 2014* signed during the 12-month period. This excludes non-operated sites.

Responding to complaints

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

Community complaints declined in FY2021 as we continue to focus on engaging with our communities and minimising the impact of our operations. This includes a dust mitigation program at Eraring Power Station, which is reducing the risk of dust emissions and dust-related complaints.

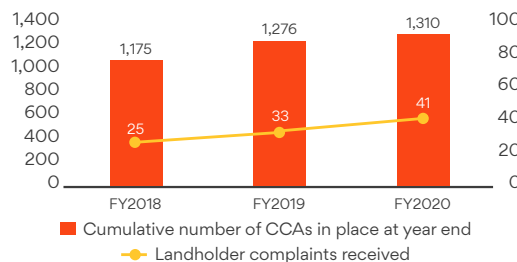
Community complaints¹



1. The Energy Markets figures do not include complaints from customers. This information is contained in the Customers section.

During the year, we received 41 complaints from landholders with whom we have negotiated or are negotiating a CCA, with new processes leading to better recording of complaints in our system. Most of these related to land access and management of gates for livestock. Each complaint is carefully investigated, and we are striving to improve our performance and reduce the number of complaints.

Conduct and Compensation Agreements and landholder complaints



Supporting communities

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



◆ Apprentice Rachelle Moore at a Spring Gully wellsite.

We support local communities through activities such as purchasing from [local suppliers](#), providing financial incentives for our people to live local and offering local apprenticeship and traineeship opportunities.

Our regional apprentice schemes aim to build local workforce capacity through training and development. As upstream operator for Australia Pacific LNG, we run apprentice and traineeship programs, offering qualifications or trades relevant to the oil and gas industry to recruits from the Western Downs and Maranoa regions. At the end of FY2021, there were 23 apprentices in the

program, while a total of eight apprentices and trainees have completed their program since we commenced in 2017 – five have permanent positions with Origin and two have gained positions with contractors.

We also offer apprenticeships within our generation business. At Eraring Power Station, we have hired more than 15 apprentices a year since 2013, with 19 employed in FY2021 in electrical, fabrication and fitter apprenticeships.

Community investment

Our national community programs include Origin Little Big Idea, an annual competition that seeks Australia’s next generation of inventors. We are also working with Netball Australia to support players at all levels across the country – from local clubs to the world-leading Australian Diamonds. Our Be an Origin Diamond for a day program travels to regional netball communities, inspiring players to achieve through the power of sport. In FY2021, we took the program to several clubs across the country, including Chinchilla Netball Club in regional Queensland.

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

During FY2021, we contributed more than \$1.36 million to support various local community programs and events. These ranged from multi-year partnerships with schools and community organisations to supporting important services and local events. We also contributed \$50,000 to the Business Council of Australia’s BizRebuild program to provide practical support to communities affected by drought, bushfires and COVID-19 over the last 24 months.

Case study

Diamond netballer delivers good energy to Chinchilla

Former Australian Diamond Caitlyn Nevins dropped in to the Chinchilla Netball Club as part of our Be an Origin Diamond for a day program.





Origin and its employees supported the development of the Great Artesian Basin Interpretive Centre at the Miles Historical Village in Miles, Queensland.

As part of National Sciences Week, our employee volunteers presented to the Women in STEM (science, technology, engineering and maths) forum at Chinchilla State High School in Queensland and to a further eight schools online, reaching more than 260 years 9 and 10 students across the state. Our employees recorded in excess of 350 volunteer hours in support of educational events across regional Queensland focused on helping to develop confidence, interest, and skills in STEM.

Also in regional Queensland, Origin has collaborated with the Miles Historical Village for more than 10 years, including helping to develop the Great Artesian Basin Interpretive Centre by providing in-kind donations and more than \$300,000 in financial donations. The centre was opened in November 2020 and features an interactive display of the origins, scale and structure of the Artesian Basin and the history of coal seam gas in the Surat Basin. It has helped to boost visitor numbers at the Village from around 5,700 in FY2020 to around 13,100 in FY2021.

Recognising that drought, bushfires, and the COVID-19 pandemic have had a significant impact on the mental health and wellbeing of many

Australians, we have invested in mental health initiatives in our local communities. For example, at Uranquinty Public School in NSW, we have supported the Blueearth program, which provides students with expert coaching on the importance of active living and mindfulness. Our assistance has also enabled the school to employ a Student Wellbeing Officer, who focuses on supporting students' mental health and wellbeing.

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. Funds distributed by the Foundation are drawn from interest on a corpus provided by Origin. The corpus is currently valued at \$66 million. We also fund the running costs, ensuring that all the investment income goes to community programs.

Through grants, volunteering, in-kind donations and workplace giving programs, the Foundation distributed more than \$3 million to the community in FY2021 and has provided more than \$32 million to support community organisations since its inception.

Working with community partners

Through its grants program, the Foundation provides funding to Australian non-profit organisations that support students from early education to university.

One such partnership sought to act swiftly to support young Australians whose education had been interrupted by COVID-19. Recognising that children who were already experiencing disadvantage were at particular risk when schools closed during pandemic-related lockdowns, the Foundation provided the Grattan Institute with a \$100,000 grant to research the impacts of home schooling on disadvantaged students, and suggest solutions. The Institute's report called for the urgent establishment of substantial government-funded tutoring programs. Subsequently, NSW and Victorian governments have now committed more than \$500 million for implementing such programs in 2021.

In addition, the Foundation funded a trial to assess the impact of tutoring support for more than 100 vulnerable children in The Smith Family's

Learning For Life program. Students in years 4, 5, 7 or 8 received one-on-one online tutoring from a qualified teacher, over 20 weeks. The trial saw increases in student engagement and greater than expected gains in literacy and numeracy.

Supporting employee giving

A key element of the Foundation's work is our employee volunteering program, Give Time. This year, our participation rate of 34 per cent saw employees donate more than 8,400 hours, including around 250 hours as mentors. Our employee volunteers participate in mentoring programs with Foundation partners such as The Smith Family, the Beacon Foundation and the Raise Foundation, giving their time to work one on one or within small groups, in the classroom or online. Mentoring has proven to be an effective way of helping young people build resilience, connect with their communities and industry and build aspirations for the future. We reached more than 3,000 students through our mentoring and school outreach programs in FY2021.

Case study

Give a little, get a lot through volunteering

Clocking up more than 50 mentoring sessions in 35 schools, across five states, over five years, Mark Bernhardt says: "While there's people I can help, I'll keep volunteering."



Through our workplace giving program, Give2, the Foundation matched employee donations dollar-for-dollar, providing in excess of \$690,000 to more than 250 Australian not-for-profit organisations in FY2021.

For the second year running, we topped GoodCompany's list of the Top 40 Best Workplaces to Give Back. The list ranks companies on their commitment to empowering their employees to give back to communities that need it most. To maintain our number one ranking, we were recognised in the areas of volunteer leave, payroll giving and action plans for positive change. In addition, the Origin Energy Foundation received the Silver Award from Workplace Giving Australia in the category of Best Employer Response to a Crisis.

Responsible procurement

Our supply chain includes the supply of goods and services, wholesale commodities and the distribution of energy. It encompasses nearly 3,700 direct suppliers with which we spend around \$7.8 billion per annum.⁷ Our direct suppliers are mainly in Australia, with six per cent based internationally. The goods and services segment represents approximately one-quarter of our overall supply chain spend and accounts for more than 90 per cent of our direct suppliers.

We strive to improve our supply chain's social and ethical footprint, and work with suppliers that share our values. We expect our suppliers to comply with all applicable laws and to demonstrate that they have the attributes set out in our [Supplier Code](#).

We recognise the opportunity to create a positive impact on communities by making considered choices about how and where we source the goods and services we need to operate our business. Our responsible procurement plan focuses on four key areas:

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

Identifying, assessing, and addressing modern slavery risks

We consider any form of modern slavery to be unacceptable and acknowledge our responsibility to help eradicate it. During FY2021, we continued to apply a rigorous four-step methodology to manage modern slavery risks. We are working to progressively understand the multiple tiers of suppliers that form our extended supply chain. Our assessments to date have not identified any known modern slavery practices in our operations or supply chain, however, we recognise this is an ongoing process and continue to review.

For more information, see our [2021 Modern Slavery Statement](#).

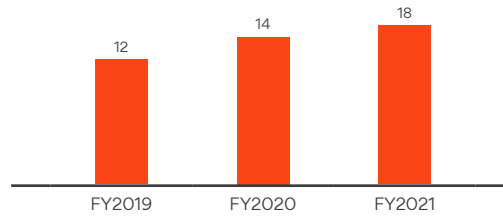
Supporting regional communities

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

For example, in FY2021, we signed a five-year agreement with energy services company, Valmec Limited, which will provide compression, mechanical and electrical maintenance services for our natural gas production assets in the Maranoa region around Roma in Queensland. Under the agreement, Valmec has committed to building local employment opportunities year-on-year, establish a local Indigenous traineeship program, and investing in community partnerships and donations.

Overall, we spent \$270 million directly and indirectly with regional suppliers this year. This value is \$125 million less than in FY2020 due to an overall reduction in our procurement spend. However, our proportion of regional spend increased from 14 per cent to 18 per cent year-on-year as a result of our continuing commitment to find opportunities to include regional suppliers.

Regional procurement spend as a percentage of total procurement spend (%)



Increasing Indigenous participation in our supply chain

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

In FY2021, our spend with Indigenous suppliers was more than \$10 million,⁸ exceeding our Stretch RAP target of \$6.5 million and FY2020 performance of \$5.3 million.

To help facilitate opportunities for Indigenous businesses, we include Indigenous Participation Commitments (IPCs) in contracts with key suppliers. We agreed 12 new IPCs with our major contractors in FY2021, resulting in a total of 22 IPCs agreed within the first two years of our Stretch RAP. Working with our major contractors to deliver these commitments has meant that around \$5 million has flowed to Indigenous businesses that may not have otherwise been able to participate in our supply chain and also generated further employment and training opportunities for Aboriginal and Torres Strait Islander people.

This year we expanded the breadth of goods and services we purchased directly from Indigenous businesses by creating new opportunities to supply carbon credits, information technology services and office supplies. These new agreements complement our existing relationships for the delivery of civil and facility maintenance services, workwear and bottled water.

We recognise that growing our engagement with Aboriginal and Torres Strait Islander-owned businesses is a continual journey that requires our deliberate effort and the development of lasting relationships. To this end, in FY2021 we launched the Marketplace Initiative with our long-term not-for-profit partner, Many Rivers. The initiative aims to break down barriers that prevent emerging Indigenous businesses from entering corporate supply chains by building a pipeline of local Indigenous businesses that can support our operations, and those of other corporates. The partnership includes an Origin secondee working for Many Rivers to lead the development of the initiative.

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 approximately 1,400 small businesses that supply to Origin. We have worked to improve our performance, including:

- advocating for appropriate invoicing practices with our suppliers;
- continuing the accelerated 14-day payment terms for these suppliers – introduced in response to COVID-19 – throughout FY2021; and
- improving our internal systems to simplify and streamline how we work.

We expect to submit our first report under the Australian Government's new Payment Times Reporting Scheme, which aims to improve payment times for small businesses, in September 2021.

⁷ Supply chain spend is approximate annualised third-party spend excluding taxes, government charges, joint ventures, intercompany transfers and landowner compensation payments.

⁸ Progress towards our Stretch RAP objective is measured by monitoring direct procurement spend (paid by Origin) and indirect spend (sub-contractors to Origin). This figure includes indirect and direct spend.



Planet



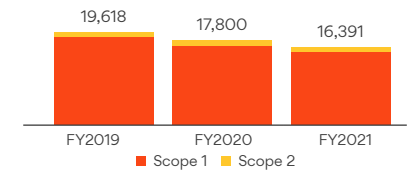
We care about our impact on the environment. With an aim to achieve net-zero Scope 1 and Scope 2 emissions by 2050, we are committed to helping lead the transition to a low-carbon future by progressively decarbonising our business and investing in technologies to help our customers do the same.



Performance at a glance

- Total equity Scope 1 and Scope 2 emissions down by eight per cent compared to FY2020
- Progressing the update of our emissions reduction targets to a 1.5°C pathway
- Launched Origin 360 EV Fleet, the first full-service EV fleet management solution of its kind in Australia
- Progressed our renewable hydrogen and renewable ammonia opportunities, including commencing a feasibility study in Bell Bay, Tasmania
- Signed a new agreement to supply 900,000 tonnes of ash from Eraring for re-use in the mining sector, almost doubling Eraring's ash re-use program

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



74 MW

Residential and business solar installations, up from 61 MW in FY2020

UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs:



Management approaches

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



Climate change



Environment

Energy and climate change

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

We unequivocally support the United Nations Framework Convention on Climate Change and the Paris Agreement, and measures to progressively reduce global emissions, including the aim to limit the world's temperature increase to 1.5°C above pre-industrial levels.

We are in the process of updating our emissions reduction targets to be consistent with a 1.5°C pathway. We aim to achieve net-zero Scope 1 and Scope 2 emissions⁹ by 2050.

Electricity generation contributes around 33 per cent of Australia's emissions.¹⁰ As one of Australia's largest electricity generators, we believe the sector, and our company, should be at the forefront of reducing emissions. In a rapidly decarbonising world, gas will play a role as a lower-emissions fuel and in supporting growth in renewable generation.

We are committed to reducing our greenhouse gas emissions and helping lead the transition to a low-carbon future. We support a national goal of net-zero emissions by 2050 and are proud of our ongoing contribution to the decarbonisation of the National Electricity Market (NEM).

Origin supports the Say on Climate initiative, and we intend to put our climate reporting to a non-binding, advisory vote of shareholders at our 2022 Annual General Meeting.

Managing climate change risks and opportunities

We have considered the effects of decarbonisation on the value of our assets over the short, medium and long term, and we recognise that climate-related impacts and opportunities must be considered across our business. The transition to a low-emissions energy sector is a key strategic priority for Origin.

We actively monitor the latest global climate change science published by leading international organisations to help assess potential risks and opportunities for our portfolio. We seek to manage our portfolio to be resilient so as to adapt to a fast-moving energy transition, and the increasing expectations of our stakeholders.

Climate-related risks and opportunities are identified, assessed and managed using Origin's Risk Management Framework in the same way as all other risks at Origin. The Board and senior management consider, review and monitor climate-related risks and opportunities as part of our strategic planning process, for investment decisions, and for regular financial and operational performance reviews throughout the year. During FY2021, strategic topics included a deep dive on decarbonisation across the business, emerging business models in the electricity transition, battery storage opportunities, and emerging climate-related risks. Climate change risk is specifically reviewed by the Risk and Sustainability and Safety Committees.

We are continuously improving the way we identify, assess, manage and govern climate-related risks and opportunities for our business. We believe the TCFD framework is a useful way to disclose this information to our stakeholders. See our [TCFD Disclosure](#) and our [Climate change management approach](#) for more information.



▲ Origin employees undertaking well maintenance in Spring Gully.

Capital allocation and climate resilience

Our investment and capital expenditure decisions are made within a governance framework so that our investments are consistent with our strategy, meet certain investment hurdles and are consistent with our purpose. Origin's existing operations require capital expenditure to ensure they continue to play their part in providing safe, reliable and affordable energy, and meet regulatory commitments. Origin continues to allocate growth capital to digital and low-carbon customer solutions.

All major Origin capital expenditure and investment decisions are subject to a formal review and approval process which is overseen by the Origin Investment Committee (OIC). The OIC is comprised of our Executive Leadership Team, which assesses material investments, including against a range of climate-related scenarios and incorporating a price on carbon.

We are progressing work on updating our existing emissions reduction targets consistent with a 1.5°C pathway, and we will continue to review our capital allocation governance framework as part of updating our emissions reduction targets.

Climate change scenario analysis plays a role in our assessment of the assets we should hold, invest in, dispose of and acquire. We have previously published [scenario analyses](#) on the value of our generation portfolio to evaluate the impact of 2°C and 1.5°C pathways.¹¹

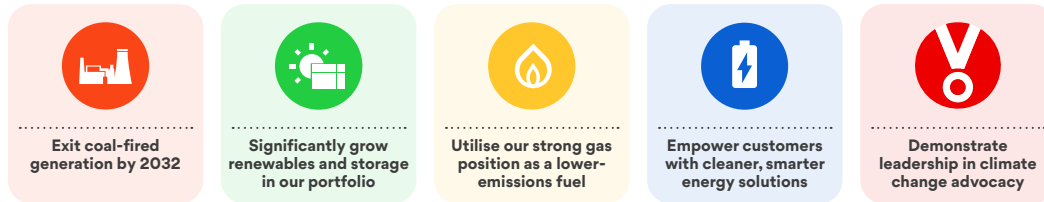
We also look beyond the risks of climate change and actively consider how climate change may present future business opportunities for us by utilising our existing competitive advantages.

⁹ Scope 1 greenhouse gas emissions are the emissions released to the atmosphere as a direct result of an activity. These are sometimes referred to as direct emissions, examples include electricity generation and gas production. Scope 2 emissions result from the electricity that we consume to power our offices and operating sites.

¹⁰ [Industry.gov.au/data-and-publications/national-greenhouse-gas-inventory-quarterly-update-december-2020/#annual-emissions-data](https://www.industry.gov.au/data-and-publications/national-greenhouse-gas-inventory-quarterly-update-december-2020/#annual-emissions-data)

¹¹ [originenergy.com.au/content/dam/origin/about/investors-media/documents/1_5c_paper_final_.pdf](https://www.originenergy.com.au/content/dam/origin/about/investors-media/documents/1_5c_paper_final_.pdf)

Our five-pillar decarbonisation strategy



Decarbonisation strategy

We have a five-pillar approach to progressively decarbonise our business. Since our decarbonisation strategy was created in 2017, we have made progress in our commitments and initiatives to reduce emissions. Our approach is grounded in science, and our decarbonisation pathway is supported by our approved science-based targets.

Exit coal-fired generation by 2032

To reduce our greenhouse gas emissions and help lead the transition to a decarbonised future, we have committed to exiting coal-fired generation by 2032, or earlier.

In FY2021, Eraring Power Station contributed eight per cent of Origin's total revenue, represented five per cent of total assets, and accounted for 86 per cent of our Scope 1 operated emissions. Eraring is Australia's largest coal-fired power station, providing stability and reliability in the NEM.

Coal currently plays a critical role in providing baseload supply in Australia and as a black coal generator, Eraring has a lower-emissions intensity than brown coal-fired plants. However, the rapid and continuing increase in low-cost power generated from renewables is displacing coal from its baseload role during the day, and the role of coal is diminishing.

The decline in Eraring's output between now and its closure by 2032 is unlikely to be linear and will be influenced by various factors, including demand

from the NEM and growth in renewable energy and large-scale storage. However, Eraring's output, and its emissions, have continued their downward trajectory from FY2019. Output from Eraring declined by three per cent during FY2021, while emissions were down by four per cent.

We are changing the way we run Eraring to better position it for increasing renewables, running three of Eraring's four generation units more often during FY2021. Eraring is also one of the most flexible coal-fired power stations in the NEM as its four units can be rapidly cycled from minimum generation (approximately 30 per cent of capacity) to medium and high output levels, with ramp-up capability of more than 10 MW per minute per unit. We have been increasing the amount of intra-day ramping at Eraring in response to fluctuations in demand due to increasing renewable penetration. We expect these trends will continue, with greater intra-day ramping and the potential for having just two or three units running outside of the summer months.

We continue to look for ways to improve Eraring's environmental performance, including reducing emissions. The Real Time Optimisation (RTO) program has been operating at Eraring for a number of years, using artificial intelligence to improve the plant's overall heat rate – the fuel consumed per megawatt of electricity produced – which in turn can reduce the plant's emissions. During FY2021, 77,000 tonnes of CO₂-e were estimated to have been avoided due to RTO efficiency improvements.

Ahead of the planned exit from coal-fired generation at Eraring by 2032, there is a significant amount of planning and preparation involved to ensure the continued supply of reliable energy to the NEM. We anticipate that Eraring's 2,922 MW capacity will be replaced by a combination of renewables, storage and gas. Until that time, Eraring continues to support the security, reliability and affordability of power supply in the NEM.

Significantly grow renewables and storage in our portfolio

Since 2016, we have committed to purchase the offtake from around 1,200 MW of new wind and solar projects across Victoria, Queensland and South Australia. Once current renewable developments fully come online, subject to development and commissioning timelines, we will meet our target of having 25 per cent of our owned and contracted generation capacity made up of renewables and storage.

As coal is retired and the use of renewables increases, the need for flexible, firming generation will continue to increase. We are progressing a range of brownfield generation opportunities, including batteries and pumped hydro, which would further improve our flexibility and capacity to support the increase in renewables. This includes initial scoping for a battery at Eraring, with an overall capacity of up to 700 MW and a dispatch duration of four hours, with an Expression of Interest issued in January 2021. Subject to market signals and regulatory certainty, we could quickly implement these opportunities at the appropriate time.

One of our We Mean Business commitments is to source 100 per cent of energy from renewable sources for our office premises and, where possible, all other operations by 2050. To help achieve this, we continue to identify opportunities to run our sites on renewable energy. Some of our LPG terminal sites already have solar installed, and during FY2021, we installed more than 480 kW of solar at our generation and LPG sites, including at Mt Stuart, Mortlake, Shoalhaven and Darling Downs Power Stations, with more to come in FY2022 – read more about this in our case study.



Case study

Powering the power stations with solar

Installing solar panels on Origin infrastructure is supporting our decarbonisation targets, helping us meet our We Mean Business commitments, and reducing operating costs and greenhouse gas emissions.

Utilise our strong gas position as a lower-emissions fuel

A global response is required to achieve the targets of the Paris Agreement. While renewables ultimately will be the primary source of energy all over the world, gas has a supporting role to play as a lower-emissions and flexible firming fuel, particularly in Asian economies as these countries switch from more carbon-intensive fuels.

We own Australia's largest peaking gas generation fleet, which is well placed to provide firming capacity to support renewables and supply critical peak demand during periods of extreme weather events or baseload supply shortages. Our gas generation portfolio had an average emissions intensity of 0.49 tonnes of CO₂-e per MWh in FY2021, compared to 0.50 tonnes of CO₂-e per MWh in FY2020.

We are investing in our existing gas fleet to improve its efficiency and flexibility and we are completing the replacement of the second fast-start aero derivative gas turbine at Quarantine Power Station in South Australia. The new turbines will be able to go from zero to 100 per cent output in as little as five minutes, and this fast-start capability helps to support the stability of the grid and growth in renewables. In addition to the benefits of increased flexibility, the new turbines are more efficient – they use at least 10 per cent less gas than the old turbines for the same electricity output, producing fewer emissions per MWh.

Australia Pacific LNG continues to be a significant contributor to the Australian east coast gas market, supplying approximately 30 per cent of east coast gas demand.

As upstream operator for Australia Pacific LNG, we are committed to reducing emissions from our gas operations. We use a Marginal Abatement Cost Curve to prioritise emissions reduction activity. This includes replacement of equipment and devices with more efficient and advanced technologies, as well as retrofitting facilities to reduce methane venting and fuel gas consumption.

We are making operational improvements by applying data analytics and artificial intelligence to better predict which of our 2,000+ gas wells across our upstream operations are most suited to being

turned down or temporarily suspended during planned maintenance events at gas processing facilities. This should directly reduce the need for flaring and the likelihood of interventions to ensure the gas field can return to production, and therefore reduce emissions. We are also increasing the efficiency of our operations to reduce fuel and electricity consumption, including looking to use renewable energy to power our operations wherever possible.

Origin plans to offset the greenhouse gas emissions associated with its exploration and appraisal activities in the Beetaloo Basin in the Northern Territory in calendar year 2021. In May, we purchased Australian Carbon Credit Units (ACCUs) from an Aboriginal carbon farming project near the Beetaloo Basin – recognising the significant community, cultural and biodiversity co-benefits. Following the end of 2021, we will obtain independent verification and voluntarily retire the required number of ACCUs to offset our 2021 activities.

Both carbon credits and subsurface carbon capture and storage can play an integral part in meeting our own and our customers' emissions reduction ambitions. We are in the early stages of investigating solutions around carbon capture and storage and credible carbon offsets, and growing our capabilities, starting with areas on or near our strategic asset locations.

There is also potential in carbon-negative technologies still in early-stage development and we are supporting university and research initiatives in this area. However, further research and development is required to get these technologies to commercial scale.

Empower customers with cleaner, smarter energy solutions

Customers are at the centre of everything we do, and connecting customers to the energy and technologies of the future is one of our strategic priorities.

Energy Markets

Energy markets around the world are rapidly transforming towards low-cost renewables and new digital technologies, and Australia is no



▲ Kyalla wellsite, Beetaloo Basin, Northern Territory.

exception. Continued penetration of decentralised generation and storage, combined with the rise of internet-enabled devices, is changing the way our customers interact with us and use energy at home and in their businesses.

We continue to assess, trial and grow our offering of products that give customers the opportunity to have more control over their energy usage, costs and carbon footprint. This includes expanding our VPP and growing our customer base for Origin Spike, cleaner energy products, and solar installations. During FY2021, we installed approximately 74 MW of solar across the roofs of Australian homes and businesses, an increase of 21 per cent on the prior period.

We are also working with other businesses to source technical solutions and capabilities. We are co-founders of the Free Electrons global energy group, which brings together global utilities and leading start-ups from around the world looking to deploy new technology.

We also launched Origin 360 EV Fleet during the year as part of our developing electric vehicles offer, and our Green Gas and Green LPG have been certified carbon neutral by Climate Active. See our [Customers](#) section for more information.

Integrated Gas

In the absence of consistent action by governments, we are seeing businesses, including our customers, drive action on climate change. We need to consider the decarbonisation pathways of our customers, and how they plan to convert or update their plant and equipment to use lower carbon fuels.

Low-carbon fuels will play an important role in decarbonising our business. We are exploring the development of these products, focusing on opportunities in renewable hydrogen and renewable ammonia made using renewable energy and sustainably sourced water. These fuels may help make energy systems more resilient, as well as provide new low-carbon ways of delivering energy to our customers.

We recognise that any development of new gas supply, such as through our permits in the highly prospective Beetaloo Basin, will need to build in plans for how we abate the emissions from that gas. Any future development of the Beetaloo Basin gas resource would be consistent with our aim to be net-zero by 2050, and we are also investigating blue hydrogen opportunities for the project.

Hydrogen's big potential



We are uniquely placed to harness the potential of hydrogen, with proven experience in project delivery, a flexible portfolio that has an extensive base of renewable energy and end-to-end experience in complex supply chains.

Hydrogen is safely transportable. It can be blended with coal or gas to reduce the emissions intensity of those fuels, and existing plants can be adapted to use it. It has great potential as a clean transport fuel.

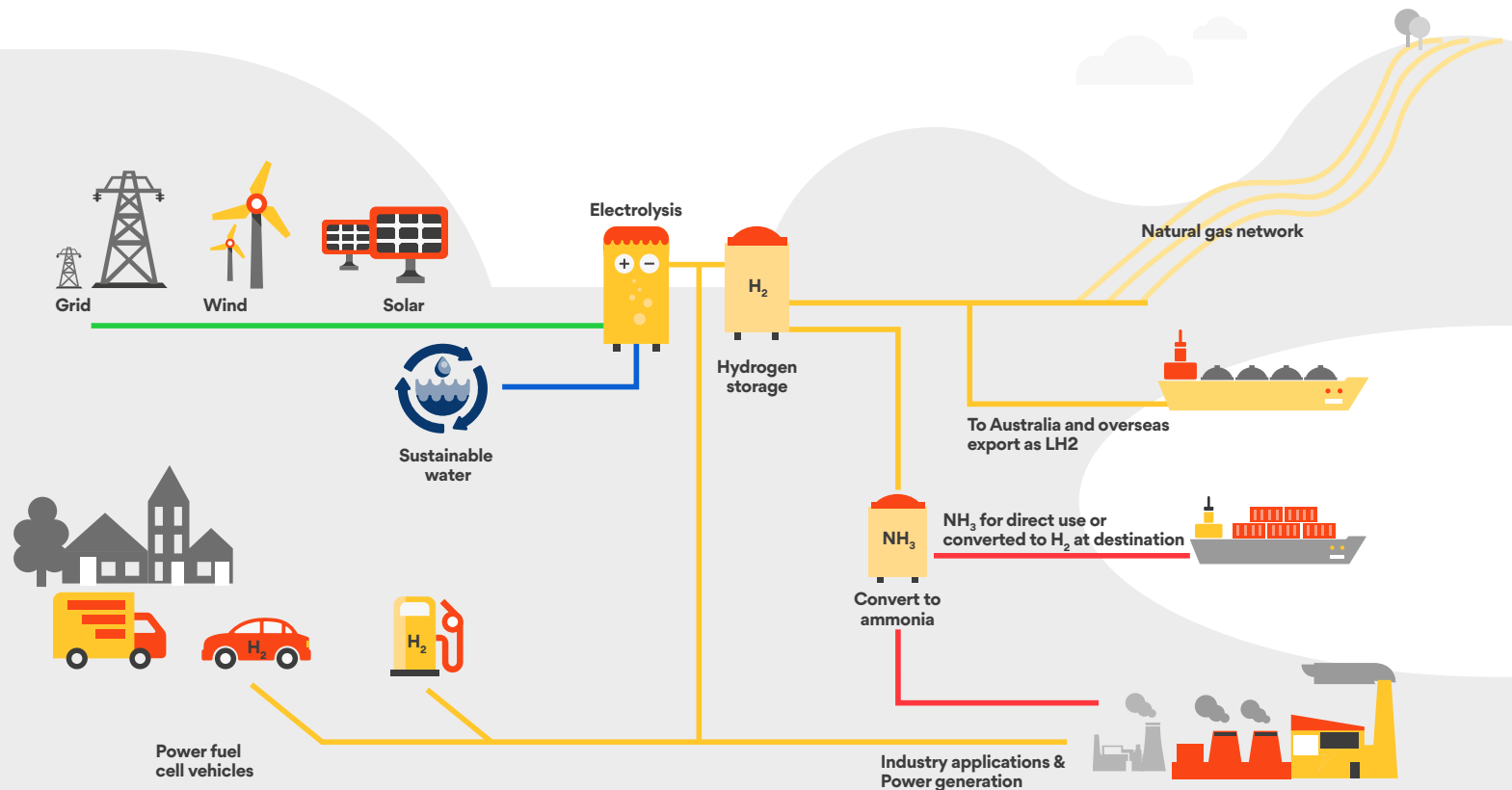
Demand for hydrogen is growing rapidly, with countries like Japan, Korea, Singapore and Germany all targeting shipments in the mid to late 2020s. While we are seeing greater demand in the export market, we are equally focused on creating and adding supply and demand within Australia, in parallel with our export ambitions.

As part of our efforts to explore these new market opportunities for hydrogen, Origin entered a memorandum of understanding (MoU) with global shipping company, Mitsui O.S.K. Lines (MOL) in August 2021. Origin and MOL will investigate opportunities to develop Australia's supply chain to support export-scale renewable ammonia, with the intent of also creating a strong domestic hydrogen sector that can supply key downstream markets from 2026.

Western Sydney Green Gas Project

We have joined leading infrastructure company, Jemena, on a renewable-offset project in NSW to produce hydrogen. This will be a five-year trial across a number of uses, including residential gas supply, transport, and grid management and demand response, to help understand the role hydrogen can play in Australia's energy future.

The Western Sydney Green Gas Project in Horsley Park, partially funded by ARENA, will



▲ Renewable hydrogen and ammonia value chain.

build a 500 kW electrolyser to use renewable energy from Origin's contracted wind and solar assets to convert water into hydrogen.

Most of the hydrogen produced will be injected into the gas network at a mix of less than 10 per cent. The project aims to provide enough energy to meet the cooking, heating and hot water requirements of approximately 250 homes.

The hydrogen is also planned to be used to charge a fuel cell connected to a microturbine for electricity generation and to export electricity back into the grid when renewables are not available. The project will also seek to make excess hydrogen available to transport customers such as Hyundai, as well as providing hydrogen for back-to-base vehicles.

We will support electricity grid management during the project, considering how to integrate

electrolysers within the grid and how they could play a role in demand response and overall grid stability. Hydrogen electrolysers could take excess electricity from the grid during off-peak times, and seek to reduce pressure on the system during peak periods by powering down.

Bell Bay

Supported by the Tasmanian Government, we are completing a feasibility study into a large-scale renewable hydrogen and ammonia plant at Bell Bay as part of the Tasmanian Hydrogen Strategy.

The study is assessing the feasibility of constructing a large-scale renewable-powered hydrogen and ammonia plant with a planned production rate of approximately 420,000 tonnes of ammonia each year. While the project will focus on the production of renewable

ammonia for export, ammonia and hydrogen are also planned to be made available to domestic customers to support Tasmania's decarbonisation ambitions. The feasibility study is expected to be completed by December 2021.

Townsville

We have an MoU in place with the Port of Townsville in Queensland, and are investigating a commercial-scale export project out of the port. Hydrogen production on a commercial scale will require significant energy, which is why we have chosen strategic locations near renewable resources.

We believe scale is important, as well as proximity to export markets and end users to make this business work on a commercial scale.

Demonstrate leadership in climate change advocacy

We continue to advocate for climate change action, including the progressive decarbonisation of the energy sector and policy settings to enable this.

We have encouraged the Australian Government to adopt an emissions policy and will continue to work constructively with all levels of government in this area.

We support integrated energy and climate change policy, set at a national level, including short- and long-term emissions reduction targets and policy mechanisms to achieve those targets. We support an emissions intensity scheme for the electricity sector that would facilitate an orderly transition to a low-carbon system without placing undue pressure on affordability.

We also advocate for policy that supports the responsible development of Australia’s gas resources consistent with the goals of the Paris Agreement.

In FY2021, we conducted our annual review of our relevant industry associations in respect to their climate-related policies. Where there are areas of difference, we seek to influence the relevant industry association and its members through constructive dialogue.

Overall, we found alignment on climate change positions with our key industry associations. The Australian Energy Council, the Australian Petroleum Production and Exploration Association, the Business Council of Australia and the Queensland Resources Council have all strengthened their positions on climate change action and policy, including explicit commitments to the Paris Agreement and net-zero emissions by 2050.

We will continue to review the performance of our industry associations, in particular against the goals of the Paris Agreement.

Read more in our [Industry Association Review](#).

Decarbonisation commitments and targets

The world is rapidly accelerating towards a lower-emissions future, and we will play an important role in that transition. We will help bring to bear the energy and technologies needed to meet decarbonisation goals, not just for the energy sector, but also for other sectors across the economy.

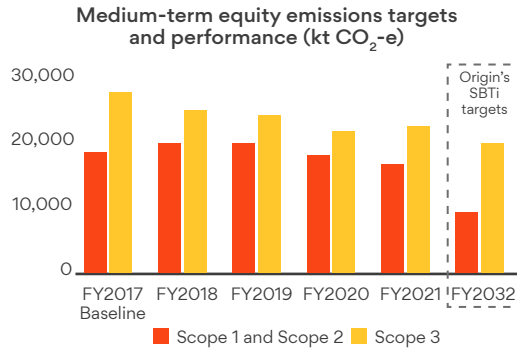
We are progressing the decarbonisation of our business. In 2017, we became the first company in Australia to set science-based emissions targets independently approved by the Science-Based Target initiative (SBTi). Our medium-term, SBTi-approved targets cover Scope 1, Scope 2 and Scope 3¹² emissions. One of the ways we will achieve our targets is by exiting coal-fired generation by 2032 or earlier.

We continue to progress work on updating our existing emissions reduction targets consistent with a 1.5°C pathway.

Medium-term targets

Origin’s current medium-term emission reduction targets have been approved by the SBTi. We have committed to halve our Scope 1 and Scope 2 greenhouse gas emissions on an equity share basis by 2032, from our FY2017 baseline of 18,246 kilotonnes (kt) CO₂-e. Emissions reported on an equity basis captures the emissions relating to the assets we own, including our generation fleet and our 37.5 per cent share of Australia Pacific LNG, which includes the downstream operations and non-operated areas.

We have also committed to reducing Scope 3 emissions by 25 per cent by 2032 from the FY2017 baseline of 27,451 kt CO₂-e. Our SBTi Scope 3 target covers a minimum two-thirds of our total Scope 3 equity emissions in the baseline. This Scope 3 target covers all supply chain emissions incurred within the domestic market, including the electricity and gas that our Energy Markets business sells to customers and the Origin equity gas Australia Pacific LNG sells to domestic customers. It does not include Australia Pacific LNG’s LNG exports.



As discussed in more detail in the following section, in FY2021, our equity Scope 1 and Scope 2 emissions were 16,391 kt CO₂-e, a decrease of eight per cent on FY2020, and 10 per cent lower than our FY2017 baseline.

Our total Scope 3 emissions reported under our SBTi-approved emissions reduction target increased by four per cent in FY2021 to 22,347 kt CO₂-e, and were 19 per cent lower than our FY2017 baseline, largely reflecting lower output from our owned and contracted generation resulting in an increase in net electricity purchases from the NEM and external sources, partly offset by a reduction in domestic gas sales at Australia Pacific LNG primarily due to the roll off of legacy contracts. Further details are provided in the following section.

Short-term Scope 1 emissions target

We are committed to delivering further reductions on our absolute emissions over the short term and are targeting a reduction in Scope 1 equity emissions by 10 per cent on average, over the three financial years to FY2023, compared to our FY2017 SBTi baseline.

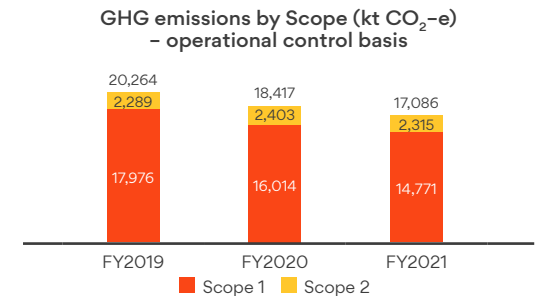
Our total Scope 1 equity emissions were 15,273 kt CO₂-e in FY2021, a decline of 11 per cent against the FY2017 baseline.

Greenhouse gas emissions

Scope 1 and Scope 2 emissions

Our emissions reduction targets apply to our equity emissions. We also report our Scope 1 and Scope 2 emissions on an operational control basis, which represent emissions from our operated assets, being our generation fleet and 100 per cent of the upstream operations at Australia Pacific LNG. Operational control emissions reporting aligns with the NGER reporting requirements.¹³

Total Scope 1 and Scope 2 operational control emissions were down by seven per cent to 17,086 kt CO₂-e in FY2021, from 18,417 kt CO₂-e in FY2020.



Our Scope 1 operational control emissions declined by eight per cent year-on-year to 14,771 kt CO₂-e reflecting lower output from Eraring and our gas generation portfolio. Scope 2 operational control emissions have decreased by four per cent to 2,315 kt CO₂-e in FY2021, mostly due to decreased output at Shoalhaven. See our [Sustainability performance data](#) for more details.

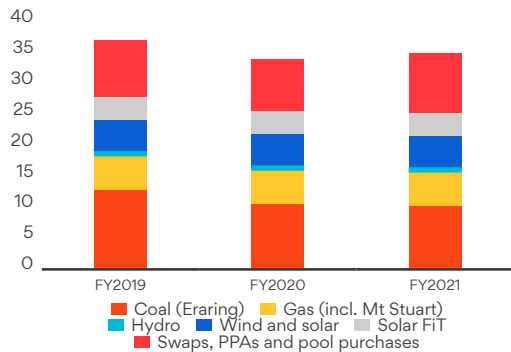
¹² Scope 3 encompasses indirect emissions, other than Scope 2, relating to our value chain that we do not own or control, including wholesale purchases of electricity from the NEM.
¹³ With the exception of LPG Pacific data, which is not reported under NGER, however is immaterial.

Energy Markets

On an operational control basis, Energy Markets' Scope 1 and Scope 2 emissions were 14,225 kt CO₂-e in FY2021, a nine per cent decrease on the previous year. This decrease is largely due to lower generation output from both Eraring and our gas generation portfolio, reflecting low wholesale electricity prices and elevated gas generation in FY2020 to cover an outage at Eraring.

We also increased the amount of generation sourced from contracted renewable PPAs by three per cent in FY2021, while the amount of generation we source from solar feed-in tariffs (Solar FIT) from our customers has grown to more than 1.9 TWh, or five per cent of our total electricity sales.

Origin's electricity sources (GWh)



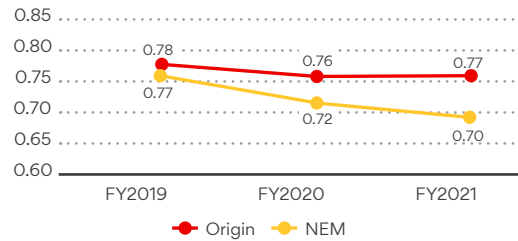
Emissions intensity – Energy Markets

Our Scope 1 and Scope 2 emissions intensity for power generation, including contracted renewables, increased marginally to 0.71 tonnes of CO₂-e per MWh in FY2021, from 0.70 tonnes of CO₂-e per MWh in FY2020. This reflects the increased proportion of electricity output from Eraring during the year as gas generation declined, partly offset by the improved efficiency of Eraring and a three per cent increase in generation sourced from contracted renewables.

To enable a valid comparison of our performance against the NEM, where intensities consist of Scope 1 and Scope 3 emissions, we also report our emissions intensity in this format. The emissions

intensity of our electricity generation portfolio, including contracted renewables, increased marginally from 0.76 tonnes of CO₂-e per MWh in FY2020 to 0.77 tonnes of CO₂-e per MWh in FY2021 across Scope 1 and Scope 3 emissions.

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



This was higher than the NEM average of 0.70 tonnes of CO₂-e per MWh in FY2021 across Scope 1 and Scope 3 emissions. The NEM continues to decarbonise, and is moving rapidly from a centralised system of large coal and gas generation towards a mixture of smaller scale, widely dispersed wind and solar generators, and grid-scale batteries, with consumers having more control over how and when they use energy. During 2020 close to 3,900 MW of new large-scale wind and solar generation capacity was added to the NEM.

Origin is supporting and contributing to this transition, while also playing an important role in ensuring the reliability of the NEM during this decarbonisation phase. The task of reducing carbon emissions is NEM-wide, and balancing the grid in a decarbonising market is about ensuring that fluctuating levels of renewable generation are always backed up (or 'firmed') so that reliable electricity supply is maintained at a competitive cost. This is driving the Energy Security Board's Post-2025 Market Review, which is seeking to reward the system security and reliability services that will be increasingly necessary as we transition to a net-zero emissions system.

The emissions intensity of Eraring, calculated using Scope 1 emissions only, declined to 0.94 tonnes of CO₂-e per MWh in FY2021, from 0.96 tonnes of CO₂-e per MWh in FY2020. We have been operating three of four units at Eraring more

often during FY2021, which allows those units in operation to run more efficiently, rather than ramping all four units up and down to minimum generation in response to intermittent renewable supply. As renewable penetration of the NEM continues to increase, Eraring will increasingly be run at lower loads and ramped up and down in response to changes in renewable energy supply.

Integrated Gas

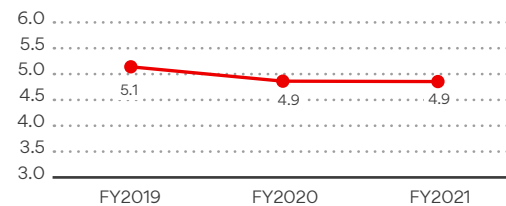
On an operational control basis, Integrated Gas produced total Scope 1 and Scope 2 emissions of 2,861 kt CO₂-e in FY2021, in line with FY2020.

Scope 1 emissions accounted for around one-quarter of our reported emissions from Integrated Gas in FY2021 and were down by one per cent, largely due to a reduction in flaring and lower fuel gas use. Three-quarters of our emissions were produced by the electricity purchased to run our operations (Scope 2), which saw a marginal increase in FY2021.

Emissions intensity – Integrated Gas

The Scope 1 and Scope 2 emissions intensity of Integrated Gas was 4.9 tonnes of CO₂-e per terajoule (TJ) in FY2021, consistent with FY2020.

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



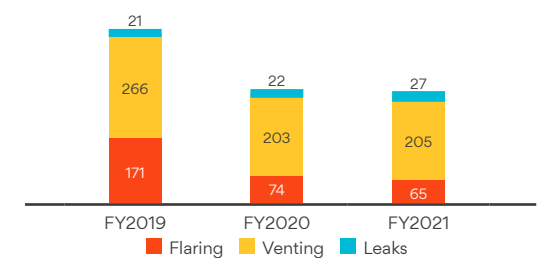
Emissions from flaring, venting and leaks

Emissions from flaring, venting and leaks totalled 296 kt CO₂-e in FY2021, or two per cent of our total Scope 1 operated emissions.

Emissions from flaring are comprised mainly of CO₂, as most of the methane is combusted during the flaring process, which is predominantly associated with the unplanned downtime of gas processing facilities. Through targeted planning and implementation of gas field turndown tools using artificial intelligence technology, we have

been able to minimise flaring at our Australia Pacific LNG gas processing facilities during planned shutdown and maintenance events. This partly contributed to a 13 per cent reduction in emissions from flaring on FY2020.

Australia Pacific LNG emissions from flaring, venting and leaks, operational control (kt CO₂-e)



Emissions from venting and leaks are determined using a combination of estimation methods, including regulatory emission factors, metering and engineering calculations. Emissions reported from venting and leaks totalled 232 kt CO₂-e in FY2021, an increase of three per cent on FY2020. This was primarily due to a change in the calculation method prescribed in the NGER regulation, to increase the global warming potential for methane from 25 times to 28 times the equivalent of CO₂ on a 100-year timescale. The impact of the change in the calculation method was mostly offset by the targeted optimisation of gas dehydration processes – which reduced cold methane venting by approximately 27 kt CO₂-e in FY2021 – as well as other minor improvements in estimation and measurement accuracy.

In FY2021 we have continued our focus on minimising emissions of short-lived climate pollutants such as methane. We have developed a pipeline of opportunities to reduce and avoid emissions and continue to implement initiatives where possible. This includes developing visualisation tools to improve the identification of leaks, optimisation of venting processes, as described above, and developing longer-term initiatives that aim to eliminate methane emission sources.

The emissions from venting and leaks have remained at less than 0.1 per cent of metered gas sales from the operated areas. This is already significantly lower than the 0.23 per cent methane intensity target of the Oil and Gas Climate Initiative,¹⁴ which comprises 12 global international oil and gas companies.

Methane emissions from the landscape

Shallow gas and seeps are naturally occurring, but we know gas developments can contribute to the change in natural methane migration and emission patterns, as observed in the Surat Basin.

We have seen a positive impact in reducing seeps in the Condamine River using a combination of coal seam gas production and targeted intercept wells. These specifically designed intercept wells have proven effective in capturing shallow gas and reducing the amount of methane being emitted from naturally occurring geological pathways.

Monitoring and studies

During the year we continued the Picarro sniffer truck infrastructure survey operations and fugitive emission research with the CSIRO. The sniffer truck survey aims to cover all our operating wells and gathering lines twice during the year.

Throughout 2020 and 2021, we have supported the CSIRO in collecting methane emission measurements from our coal seam gas (CSG) processing facilities and produced water. Outcomes of this fugitive emissions research will inform emissions factors used under the NGER legislative framework. The final report is anticipated in late 2021.

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

Scope 3 emissions

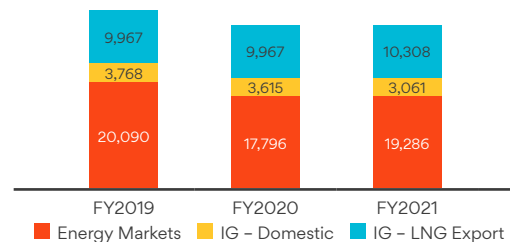
Scope 3 emissions in Energy Markets increased by eight per cent in FY2021 with lower output from our owned and contracted generation resulting in an increase in net electricity purchases from the NEM and external sources, partly offset by lower third-party gas purchases.

Scope 3 emissions from Integrated Gas's domestic operations declined by 15 per cent in FY2021 because of a reduction in domestic gas sales at Australia Pacific LNG primarily due to the roll off of legacy contracts.

While our SBTi-approved target does not include the Scope 3 emissions from our LNG exports, we recognise it is important to disclose these emissions. 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.

In FY2021, our estimated equity share of estimated Scope 3 emissions from Australia Pacific LNG's LNG exports was 10,308 kt CO₂-e, an increase of three per cent on FY2020, reflecting higher export LNG volumes in FY2021.

Scope 3 emissions equity basis (kt CO₂-e)



Water

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

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

Water use across Origin's portfolio (ML)

	FY2019	FY2020	FY2021
Energy Markets	2,760,807	2,571,219	2,578,109
Integrated Gas	21,885	21,680	21,092
Corporate	13	21	4

Note: Shoalhaven is excluded, as pumped storage is not considered a water withdrawal because the water circulates in a closed loop.

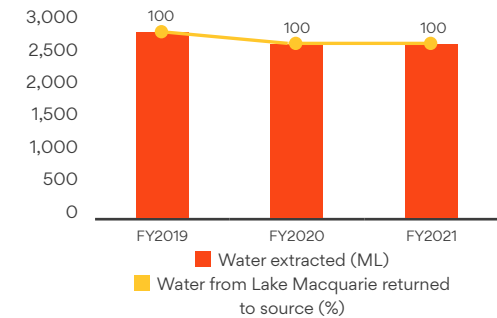
Energy Markets

Eraring draws salt water from Lake Macquarie as cooling water for its generating units, all of which is returned to the lake after use in accordance with environmental requirements. This represents the majority of water use in our Energy Markets business.

Our gas-fired power stations require much less water to operate than Eraring. Our combined cycle Darling Downs Power Station uses air-cooled condensers for the steam turbine, further reducing the power station's water usage.

Water is used to generate electricity at our Shoalhaven pumped hydro station. It is pumped to the lake at the top of the hydro station when electricity prices are low and then released to generate electricity when electricity prices are high.

Eraring's water use (ML '000)

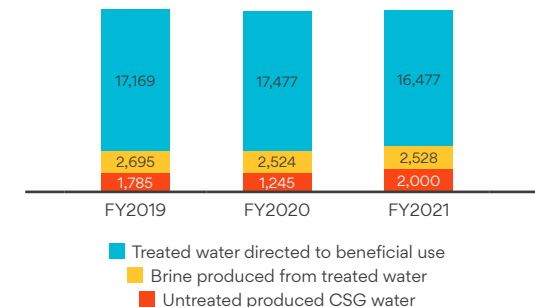


Australia Pacific LNG

Australia Pacific LNG's operations extract groundwater and gas from coal seams and small volumes of water from other sources like dams or bores for project use. In FY2021, we extracted 21,062 megalitres (ML) of water through Australia Pacific LNG's operations, 21,020 ML coming from CSG production, and the balance from other sources, such as surface and bore water for project activities.

Around 90 per cent of water extracted was treated through reverse osmosis. The remaining 10 per cent untreated produced water was either used for project activities, stored awaiting treatment or was lost through natural evaporation.

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



¹⁴ Oil and Gas Climate Initiative, 'OGCI reports significant progress on aggregate upstream methane and carbon intensity targets'.

Treated water is available for a number of beneficial uses, including crop irrigation and injection into aquifers to increase available groundwater. Treated water directed for beneficial use must meet regulatory water quality criteria and requirements set out in environmental approvals. A total of 16,495 ML of treated water was available for beneficial use in FY2021, of which 4,153 ML was injected into the Great Artesian Basin Precipice Sandstone aquifer at the Australia Pacific LNG Reedy Creek and Spring Gully assets.

We have partnered with Hewitt Cattle Australia (HCA) as part of our Spring Gully-Wybara Irrigation Project since 2018, providing an average of 5.6 ML per hectare of treated extracted water per year for crop irrigation. The project has enabled HCA to successfully farm forage crops and perennial pastures (such as lucerne, Rhodes grass, wheat, lablab and oats) on land previously used for beef cattle grazing, and supply quality fodder to local livestock producers.

In FY2021, there were no releases to water courses from the authorised release points.

During FY2021, we resolved two statutory clean-up notices that we received as the upstream operator of Australia Pacific LNG. These notices relate to losses of saline impacted stormwater during a large storm event from two produced water tanks we were decommissioning. We have adjusted procedures to reduce the potential for a recurrence. Notwithstanding this, the Queensland environmental regulator commenced related prosecutions in June 2021.

Protecting water resources

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

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

To date, we have installed 221 bores to monitor groundwater levels and water quality around our Australia Pacific LNG operations. We submit these results to the Queensland Government as part of its regional monitoring and management program.¹⁵

Hydraulic fracture stimulation

Hydraulic fracture stimulation, or 'fracking', is the process designed to release gas trapped in coal seams or dense shale rocks deep underground.

We hydraulically fractured 19 wells at our Australia Pacific LNG operations in FY2021. There were no groundwater impact incidents caused by hydraulic fracturing at any of our operations in FY2021.

The hydraulic fracturing operation in our Condabri field was subject to a regulatory compliance inspection during FY2021. This included site inspection and a review of procedures, risk assessments and monitoring results against the regulatory requirement prescribed in the environmental authority. The regulator identified no evidence of non-compliance with the environmental authority or the *Environmental Protection Act 1994* (Qld).

For further information on hydraulic fracturing, including the safeguards we have in place, refer to our [Environment management approach](#).



◆ The Talinga Water Treatment Facility uses reverse osmosis to prepare water for beneficial uses such as crop irrigation.

¹⁵ See Underground Water Impact Report for the Surat Cumulative Management Area.



Continuous automated monitoring of groundwater during fracture stimulation at our Kyalla well site was verified by daily manual sampling of the two limestone aquifers in the area.

Beetaloo Basin

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

The safeguards we put in place to protect land and water in the Northern Territory are explained in our [Environment Management Plans](#), including how we comply with our regulatory obligations under the Northern Territory Government's *Code of Practice: Onshore Petroleum Activities in the Northern Territory*.

During FY2021, we hydraulically fractured our one exploration well at our Kyalla well site.

An important part of the hydraulic fracture stimulation process is monitoring water levels and water quality before, during and after each hydraulic fracture stage is completed. A groundwater monitoring program was established in 2014 to provide a baseline of the natural variability in water levels and water quality, and to assist in detecting any impacts associated with gas exploration activity in the Beetaloo Basin. This monitoring has found no evidence of any impact from our work to date.

Additional groundwater monitoring bores have been installed around all of our hydraulically-fractured exploration wells in accordance with the *Code of Practice*. For example, during fracture stimulation undertaken in late 2020, two water monitoring bores located 20 metres from the Kyalla well allowed for continuous automated monitoring and were verified by daily manual sampling of the two limestone aquifers in the area. These compliance monitoring bores provided specific assurance while hydraulic fracture activity took place, further complementing regional groundwater monitoring. All data is made publicly available on the Northern Territory Government website.

Waste

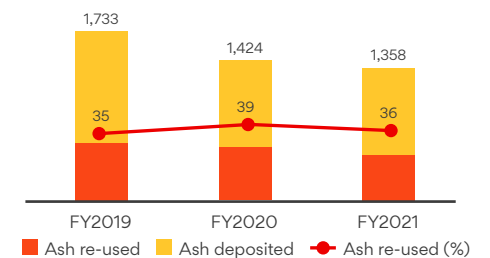
We are committed to effectively managing waste across our entire business. Our two most significant waste-generating activities are at Eraring and at the upstream operations of Australia Pacific LNG.

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 and is either supplied onsite to multiple customers for a range of end uses or deposited in our ash dam adjacent to the power station.

In FY2021, the amount of ash produced at Eraring was down by five per cent due to lower output at Eraring and higher quality coal. Eraring's ash re-use rate was 36 per cent in FY2021, down from 39 per cent in the prior year. The major source of our fly ash demand is from the construction industry, which experienced a contraction during the pandemic, leading to lower demand for ash.

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





Case study

Recycling boost at Eraring Power Station

Origin's goal of recycling coal ash moved forward with a new agreement to supply 900,000 tonnes of ash to mining company Glencore.

In 2020, we put in place a Long-Term Ash Management Strategy that outlines Origin's 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, Industry and Environment's ash re-use goal of 80 per cent by 31 December 2021. We are actively participating in and advocating for collaboration between generators, government agencies, regulators and potential customers to achieve optimum recovery of ash as a resource. Achievement of this goal would be facilitated by the removal of regulatory barriers governing the use of coal ash in roads and the establishment of new markets.

Reaching the goal of re-using 80 per cent of the coal ash generated at Eraring has taken a big step forward after we entered a new agreement to supply 900,000 tonnes of ash to mining company Glencore over the next two and a half years. This agreement will almost double our Eraring ash re-use program.

We are also investing capital in infrastructure and research and development (R&D) activities to expand traditional markets or create new markets for Eraring ash. We have recently co-invested in an onsite classifier to further refine our fly ash to a quality suitable for the construction industry. We are also undertaking R&D activities to develop a low-cost, lightweight aggregate material.

Ash dam

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

As reported in FY2020, the NSW Office of Sport took the decision to close the Myuna Bay Sport and Recreation Centre following the completion of an engineering review commissioned by us, which found that the integrity of the dam's main embankment is likely to be affected in the event of a significant earthquake. The Office of Sport continues to progress regulatory approval for the new Myuna Bay Sport and Recreation Centre and Origin remains committed to financially supporting the new facility.

Detailed engineering designs for the ash dam wall stability works are progressing, taking into account the *Dams Safety Act 2015* (NSW) as well as the *Dams Safety Regulation 2019*, which come into full effect from 1 November 2021.

Australia Pacific LNG brine management

The main waste product from Australia Pacific LNG's upstream operations is brine. Its operations extract groundwater from CSG wells, and the water contains naturally occurring salt. We use reverse osmosis to remove the salt so that most of the water can be made available for beneficial use (see the [Water](#) section for more information). This process produces a salty waste product known as brine, which is stored in engineered ponds. The ponds are built to regulatory standards and inspected annually by certified engineers.

Each Australia Pacific LNG water treatment facility has multiple brine ponds. The total available storage capacity in the brine ponds increased to 10,463 ML in FY2021 due to the commissioning of a new brine pond at our Condabri Central water treatment facility. The total volume of stored brine at the end of the reporting period was 6,156 ML.

Australia Pacific LNG did not record any loss of containment events from brine ponds during FY2021.

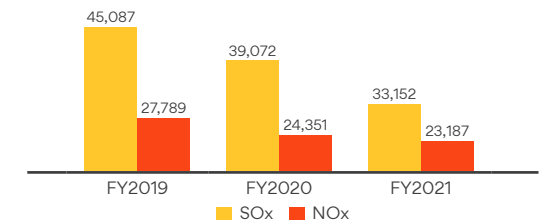
Air emissions

Our main air emissions are from the generation of electricity at our power stations and the production of natural gas.

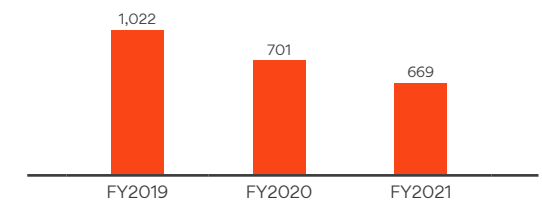
Electricity generation at Eraring produces the majority of the nitrogen oxides (NOx), sulphur oxides (SOx), and particulate matter (PM) emissions. Our operations at Australia Pacific LNG produce most of the volatile organic compounds (VOC).

Our air emissions decreased in FY2021, primarily due to lower output at Eraring during the year and higher quality coal. Eraring is one of the few coal generators in NSW that has low NOx burner technology installed, which reduces NOx emissions by 40 per cent per megawatt hour.

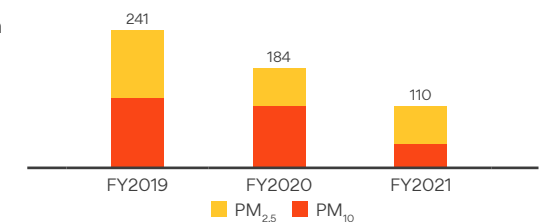
NOx and SOx emissions (tonnes)



VOC emissions (tonnes)



Particulate matter (tonnes)¹



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



▶ Releasing 18,000 yellow belly fingerlings in the Chinchilla Weir in Queensland.

Biodiversity

We are committed to minimising impacts to the biodiversity of the areas in which we operate.

We engage with local communities and biodiversity experts on the impacts of our activities and 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 FY2021, we worked with local fishing and restocking clubs at Miles and Chinchilla to release almost 30,000 fingerlings into local waterways impacted by drought. At our Uranquinty Power Station, we have supported the local council to set up glider poles for local endangered squirrel gliders. Using recycled power poles, the new structures provide habitat and connectivity for the animals while native vegetation regenerates.

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

We also implement offset initiatives for projects where a significant impact to a site's biodiversity is unavoidable. These initiatives are designed to align with stakeholder interests and counterbalance defined impacts. For example, we purchased our Dukes Plain offset in central Queensland in 2017, specifically to offset environmental impacts of the Australia Pacific LNG project. It provides 4,500 hectares of valuable habitat for flora and fauna across 14 regional ecosystems and nine broad vegetation groups, including a number of near threatened or vulnerable species. See our case study for more information.

Case study

Making a positive impact in Dukes Plain

Monitoring is showing that our Dukes Plain property is helping to offset our footprint by providing a safe habitat for fauna and protected areas for flora to flourish.



People and culture



We are creating a great place to work where all of our people are led by our purpose and guided by our values. We promote safety, health and wellbeing; foster diversity and an inclusive culture; and work to ensure we all act lawfully, honestly, ethically and with integrity.



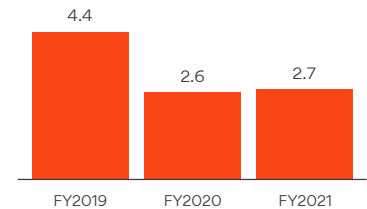
Performance at a glance

- Achieved our FY2021 target of 33 per cent women in senior roles, up from 32 per cent in FY2020
- Attained a Great Place to Work® certification from a global authority on workplace culture, the Great Place to Work Institute
- Ranked 19 in LinkedIn's annual list of Australia's Top Companies
- Became a signatory to 40:40 Vision, targeting gender balance in executive leadership by 2030

74%

Employee engagement
(top quartile for AU/NZ)

Total Recordable Injury Frequency Rate (TRIFR)



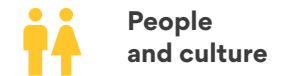
UN Sustainable Development Goals

Our activities are helping to contribute to the following SDGs:



Management approaches

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



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 injuries and working to keep our people, environment and communities safe.

To protect the health and safety of our people and help minimise the spread of COVID-19 in our communities, we have continued to closely monitor the shifting rules and restrictions in place across Australia. We have responded with workplace changes that follow federal and state government recommendations and communicated these as quickly as possible to those affected.

Our focus has remained on supporting our people by providing mental health sessions, resources and support services, and flexibility to balance work and home life responsibilities and attend vaccination appointments. We continued to provide 10 days of pandemic leave, which was accessed by 670 employees in FY2021.

Employee health and wellbeing

Our online Mental Health and Wellbeing Hub offers a calendar of activities focused on mental, physical and workplace wellbeing, including virtual physical fitness classes, and sessions with external speakers covering topics such as managing and embracing change, balancing home and work, and supporting the mental health of children. Helping to support our people through the COVID-19 pandemic, there were around 7,700 views of the hub in FY2021, with more than 1,000 employees attending virtual events.

We established online training that gives employees an understanding of the importance of mental health and wellbeing and what support options are available to them. We also developed training for our people managers to help equip them with skills to recognise warning signs of mental health issues in team members and where to find support.

In FY2021, we launched a peer support program that trains employee volunteers to assist and

support their work colleagues experiencing work-related or personal difficulties.

Life saving controls

In FY2021, we reinforced our health, safety and environment (HSE) management system by rolling out a simple set of life saving controls at operational sites across Origin. This delivered a consistent set of verification questions that test whether critical controls are in place and working effectively. The controls cover 13 high-risk areas, including road transport, working from heights, falling objects, and working with electricity, and are designed to prevent or mitigate serious injury or fatality.

Sites are required to discuss the hazards and needed controls, act to put the controls in place, verify this has been done correctly, strengthen or improve the control if necessary, and capture any learnings to improve the process for next time.

Learning from incidents

We have a commitment to learn from internal and external incidents and share insights with employees across our business through various channels, including weekly team calls led by senior management, technical communities of practice and HSE learning forums. Our engineering and technical community of practice, for example, holds monthly virtual sessions where subject matter experts present on a wide range of technical topics and disciplines to share learnings and generate collaboration opportunities between teams. Topics covered in FY2021 included the Mortlake generator failure and cyber security risks, including global examples of cyber attacks on energy networks.

We completed an Origin-wide assessment to learn from the findings of the Dreamworld coronial inquiry, released in February 2020. A Coroner's Inquiry was undertaken following an incident on a ride at the Dreamworld Theme Park in Queensland in 2016 that resulted in the loss of four lives. While Origin does not operate amusement rides or manage theme parks, we do manage plants and structures and maintain safe systems of work. Many of the findings can be considered in the context of our business, including assessments so that we have adequate controls in place.



◆ We reinforced our HSE management system by rolling out a simple set of life saving controls at operational sites across Origin.

Board site visits



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

Site visits have been restricted due to the COVID-19 pandemic. However, the Board undertook several virtual site visits in addition to some in person – some examples are provided below.

LPG terminal, Minto, Queensland

In November 2020, Director Bruce Morgan undertook an HSE site visit to the Minto LPG Terminal. During his visit, Mr Morgan joined the weekly LPG HSE call and engaged in an informal discussion with the site management team. He provided an overview of the role of the Board and its focus on HSE.

LPG terminal, Albany, Western Australia

Chairman of the HSE Committee, John Akehurst, visited the Albany LPG terminal in December 2020. Mr Akehurst toured the site, with the discussion focusing on safety and recent improvements. He addressed the Albany site team, outlining the Board's responsibilities and why Board Directors conduct HSE site visits. He also stressed the importance of Origin's Authority to Stop Unsafe Operations. Mr Akehurst participated in a 'ride-along', spending the afternoon visiting customers on an exchange cylinder delivery truck with a driver from the Albany terminal.

Australia Pacific LNG, Queensland

In March 2021, Chairman Scott Perkins, with senior management from the Integrated Gas team, visited a number of Australia Pacific LNG upstream sites over three days. Mr Perkins visited many of our operational sites, including a Savanna workover rig, a Condabri well where hydraulic fracture stimulation was being conducted, the Australia Pacific LNG pipeline hub, the Reedy Creek gas processing facility, and the Reedy Creek water treatment facility. He attended safety toolboxes and met with many personnel on the ground, ranging from apprentices to technical hydrogeology experts to Stakeholder Liaisons, providing opportunities for team members to engage and ask questions. Mr Perkins was able to observe how field teams are tracking and implementing continuous improvement initiatives. He was also able to better understand how we coexist with our landholders, in particular relating to the re-use of produced water through irrigation water for local landholders and aquifer re-injection.



Origin employees at Reedy Creek gas processing facility.

HSE performance

Our objective is to prevent harm to people and the environment as a result of our business activities. A large number of performance indicators are used across the company to measure and manage our performance.

HSE performance forms part of our remuneration framework. For FY2021, the HSE performance measures included in our remuneration framework are the number of Actual serious incidents, which aims to prevent harm to people and the environment; and the number of Learning incidents (previously Potential serious incidents), which 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.

We set a target of no more than three Actual serious incidents and more than 30 Learning incidents for FY2021. The targets include personal safety, process safety and environmental outcomes, which help Origin apply an equal focus across these areas. We recorded four Actual serious incidents – all four were injuries to people, none of which included a fatality. This result exceeded our target of three but was within our threshold target of five and is consistent with our FY2020 performance.

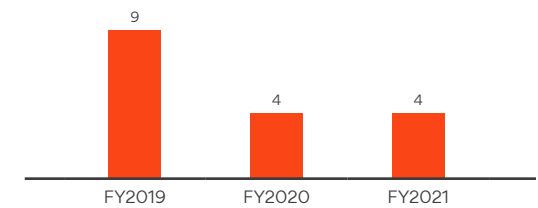
We have included an additional component as part of the learning incidents metric in FY2021, requiring an action to be raised and closed that supports and embeds the learning. This builds on the metric introduced in FY2019, with additional focus on sharing learnings across the organisation as well as to reporting incidents in which there was potential to learn.

We continue to measure our Total Recordable Injury Frequency Rate (TRIFR), which measures the number of company-wide work-related recordable injuries per million hours worked for employees and contractors. This year, our personal safety remained steady with a TRIFR of 2.7, compared to 2.6 in FY2020. We saw a reduction in the number of recordable injuries sustained by our workforce to 35, which was down seven on the prior year.

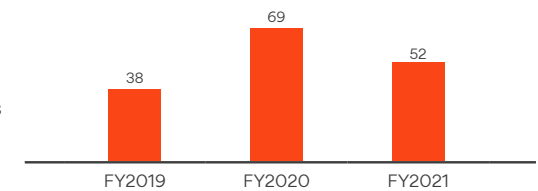
Process safety

In FY2021, there was one Tier 1¹⁶ and 10 Tier 2¹⁶ process safety events. We have focused on improving the resilience of our power stations, including applying significant learnings from recent industry events within the Australian power generation sector.

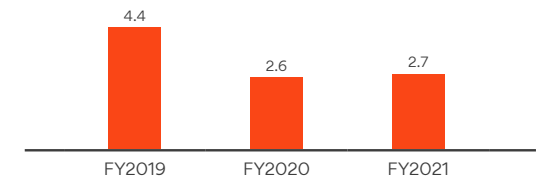
Actual serious incidents



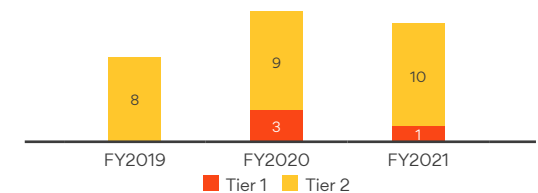
Learning incidents



TRIFR



Process safety events



¹⁶ 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).



During FY2021, we added family rooms at our Chinchilla and Roma offices in the Surat Basin, accommodating children and other family members while parents or family members are working.

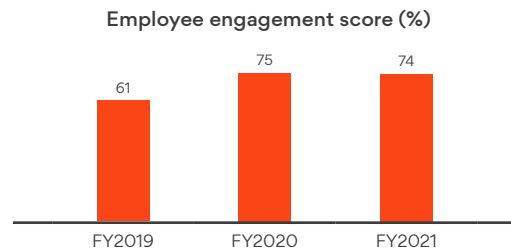
How we work

Employee engagement

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

Our FY2021 engagement score was 74 per cent, down one percentage point from the previous year, and up 13 percentage points from FY2019. This result was achieved through a continuing focus on safety, learning and connection to our purpose and values.

In FY2021, 89 per cent of our employees participated in the annual engagement survey, a marginal decline from our highest ever participation rate of 90 per cent in the previous year. With this result, we continue to be placed in the top quartile of organisations across Australia and New Zealand and we are 13 percentage points above the energy and utilities industry average engagement score.



We are supporting our employees' learning and development through a variety of learning opportunities. These include a dedicated Learning and development hub, LinkedIn Learning portal and mentorship and leadership programs. In December 2020, Origin introduced its first pilot sponsorship program where Executive Leaders and General Managers sponsored talented employees who are looking to progress their career into senior leadership.

In FY2021, we launched our first Origin-wide recognition program, Good Energy Moments Underpinned by our values and behaviours, the program enables our people to acknowledge and appreciate a colleague in the moment or formally by nominating them for a monthly reward. More than 5,000 recognitions were offered in the first month of the program.

In FY2021, Origin achieved certification as a Great Place to Work® by a global authority on workplace culture, the Great Place to Work Institute. The benchmark study considers the level of trust that employees experience in their leaders, the level of pride they have in their jobs and the extent to which they enjoy working with their colleagues. We were also ranked 19 on LinkedIn's 2021 Top Companies Australia list, which assesses the best workplaces to grow your career.

Ways of working

Our workforce is highly distributed, with employees working from home, offices, site locations, gas fields, terminals and facilities. We have developed a set of principles to support our approach to hybrid working across our workforce:

- We choose** Together, we choose our location of work
- We support** Together, we support each other regardless of our work location
- We trust** Together, we trust each other and continue to be purpose led and values driven

We have made significant changes to the way we work in response to the COVID-19 pandemic. We have supported our employees to find new ways to connect virtually, develop and implement innovative solutions, and perform their roles with increased agility. Our most recent employee engagement survey highlighted the value our employees place on hybrid working and the manner in which it has been delivered.

Our flexible work environment has been a core strength in supporting our employees during this time, aided by employee-defined ways of working charters and our pandemic leave policy.

Case study

A great place to work

Origin has been certified as a Great Place to Work® by a global authority on workplace culture, the Great Place to Work Institute.



Working ethically

Our Code of Conduct builds on our purpose and values and sets standards that guide us in making the right choices in how we act, solve problems and make decisions. In FY2021, we refreshed our Code of Conduct and associated online training modules, to ensure we continue to meet changing legislative requirements and community expectations.

The updated Code of Conduct outlines five key principles that guide us in making the right choices in how we act, solve problems and make decisions:

- we respect others and protect their health, safety and mental wellbeing;
- we act lawfully, honestly, ethically and with integrity;
- we recognise our responsibilities to our customers, communities and planet;
- we protect Origin’s business and assets; and
- we are all accountable for complying with our Code of Conduct and speak up if we have concerns.

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

Inclusion

We aspire to create a workplace where everyone feels comfortable and safe to be themselves.

We encourage a diverse workplace and diversity of thought because when we embrace our differences, we are better at learning, listening, collaborating and making unbiased decisions. When we are inclusive, we innovate, solve problems and better serve the needs of our diverse customers.

To help support this, we continue to build on our policies covering gender equity, reconciliation, and our LGBTIQ+ colleagues. In FY2021, we brought our policies and work programs together in a new inclusion strategy, which now also encompasses

cultural diversity and accessibility. We are working on our plans in these areas.

We encourage our people to call out behaviour that doesn’t align with our intention of being a fair and inclusive workplace.

Gender diversity

We strive for gender equity and achieved our target of 33 per cent of women in senior roles in FY2021, an increase from 32 per cent in the previous reporting period. We will continue to measure women in senior roles; however, going forward we are focusing on a smaller cohort of Senior Leaders¹⁷ when measuring diversity, to align with industry standards.

We have continued to focus on delivering equal average pay for men and women at each job grade, with the overall differential within our policy tolerance of ±1 percentage point in FY2021.

In July 2021, we became a signatory to 40:40 Vision, an investor-led initiative targeting gender balance in executive leadership by 2030. The initiative identifies gender balance as having 40 per cent male, 40 per cent female and 20 per cent any gender representation at the senior level across the organisation. As part of the 40:40 Vision initiative, we are committed to achieving a 40:40:20 balance in the CEO-1 category (the CEO plus the executive leadership that reports to the CEO) by 2030, together with interim targets in 2023 and 2027, and publicly reporting on our progress.

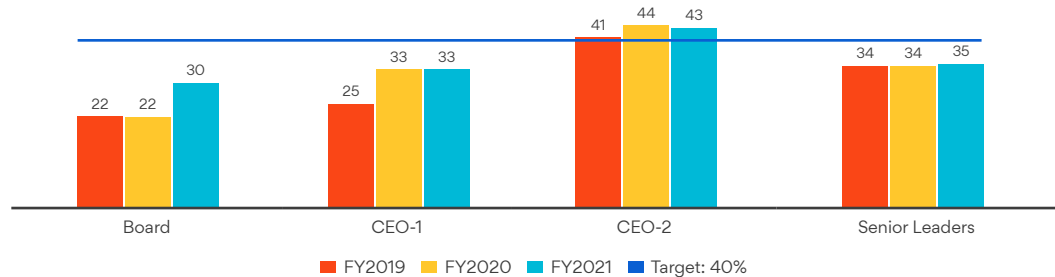
In addition to executive leadership, we have set targets to achieve gender balance by 2030 at the Board level, and in the CEO-2¹⁸ and Senior Leaders categories. We have made progress on gender diversity in recent years.

Our first interim target is to achieve gender balance across the total combined CEO-1 and CEO-2 categories by the end of FY2023, and year-on-year progress in the remaining categories.

¹⁷ Senior Leaders captures the three reporting levels below CEO and includes roles with base salaries exceeding approximately \$200,000 per annum.

¹⁸ CEO Level-2 includes roles directly reporting to CEO Level-1.

Female representation within Origin (%)



Our second interim target is to achieve female representation exceeding 38 per cent in all categories and to have gender balance in at least two of the four categories by the end of FY2027.

Our overall target is to have gender balance within and across all four categories by the end of FY2030. The new targets are an extension of our longstanding targets for women in senior roles and equal pay for equal work. We aim to have

more women in our leadership teams, because we believe a more diverse organisation delivers better outcomes.

Origin was ranked 40th globally in Equileap’s 2021 Gender Equality Global Report & Ranking, which assessed over 3,500 companies worldwide across 19 criteria as part of their Gender Equality Scorecard.



Our LGBTIQ+ colleagues

Inclusion at Origin means we strive to enable our employees to feel comfortable, safe and able to bring their whole self to work every day. We are committed to creating an inclusive culture in which people of all genders, sexes and sexualities feel respected, included and understood.

The Pride@Origin Committee works to create a supportive, safe and inclusive workplace for our LGBTIQ+ communities and focuses on aligning us to the Australian Workplace Equality Index (AWEI), as our external benchmark. We were awarded AWEI Silver Employer at the Australian LGBTQ Inclusion Awards 2021 run by Pride in Diversity.



Origin employees celebrated Wear it Purple Day.

We launched the Embrace Pride@Origin Digital Learning platform to give our people an opportunity to better understand LGBTIQ+ experiences. We kept the conversation going by recognising days of significance on the Pride calendar such as IDAHOBIT, Wear it Purple Day, and World AIDS Day.

We also launched our Gender Affirming Support Package, which provides supportive pathways for individuals, and education and guides for managers and colleagues. We provide six weeks paid leave or up to 12 weeks at half pay for any employee who needs time off for their gender affirmation.

Reconciliation

We focus on the inclusion of Aboriginal and Torres Strait Islander peoples in our workplace and communities. Our Stretch RAP aligns with Reconciliation Australia's three pillars of relationships, respect and opportunities, and outlines how we plan to embed social change in our workplace.

In FY2021, 70 Origin employees self-identified as Aboriginal or Torres Strait Islander, an increase from 49 in the previous period. Our Indigenous Employee Network (IEN) provides a supportive space for Aboriginal and Torres Strait Islander employees to engage, discuss issues, share knowledge and provide peer-to-peer support. All new Indigenous employees are offered the opportunity to buddy with an IEN member through the Deadly Buddy initiative introduced this year.

In FY2021, we launched our cultural awareness learning framework, which outlines learning options to build awareness of Aboriginal and Torres Strait Islander cultures, histories and achievements. This included the launch of our cultural awareness e-learning, which 96 per cent of employees have completed, and cultural awareness training workshops for managers.

We have a number of partnerships and programs in place to create opportunities and to continue to support Indigenous employment. Since 2015, we have partnered with the CareerTrackers 10x10 program by providing temporary work placements for a minimum of 10 Indigenous graduates a year. The program aims to transition Indigenous students into full-time employment once they complete

their degree. In addition, Origin's Graduate program supports the transition of summer interns into graduate roles. This year we placed nine summer interns and two graduates. CareerTrackers recognised the Origin Energy Foundation as a Partner of Excellence for the ongoing support we provide to the organisation.

We partner with the Australian Football League's SportsReady Warumilang program to provide practical office-based experience to Indigenous trainees while they study for a Certificate or Diploma in Business for 12 months. In FY2021, we established an Aboriginal and Torres Strait Islander cadetship program, which supports students in their final year of university and aims to provide a pathway from university into the workplace.

This year, we also partnered with Indigenous Women in Mining and Resources Australia (IWIMRA), aiming to work collaboratively to increase the representation of Indigenous women in Origin's workforce. Under the partnership – the first of its kind by IWIMRA – the organisation will promote Origin to its Indigenous female membership base and wider audience.

Case study

Inspiring an Indigenous talent pipeline

Second year People and culture graduate and CareerTrackers alumni Keziah Alimpulos hopes her experience at Origin will inspire other young Indigenous Australians on their career journey.



Our reporting

Our 2021 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 2021, focusing on the material topics that matter most to our stakeholders.



Environmental, social and governance (ESG) ratings

Australian Council of Superannuation Investors

Leading rating for disclosure of ESG risks and opportunities in 2009–2011, 2013–2021.

In 2021, the Australian Council of Superannuation Investors reviewed Origin's level of ESG disclosure and assessed it as being at a 'Leading' level for the last four or more consecutive years.

Carbon Disclosure Project

Origin has participated in the Carbon Disclosure Project (CDP) climate change survey since 2006. The survey is conducted globally and reported in arrears.



Origin's 2020 CDP climate change performance score (covering FY2019) was maintained at a 'B', signifying a 'Management' level. We were also awarded an 'A' for CDP's Supplier Engagement Rating, which assesses how effectively companies are engaging with suppliers on climate change.

In 2021, we participated in the climate change survey, which covers our performance during the FY2020 reporting period. These responses are expected to be released by CDP in late 2021.

FTSE4Good

2004–2021

FTSE Russell¹⁹ 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.

Created by the global index provider FTSE Russell, the FTSE4Good Index Series is designed to measure the performance of companies demonstrating strong ESG practices.



MSCI

MSCI ESG's A rating

In 2021, Origin received a rating of A (on a scale of AAA-CCC) in the MSCI Ratings assessment.²⁰



Sustainalytics

In August 2021, Origin received an ESG Risk Rating of 33.8 and was assessed by Sustainalytics to be at high risk of experiencing material financial impacts from ESG factors.

¹⁹ The trading name of FTSE International Limited and Frank Russell Company. The FTSE4Good indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.

²⁰ 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 FY2021 include:

Stakeholder	Areas of interest	How we engaged	
Shareholders	<ul style="list-style-type: none"> Sustainable earnings Identification and management of risks Climate change and greenhouse gas emissions Future energy solutions Our engagement with Traditional Owners Remuneration 	<ul style="list-style-type: none"> Held investor meetings, briefings and roadshows, including with members of the ELT and Board, on various matters, including climate change, engagement with Native Title holders in the Beetaloo and executive remuneration Participated in various investor and broker conferences, including with the Australian Shareholders Association 	<ul style="list-style-type: none"> Responded to investor enquiries and undertook surveys to gather investor feedback Responded to sustainability-related information requests and participated in benchmark surveys Met with investor proxy advisors
Customers	<ul style="list-style-type: none"> Energy affordability Quality of our service Ease of interacting with Origin Smarter energy solutions Energy reliability 	<ul style="list-style-type: none"> Provided support to customers affected by the COVID-19 pandemic Received feedback on a range of projects in development from more than 3,000 customers through our Origin Exchange Customer Insights Community Research Panel Re-established our Customer Advocacy Panel and sought feedback on a range of topics from pricing to emerging customer solutions 	<ul style="list-style-type: none"> Asked our customers what mattered to them via our RepTrak™ survey Asked our customers how the experience was after each interaction, which provides valuable feedback and also our Interaction NPS score
Communities	<ul style="list-style-type: none"> Our impact on local communities Our environmental management Land access and coexistence Sharing economic benefits Our response to COVID-19 and natural disasters 	<ul style="list-style-type: none"> Engaged with landholders as upstream operator of Australia Pacific LNG, including negotiating 34 Conduct and Compensation Agreements Engaged with Traditional Owners as upstream operator of Australia Pacific LNG, including collaborating to open a newly refurbished office in Roma that promotes cultural awareness Established the Community Consultative Committee for the ash dam expansion at Eraring Power Station and discussed issues related to the project 	<ul style="list-style-type: none"> Communicated and engaged with Native Title holders as part of our Beetaloo Basin exploration project, including hosting a visit to the Kyalla well site near Daly Waters during hydraulic fracture operations Supported community partners through the Origin Energy Foundation, including 8,400 hours donated by Origin employee volunteers
Suppliers	<ul style="list-style-type: none"> Climate change and emissions Workforce health and safety Working ethically Business resilience Cyber security 	<ul style="list-style-type: none"> Shared our environmental, social and governance expectations by issuing our Supplier Code to nearly 3,700 suppliers Gathered greater insight into the activities of our suppliers through completion of our supplier Self Assessment Questionnaire 	<ul style="list-style-type: none"> Engaged with local chambers of commerce and local suppliers to share our upcoming opportunities and understand supplier capability
Our people	<ul style="list-style-type: none"> Climate change and emissions Our impact on communities Working ethically Resilience of our business Career and development opportunities 	<ul style="list-style-type: none"> Held virtual forums hosted by the Executive Leadership Team, with opportunities for employees to ask questions Shared information on how we are delivering on our purpose and living our values via various channels, including CEO emails and videos, posts on our internal social media platform, and live Q&A sessions with subject matter experts 	<ul style="list-style-type: none"> Conducted our annual engagement survey, to give employees opportunity to provide feedback on culture and engagement and help shape their future working environment Sought employee feedback on communication related to the COVID-19 pandemic, health and wellbeing resources, and team engagement, to help inform ongoing support for employees
Government	<ul style="list-style-type: none"> Reliability of energy Affordability of energy Climate change and emissions Our engagement with Traditional Owners Our plans for our operations 	<ul style="list-style-type: none"> Advocated directly and through peak industry associations for sound policy outcomes on energy and climate policy Hosted key ministers and others in government to help them understand our assets and projects, including Traditional Owner engagement 	<ul style="list-style-type: none"> Met with governments, regulators and non-government organisations on topics such as the NEM 2025 review and climate change action Participated in forums, workshops and conferences with government, non-government organisation, think tanks and others on challenges facing energy markets

Our material sustainability issues

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

Our materiality process

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

1. Identify

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

2. Engage

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

We engage with our stakeholders on an ongoing basis through various channels, including face-to-face and virtual meetings, briefings, workshops, surveys, research and by responding to queries and concerns. (See [Stakeholder engagement](#) for details on our FY2021 engagement). The feedback we gather throughout the year informs our materiality assessment. As well, we survey key stakeholder groups, including employees, investors and customers, and ask them to rank our list of sustainability issues by importance to them.

4. Review

Our list of material topics is reviewed by our risk team, senior management and the Board. The material topics in FY2021 did not change significantly from FY2020, however, we have redefined some of our material topics to better describe the issues.

3. Assess and prioritise

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

Through this process we identified 12 material topics as well as a number of important and emerging topics on which we also report.

2021 material topics

Customers

Smarter and easier delivery of energy

Affordability of energy

Reliability of energy

Communities

Impacts to communities

Rights and cultural heritage of Indigenous peoples

Land access and coexistence

Planet

Climate change and greenhouse gas emissions

Water management

Waste management

Our people and culture

Health and safety

Ethical business practices

Diversity and inclusion

Other important and emerging issues

Cyber security

Supporting vulnerable customers

Policy and regulation

Economic value creation

Closure planning of sites/assets

Supply chain

Human rights

Business model resilience

Policy and regulation

Biodiversity

Air emissions





Workforce training, development and engagement









Governance

United Nations Sustainable Development Goals (SDGs)

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





Our purpose of getting energy right for our customers, communities and planet is aligned with many of the SDGs. We have mapped the SDGs to the four sections of our report and outlined our aims and overarching approach in these areas. The table below maps some of the actions we have taken in FY2021 that support the SDGs.

SDG	Actions in FY2021 that support the SDGs	Location in sustainability reporting	SDG	Actions in FY2021 that support the SDGs	Location in sustainability reporting
	<ul style="list-style-type: none"> • Focused on learning from incidents and sharing insights with employees across our business and partner organisations • Included an additional component as part of our HSE 'learning incidents' metric, requiring an action to be raised and closed that supports and embeds the learning • Continued our Pandemic Leave Policy to support our people, with up to 10 days paid leave available for employees who have been impacted by the pandemic, including for vaccination appointments (linked to SDG 8) • Rolled out a set of life saving controls at operational sites across Origin 	<p><u>Safety, health and wellbeing</u></p> <p><u>Safety, health and wellbeing</u></p> <p><u>Safety, health and wellbeing</u></p> <p><u>Safety, health and wellbeing</u></p>		<ul style="list-style-type: none"> • Provided more than \$1 million in rewards to Origin Spike customers for reducing their energy use during peak periods (linked to SDGs 9 and 12) • Increased GreenPower and Green Gas customers to 260,000, up from 117,000 in FY2020 • Grew our virtual power plant to more than 159 MW across 79,000 connected services • Launched Origin 360 EV Fleet and are undertaking an electric vehicle smart charging trial with ARENA (linked to SDGs 9 and 13) • Announced lower electricity and gas prices for most of our customers in NSW, Queensland, South Australia and the ACT in FY2021 (linked to SDG 10) • Provided our customers with low-carbon product offerings such as GreenPower, Green Gas, Green LPG, batteries and solar • Installed 74 MW of solar, an increase of 21 per cent on the prior period • Supported access to energy through our hardship program Power On, investing \$18 million • Announced our intention to investigate a large-scale battery at Eraring (linked to SDGs 9 and 13) • Continued our partnership with the NSW Government to deliver the Solar for Low Income Housing program to provide, free of charge, three kilowatt solar systems to low-income households (linked to SDG 10) 	<p><u>Making energy smarter and easier</u></p> <p><u>Energy reliability and sustainability</u></p> <p><u>Making energy smarter and easier</u></p> <p><u>Energy reliability and sustainability</u></p> <p><u>Energy affordability</u></p> <p><u>Energy reliability and sustainability</u></p> <p><u>Energy reliability and sustainability</u></p> <p><u>Energy affordability</u></p> <p><u>Decarbonisation strategy</u></p> <p><u>Energy affordability</u></p>
	<ul style="list-style-type: none"> • The Origin Energy Foundation distributed over \$3 million to charity partners, including a \$100,000 grant to the Grattan institute in FY2021 grant to research the impacts of home-schooling on disadvantaged students, and recommend solutions • Continued to support the transition of Indigenous students to the workplace through our partnership with CareerTrackers, providing temporary work placements for a minimum of 10 Indigenous graduates a year (linked to SDG 10) • Provided practical office-based experience to Indigenous trainees while they study a Certificate or Diploma in Business for 12 months through our partnership with the AFL SportsReady Warumilang • Established an Aboriginal and Torres Strait Islander cadetship program, which supports students in their final year of university and aims to provide a pathway from university into the workplace (linked to SDG 8) 	<p><u>Supporting communities</u></p> <p><u>Inclusion</u></p> <p><u>Inclusion</u></p> <p><u>Inclusion</u></p>			
	<ul style="list-style-type: none"> • Achieved our FY2021 target of 33 per cent of women in senior roles in FY2021 and continue to deliver equal average pay for men and women at each job grade (linked to SDG 8) • The Pride@Origin Committee worked to create a supportive, safe and inclusive workplace for our LGBTIQ+ communities, focusing on aligning Origin to the Australian Workplace Equality Index (AWEI) as our external benchmark (linked to SDG 10) • Offered equal access to parental leave, providing up to 20 weeks paid parental leave to the primary carer (linked to SDG 8) 	<p><u>Inclusion</u></p> <p><u>Inclusion</u></p> <p><u>Inclusion</u></p>			

SDG	Actions in FY2021 that support the SDGs	Location in sustainability reporting	SDG	Actions in FY2021 that support the SDGs	Location in sustainability reporting
	<ul style="list-style-type: none"> Spent 18 per cent of our total procurement spend with regional suppliers (linked to SDG 10) Spent \$10 million directly and indirectly with Indigenous suppliers, up from \$5.3 million in 2020 (linked to SDG 10) Released our Modern Slavery Statement and continued to apply a four step methodology to manage modern slavery risks (linked to SDGs 3, 5, 8, 10 and 16) Certified a Great Place to Work by a global authority on workplace culture, the Great Place to Work Institute Supported regional apprentice schemes to build local workforce capacity through training and development 	<p>Responsible procurement</p> <p>Responsible procurement</p> <p>Responsible procurement</p> <p>How we work</p> <p>Supporting our communities</p>		<ul style="list-style-type: none"> Became the world's first energy company to sign up to all seven We Mean Business initiatives in 2015 Became the first company in Australia to set science-based emissions targets independently approved by the Science-Based Targets Initiative (SBTi) in 2017. Our medium-term, SBTi-approved targets cover Scope 1, Scope 2 and Scope 3 emissions Progressing the update of our existing emissions reduction targets consistent with a 1.5°C pathway. We aim to achieve net-zero Scope 1 and Scope 2 emissions by 2050 Actively engaged in responsible engagement in climate policy 	<p>Origin's corporate reporting</p> <p>Energy and climate change</p> <p>Decarbonisation commitments and targets</p> <p>Decarbonisation strategy</p>
	<ul style="list-style-type: none"> Installed 103 smart chargers for electrical vehicles in homes and businesses across NSW, Victoria, Queensland and South Australia as part of the ARENA trial (linked to SDGs 7 and 13) Installed over 480 kW of solar at our generation and LPG sites, including Mortlake, Shoalhaven and Darling Downs Power Stations Progressed our renewable hydrogen and renewable ammonia opportunities, including commencing a feasibility study in Bell Bay, Tasmania (linked to SDGs 7 and 13) Held our annual Little Big Idea competition, which encourages creativity and innovation in students Participated in Free Electrons, a global incubator for energy start-ups 	<p>Making energy smarter and easier</p> <p>Decarbonisation strategy</p> <p>Decarbonisation strategy</p> <p>Supporting our communities</p> <p>Making energy smarter and easier</p>		<ul style="list-style-type: none"> Worked with communities to restore and protect the local biodiversity through programs such as fish restocking in local waterways Continued to monitor and manage our biodiversity offset initiatives, including Dukes Plain in central Queensland Worked with partners to monitor and protect waterways, such as the Fitzroy Partnership for River Health, a collective of government, agriculture, resources, industry, research and community interests across the Fitzroy Basin in central Queensland (linked to SDG 17) 	<p>Biodiversity</p> <p>Biodiversity</p> <p>Environment management approach</p>
	<ul style="list-style-type: none"> Launched our cultural awareness learning framework to build awareness of Aboriginal and Torres Strait Islander cultures, histories and achievements Continue to work towards our Stretch RAP targets, and the participation of Aboriginal and Torres Strait Islander businesses in Origin's supply chain (linked to SDG 8) 70 Origin employees voluntarily self-identified as Aboriginal or Torres Strait Islander, an increase from 46 in FY2020 Partnered with Indigenous Women in Mining and Resources Australia to increase the representation of Indigenous women in Origin's workforce (linked to SDG 17) Partnered with other energy companies and civil society groups to help address some of the barriers experienced by members of culturally and linguistically diverse communities when engaging with energy (linked to SDGs 7 and 17) 	<p>Inclusion</p> <p>Responsible procurement</p> <p>Inclusion</p> <p>Inclusion</p> <p>Energy affordability and supporting vulnerable customers</p>		<ul style="list-style-type: none"> Refreshed our Code of Conduct and associated online training modules Issued our Supplier Code to nearly 3,700 suppliers (linked to SDG 10) 	<p>How we work</p> <p>Responsible procurement</p>
	<ul style="list-style-type: none"> Signed a new agreement to supply 900,000 tonnes of ash for re-use in the mining sector, almost doubling Eraring's ash re-use program Provided 16,495 ML of treated produced water for beneficial use Became a member of EV100 to support the accelerated uptake of electric vehicles and launched Origin 360 EV Fleet solution (linked to SDG 7) 	<p>Waste</p> <p>Water</p> <p>Making energy smarter and easier</p>		<ul style="list-style-type: none"> The Origin Energy Foundation partnered with not-for-profit organisations to break the cycle of disadvantage and empower young Australians to reach their potential The Foundation partnered with SolarBuddy to provide affordable energy in the form of solar lights to children living in energy poverty globally We are one of 10 co-founders of Free Electrons, a global incubator for energy start-ups 	<p>Supporting communities</p> <p>Supporting communities</p> <p>Making energy smarter and easier</p>

Task Force on Climate-related Financial Disclosures (TCFD) disclosures

We support the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD) and we set out here where our disclosures on climate-related risks and opportunities can be found.

TCFD recommended disclosure	Where to find more information	TCFD recommended disclosure	Where to find more information
<p>Governance</p> <p>The organisation's governance around climate-related risks and opportunities</p> <p>a) Describe the board's oversight of climate-related risks and opportunities</p> <p>b) Describe management's role in assessing and managing climate-related risks and opportunities</p>	<p></p> <p>Climate change management approach</p> <p>Climate change management approach</p>	<p>Risk management</p> <p>The process used by the organisation to identify, assess and manage climate-related risks</p> <p>a) Describe the organisation's process for identifying and assessing climate-related risks</p> <p>b) Describe the organisation's process for managing climate-related risks</p> <p>c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management</p>	<p></p> <p>Climate change management approach</p> <p>Climate change management approach</p> <p>Climate change management approach</p>
<p>Strategy</p> <p>The actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning</p> <p>a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long terms</p> <p>b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning</p> <p>c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios including a 2°C or lower scenario</p>	<p></p> <p>Climate change management approach</p> <p>Operating and Financial Review</p> <p>Planet, Energy and climate change</p> <p>Climate change management approach</p> <p>Planet, Energy and climate change</p> <p>Climate change management approach</p> <p>2°C and 1.5°C Scenario Analysis</p>	<p>Metrics and targets</p> <p>The metrics and targets used to assess and manage relevant climate-related risks and opportunities</p> <p>a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process</p> <p>b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas emissions, and the related risks</p> <p>c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets</p>	<p></p> <p>Planet, Energy and climate change</p> <p>Climate change management approach</p> <p>Planet, Energy and climate change</p> <p>Sustainability performance data</p> <p>Planet, Energy and climate change</p> <p>Climate change management approach</p>

Key sustainability performance measures

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

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

	FY2017	FY2018	FY2019	FY2020	FY2021
Customers					
Total customer accounts (electricity, gas, LPG and broadband) ('000)	4,210	4,178	4,199	4,233	4,266
Green Energy customer accounts ('000) ¹	184	152	109	118	260
Ombudsman complaints (per 1,000 customers)	2.5	2.8	2.7	2.7	1.9
Net Promoter Score – strategic	(16.0)	(13.0)	(6.0)	2.0	6.0
Net Promoter Score – interaction	16.1	21.7	24.7	26.4	34.1
Net Promoter Score – episodic	-	-	-	53.8	42.3
Reputation (RepTrak™ score)	65.5	63.6	63.3	66.0	67.7
Successful Power On payment plan completions ²	n/a	42,107	48,659	33,102	35,336
Communities					
Community complaints received	55	86	12	14	3
Landholder complaints received	32	51	25	33	41
Regional procurement spend (%)	-	-	12	14	18
Origin Energy Foundation funds distributed (\$m)	3.2	2.4	2.4	3.2	3.0
Indigenous supplier spend (a Stretch RAP target) (\$m)	-	-	-	5.3	10.2
Employee volunteering through the Origin Energy Foundation (hours)	5,912	8,002	9,153	6,758	8,466
Planet (climate change, environment)					
Scope 1 emissions (equity basis, kt CO ₂ -e)	17,792	18,681	18,430	16,573	15,273
Scope 2 emissions (equity basis, kt CO ₂ -e)	945	1,028	1,188	1,228	1,118
Generation emissions intensity (owned and contracted) (t CO ₂ -e/MWh)	0.70	0.71	0.72	0.70	0.71
Integrated Gas emissions intensity (t CO ₂ -e/TJ)	5.61	5.17	5.10	4.85	4.91
Capacity of solar PV systems installed (MW)	30	43	48	61	74
Environmental consequence incidents	0	0	0	2	0
Fugitive emissions (flaring, leaks and venting) (kt CO ₂ -e)	944	506	459	300	296
Ash re-used at Eraring (%)	28	30	35	39	36
Air emissions (NO _x , SO _x , VOC, PM ₁₀) (tonnes)	57,361	67,100	74,139	64,367	57,348
Renewables and storage (% of owned and contracted capacity)	15	17	19	19	19
People					
Total Recordable Injury Frequency Rate (TRIFR) ³	3.2	2.2	4.4	2.6	2.7
Actual serious (or above) incidents ⁴	-	-	9	4	4
Learning incidents ⁵	-	-	38	69	52
Process safety incidents (Tier 1 and 2) ⁶	10	12	8	12	11
Employee engagement score ⁷ (%)	58	61	61	75	74
Female representation (%)					
Board	25.0	25.0	22.2	22.2	30.0
CEO-1	11.1	20.0	25.0	33.3	33.3
CEO-2	26.2	33.8	40.6	43.9	42.9
Senior leaders	34.0	34.2	34.4	33.9	34.6
Indigenous representation (voluntarily self-identified)	17	35	41	46	70
Reported incidents of bribery or corruption ⁸	0	0	1	0	0

- FY2019 green energy customer account numbers have been restated.
- Power On customer payment plan completions data prior to FY2018 is not available due to a change in Origin's regulatory performance indicator reporting processes.
- Rolling 12-month average.
- Metric introduced in FY2019 and includes incidents rated with a rating as a Risk Consequence of 3-Serious Actual (or above) on the Origin Risk Matrix.
- Metric introduced in FY2019 and includes incidents rated with a rating as a Risk Consequence of 4-Major Potential (or above) on the Origin Risk Matrix. Note: Excludes incidents already counted under the Actual Serious Consequence metric.
- FY2018 results onwards include all incidents that resulted in Tier 1 or Tier 2 events as per the IOGP Process Safety Recommended Practice on Key Performance Indicators, Report No. 456. Disclosures for prior years only include Tier 1 and 2 events that resulted in an outcome of serious and above.
- Kincentric's methodology.
- 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.

Glossary

Ash dam

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

CO

Carbon monoxide.

CO₂

Carbon dioxide.

CO₂-e

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

CSG

Coal seam gas. Natural gas contained within coal seams.

Electricity measures:

Watt (W)

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

Kilowatt (kW)

One kW = 1,000 watts.

Kilowatt hour (kWh)

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

Megawatt (MW)

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

Megawatt hour (MWh)

One MWh = 1,000 kilowatt hours.

Gigawatt hour (GWh)

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

Terawatt hour (TWh)

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

Flaring

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

Fugitive emissions

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

Gas measures:

Joule (J)

Standard unit of measurement for energy.

Gigajoule (GJ)

One GJ = 10⁹ joules.

Terajoule (TJ)

One TJ = 10¹² joules.

Petajoule (PJ)

One PJ = 10¹⁵ joules.

GHG emissions

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

GHG emissions intensity

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

kt

One kilotonne = 1,000 tonnes.

Leaks

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

LNG

Liquefied natural gas.

LPG

Liquefied petroleum gas.

National Electricity Market (NEM)

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

NGERs

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

NOx

Nitrogen oxide.

PM_{2.5}

Particulate matter that is 2.5 micrometres or less in diameter.

PM₁₀

Particulate matter that is 10 micrometres or less in diameter.

Process safety event

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

Reverse osmosis

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

SBTi

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

SOx

Sulphur oxide.

Scope 1 emissions

Scope 1 greenhouse gas emissions are the emissions released to the atmosphere as a direct result of an activity. These are sometimes referred to as direct emissions; examples include electricity generation and gas production.

Scope 2 emissions

Scope 2 emissions result from the electricity that we consume to power our offices and operating sites.

Scope 3 emissions

Scope 3 encompasses indirect 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.

Venting

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

VOC

Volatile organic compound.

Water measures:

Kilolitre (kL)

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

Megalitre (ML)

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

About our reporting

In this report a reference to 'Origin', 'Origin Energy', 'Group', 'Origin Group', 'Company', 'we', and 'our' is to Origin Energy Limited and its controlled entities and joint venture arrangements as outlined in our 2021 Annual Report.

Unless otherwise stated, Origin Energy's 2021 Sustainability Report provides a summary of Origin's performance on material social and environmental sustainability aspects for the period 1 July 2020 to 30 June 2021 (FY2021).

Its scope is limited to the assets we operate. 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 37.5 per cent shareholder. Emissions on an operational control basis represent emissions from our operated assets, being our generation fleet and 100 per cent of the upstream operations at Australia Pacific LNG. Emissions reported on an equity basis captures the emissions relating to the assets we own, including our generation fleet and our 37.5 per cent share of Australia Pacific LNG, which includes the downstream operations and non-operated areas.

This report may also reference significant events occurring after 30 June 2021. 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. Statements about past performance are not necessarily indicative of future performance.

All monetary amounts are in Australian dollars unless otherwise stated. Due to rounding, numbers presented in this report may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

We report our Scope 1 and Scope 2 emissions under the *National Greenhouse and Energy Reporting Act, 2007 (NGER)*. We are not required to report our Scope 3 equity emissions under NGER, however, we believe it is important that entities take responsibility for influencing emissions reduction throughout the value chain and as such we measure and report our equity Scope 3 emissions data. 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.¹

Where data is not available, we apply a reasonable estimation methodology. The methodologies applied to calculate data set out in this report may include assumptions not disclosed in this report. 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 FY2021 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 12, 225 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](https://www.originenergy.com.au)

¹ ghgprotocol.org/standards/scope-3-standard