

A woman with long brown hair, Jess, is shown from the chest up, looking off to the side with a gentle smile. She is holding a white mug with a purple zigzag pattern. The background is a warm, out-of-focus outdoor setting with sunlight filtering through, creating a bokeh effect. The overall tone is warm and positive.

**WE HELP
JESS HARNESS
THE SUN'S
ENERGY
TO POWER
HER HOME**

**ENERGY MADE
FRESH DAILY**

**SUSTAINABILITY
REPORT
2015**

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IMPORTANT INFORMATION

Origin has been reporting its sustainability performance since 2002 via an annual Sustainability Report.

Unless otherwise stated, Origin's Sustainability Report provides a summary of activities, operated assets and non-financial performance between 1 July 2014 and 30 June 2015. Emissions performance is reported on an operated and equity basis. Significant events occurring after the close of the period may also be referenced.

Origin's Sustainability Report outlines the Company's performance against a number of Material Aspects. Origin's approach to determining Material Aspects is informed by the Global Reporting Initiative and the AA1000 Accountability Principles.

The following Report includes an assessment of Upstream activities by Australia Pacific LNG, in which Origin has a 37.5 per cent shareholding (consistent with its holding as at 30 June 2014) and is the Upstream operator.

This Report does not contain information on the sustainability performance of Contact Energy, in which Origin held a 53.1 per cent interest at the close of the reporting period. After the close of the period, Origin divested its entire interest in Contact Energy. Information regarding Contact Energy can be found at www.contactenergy.co.nz.

All monetary amounts are in Australian dollars unless otherwise stated.



WE HELP MAKE PEACE AND QUIET

We're providing energy
to millions of homes
so kids around the
country can enjoy their
favourite stories.



It has long been the case that access to a reliable and affordable supply of energy has been central to the economic development of nations and to the improvement in the standard of living that people naturally seek.

In more recent times, it has also become the objective of our industry that the contribution energy makes to improving living standards be achieved in an environmentally as well as economically sustainable basis.

In seeking to meet this objective, environmental and economic goals can often be competing but are not necessarily mutually exclusive – they require a balance between them to be met.

At Origin we are always seeking to find this balance, particularly in the opinion of our key stakeholders – our shareholders, customers, employees and the communities we serve. We listen to and consider the opinions of our key stakeholders and they inform the choices we create and the decisions we make.

BALANCING ENVIRONMENTAL AND ECONOMIC OUTCOMES

As a diversified energy company active in both domestic and export markets, we see that the global energy landscape is subject to continual change. We regularly evaluate how these global trends create opportunities and risks in our business and respond to them appropriately.

As world population grows, energy demand grows with it. We know that the carbon emissions associated with traditional forms of energy production have to be significantly curtailed. For this to occur there must be a significant transition in the way energy is produced and used and this necessary transition creates the long term risks for investors in the energy sector.

The International Energy Agency (IEA) has been charged by governments around the world to analyse and interpret data relevant to energy and climate change in order to provide guidance on how climate change can be addressed.

The IEA's guidance is framed by global warming scenarios – two of which are the *New Policies Scenario* and *450 Scenario* – and provides direction on the appropriate energy mix in order to minimise the impacts of climate change. In both scenarios, the world must place limits on the use of high-emission fuels such as coal, increase in appropriate quantities the use of natural gas, and grow the contribution of renewable energy.

The IEA estimates that an investment of \$2 trillion a year⁽¹⁾ is required through to 2040 to provide sufficient energy to meet the world's growing energy needs on an environmentally and economically sustainable basis.

Throughout the world the transition in the way we produce and use energy required to balance environmental and economic outcomes creates significant risks for businesses like Origin. Our industry has invested significantly in long life, capital intensive, energy producing assets to meet our customers' requirements for an affordable and reliable supply of energy, yet some of these assets are more carbon intensive than many believe is appropriate to operate in a more carbon constrained future.

Origin has always managed this risk by investing in less carbon intensive forms of energy such as natural gas and renewables, and assets that are more carbon efficient than industry average – such as the Eraring coal-fired power station. Recognising the inevitable move to more renewable generation, Origin has remained underinvested in generation relative to the energy we sell to our millions of customers. This reduces the risk that Origin will have stranded generation assets and gives Origin the opportunity to invest in less carbon intensive assets such as renewables when it is economic to do so.

Governments have a critical role to play in facilitating a balanced transition to a less carbon intensive economy. They not only set the policy framework in which the industry operates but also often set targets for specific outcomes such as renewable energy targets, efficiency targets and carbon pricing schemes.

Properly designed policies, regulations and targets can play a critical role in accelerating the required transition, and conversely, poorly designed policies can have a very damaging effect on the industry.

There is much in the global experience of government intervention that has weakened the industry's ability to fund required ongoing investment in energy production. Poor policies, poorly implemented, have had a damaging effect. In Australia in the two decades since the nation committed to reducing carbon emissions by 5 per cent on 2000 levels by 2020, there has been a multiplicity of initiatives at state and federal level that have significantly increased risks for investors in the industry.

Notwithstanding this experience, Origin has supported the reframing of the Renewable Energy Target and also supports the Australian Government's announcement of a post 2020 emissions reduction target of a 26 to 28 per cent reduction on 2005 levels by 2030 as a target that is balanced in its aspiration and its feasibility. Origin looks forward to a successful global outcome at the COP21 meeting in Paris in December 2015, and the subsequent policy detail that brings clarity and certainty to the energy policy landscape in the years ahead.

Each year, Origin publicly reports the absolute emissions and emissions intensity of our power generation and natural gas production activities. This year's results reconfirm that Origin's power generation activities compare favourably to many of our peers and align with both Australia's and global climate change objectives.

Given Origin's integrated business – one that sees us developing, generating and selling energy – we undertake a diverse range of activities in the communities in which we operate. We give careful consideration to our environmental footprint across this range of activities, and provide transparency through this report on the environmental impact of our activities.

BALANCING OUR COMMITMENTS TO STAKEHOLDERS

We also seek to find a balance in our business in meeting the expectations of our key stakeholders – our customers, shareholders, employees and the communities we serve.

We recognise these expectations through the commitments we make in our Compass and know that fulfilling these commitments can often require difficult choices and decisions to be made if we are to achieve a balanced outcome, which will be sustainable over the longer term.

Our principles and values provide the guidance we need to make these choices and decisions.

We set targets and measure performance to evidence our progress in delivering on our commitments.

To measure our progress we use:

- Safety and Engagement for our people;
- Total Shareholder Returns for shareholders;
- Net Promoter Score for customers; and
- Reputation for the communities we serve.

We have high aspirations for our performance on each of these measures and set targets each year to continually improve.

This year our results are as follows:

- Total Recordable Injury Frequency Rate (TRIFR) for safety: performance improved to 3.8 compared with 5.0 in the prior year;
- Total Shareholder Returns for financial performance: -15 per cent for the year when compared with +125 per cent during the past decade;
- Net Promoter Score: a 9 point improvement on the prior year to -39, from -48;
- Engagement for our people: up 5 points to 52, from 47 last year; and
- RepTrak for community reputation: at 61.8 which is steady with the prior year, and the year average up on the prior year average.

With the recent fall in oil prices and the prospect that this situation may persist longer than might have previously been anticipated, our shareholder returns over the year in review have been significantly reduced. We have lost some of the balance we seek to preserve and have taken action to build resilience within Origin to operate in a lower oil price environment and restore balanced outcomes for our key stakeholders.

We believe that our performance against these measures helps us understand whether we are getting the balance right in respect of the commitments we have made to our key stakeholders.

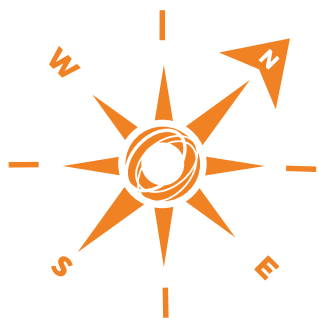
This is our 14th annual Sustainability Report and details our performance in the Material Aspects of our business. We believe it demonstrates a year of good operational performance across our business and continued progress on building a strong and sustainable company that finds the right balance in meeting the expectations of our key stakeholders.



Grant King
Managing Director

(1) International Energy Agency, *Energy and Climate Change, World Energy Outlook Special Report 2015*

OUR COMPASS



OUR PURPOSE

We aspire always to lead.

We deliver today's energy needs, and we search and innovate to create tomorrow's energy solutions.

We honour our principles and values, and they are evident in all we do.

We live our commitments to our shareholders, to our customers, to our people, to our communities and to our business partners.

OUR PRINCIPLES

Origin's Principles provide guidance for making the right decisions:

- We conduct ourselves and our business with **due care** and in accordance with relevant laws and regulations. We have an overriding duty to ensure the health and safety of our employees, and to minimise the health, safety and environmental impacts on our customers and the communities in which we operate.
- We will **add value** to the resources that come under our control.
- The value we create will be distributed to stakeholders, recognising the need to ensure the **sustainability** of our business, and its impact on the environment and the communities in which we operate.
- We encourage **diversity** and expression of ideas and opinions but require **alignment** with the Company's Principles, Values and Commitments and the policies established to implement them.
- When faced with choices, we make decisions knowing they will be subject to **scrutiny**. We should be able to demonstrate the soundness of our decisions to all stakeholders.

OUR VALUES

Origin's Values describe good behaviour:

Caring: We care about our impact on customers, colleagues, the community, environment and shareholders.

Listening: We listen to the needs of others, knowing that an unfulfilled need creates the best opportunities.

Learning: We constantly learn and implement new and better ways, sharing information and ideas effectively.

Delivering: We deliver on the commitments made in all areas of performance.

OUR COMMITMENTS

Origin's Commitments define the outcomes we strive to achieve for key stakeholders.

We commit to:

- Deliver market-leading performance for **shareholders** by identifying, developing, operating and growing value-creating businesses.
- Create value for our **customers** by understanding their needs and delivering relevant and competitive energy solutions to meet those needs both today and into the future.
- Create a rewarding workplace for **our people** by valuing everyone's contribution, encouraging personal development, recognising good performance and fostering equality of opportunity.
- Respect the rights and interests of the **communities** in which we operate, by listening to them, understanding and managing the environmental, economic and social impacts of our activities.
- Respect the rights and interests of our **business partners** by working collaboratively to create valued and rewarding partnerships.

WHERE WE OPERATE



Exploration acreage

- Conventional & unconventional ●
- Geothermal ●

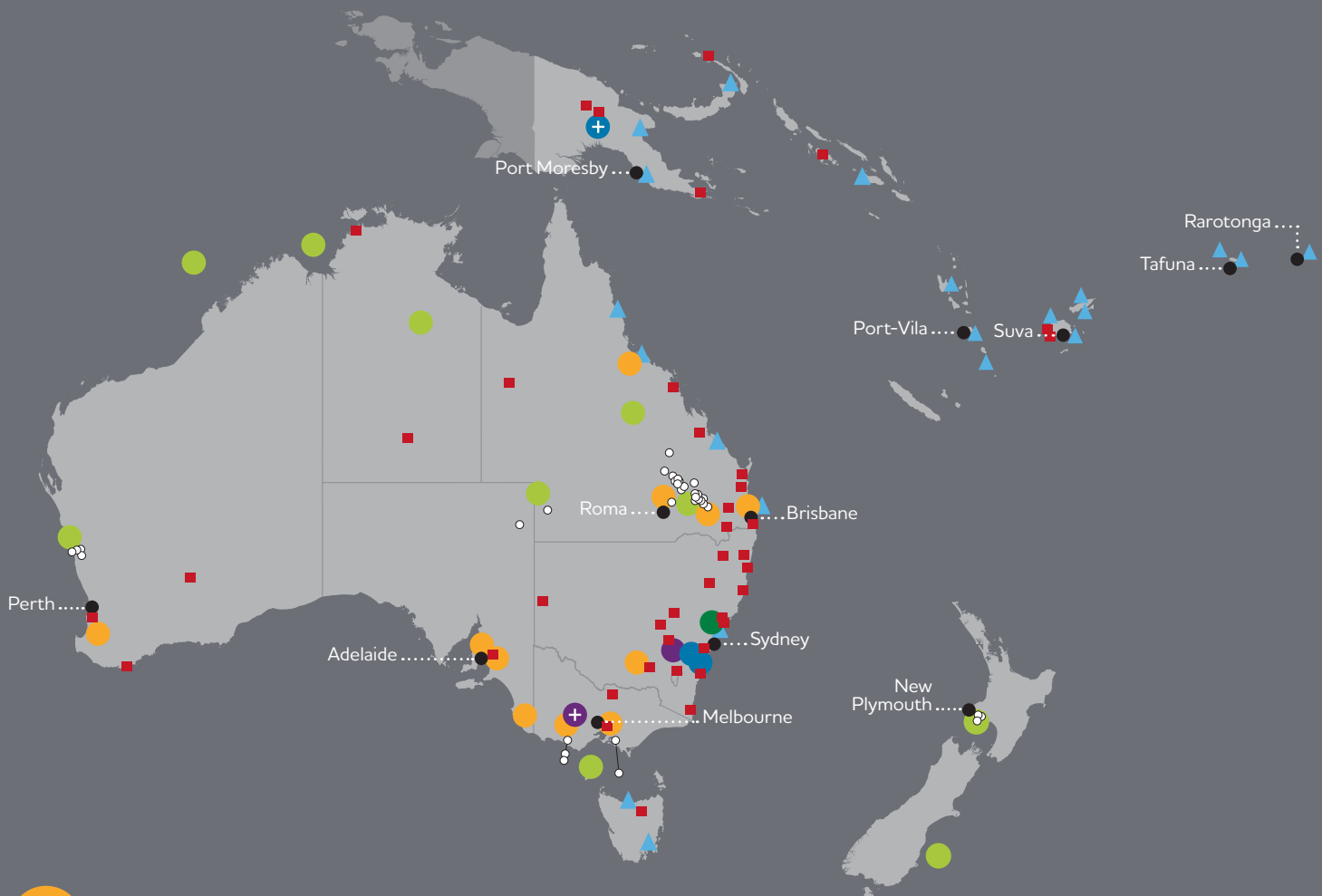
Generation

- Power station (gas fired) ●
- Power station (coal fired) ●
- Wind generation ●
- Hydro generation ●
- Solar generation ●
- Production facility ●
- Development proposal +

Office ●

LPG seaboard terminal ▲

LPG terminal or branch ■



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INTERACTIVE MAP
ONLINE

OUR YEAR AT A GLANCE 2015 FINANCIAL YEAR

2014

4 July

Construction of the Australia Pacific LNG main gas transmission pipeline completed.

17 July

Passed through lower electricity costs to customers following the repeal of the Australian Government's carbon price.

12 August

Completed the acquisition of Karoon Gas's 40 per cent interest in two offshore exploration permits in Western Australia's Browse Basin.

9 September

Announced the successful pricing and allocation of €1 billion hybrid capital securities, completing the Company's financing for the acquisition of interests in two exploration permits located in Western Australia's Browse Basin.

23 September

Launched the *Greater Energy Choice* campaign in the ACT, with Origin commencing sales of electricity and gas to homes and small businesses in the capital territory for the first time.

3 October

Origin held a forum at Sydney's Powerhouse Museum for its *LittleBigIdea* schools competition, with the three most innovative ideas announced from more than 1,300 entries.

12 November

Launch of the Deloitte Access Economics Report *Emissions metrics – Australia's carbon footprint in the G20*. Commissioned by Origin, the report proposes better ways to understand the economic drivers of carbon emissions and better reflect the relationship between emissions and economic activity.

25 November

Origin increased its investment in Energía Andina SA to 49.9 per cent. Energía Andina acquired 40 per cent of the 69 MW Javiera solar project in Chile's Atacama Desert which began commercial operations in the second half of the 2015 financial year.

5 December

Origin became the major partner of the NSW State Emergency Services (SES) Cadet and Leadership Program which provides secondary school students with the leadership and life skills required to make a difference in the community.

9 December

Speculant-1 exploration well discovered commercial quantities of gas in the Otway Basin, offshore Victoria. This well forms part of the Halladale and Speculant project which will enable increased utilisation of the onshore Otway facilities.

16 December

Milestone achieved at BassGas Mid Life Enhancement Project – successful lift of the export compression and condensate pumping modules into place on the Yolla offshore platform.

2015

10 February

The Federal Court of Australia ordered Origin and two of its subsidiaries to pay penalties totalling \$325,000 and notify affected customers for contravening the Australian Consumer Law by making false or misleading representations to residential consumers in South Australia regarding the *DailySaver* energy plan, in proceedings brought by the Australian Competition and Consumer Commission (ACCC).



WE HELP TOM AND RYAN PERFORM THEIR LATEST TRACK

We're providing energy to power the creativity of budding musicians.

11 February

First gas from Australia Pacific LNG's coal seam gas fields in the Surat Basin reach Curtis Island, Queensland.

16 February

Origin awarded tender to build 3MW solar array at Tonsley in SA, which will be the largest rooftop array in Australia.

19 February

Origin reported interim results including Statutory Loss of \$25 million and Underlying Profit of \$346 million.

15 March

Origin broke the record for construction of the longest extended reach drilling section in Australia as part of the drilling campaign for the Halladale and Speculant development project in the Otway Basin.

27 March

The Federal Court of Australia ordered Origin to pay \$2 million in penalties and one of its third-party service providers to pay \$325,000 in relation to unlawful door-to-door selling practices in proceedings brought by the ACCC. Origin ceased door-to-door sales in September 2013.

21 April

Released Origin's first Reconciliation Action Plan (RAP), which details our efforts and commitment to respect the rights and interests of the Aboriginal and Torres Strait Islander communities.

22 April

Australia Pacific LNG reached a significant milestone with the successful start-up of the first of seven gas turbine power generators, designed to provide electrical power to the Curtis Island LNG facility.

3 May

Launched *Don't Waste Your Roof* solar campaign which encourages Australians to think differently about the value of their roof and the potential of solar energy.

10 June

Origin announced its intention to be number one in solar by 'installed capacity'. This follows the launch of its *Solar as a Service* product in May, which enables more customers to access the benefits of solar without having to purchase the system.

16 June

Origin announced a new community partnership to raise funds for the NSW SES donating \$5 to the organisation for every LPG cylinder or refill purchased by a new customer until 30 September 2015.

26 June

Royal assent for new legislation on the large-scale Renewable Energy Target (RET) of 33 terawatt hours (TWh). This provides a boost for the renewables industry, which will need to build a substantial amount of wind and solar by 2020.

26 June

Origin awarded the tender to design, build, own and operate 924 solar panels on the roof of the Royal Australian Mint in Canberra. The solar system will help the Mint save money on electricity and reduce its carbon footprint.

1 July

Secured a 12-year \$100 million finance commitment from the Clean Energy Finance Corporation to further develop rooftop solar offerings for Australian homes and businesses.

28 July 2015

Loading of refrigerants commenced at the Curtis Island LNG facility, marking a significant achievement in the commissioning and start-up phase of Australia Pacific LNG.

Origin supplies energy to markets in Australia, New Zealand and the Asia Pacific region. Origin’s strategy of connecting resources to markets is pursued through a clear focus on its three businesses and four priorities, designed to drive continued improvement in Origin’s performance.

3 **BUSINESSES**



REGIONAL LEADER
IN ENERGY MARKETS



REGIONALLY SIGNIFICANT
POSITION IN NATURAL GAS
AND LNG PRODUCTION



GROWING POSITION
IN RENEWABLE ENERGY
IN THE ASIA PACIFIC REGION

4 **PRIORITIES**



IMPROVING RETURNS
IN ENERGY MARKETS



DELIVERING GROWTH
IN THE INTEGRATED
GAS BUSINESS



GROWING CAPABILITIES
AND INCREASING
INVESTMENT IN
RENEWABLES



CAPITAL MANAGEMENT
AND FUNDING

We use five key measures to tell us how we are tracking against our commitments to our key stakeholders.

These measures touch on a range of social, environmental and economic aspects of activities carried out by Origin.

5 MEASURES



TRIFR FOR OUR SAFETY

Total Recordable Injury Frequency Rate:

3.8 Our lowest ever and a
▲ **24% improvement** on the prior year



TOTAL SHAREHOLDER RETURNS FOR FINANCIAL PERFORMANCE

Total Shareholder Returns:

-15% For FY2015
while over the past decade
Total Shareholder Returns
were **125%**



NET PROMOTER SCORE FOR OUR CUSTOMERS' ADVOCACY

Strategic NPS:

-39 At 30 June 2015
▲ **9 point improvement** on the prior year



ENGAGEMENT SURVEY FOR PEOPLE AT ORIGIN

Employee Engagement Score:

52
▲ **Improvement from 47** in the prior year



REPTRAK™ FOR COMMUNITY REPUTATION

Community Reputation Score:

61.8 At 30 June 2015
Steady with the prior year

The global energy landscape is characterised by constant change – from climate change, to technology developments and dramatic fluctuations in the price of oil. The following trends provide insight into how the global energy landscape may continue to evolve, which we constantly evaluate to understand both the opportunities and potential risks facing Origin.

INCREASING POPULATION AND URBANISATION

Today's world population of approximately 7.3 billion is expected to reach 9.7 billion by 2050⁽¹⁾. Despite more than half of the world's population living in cities, about 1.3 billion people today still have no access to electricity and 2.7 billion rely on traditional energy sources such as biomass for cooking⁽²⁾.

The IEA expects the world's use of electricity to double between now and 2050⁽³⁾, requiring investment of around \$2 trillion each and every year between now and 2040⁽²⁾. As the world's population continues to grow and urbanise, ensuring people have access to a reliable, affordable energy supply is one of society's significant challenges.

THE ASIAN CENTURY

In 2014, China surpassed the United States to become the largest economy in purchasing power parity terms⁽⁴⁾. Asia has been an engine of growth for the world economy and over the past few decades China's growth has led to the provision of electricity for around half a billion people⁽²⁾. While the rate of China's expansion is moderating, the economic prominence of the Asian region is expected to continue well into the century.

Asia's growing economies continue to demand energy, as well as new and cleaner energy sources such as natural gas and renewables, to combat air pollution and climate change. With global energy demand set to grow, Asia is expected to account for 60 per cent of this growth⁽⁵⁾. Australia's proximity to Asia, as well as its large LNG export market, means it is best placed to help meet this increasing energy demand.

ENVIRONMENTAL CONCERNS AND CLIMATE CHANGE

Energy production accounts for two thirds of the world's greenhouse gas emissions⁽²⁾ and there is increasing pressure from the public to reduce emissions in order to mitigate climate change. Finding the right balance between our energy use and meeting our environmental objective to limit global warming to 2 degrees Celsius is a significant societal challenge.

In the lead up to the United Nations Framework Convention on Climate Change meeting in Paris later this year, a number of countries have made long-term emission reduction pledges. Importantly, this includes announcements from the 'big three' emitters – China, the US and Europe – which collectively account for about half the world's emissions. Australia, which represents 1.3 per cent⁽⁶⁾ of the world's emissions, has announced an emissions reduction target of 26 to 28 per cent on 2005 levels by 2030.

Against this backdrop, the ongoing challenge for energy providers is to ensure that energy supply meets the three key criteria of being reliable, affordable and also being produced in an environmentally sustainable way.

SOON WE WILL HELP LIGHT UP BEIJING

We are providing cleaner energy to buzzing metropolises across Asia.

CREATING A RENEWABLE FUTURE THROUGH INNOVATION

Renewables accounted for nearly half of all new power generation capacity globally in 2014 and continue to be dominated by wind, solar and hydro. While renewable energy is part of the world's energy mix to deliver clean forms of energy and address climate change, it also provides energy access to people living in developing countries.

Continued innovation in battery storage technology will enable the integration of increasing sources of renewable power into the energy mix. While energy storage solutions are currently expensive, ongoing research and development – as well as regulatory frameworks – are expected to drive the cost of storage down.

GAS AND GROWING ENERGY DEMAND

The lower carbon profile of gas and its abundant supply underpin its status as the world's fastest growing fossil fuel. As countries seek to diversify their energy mix and decarbonise their power supply, gas is expected to play an increasing role in displacing coal. The significant fall in oil prices and the realignment of oil-linked gas pricing is also expected to enhance the attractiveness of gas in the short term.

Between 2014 and 2020, the IEA expects global gas demand to increase at an average annual rate of 2 per cent⁽⁷⁾. The demand for gas in China, non-OECD Asia and Africa to 2020 is forecast to increase at compound average aggregate growth rates of 10, 2.9 and 3.0 per cent respectively⁽⁷⁾.

In Australia, the LNG market is expected to triple between now and 2017 with the completion of a number of projects and ramp up of exports from the east coast, making Australia the world's largest producer of LNG by 2018⁽⁸⁾. Increasing LNG trade also helps countries to maintain security of gas supply by mitigating geopolitical risk.

COMPLEXITY AND CHALLENGE IN MAKING GOVERNMENT POLICY

The global energy sector is highly regulated, and as nations put the need to address climate change at the forefront of energy policy the level of complexity in formulating commercially viable policy settings increases.

The European Union has an overarching target of a 40 per cent reduction in emissions on 1990 levels by 2030, and while the subsidies for renewables have been reduced, the target for 2030 remains strong. While attempts to create an emissions trading scheme in the US have been shelved, the Environmental Protection Agency is now using regulation to reduce emissions. Most states also have renewable energy targets and California has its own emissions trading scheme.

In Australia, a variety of incentives have been introduced, changed or removed in order to reduce emissions and promote renewable energy, including solar feed-in tariffs, a carbon pricing mechanism, direct action, and various renewable energy targets.

In many developed countries the implementation of policies to mitigate climate change must be considered in the context of subdued energy demand. Therefore, as policy measures determine the pathway to decarbonising economies, the ongoing challenge is to ensure that energy is delivered in a reliable and affordable way.

- (1) United Nations, *World Population Prospects: 2015 revision*.
- (2) International Energy Agency, *Energy and Climate Change: World Energy Outlook Special Report 2015*.
- (3) Calculated using data from International Energy Agency, *World Energy Investment Outlook 2014*.
- (4) PricewaterhouseCoopers, *The World in 2050: Will the shift in global economic power continue?* February 2015.
- (5) International Energy Agency, *World Energy Outlook 2014*.
- (6) dfat.gov.au/international-relations/themes/climate-change/Pages/global-emissions-data-graph.aspx
- (7) International Energy Agency, *Medium-Term Gas Market Report 2015*.
- (8) RBA Bulletin, *Australia and the Global LNG Market: March Quarter 2015*.

Origin's approach to sustainability is anchored in Our Compass.

Our purpose, the decisions we make, the actions we take and the behaviours we display as an organisation are guided by Our Compass. In order to be a sustainable business, we believe we must demonstrate how we are meeting the needs and expectations of those who are most interested in our business – our employees, investors, customers and the communities in which we operate.

Where possible, we seek to create more valuable social, environmental and economic outcomes for society.

DEFINING WHAT IS MATERIAL TO OUR PERFORMANCE

Origin's sustainability reporting reviews the Company's performance against a number of Material Aspects. Material Aspects are those activities that are of most importance to both our business and stakeholders. We believe if we manage these Material Aspects well, we can be confident of a more successful and sustainable business.

Material Aspects are informed by a deep understanding of our business and stakeholders' interests. We use the Global Reporting Initiative (GRI) and the AA1000 Accountability Principles to inform the reporting of our Material Aspects. This year Origin completed a materiality review, which included examining each Material Aspect according to its level of risk to the Company, the level of stakeholder interest and how topical each activity is. In order to be included in Origin's Sustainability Report, Material Aspects must meet the threshold in two or more of these three areas.

Changes to the Material Aspects against which we report this year include the merging of 'Setting sustainable tariffs' with 'Energy affordability', and the inclusion of 'Emissions' in our new 'Climate Change and our business' section. We also added 'Employee engagement' and 'Process safety', which forms part of the 'Safety' Material Aspect.

HOW WE REPORT

The first principle which guides the management of our business is our Duty of Care. This requires us to, at a minimum, comply with the relevant laws, regulations and contractual obligations imposed on us by others. Where practical and desirable, we choose to impose on ourselves additional standards to create better outcomes for our business and our stakeholders. This may be because these additional standards help us manage risk better, or because our engagement with our stakeholders shows us how, by imposing additional standards, we can better manage our environmental, social and governance performance and meet expectations more fully.

Our reporting provides detail on our Duty of Care for each of the Material Aspects.

When our Duty of Care is fulfilled, we then strive to create value in how we manage our Material Aspects, from improved delivery and efficiencies, to better, innovative and value-enhancing outcomes. Where possible, we seek to create more valuable, social, environmental and economic outcomes for society, such as improved social amenity and wellbeing, improved state of the natural environment and improved standards of living to the benefit of our customers, investors, employees, and the communities in which we operate.

In addition to these Material Aspects, we also report on other topics that are of interest to our stakeholders.

We continue to listen to our stakeholders to help determine whether our management of Material Aspects and topics of interest are appropriate and, from this interaction, we learn where we can improve.

Material Aspects and key topics

Energy developments

- Land access and coexistence
- Water management
- Impact on communities
- Sharing economic benefits
- Biodiversity

Delivering energy

- Customer care
- Energy affordability

Managing our business

- Safety
- Climate change and our business
- Sound and stable policy
- Financial performance
- Corporate governance
- Diversity and inclusion
- Employee engagement

Future energy solutions

- Developing cleaner energy solutions
- Renewable energy opportunities

Philanthropy

- Origin Foundation



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WE HELP ELLEN KEEP IN TOUCH

We're providing power so Ellen can stay connected with her loved ones and the world.

ENGAGING WITH OUR STAKEHOLDERS

Our business brings us into contact with a diverse range of stakeholders. How we approach and build stakeholder relationships over time is important to our business.

Stakeholder	Key areas of interest	How Origin engages
<p>OUR CUSTOMERS</p> <p>Origin has approximately 4.3 million electricity, gas and LPG customer accounts across Australia.</p> <p>Our commitment</p> <p>Create value for our customers by understanding their needs and delivering relevant and competitive energy products and solutions to meet those needs both today and into the future.</p>	<p>Energy underpins our everyday life. Our customers have come to expect a reliable source of energy, provided at an affordable price and produced in an environmentally responsible way. We seek to provide our customers with a wide choice of products and services, as well as more visibility on their energy use and costs. Our key activities in the 2015 financial year are described in Customer Care and Addressing Energy Affordability on pages 32 and 36.</p>	<p>Our Customer Charter guides our engagement with customers. Customers provide us with feedback via letters and emails, contact with our call centre, as well as through social media. Customer Service Hubs also provide customers with a physical location they can visit to address their concerns and provide feedback.</p> <p>We also engage with consumer protection regulators and Ombudsmen to help identify systemic problems, and opportunities to better meet the needs of customers.</p> <p>We undertake qualitative and quantitative market research to better understand customer needs, priorities and perceptions. During the period, Origin captured feedback through its Net Promoter Score (NPS) which confirmed that the quality of our service and energy affordability were of most importance to our customers.</p>
<p>OUR COMMUNITIES</p> <p>Our activities bring us into contact with a wide range of communities in Australia and internationally. Origin engages with local community groups and individuals as well as community representatives such as governments and non-government organisations (e.g. charities and environmental agencies).</p> <p>Our commitment</p> <p>Respect the rights and interests of the communities in which we operate by listening, understanding and working together to manage the environmental, economic and social impacts of our activities.</p>	<p>We communicate directly with communities and traditional owners of the land around our operations and developments.</p> <p>We also work with intermediaries and influencers who reflect and represent the interests of the broader community. These include:</p> <p>Governments and regulators who are charged with representing community interests.</p> <p>Industry associations which represent the interests of the energy and business sectors.</p> <p>Media who express views of the community.</p> <p>Non-government organisations (NGOs) which represent diverse interests including environmental, social and human rights.</p> <p>Water management, as well as land access are key areas of concern for the communities in which we operate. How we manage Water Resources and Land Access and Coexistence are described in the Material Aspects on pages 20 and 17 of this report.</p> <p>Our media analysis suggests a continuing high level of interest in public policy as it relates to energy and emissions, and also the development of the gas industry. Key activities relating to our public policy and advocacy work is outlined on page 49.</p>	<p>Local communities – Ongoing dialogue is underpinned by our Community Directive. We engage with communities through meetings, and communicate through targeted newsletters, public information centres in key project areas, project-specific websites and hotlines. In some locations we have Community Relations Advisors who convene or participate in formal community reference groups.</p> <p>We undertake scientific research in partnerships with organisations including the CSIRO, into the social and environmental impacts associated with the Coal Seam Gas (CSG) industry, which helps local communities respond to resource developments.</p> <p>Origin also measures stakeholder perceptions through the implementation of an independent benchmark using RepTrak™ methodology. The RepTrak™ results were incorporated into communications strategies throughout the year.</p> <p>Governments – Origin's Managing Director, senior executives and members of the Corporate Affairs team have regular dialogue and meetings with representatives from both state and federal governments, the Opposition and other political parties.</p> <p>Media – A dedicated team manages engagement with Australian and international media through media releases, events, one-on-one interviews, background briefings and presentations. The team also monitors and measures media engagement and coverage, which influences communications strategy and ensures stakeholders are receiving informed and balanced content.</p> <p>NGOs – Key Origin executives engage with major environmental and climate change-focused organisations to exchange views and information in association with our projects and major activities.</p> <p>Industry associations – We are an active member of a number of relevant industry and business associations including the Australian Petroleum Production and Exploration Association (APPEA), Business Council of Australia, Energy Retailers Association of Australia, Energy Supply Association of Australia, and the Queensland Resources Council.</p>

To understand the potential impact and opportunities our activities create, we actively listen to stakeholder feedback. What we learn through direct engagement is supplemented by structured stakeholder assessments and research, which helps us to define the activities that are of most importance to both our business and stakeholders. This is a key input to determining our Material Aspects.

Our ongoing challenge is to find the right balance in meeting the needs and expectations of our various stakeholders. Our commitment to and engagement with each of these stakeholders is detailed below.

Stakeholder	Key areas of interest	How Origin engages
<p>OUR EMPLOYEES</p> <p>Origin directly employs approximately 6,900 people plus several thousand contractors, the majority of which are based in Australia.</p> <p>Our commitment Create a rewarding workplace for our people by valuing everyone's contribution, encouraging personal development, recognising good performance and fostering equality of opportunity.</p>	<p>Employees and contractors place a high value on health and safety, and the promotion of behaviour that aligns with Our Compass and Code of Conduct.</p> <p>Employees require an inclusive workplace, fair and equitable remuneration, recognition of good performance, career development and training to encourage personal development.</p> <p>Unions are represented at some of our operations and are focused on workers' rights and wages, collective bargaining, health and safety and working hours and rosters.</p> <p>Employee engagement is outlined on page 58 of this report.</p>	<p>Face-to-face communication with our employees includes toolbox talks and visits from senior leaders. A twice yearly formal performance management process for all employees ensures roles are clear, skills are developed and opportunities provided.</p> <p>We also talk to employees and hear feedback via twice yearly employee roadshows with the Managing Director or other members of the Executive Management Team; employee roadshows at the Business Unit level; as well as senior leadership and Business Unit team meetings and conferences; a company-wide intranet; and operation-specific newsletters, and announcements.</p> <p>We conduct engagement surveys to understand the views of our employees. Engagement is one of five measures monitored to drive continued improvement in Origin's performance.</p>
<p>OUR INVESTORS</p> <p>Our investment community incorporates retail shareholders, institutional investors, debt providers, credit reporting agencies and analysts including Environment, Social and Governance (ESG) advisers all of whom rely on material information to make informed decisions on Origin's current and future performance.</p> <p>Our commitment Deliver market-leading performance for shareholders by identifying, developing, operating and growing value-creating businesses.</p>	<p>The investment community measures how Origin is delivering shareholder value.</p> <p>Investors are interested in the financial and non-financial performance of the Company and how we identify, manage and mitigate risks across the business to deliver sustainable shareholder value.</p> <p>Non-financial metrics include environmental, social, governance and climate change/carbon management.</p> <p>It is therefore important for our investors to be reassured that decisions are reached through sound leadership and governance. Origin's financial performance, together with corporate governance, is outlined on pages 51 and 53.</p>	<p>We engage with investors through a number of channels. Material price sensitive information is distributed via the ASX. Shareholders also have an opportunity to engage with the Company at our Annual General Meeting held each year after the release of full year results.</p> <p>The Company has a dedicated investor relations team to facilitate two-way communication with institutional investors and analysts. We conduct analyst and investor briefings, domestic and international investor roadshows, respond to shareholder enquiries and give industry presentations. Corporate Affairs also directly participates in shareholder engagement, via reporting documents including the Annual Report and Sustainability Report.</p> <p>Origin's website provides a list of key dates and all recent ASX announcements, as well as presentations and Company financial and non-financial reports.</p> <p>In addition, Origin participates in investor-focused external benchmarking including the Dow Jones Sustainability Index, FTSE4Good Index and CDP Climate Change as well as responding to queries and surveys issued by ESG analysts.</p>
<p>OUR BUSINESS PARTNERS</p> <p>Origin has a number of joint venture and investment partners, both domestically and internationally. This stakeholder group also includes businesses which provide goods and services for our projects and operations.</p> <p>Our commitment Respect the rights and interests of our business partners by working collaboratively to create valued and rewarding partnerships.</p>	<p>Business partners require an open and transparent relationship with Origin to assist joint ventures in delivering shareholder value.</p>	<p>Regular communication throughout daily operations, with additional engagement undertaken through formal meetings; representation on joint venture boards; and participation in operating committees. Origin's Code of Conduct and Supplier Selection and Engagement Directive provide guidance on fair and ethical dealings with suppliers.</p>



WE HELP BENJI AND SAM STAY COMFY

We're providing
gas to keep millions
of families warm and
cosy through winter.

As the leading Australian integrated energy company, we are constantly working to deliver today's energy needs and searching and innovating to create tomorrow's energy solutions.

ENERGY DEVELOPMENTS

Origin's development of natural resources such as gas and renewables to meet the energy needs of society, typically require large scale, capital intensive projects. This brings us into contact with a variety of stakeholders, some of whom may be impacted by our development and others who may be able to share in the benefits.

At the heart of our interactions with stakeholders are two of our company values – listening and learning. In this section of the report we discuss how we manage environmental, economic and social impacts and opportunities across our energy developments.

LAND ACCESS AND COEXISTENCE

Why it is important

Natural resources such as gas often lie below the surface of the land. Where we do not own the land, we are required to negotiate access in order to develop those natural resources. Access to other people's land may be required to accommodate infrastructure associated with our energy developments such as power stations, pipelines, wells and gas processing facilities. Land access can involve a range of landholders, who are often based in remote or regional areas, including private land owners, businesses, as well as local and state governments.

How we approach and build landholder relationships over time is important for our business. Our effective management of land access activities helps to maintain the ongoing confidence of both landholders and regulators throughout the life of our projects and operations.

Currently, while Origin is required to access land to support many of its activities, the greatest requirements relate to the Australia Pacific LNG project, which is developing CSG resources for LNG export. Australia Pacific LNG's land access activity is the primary focus of this section.

Managing land access and disturbance at Australia Pacific LNG

Origin seeks to apply a fair, transparent and well-regulated process to our land access activities, aiming to provide our stakeholders with confidence that we will conduct ourselves with due care and that they will be fairly compensated for changes caused by our developments.

We are required to comply with a range of laws, regulations, standards, codes of practice and guidelines when we access land for Australia Pacific LNG.

Our formal process for managing access to and disturbance of land is Origin's Disturbance Approvals Process. This process not only defines how we will meet our obligations under various laws, standards, codes of practice and guidelines – but also maintain respectful relationships with landholders when accessing land. Prior to the commencement of any project, we typically undertake consultation with landholders.

Our disturbance approvals are guided by safety, environmental and cultural heritage state legislation described in the Coordinator-General Report, the Queensland Land Access Code 2010, and federal legislation including the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* and *Native Title Act 1993*.

To help us build and maintain positive long-term working relationships with landholders, we assign a Landholder Relations Adviser (LRA) to all landholders. LRAs provide a single point of contact for the landholder for all land access related matters.

How the Disturbance Approval Process works

Scoping

LRAs develop Property Management Plans in consultation with landholders to identify considerations unique to each property.

Scouting

Site visits are used to verify any constraints identified during the scoping stage.

Defining layout

We work with landholders to identify infrastructure locations and the supporting activities required for construction and operation.

Approval

The proposed layout of infrastructure is verified with the landholder, and compliance with relevant policies, regulations and codes of practice confirmed.

LAND ACCESS AND COEXISTENCE AT A GLANCE

OUR PURPOSE

Establish strong landholder relationships built on trust and mutual respect to support project delivery and operations.

Laws and regulations

Our development activities at Australia Pacific LNG follow the Queensland Government's Land Access Code plus many other regulations.

Our additional actions

Origin, on behalf of Australia Pacific LNG, works with landholders to develop specific Property Management Plans which identify considerations unique to each landholder's property.

Our approach

We follow a rigorous, formal process from pre-planning through to post-activity land rehabilitation.

Our performance

During the 2015 financial year, we signed 59 compensation agreements and completed our land access activities for Phase 1 of the Australia Pacific LNG project. Origin also signed 10 compensation access agreements for its Halladale and Speculant project.

We typically write our agreements in plain English; outline how we are to access land during development; how we conduct ourselves and our business; and how the landholder is to be compensated. We give landholders sufficient time to consider our plans, provide feedback and obtain legal advice and negotiate their agreements. Once these steps have been completed, the relationship is formalised through an agreement such as a Conduct and Compensation Agreement.

Land access progress at Australia Pacific LNG

In the 2015 financial year, Origin negotiated and signed 59 compensation agreements with landholders. These compensation agreements secured access to 181 development well sites and 27 sites for exploration and appraisal activities, as well as six groundwater monitoring bores.

During the period, no land access agreements were concluded through alternative dispute resolution mechanisms or court resolution.

At the end of the 2015 financial year, compensation agreements were in place for 977 wells to support Phase 1 of the Australia Pacific LNG development, completing requirements to negotiate access to land for this part of the project. Each year, we will require access to land for new gas wells and associated infrastructure to sustain gas production over time.

The Australia Pacific LNG project is now in the process of transitioning from construction to operations.

The Australia Pacific LNG project will play an important role in delivering a cleaner source of energy to help meet growing demand for natural gas in Asia.



DELIVERING AUSTRALIA PACIFIC LNG

Origin holds a 37.5 per cent interest in Australia Pacific LNG, which along with its partners ConocoPhillips (37.5 per cent) and Sinopec (25 per cent), is developing Australia's largest CSG to LNG project, based on nameplate capacity.

ABOVE
Australia Pacific LNG project is nearing completion.

Located in Queensland and having the largest 2P CSG reserves position in Australia⁽¹⁾, the Australia Pacific LNG project will play an important role in delivering a cleaner source of energy to help meet growing demand for natural gas in Asia.

The Australia Pacific LNG export project is a two train project with a nameplate capacity of 9 million tonnes per annum of LNG. Australia Pacific LNG has committed LNG offtake agreements for approximately 20 years with Sinopec for approximately 7.6 million tonnes per annum and with Kansai Electric for approximately 1 million tonnes per annum.

Australia Pacific LNG continues to make good progress on the delivery of the CSG to LNG project and was 97 per cent complete on the Upstream and 92 per cent on the Downstream parts of the project as at 30 June 2015. At the end of the reporting period, \$25 billion⁽²⁾ had been spent. Sustained production of LNG from Train 1 is expected to be achieved from the second quarter of the 2016 financial year and from Train 2 approximately six months later.

At 30 June 2015, Australia Pacific LNG had 13,778 PJe of 2P CSG⁽³⁾ reserves, which is more than sufficient to support domestic and LNG contracts.

- (1) Energy Quest May 2015
- (2) Includes an unfavourable foreign exchange translation impact of A\$362 million relative to project cost estimates announced in February 2013, which were based on 31 December 2012 exchange rates.
- (3) At 30 June 2015. For further information refer to Origin's Annual Reserves Report for the year ended 30 June 2015, announced on 31 July 2015. Also refer to the Important Information on reserves and resources disclosures on page 68 of this report.

Additional land access activities

Outside of Australia Pacific LNG, our most significant project requiring land access during the 2015 financial year was the Halladale and Speculant project in Victoria. This is an onshore drilling program to extract gas from offshore gas reservoirs and explore the Speculant prospect. Construction of a new 33-kilometre pipeline is expected to commence in late 2015 to transport the gas to the existing Otway Gas Plant for processing. While we have existing pipeline easements with landholders, we are required to negotiate new easements for the remaining section of the pipeline, and engage with landholders to access our current easement agreements.

We must also negotiate Conduct and Compensation Agreements with landholders to ensure they are adequately compensated for disturbance and the impact on their business activities while we install the pipeline. During the period, 10 compensation agreements were concluded for the Halladale and Speculant project. All land access and compensation agreements were concluded through negotiation.

Managing landholder complaints

Australia Pacific LNG

Our LRAs, together with our Regional Community Relations staff, seek to manage complaints in accordance with our Complaints Management Plan.

In the 2015 financial year, we received 112 landholder complaints relating to Australia Pacific LNG activities. Complaints were predominantly related to concerns about workforce behaviour (e.g. failure to close private property gates and use nominated property access routes), noise, dust, as well as traffic and transport. We have undertaken a variety of measures to address these complaints including dust suppression activities and noise mitigation plans. We have also strengthened our commitment to land access codes by insisting that contractors and staff demonstrate diligence in closing gates and observing property access routes.

Halladale and Speculant project

There were no complaints from landholders in association with the new pipeline during the 2015 financial year.

Indigenous Land Use Agreements and Cultural Heritage Management Plans

Australia Pacific LNG

All of the Indigenous Land Use Agreements (ILUA) for the main pipeline and gas fields are complete. At the end of the 2015 financial year there were eight registered ILUAs and four Rights To Negotiate agreements in place, one of which was agreed and registered during the reporting period. We are committed to continued engagement with Aboriginal and Torres Strait Islander communities.



Extensive planning and stakeholder engagement helped us to minimise the social and environmental impacts of our Halladale and Speculant drilling campaign in Victoria.

We are aware of the potential for our assets and developments to impact on the environment and communities. Ahead of the Halladale and Speculant drilling, we engaged extensively with local stakeholders and put strategies into place to reduce our impacts. The use of extended reach drilling to access offshore reservoirs played a key role in minimising our impact on the terrestrial and aquatic environments and ensured there was no direct interference with the adjacent Bay of Islands Coastal Park.

With the well site situated 3 kilometres from the Great Ocean Road, and occupying dairy farming country, we commissioned a report by the Vet Group (a group of local experienced veterinarians) to explore the effects of gas flaring on animal behaviours, milk production, somatic cell count, and farm management. The study examined six dairy operations in close vicinity to the well site and advised on strategies to minimise any potential negative impact on animal health and production in the weeks leading up to the flare event, as well as during and post the event. The report found there was no observable or measurable effect on animal behaviour, farm management practices, milk production or somatic cell count data during and after the flaring events.

ABOVE
Origin's Halladale and Speculant project in Victoria.

Our Cultural Heritage Management Plans set out processes to manage and protect cultural heritage. These plans include a communication protocol, management structure and survey process to ensure cultural heritage is protected. We have nine Cultural Heritage Management Plans in place and these are being implemented across the Australia Pacific LNG project. During the 2015 financial year, there were no recorded breaches to our Cultural Heritage Management Plans.

Halladale and Speculant project

At the end of the 2015 financial year, there were two Cultural Heritage Management Plans in place at our Halladale and Speculant project. No breaches to these Plans were recorded during the period.

WATER MANAGEMENT AT A GLANCE

OUR PURPOSE

Manage our impacts on water resources to ensure water security for our business and other water users.

Laws and regulations

Water management is governed by extensive federal and state laws and regulations including the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) and Queensland's *CSG Water Management Policy* and *Water Act 2000*.

Water use is governed by various state licences.

Our additional actions

Origin has constructed an integrated water distribution system at Fairymeadow Road, Queensland, delivering 8,160 ML of treated CSG water to landholders this year.

The first operational aquifer injection schemes by the CSG industry have been developed by Origin at two sites to help replenish the Great Artesian Basin reserves.

Our approach

Our water management program is governed by strict conditions imposed by law, and we make additional commitments as outlined in Origin's Water Management Directive.

Our performance

In the 2015 financial year, the total volume of water withdrawn across Origin's activities increased by approximately 6 per cent to 2,588,958 ML⁽¹⁾.

WATER MANAGEMENT

Why it is important

Effective and responsible management of water is important for our business, the community and the environments in which we operate. We come into contact with water in many of our activities, including gas production and power generation, and we understand that how we use, re-use or dispose of water is of considerable interest to a wide variety of stakeholders.

Water management is a key issue at two assets, the Australia Pacific LNG project for which Origin is Upstream operator, and the Eraring Power Station. The two business activities are described separately below.

In the 2015 financial year, the total volume of water withdrawn across Origin's activities increased by approximately six per cent to 2,588,958 ML⁽¹⁾. The majority (99 per cent) of water withdrawn⁽²⁾ related to our activities at the Eraring Power Station, with most of this water returned to Lake Macquarie.

The majority of the remaining water is produced water withdrawn by Australia Pacific LNG, which totalled 16,760 ML in the 2015 financial year. Of this, approximately 87 per cent was converted to clean water for beneficial use.

Water at Australia Pacific LNG

Approach to CSG water management

Origin's CSG water management programs take into account legislative requirements and conditions specified in our permits and agreements with stakeholders. We endeavour to minimise our reliance on external water resources and maximise the treated water we can provide for use by others.

We regularly engage with stakeholders, including governments and scientific organisations such as CSIRO and Gas Industry Social & Environmental Research Alliance (GISERA), as we implement ongoing research and monitoring programs to quantify and predict the potential impacts, risks and benefits arising from our water use.

As the Upstream operator, we manage water at Australia Pacific LNG by:

- studying and monitoring underground water systems;
- drilling wells which extract water and gas from coal seams;
- pumping extracted water, which is typically brackish, up the wells and via gathering pipelines to water treatment facilities;
- treating the extracted water at water treatment facilities to remove the salt and purify it to potable quality or as applicable to the required quality for end use; and
- providing the majority of the treated water for beneficial use.

Extracting water and gas from the coal seams

The production of CSG requires the lowering of water pressure within the coal seams through the extraction of some groundwater to allow gas to flow to the surface.

In the 2015 financial year, produced water increased by 150 per cent to 16,760 ML, reflecting higher CSG water production associated with the commencement of all Australia Pacific LNG's Phase 1 development wells.

Drilling wells

To extract gas, we use wells that are encased in steel and sealed with cement to prevent any water and CSG from entering the surrounding rock formations and mixing with aquifers.

Our Well Integrity Management Plan prescribes the monitoring and maintenance required to provide assurance that wellbores comply with the Queensland Government Code of Practice. Our well construction, design and operations are also mandated with this Code of Practice.

Hydraulic fracture stimulation, or fracking, is a process that is applied to some, but not all CSG wells. It has been used safely around the world for several decades. Hydraulic fracturing involves pumping a fluid mixture of predominantly water and sand under pressure through the wells to open existing rock, to improve the flow of gas to the surface. The additives used in fracturing fluids are regulated by the Queensland Government and are listed on the Australia Pacific LNG website.

In the 2015 financial year, 37 wells or approximately 10 per cent of all wells drilled required hydraulic fracturing.

Monitoring underground water systems

Our knowledge of hydrogeology is continually being updated through the drilling of new water bores and CSG wells; geological analysis of information obtained from this drilling, the establishment of monitoring wells and monitoring systems, and the analysis of groundwater pressure and water quality data collected by these systems.

There are currently more than 127 monitoring points installed by Origin as part of Australia Pacific LNG.

Make Good agreements

CSG related water extraction is generally not expected to significantly impact farm groundwater supplies. However, in some cases CSG activity could affect bore water levels in specific locations. Where reduced groundwater availability is identified as a result of CSG production, we are required to make good any impacts.

The Surat Underground Water Impact Report initially identified 40 bores for Make Good agreements with Australia Pacific LNG. As we progress through ongoing operations and assessments, bores may be added or removed from the Make Good agreements assessment list.

At 30 June 2015, there were 47 bores confirmed or under assessment for Make Good agreements amongst 28 landholders in association with Australia Pacific LNG. As at 30 June 2015, 13 Make Good agreements had been signed by Australia Pacific LNG and 15 were the subject of ongoing negotiations with landholders.

(1) Excluding LPG.

(2) This includes surface, groundwater, rain, third party waste and Municipal water.



INNOVATIVE PROJECT SHARES TREATED CSG WATER WITH LANDHOLDERS

Australia Pacific LNG's innovative *Water to Landholders* project is delivering high-quality, treated CSG water to participating farmers via a purpose-built pipeline along Fairymeadow Road, near Miles in Queensland.

A key element of success for this project has been close engagement with landholders to secure pipeline licences, gain access to land and provide irrigation quality water while completing complex tasks in parallel. By spending time with the local landholders and listening to what they wanted, we have delivered a very positive outcome for the local community.

Launched in April 2014, the Fairymeadow Road Irrigation Pipeline scheme has been developed to maximise the beneficial use of the treated water produced from Australia Pacific LNG's Condabri and Talinga gas facilities over the next 15 to 20 years.

The project, delivered by Origin on behalf of Australia Pacific LNG, involved the construction of a 1,873 ML irrigation storage dam located on Origin's Monreagh property, a pump station located at the dam, a 22-kilometre pipeline along Fairymeadow Road, and offtake points for each of the seven participating landholders.

CSG water is treated to Australian irrigation standards at the Condabri and Talinga Water Treatment Facilities via reverse osmosis.

The water is then distributed through the pipeline that runs along Fairymeadow Road, and is either provided to landholders, or sent to the Monreagh Dam, which provides a buffer to balance the water production and landholder demand.

The scheme is a practical application of the Queensland Government's *Coal Seam Gas Water Management Policy (2012)* which requires CSG companies to find beneficial uses for treated CSG water, and demonstrates how the agricultural and resources industries can work together to develop shared benefits.

ABOVE

Miles landholder Ash Geldard, is part of Australia Pacific LNG's *Water to Landholders* project.

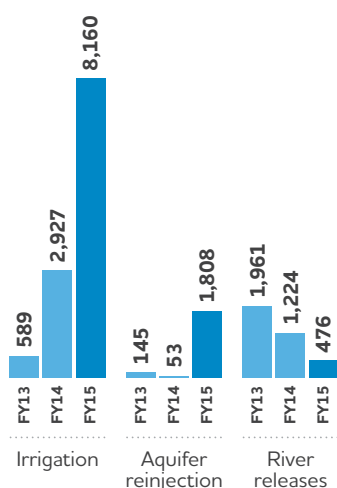


DISCOVER
MORE
ONLINE

In the 2015 financial year, the Fairymeadow Road Irrigation Pipeline Scheme supplied 8,160 ML of CSG water to landholders.



CSG WATER MANAGEMENT (ML)⁽¹⁾



Treating CSG water

CSG water naturally contains high salt levels, which generally means that it needs to be treated before it can be considered for other uses.

Origin has installed a combined CSG water treatment capacity of 112 ML per day across four water treatment facilities. The water sent is treated via filtration and Reverse Osmosis (RO) to remove dissolved salts and impurities. The treatment process has a capacity to convert approximately 87 per cent of produced water to clean water which is suitable for a range of beneficial uses by others. The remaining portion, which contains the removed salts, is directed to brine ponds.

Of the 16,760 ML of produced water withdrawn during the period, approximately 14,581 ML or 87 per cent was converted to clean water for beneficial use.

Water for beneficial use

We consult with local communities and government to determine the preferred uses for treated water. In March 2014, we constructed the Fairymeadow Road Irrigation Pipeline Scheme to provide treated water from the Talinga and Condabri water treatment facilities to landholders to supplement both existing and new irrigation and stock watering.

During the reporting period, river releases decreased while other uses, including irrigation and aquifer injection, substantially increased.

Water to landholders

The Fairymeadow Road Irrigation Pipeline Scheme provides irrigation water to seven participating landholders along Fairymeadow Road. In the 2015 financial year, the scheme applied 8,160 ML of CSG water to landholders. Our Water to Landholders program is outlined further on page 21 of this report.

Aquifer injection

In western Queensland, there has been some groundwater decline over the past 100 years as water has been withdrawn to support towns and sustain industry and business. Aquifer injection offers the potential to replenish depleted aquifers using treated water.

During the 2015 financial year, Australia Pacific LNG's aquifer injection schemes at Reedy Creek and Spring Gully commenced operation with a combined injection capacity of 48.1 ML per day. In the 2015 financial year, the volume of CSG water used for aquifer injection increased significantly to 1,808 ML as the program transitioned from trial to production.

The aquifer injection programs developed by Origin are the first within the CSG industry in Queensland. The Reedy Creek aquifer injection scheme is currently the largest treated water managed aquifer recharge scheme in Australia, with design capacity to replenish the aquifer with 40 ML of treated CSG water per day.

River releases

We currently have regulatory approval for releases of treated water to rivers. We are required to monitor sections around our release points along the rivers, and identify and describe the extent of any adverse environmental impacts on the local environmental values associated with our activities.

In the 2015 financial year, releases to rivers decreased 61 per cent to 476 ML, reflecting the increase in the delivery of treated water to beneficial uses such as irrigation.

Brine management

The salts which are removed during the RO process are captured within a brine waste stream, which is sent to specifically designed and lined brine ponds to undergo further evaporation and concentration. The base case for the management of brine generated from our water treatment process, as identified in Australia Pacific LNG's approved Environmental Impact Statement, is the crystallisation of salts and disposal of the salt in a suitably designed landfill which is managed under strict regulations.

As we develop our long-term Brine Management Strategy, we manage our brine ponds and pond development to ensure Australia Pacific LNG has adequate capacity to meet its ongoing production needs.

Water for our power generation activities

Water is used in the operation of Origin's coal and gas-fired power plants.

The black coal-fired Eraring Power Station in New South Wales uses the vast majority of our water in this part of the business. The extraction of water to support power generation activities is regulated by operating licences.

At Eraring, water is managed in accordance with a documented Water Management Plan. The power station uses water for operations, fire services and domestic use, and utilises water from Lake Macquarie for cooling. Following its use, this water is returned to Lake Macquarie with minimal evaporative losses. The location of the power station on the shores of Lake Macquarie and its design becomes particularly important during periods of water scarcity. Eraring has a comparatively lower impact on the local water supplies compared with power stations reliant on other municipal water supplies.

Eraring Power Station

In the 2015 financial year, the total volume of surface water used by the Eraring Power Station for cooling purposes increased by 4.9 per cent to 2,568,737 ML, which is directly attributable to an increase in power generation. For the 2015 financial year, the Eraring Power Station generated 13,320 GWh of electricity, which represented a 17 per cent increase on the previous financial year.

Our licence conditions permit the return of a maximum of 11,000 ML of salt water per day to Myuna Bay in Lake Macquarie via the outlet canal, with a maximum temperature of 37.5 degrees Celsius. In the 2015 financial year, we operated within this temperature limit every day of the period and returned an average of 7,018 ML per day, up from an average of 6,684 ML per day in the prior year.

(1) This chart excludes water held in storage and water used for construction.

IMPACT ON COMMUNITIES

Why we must manage our impact

Our operations involve construction and operation of large-scale infrastructure such as power stations, gas processing facilities, pipelines as well as smaller scale infrastructure such as CSG gas wells. This infrastructure is typically located in rural and regional areas with varying degrees of impact on local communities. The life of energy assets can be several decades, so we have a long term presence in the communities in which we operate.

We respect the rights and interests of communities by listening to people to understand their feedback and concerns about our activities. We seek to respond to identified community needs and invest in measures to alleviate the environmental, economic and social impacts of our operations. Our Community Directive guides how we do this.

When we are involved in large, capital-intensive energy projects, such as the Australia Pacific LNG project, people living near our operations can be affected by increased traffic, noise and dust. They may also be affected by socio-economic factors, such as increased housing costs and competition for labour. Origin's challenge is to manage these impacts effectively, through proactive, collaborative action with communities.

Managing project impacts on local communities

Australia Pacific LNG is the largest project in which we are currently involved, and also the project with the most significant impact on its neighbouring communities. Origin has a 37.5 per cent interest in Australia Pacific LNG and is the Upstream operator, responsible for development of the gas fields and the pipeline that connects the fields to Curtis Island, located off the coast of Gladstone.

The management of impacts associated with this project is governed by a Social Impact Management Plan (SIMP), which identifies actions Australia Pacific LNG will undertake alone or in cooperation with its contractors and other stakeholders to mitigate negative social impacts arising from the project on the communities in which it operates. The SIMP provides for specific actions relating to housing, workforce training, community health and safety, as well as community investment, local content and land access. It is available to download from the Australia Pacific LNG website.

At the end of the 2015 financial year, the Australia Pacific LNG project was transitioning from its construction phase to its operations phase, bringing with it changes to the nature of these impacts. To understand these changes to impacts and identify opportunities to build capacity in the community during the transition of operations, we undertook targeted stakeholder engagement during the year. We will continue this engagement as we develop and implement our updated impact management and community development plans with a focus on local spend and employment opportunities.

In the gas fields, three Regional Community Consultative Committees in Maranoa, Western Downs and Banana Shire provide forums where we engage with local communities. Established in 2011, they regularly meet with community representatives to discuss current challenges, and what can be done to address them.

These forums will continue to provide us with important feedback as the project transitions to operations.

We hold regular meetings with local governments, government departments and community organisations, attend community events and functions, and advertise in local media outlets to provide communities with information about, and to seek feedback on, our activities.

We also continue to invest in research to better understand the impacts of the broader CSG industry through a \$10 million commitment to GISERA, which Australia Pacific LNG established in 2011 with the CSIRO. In March 2014, QGC also joined the alliance. During the 2015 financial year, the socio-economic research team contributed to various peer review papers, and technical reports, covering issues around reversal of rural community decline, community resilience and community expectations of the industry. These papers are available at www.gisera.org.au.

Traffic and transport

Increased traffic and use of large transport vehicles on local roads continues to be one of the most visible impacts of the Australia Pacific LNG project. While our presence on local roads reduces as the project transitions from construction to operations, road safety remains a high priority for the community.

We have implemented a range of road safety measures such as restrictions on vehicle speed limits, movements in peak periods including Christmas, and in-vehicle monitoring systems. We have also invested in road infrastructure to upgrade busy roads and repair any damage caused by traffic increases.

We have also contributed to a CSG industry Logistics Safety Code of Practice, and our Land Transport Directive puts in place measures for employees, contractors and suppliers to minimise the risk of traffic incidents.

In the 2015 financial year, we launched a driving simulator to build the confidence and competency of local drivers behind the wheel. The *Road Safety* program is in partnership with the Queensland Police-Citizens Youth Welfare Association. The mobile program operates throughout the Darling Downs and Surat Basin region, based out of Police Citizens Youth Clubs (PCYC) in Roma, Dalby, Toowoomba and Biloela. Four state-of-the-art driving simulators are permanently stationed at the PCYC centres.

IMPACT ON COMMUNITIES AT A GLANCE

OUR PURPOSE

Minimise our impact on communities in association with the Australia Pacific LNG project.

Laws and regulations

The Queensland Coordinator-General approved Australia Pacific LNG's Environmental Impact Statement and Social Impact Management Plan with strict conditions and these form the basis of our approach.

Our additional actions

With the CSIRO we established GISERA, a major research alliance which studies the socio-economic impacts associated with the CSG industry.

Our approach

We follow a rigorous process outlined in our Community Directive which includes community engagement, impact assessment, mitigation strategies and ongoing monitoring and reporting.

Our performance

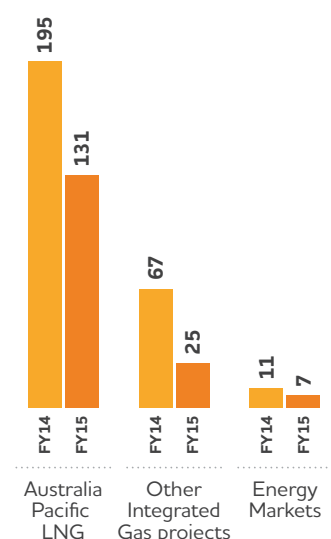
In the 2015 financial year, we launched a driving simulator – *Road Safety* program in partnership with the Queensland Police-Citizens Youth Welfare Association, and completed the development of our second affordable housing project in Roma.

RIGHT

A mix of two and three bedroom townhouses was funded by Australia Pacific LNG in partnership with Maranoa Regional Council and non-for-profit housing provider Horizon Housing.



COMMUNITY COMPLAINTS RECEIVED



Housing affordability

Australia Pacific LNG's housing strategy has targeted population centres near our gas fields, providing funding towards private housing market development and affordable housing programs.

While the composition of our workforce at the Australia Pacific LNG Upstream project is changing, housing affordability still affects many regional areas in which we operate.

During the 2015 financial year, we completed the development of our second affordable housing project. Located in Roma, the housing was built in partnership with Horizon Housing and Maranoa Regional Council. A total of 10 new two and three bedroom townhouses will help increase the availability of quality affordable housing in the Western Downs and Maranoa regions.

In February 2015, we also formalised an agreement with Horizon Housing to invest up to \$2 million to purchase existing dwellings in Miles to rent affordably. This initiative completes our investment in affordable housing for the construction phase of the Australia Pacific LNG project.

Managing community impacts across our generation portfolio

Origin has assessed the potential for our power generation fleet to impact on the communities in which they operate. Four of our power stations have the potential to significantly impact the community, for varying reasons.

At 2,880 MW, Eraring Power Station in New South Wales is both Origin's and Australia's largest power station. Eraring plays a critical role in providing a reliable and secure supply of electricity to the people of the state. Potential impacts on the community arising from the power station include visual amenity, dust from the black coal which fuels the power station and water quality.

The Eraring Power Station Community Forum was established in December 2002 to provide a platform for dialogue with community representatives.

The role of the Eraring Power Station Community Forum is to:

- enhance communication between Origin and the local community;
- enhance Origin's understanding of community issues in relation to Eraring Power Station as they arise;
- enhance stakeholder and community understanding of Origin and Eraring Power Station; and
- provide a forum through which stakeholder and community input into proposed community development activities can be sought.

Origin is also a member of the Lake Macquarie City Council Coastal and Estuary Management Committee and the Lake Macquarie City Council Air Quality Reference Group.

Managing community complaints

Across Origin, we seek to actively monitor feedback from the community and provide formal mechanisms for recording and responding to complaints. The majority of community complaints received by Origin relate to the Australia Pacific LNG project.

In the 2015 financial year, Australia Pacific LNG received 131 complaints from the community in relation to its gas field activities. Complaints were predominantly related to concerns about workforce behaviour, traffic and transport, local content, dust and noise.

There has been a steady decline in the receipt of complaints compared to previous periods, which is consistent with the Australia Pacific LNG project moving from construction to operations. In particular, traffic and transport complaints have reduced significantly, highlighting our reduced presence on local roads.

Complaints are typically managed in line with our internal grievance procedures. At the end of the 2015 financial year, there were five complaints relating to Australia Pacific LNG; and two complaints relating to our Energy Markets business which are pending resolution. Across our other Integrated Gas projects all complaints were resolved.

SHARING ECONOMIC BENEFITS

Creating economic value for communities

When we build and operate our facilities we create economic value. Our energy developments often require significant capital expenditure with local, regional and national communities benefiting through:

- procurement of goods and services from local suppliers when possible;
- creation of employment opportunities;
- investment in needed community infrastructure and services; and
- payment of taxes and royalties.

Origin's approach to distributing economic benefits to local communities is outlined in our Community Directive. We aim to take a sustainable and long-term approach to providing value to local communities, by ensuring that the regions in which we operate can sustain themselves as well as our operations during and after the development of every project.

We endeavour to tailor our activities to the specific needs and aspirations of the communities in which we operate. In our experience, local businesses and other community members are keen to participate in our projects through employment or as suppliers of goods and services. While we strive to meet these aspirations, we also recognise that businesses in small, regional communities cannot always meet the demands of large-scale energy projects.

The Australia Pacific LNG project is the largest project in which we are currently involved, and creates significant economic benefits at a regional, state and national level.

Procuring local goods and services

The Australia Pacific LNG project's Local Content Policy and associated strategy outlines how we provide opportunities for local businesses to participate in the project. The strategy includes training and development initiatives to build capacity in local businesses, as well as our Regional Buy Program. Australia Pacific LNG employs a dedicated team to implement its Local Content Strategy.

During the period, more than 360 suppliers attended our Regional Buy Program workshops in the Surat Basin. Regional suppliers are a defined group within our Local Content Policy and require additional support to ensure inclusion in commercial opportunities, and competitiveness in providing goods and services. Our dedicated team also helps suppliers to identify and capitalise on regional buy opportunities associated with the operational and maintenance requirements of the project.

Since 2011, Australia Pacific LNG has referred businesses to Queensland's Department of State Development, Infrastructure and Planning for business diagnostics and development. This has enabled local businesses to develop skills and become pre-qualified for our project, as well as other projects in the region. As Australia Pacific LNG transitions to the operations phase, the team will continue building local capability through collaboration with state and local governments.

At the end of the 2015 financial year, expenditure on Australia Pacific LNG had reached \$25.0 billion⁽¹⁾. A significant proportion of Australia Pacific LNG expenditure has been incurred on goods and services in Australia.

Encouraging local employment

Origin, as the gas fields and pipeline operator for Australia Pacific LNG, is a major regional employer. At the end of the period, Origin employed 736 workers at the Australia Pacific LNG project, which remained stable on the prior period⁽²⁾.

Through the Surat Basin Live Local financial incentive, Origin and Australia Pacific LNG also encourages permanent employees to relocate to the region. At the end of the period, 283 Origin employees lived in the region, an increase of 12 per cent on the prior period.

Increasing Indigenous participation in our business

During the period, we introduced a number of initiatives to increase Indigenous participation in our business. Through our support of the Thornhill Indigenous Training Centre and partnership with Many Rivers, we have focused on supporting Aboriginal and Torres Strait Islander peoples' access to skills, training and small business development.

Community investment

In the 2015 financial year, Origin invested \$8.9 million in the communities in which it operates. A total of \$8.4 million⁽³⁾ related to expenditure at Australia Pacific LNG.

Community investment initiatives at Australia Pacific LNG

For Australia Pacific LNG, our regional community investment programs are designed to support sustainable population growth, the development of skills, education and training, community safety and wellbeing, and natural resource stewardship.

Since commencement of the project, Origin, as the Upstream operator of Australia Pacific LNG, has spent \$18.3 million on community investment. The types of community investment are illustrated in the adjacent chart.

During the period, we also committed to new programs in the areas of emergency services and Indigenous training as follows:

- Queensland Fire and Emergency Services (QFES) provides important emergency services across the Surat Basin. Australia Pacific LNG partnered with QFES, contributing \$663,700 for the purchase of defibrillators, slip on units, trailer units, lighting units and lighting trailers and distributed amongst the Rural Fire Service and the SES;
- The Thornhill Indigenous Training Centre delivers CSG-LNG industry-focused training, including programs in camp management, hospitality, transport and security. Australia Pacific LNG has committed \$482,000 to part fund an upgrade of the Centre. This upgrade will increase the capacity of the Centre, with 15 per cent of placements reserved for Indigenous peoples from the Western Downs, Maranoa and Banana Shire over the next five years.

SHARING ECONOMIC BENEFITS AT A GLANCE

OUR PURPOSE

Share economic value generated by our operations and developments.

Laws and regulations

The Australia Pacific LNG Environment Impact Statement and Queensland Coordinator-General's report on the EIS guide how we create value from our activities.

Our additional actions

We employ a dedicated Local Content Team and implement a Regional Buy Program.

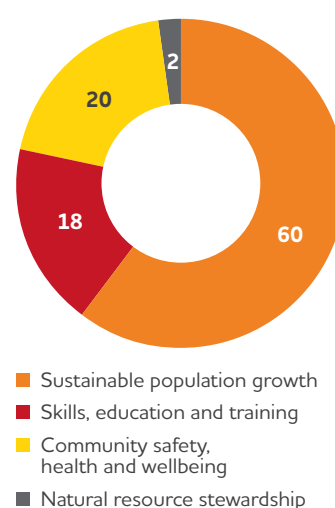
Our approach

A Local Content Strategy guides how we create opportunities for local businesses to participate in the Australia Pacific LNG project.

Our performance

Since commencement of the Project, Origin as the Upstream operator of Australia Pacific LNG has spent \$18.3 million on community investment.

AUSTRALIA PACIFIC LNG UPSTREAM COMMUNITY INVESTMENT
\$18.3 MILLION BY THEME⁽⁴⁾ (%)



(1) Includes an unfavourable foreign exchange translation impact of A\$362 million relative to project cost estimates announced in February 2013, which were based on 31 December 2012 exchange rates and around \$500 million of accrued expenses.

(2) Employee numbers for FY2014 restated to 748.

(3) This is calculated as community investment including infrastructure investments and services supported, programs undertaken either as economic development or impact mitigation, in kind contributions or work undertaken pro bono in accordance with our Social Impact Management Plan.

(4) As at 30 June 2015.

Creating lasting value through regional investment

In the 2015 financial year, our long-running community investment programs and partnerships continued in the following areas:

- Origin's *Community Skills Scholarships* program has supported more than 157 local apprentices by funding scholarships with a total value of up to \$2 million, as at 30 June 2015;
- Origin continued its work with the Queensland Government to support the Western Downs Regional Council to deliver the Miles water and sewerage treatment plant and network upgrade. Australia Pacific LNG contributed \$1.4 million towards the \$24.4 million upgrade, which became operational in 2015. Importantly, the project alleviates the pressure on the town's treated drinking water supplies by providing additional capacity to meet population growth;



FIGHTING FIRES AND HAZARDS IN QUEENSLAND

The partnership between Origin and Queensland Fire and Emergency Services ensures that rural fire fighters and volunteers on the front line are better equipped to protect communities for the long term.

Rural fire brigades and State Emergency Service groups across South West Queensland have been boosted by donations of equipment and improvements to infrastructure from Origin, on behalf of Australia Pacific LNG. This enables local brigades and Origin to better manage fire and hazard mitigation activities in areas that may affect our infrastructure, employees and the community.

ABOVE
Origin, Manager Natural Resources, Scott Cawley with QFES Commissioner Katarina Carroll, Richard Schokman (QGC), Miles Fire Station captain Ray Duncombe (in fire truck) and Toowoomba Regional Communications Manager Gail Moran.

Australia Pacific LNG entered into a one-year sponsorship agreement of more than \$660,000 to support community safety projects for the Rural Fire Service Queensland and SES in the South West Region in December 2014. It will also include an update to the Chinchilla Airbase, providing a strategic base during times of natural disaster, with a rapid, cost effective and efficient air operation.

QFES Commissioner Katarina Carroll thanked Australia Pacific LNG for its support which has already delivered nine Automatic External Defibrillators to rural and auxiliary fire stations, in Chinchilla, Roma, Miles and Injune. In addition, 24 lightweight lighting units have been delivered to 12 SES groups and storage facility upgrades have been completed in Chinchilla, Miles and Tara to ensure SES volunteers can adequately maintain life-saving equipment.

"We've also seen 10 slip on and 10 trailer portable fire fighting units distributed to 20 rural fire brigades across South West Queensland in recent months. These units will equip brigades for what is forecast to be a busy bushfire season."

- Origin's support for the *Queensland CSG Industry Schools Program* continued for its second year. The program is designed to raise the profile, awareness and participation in science, engineering; mathematics and technology among students in the Surat Basin.
- The *Origin Schools* program is open to students from state and independent schools throughout the Surat Basin, from Dalby to Roma and surrounding communities. The programs are delivered by approved third-party educational program providers and include the *Wonders of Science* program run by the Academy of Technology Sciences and Engineering, the *Power of Engineering* program run by Power of Engineering Inc.; the *Try A Trade* program run by Construction Skills Queensland and QMI Solutions; and *Re-Engineering Australia's F1 in Schools Technology Challenge*;
- The *Health Research Partnership* with the Wesley Research Institute and Australia Pacific LNG is a two-year research project. The institute conducts research into regional health issues to better inform private and public investment in health improvement initiatives. Origin, as the Upstream operator, has committed \$500,000 towards this initiative which is matched with funding from the Downstream operator, ConocoPhillips; and
- Origin's partnership with *Many Rivers* provides support for Local Traditional Owners and Indigenous Australians to develop their own business or entrepreneurial venture. *Many Rivers* is a not-for-profit organisation that offers local enterprise development, practical business support, and finance to support individuals and small start-up businesses. We have worked with the Department of State Development, Infrastructure and Planning to identify a number of businesses that are ready to harness the type of support offered by *Many Rivers*, to both the Indigenous and non-Indigenous communities in the Darling Downs.



CONTRIBUTING TO THE COMMUNITY

Origin joins Western Downs Regional Council and the Queensland Government to provide the Miles community with robust, essential utilities infrastructure that will meet the needs of the township well into the future.

Origin, together with the State Government, contributed funds to the Western Downs Regional Council's Wastewater Treatment Plant project in Miles, which included a new \$6.6 million reverse osmosis potable water treatment plant, recycling scheme, and utilities pipeline upgrades.

The new pieces of infrastructure are designed to boost the overall capacity of the existing Miles treatment plant to ensure residents have a reliable and consistent supply of good quality drinking water. As part of the project, a recycled water scheme for open space irrigation will be developed, alleviating pressure on the town's potable or treated drinking water supplies. Miles Golf Course will be the first beneficiary of the recycled waste water.

The capital works project in Miles is a significant and successful collaboration to deliver essential infrastructure for the local community, creating a strong and lasting outcome for the region.

Council Mayor Ray Brown welcomed the contribution when speaking with the ABC TV's Landline program in June 2015, "What the CSG industry and the energy sector has done with Western Downs over the past two years is to upgrade the infrastructure that should have been upgraded over the past 50 years.

"So the last time we had major upgrades to our water and sewerage was actually after the Second World War. So we've renewed everything. So for the next 50 years, we've got a very good legacy ahead of us," he said.

"What the CSG Industry and the energy sector has done with Western Downs over the past two years is to upgrade the infrastructure that should have been upgraded over the past 50 years."

Ray Brown
Western Downs
Regional Council Mayor

ABOVE
The town of Miles in Queensland, where Origin contributed to the upgrade of the water and sewerage network.

BIODIVERSITY AT A GLANCE

OUR PURPOSE

Manage, mitigate or offset adverse biodiversity impacts, and where possible enhance biodiversity values.

Laws and regulations

In Australia, biodiversity management is governed by the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC) as well as various state-based legislation.

Our additional actions

Australia Pacific LNG supports terrestrial and marine biodiversity research through GISERA.

Our approach

Origin's assessment process identifies whether biodiversity may be impacted or placed at risk. We then undertake our activities in a way that minimises impacts on biodiversity values and tries to ensure there is no impact outside of authorised areas.

Our performance

In the 2015 financial year, our projects posed no material danger to threatened species or ecological communities, and there were no unauthorised disturbances in or adjacent to, protected areas or areas of high conservation value outside of protected areas.

BIODIVERSITY

Why it is important

At Origin, we take seriously our responsibility to manage the environment. We are committed to minimising the impact of our operations to the biodiversity of the areas in which we operate. Our development activities and operations span both marine and terrestrial environments across a wide geographical area, and therefore have the potential to impact a range of plants, animals, micro-organisms and their ecosystems.

We seek to identify and assess biodiversity values and where impacts are likely, implement measures to mitigate them. The scale of the Australia Pacific LNG project has the greatest potential to impact biodiversity and is the primary focus of this section.

Managing biodiversity impacts is important to many of our stakeholders, including state and federal governments, communities and conservation groups. Strict government regulations result in the thorough and transparent management of biodiversity.

Our approach to managing biodiversity

Origin aims to identify potential biodiversity impacts and develop and implement mitigation measures or offsets to reduce biodiversity risks and where possible enhance biodiversity values. These measures include the protection of high biodiversity values and related potential impacts across marine and terrestrial environments.

Legislative requirements for managing biodiversity impacts vary between individual countries and states. In Australia, our approach to managing biodiversity has to comply with the requirements of the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* as well as various state-based legislation.

For the Australia Pacific LNG project we are required to obtain the necessary environment approvals. Our approval conditions require us to complete ecological and pre-clearance surveys for our proposed areas of disturbance. For those activities that potentially disturb threatened ecological communities and flora and fauna species listed under EPBC (Matters of National Environmental Significance) these survey reports are published on the Australia Pacific LNG website.

Planned disturbance and reinstatement is detailed in the Plan of Operations for the Australia Pacific LNG operating areas. For the actual disturbed areas, our conditions of approval require reinstatement and rehabilitation⁽¹⁾ to an agreed land use.

Assessing and minimising biodiversity impacts

Our assessment process identifies whether biodiversity may be impacted or placed at risk by a specific project, site or activity. During this process we record:

- legally protected or recognised areas and species;
- species, ecosystems and natural areas with special conservation status, such as conservation-significant flora and fauna, and rare and threatened species listed regionally and nationally;
- vegetation and habitat condition, fauna movement corridors and species diversity;
- biodiversity considered to be of significant value; and
- views of relevant external and internal stakeholders.

Once the biodiversity assessment is complete, site construction plans are developed to minimise our impact and avoid potential threats to the viability of species or communities. We undertake activities in a way that minimises habitat loss and/or degradation. We try to ensure there is no negative impact on biodiversity outside authorised activity areas, taking care to avoid introducing weeds and pests that may have an impact. If protected flora or fauna is located within an area of activity and disturbance is unavoidable, we implement where appropriate, programs to compensate for these impacts.

Our 2015 performance

The Australia Pacific LNG project's gas fields are located in Queensland's Surat Basin on the Western Downs. The operational area of Phase 1 of the project covers approximately 742,000 hectares. The area is active with agriculture, mining and transport and includes a wide band of Acacia wooded grassland between coastal tropical rainforest and the semi-arid interior of Queensland. The clearing of remnant vegetation for wells and infrastructure and the associated impact on terrestrial vegetation and fauna species is the most significant biodiversity impact of the project.

As the Upstream operator of Australia Pacific LNG, we implement threatened species management plans. These plans are available on the Australia Pacific LNG website.

In the 2015 financial year, there were no unauthorised disturbances in or adjacent to protected areas or areas of high conservation value outside of protected areas.

(1) *Environment Protection and Biodiversity Conservation Act, 1999 (EPBC Act).*

Offsets

Australia Pacific LNG's offsets aim to secure strategic environmental areas with the following values: Great Barrier Reef World Heritage values; threatened ecological communities; endangered and of concern remnant and high value regrowth vegetation; marine habitat; wetlands; watercourses; threatened flora; and habitat for threatened fauna.

During the 2015 financial year, substantial progress towards providing direct offsets and indirect offsets were made.

Direct offsets

Australia Pacific LNG's two key offsets in the gas fields are at Dukes Plain and Inverness. The Dukes Plain property is located south of Theodore in Central Queensland and will provide offsets for threatened ecological communities, endangered and of concern vegetation and associated threatened fauna habitat. The Inverness offset property is located on the ranges west of Gladstone and is where translocation of threatened flora species removed from the pipeline corridor is taking place.

In December 2014, a draft of the Dukes Plain Offset and Rehabilitation Management Plan was submitted to the Federal Government detailing the conservation outcomes and management objectives for Brigalow and semi-evergreen vine thicket threatened ecological communities and associated threatened fauna habitat. The offset and management plan has been developed with inputs from extensive field surveys and advice from scientific experts. On-ground management activities including trials to optimise the growth of Brigalow, ecological and cultural heritage surveys for the establishment and maintenance of fire breaks and pest and grazing management activities were also implemented across the Dukes Plain property during the period.

The Dukes Plain offset addresses the majority of our gas field offset obligations. We commenced negotiation with a landholder for an additional direct offset site to fulfil the remainder of the Phase 1 state and federal project offset requirements in early 2015.

In May 2015, the Inverness Offset Area Management Plan was approved by the state and federal governments. The management plan identifies the objectives and actions to be undertaken in the offset area, including the establishment of *Cycas megacarpa* and *Acacia pedleyi*. We also finalised negotiations with the landholder to legally secure the offset area through a voluntary declaration in June 2015.

During the 2015 financial year, 261 individual species of *Cycas megacarpa* were successfully translocated in accordance with the *Cycas megacarpa* Management and Translocation Plan to the Inverness offset area. In addition, a total of 1,600 salvaged and propagated *Rutidosia lanata* individuals were translocated to the Rockwood offset area in September 2014.

Indirect offsets

Australia Pacific LNG continues to support the conservation of the Fitzroy River turtle through a nest protection program managed by Greening Australia and the Fitzroy Basin Association.

During the year's nest protection survey period from September to December 2014, 41 nests were protected or successfully hatched. Three hundred turtle hatchlings safely left the nests to return to the surrounding environment. The predation rate observed in the survey area was successfully reduced to 53 per cent, an improvement on the 65 per cent obtained in the prior period, and significantly better than the 90-100 per cent predation rates observed in previous years where no protection activities occurred.

There were no unauthorised disturbances in or adjacent to protected areas or areas of high conservation value outside of protected areas.

BELOW

Australia Pacific LNG's right of way for its main pipeline has been rehabilitated and revegetated.



We timed the survey to start after the southern right whale calving season and end before the peak of the blue whale migration period to ensure minimal interaction.

Our additional actions

In the 2015 financial year, Australia Pacific LNG continued to support terrestrial and marine biodiversity research through GISERA. Research projects conducted in the reporting period included the following:

- priority threat identification, management and appraisal (terrestrial biodiversity);
- fire ecology of grassy woodlands (terrestrial biodiversity);
- habitat selection by two focal species; and
- an integrated study of the Gladstone marine system (marine environment).

Other biodiversity impacts

Outside of the Australia Pacific LNG project, our other gas development projects posed no material danger to threatened species or ecological communities, with regard to biodiversity impact. In addition, there were no unauthorised activities or incidents that materially impacted biodiversity in any project areas.

During the 2015 financial year, we undertook the Enterprise 3D seismic survey in a near shore area of the Otway Basin in Victoria. This area is a potential habitat for three threatened marine mammal species: the blue whale (*Balaenoptera musculus*), the humpback whale (*Megaptera novaeangliae*) and the southern right whale (*Eubalaena australis*).

To reduce the potential for interactions with these marine animals, we timed the survey to start after the southern right whale calving season and finish before the peak of the blue whale migration period. Aerial surveys were conducted prior to commencement of the seismic survey to provide confidence that southern right whales had left the region. During the survey, 12 experienced marine mammal observers were stationed across five vessels and were authorised to stop the survey if whales were sighted within defined distances from the acoustic source. Separate sightings of humpback whales occurred during the survey but no blue whales or southern right whales were sighted.

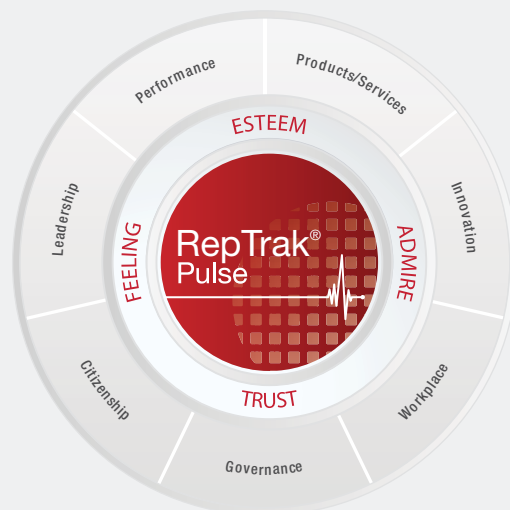
MEASURING AND MANAGING OUR REPUTATION IN THE COMMUNITY

Effective measurement of our reputation in the community, and targeted strategies to drive improvements in our performance over time, are key priorities for Origin.

Since August 2013, we have been measuring our reputation to understand how we are perceived by ordinary Australians, as well as some of our key stakeholders. These insights help us to create more targeted and effective reputation management strategies, and ultimately feed into how we conduct our business. Reputation is important to a company, as there is a strong correlation between reputation and business performance.

We use the RepTrak™ methodology to measure reputation. The study uses the academically tested RepTrak™ model, developed by the Reputation Institute. It is used by Fortune 500 companies and many Australian corporates as a standardised reputation measure. The RepTrak™ study uses a nationally representative sample of the population to rate a company against seven dimensions: products and services; innovation; governance; citizenship; leadership; performance; and workplace.

Origin's RepTrak™ score at the end of the 2015 financial year was 61.8, which was steady compared to the prior year. Origin's quarterly scores during FY2015 averaged above the quarterly scores for FY2014.





WE HELP EMILY MAKE THE MOST OF A SUNNY DAY

We're providing reliable, affordable and sustainable energy, including solar, to power households across Australia.

With approximately 4.3 million customer accounts across electricity, natural gas, LPG and solar, Origin is the leading provider of energy to homes and businesses across Australia.

We are committed to providing a reliable, affordable and sustainable supply of energy to meet our customers' needs.

CUSTOMER CARE AT A GLANCE

OUR PURPOSE

Ensure customers have a positive experience by understanding and meeting their energy needs, and providing effective service.

Laws and regulations

The Australian Energy Market Agreement sets out the legislative and regulatory framework for Australia's energy markets.

Energy retailers are regulated under the National Energy Customer Framework.

Our additional actions

We are simplifying the way our customers deal with us, and we are in the process of rolling out new services that allow us to better connect with our customers. Our customer service team is trained to understand and meet individual needs, and compassionately handle financial hardship cases.

Our approach

We consider each individual customer's needs on a case-by-case basis, and do our best to match them with the product and solutions that best suit those needs.

Our performance

In the 2015 financial year we achieved a 71 per cent customer satisfaction rating which was level with the prior year. We received 4.9 Ombudsman complaints per 1,000 customers, which was 26 per cent improvement on the prior year.

CUSTOMER CARE

Listening and responding to customer needs

Origin has approximately 4.3 million customer accounts, making us the largest energy retailer in Australia. At the end of the 2015 financial year, this consisted of around 2.8 million electricity customer accounts, 1.1 million natural gas customer accounts and 382,000 LPG customer accounts.

Our customers depend on us to provide a reliable, affordable and sustainable energy supply that meets their needs and expectations. That means we are not just in the business of supplying energy, but also need to provide timely and helpful advice, effective service response, and assistance in accessing other parts of the energy supply chain, when required.

Our success depends on our ability to meet these needs and exceed expectations, which is why we are committed to genuinely listening to our customers, continually improving their service experience and evolving our business to ensure that we are well positioned to meet their future needs.

We continue to use traditional communication channels, and have made significant investment in new channels that make it easier for our customers to interact with us at times that suit them.

Improving products and services for customers

It is important to us that our customers have a wide array of products and services to choose from, so we have introduced new products and technologies that help make this possible. We also maintain a focus on improving our customer service performance, and have made a number of changes to our marketing and sales processes affecting how and when we engage with customers.

These changes include:

- simplifying contracts and quote packs;
- introducing new payment options;
- continuing the roll out of our Customer Service Hubs, which provide customers with a physical location they can visit to provide feedback and have their concerns addressed;
- launching the *Everyone Can Help Out* (ECHO) app, which allows employee-generated sales leads and customer issues to be shared amongst employees, to follow up or resolve;
- introducing stronger service offerings for small to medium businesses;
- implementing new SMS customer updates including an SMS service tailored to people moving house that notifies them when their meter has been installed and updates them on next steps;
- improving the experience of our commercial and industrial customers;
- refreshing and streamlining the contract renewal process; and
- bringing our services to customers in Canberra.

A leader in green energy solutions

Origin is a leader in low carbon energy solutions and we continued that tradition in the 2015 financial year by supplying customers with options that can offset or lower their greenhouse gas emissions.

We have around 255,000 green energy customer accounts, making us the largest Australian provider of GreenPower and Green Gas products.

When our customers choose a GreenPower option, they nominate a percentage of their electricity usage (anywhere between 25 per cent and 100 per cent) that they would like to come from GreenPower accredited renewable sources, which we match with the equivalent of energy from those sources. For Green Gas, we purchase greenhouse gas offsets equal to the customers estimated usage and we are the only retailer in Australia to do so.

These options allow our customers to directly support Australia's renewable energy industry. However, they are not the only options available to customers to lower the impact of their energy use on the environment; solar has been a consistent part of our business for many years.

At the end of the 2015 financial year, more than 391,000 Origin customers have had solar installed, representing around 27 per cent of Australia's solar market⁽¹⁾. Over the past 10 years, we have directly installed more than 80,000 solar PV systems and more than 4,000⁽²⁾ solar hot water systems, making us one of the largest installers of residential rooftop solar panels in Australia. These solar systems provide a clean and cost-effective way for households to generate renewable electricity. In May 2015, we also introduced a new way for customers to go solar, with our *Solar as a Service* offering. This allows a wider range of customers access to the benefits of solar, including potentially lower energy costs and a reduced carbon footprint, without having to purchase the system, as Origin owns, installs and maintains the system throughout the life of the *Solar as a Service* contract.

As some solar customers are becoming more interested in battery storage, Origin has completed extensive analysis on the battery market. Our analysis focused on evaluating battery types and suppliers based on product flexibility, economics, and customer experience.

As a result we have been trialing units in Queensland, NSW and SA, laying the foundation for a solar battery solution for Origin's customers.

Improving call centre performance

It is important to us that our customers have the best possible experience when they call Origin. We have introduced a new operating model for our Care and Resolutions teams that allows us to provide specialised support and greater sales and service capabilities.

We use a number of mechanisms to monitor the effectiveness of our systems and customer service initiatives. This helps us to understand what our customers are looking for and improve the way we do things which, in turn, helps us retain customers.

For example, we have been measuring customer satisfaction for many years by asking customers about their service experience and interaction with our service teams. This allowed us to compare the performance of different service teams, providing a more relevant measure of satisfaction than market-based satisfaction surveys. At the end of the 2015 financial year, our customer satisfaction rating was at 71 per cent which was in line with the prior year.

Going forward, we will cease using a customer satisfaction measure and instead use a 'strategic' Net Promoter Score as our primary measure of customer advocacy. In addition, we will report an 'interaction' Net Promoter Score, which is a similar measure to customer satisfaction but more challenging, as it goes further than indicating a customer's level of satisfaction with their interaction with Origin; it tests whether they would be prepared to recommend Origin to family and friends.

We are also building on our customer centric culture by making sure our actions and behaviours address clear customer needs and consistently deliver benefits. Putting customers' needs at the heart of our decision making, operations, systems and processes is a cultural change that will take time, but we have made significant progress so far.

This year saw the introduction of the ECHO app which encourages employees to log sales, service or account enquiries for family and friends to be followed up by specialist case managers. This demonstrates our recognition that true customer advocacy starts with our employees. Allowing our employees to help their family and friends, we believe will help them feel proud about working at Origin.


**More than
391,000 Origin
customers have
had solar installed,
representing
around 27 per cent
of Australia's
solar market⁽¹⁾.**

- (1) SunWiz July 2015 *Monthly Insights*.
- (2) FY2015 data is reported as an 11 month actual (July-May) + one month estimate (June).

BELOW

We provide reliable, affordable and sustainable energy to power millions of homes.





We've recently put a lot of work into reducing Ombudsman complaints by improving our services, including stabilising our core business platforms, reducing the amount of late bills and streamlining the processes that were causing backlogs.

Working with customers to resolve issues

Delivering great customer experiences requires expertise and we make sure our people are equipped to identify and solve potential issues and disputes. Origin team members undertake regular training that develops their skills, knowledge and confidence in managing a broad range of complaints and concerns. We also have detailed complaint-handling procedures in place, which allow us to resolve issues faster and escalate them when necessary.

If a customer feels an issue has not been sufficiently addressed, or they aren't satisfied with the outcome of their interaction with Origin, they are able to have the matter reviewed by the relevant Ombudsman in their state or territory. If the case escalates to an enquiry, Origin will always work closely with the customer to resolve the dispute.

Complex matters arise from time to time that require the Ombudsman to initiate an investigation and request a written resolution from Origin. The process is directly managed by the Ombudsman in these instances.

We've put a lot of work into reducing Ombudsman complaints by improving our services, including stabilising our core business platforms, reducing the amount of late bills and streamlining the processes that were causing backlogs. Our efforts have resulted in less Ombudsman complaints in the 2015 financial year, falling to 4.9 per 1,000 customers compared to 6.6 per 1,000 customers in the prior year.

High bills, revised bills, and credit related complaints continue to be major sources of new Ombudsman complaints and will be the focus of our continuing efforts to improve.

Overcoming barriers to contact

We deliver energy and services to customers with a diverse range of backgrounds so it is important that our information be accessible and understandable.

We provide access to independent and accredited translators to customers who are from non-English speaking backgrounds or have difficulty accessing or understanding the information we provide. We include contact details for print interpreter services on our bills in several languages and provide large print and online versions of our bills to assist limited vision customers.

Access is provided to multi-lingual financial counselling and energy auditors to customers enrolled in our *Power On* financial hardship program.

Regulatory requirements

Origin, like other energy retailers in Australia, is regulated by the National Energy Customer Framework (The Framework). The Framework, which includes *National Energy Retail Law*, *National Energy Retail Rules* and *National Energy Retail Regulations*, sets out key protections and obligations for retail energy customers and the businesses they buy their energy from.

We provide energy in New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory and The Framework applies to each of these jurisdictions except Victoria. However the Victorian energy codes have recently been changed to be more in line with The Framework.

In the 2015 financial year there were five compliance breaches relevant to these regulatory frameworks (that is, five provisions of The Framework were breached). These related to late bills, wrongful disconnections and incorrect billing data displayed on bills. In each case the regulator was notified and, where necessary, remedial action was taken.

The ACCC closed two investigations relating to Origin in the 2015 financial year.

In May 2014, the ACCC commenced proceedings against Origin and two of our subsidiaries in the Federal Court of Australia, alleging that Origin made false or misleading representations and engaged in misleading or deceptive conduct regarding the level of discount available under a *DailySaver* energy plan in South Australia. Origin settled the dispute with the ACCC in December 2014 – and in February 2015, the Federal Court handed down orders requiring Origin to pay a fine of \$325,000 plus the ACCC's costs and notify affected customers.

We recognise that we could have better explained our discounts, and we are committed to being clear and transparent with our customers about the discounts we offer.

The second matter investigated by the ACCC related to our residential door-to-door activities, a sales channel Origin ceased using in September 2013. In March 2015, the Federal Court ordered Origin to pay \$2 million in penalties in relation to unlawful door-to-door selling practices. The Court also ordered Origin's marketing company, *SalesForce Australia Pty Ltd*, to pay penalties and both parties to publish a joint corrective newspaper notice, maintain compliance programs and contribute to the ACCC's costs.

While the conduct in question was performed by a third party on our behalf, we recognise that it is our duty to ensure that anyone who represents us reflects our behaviours and values. We no longer sell energy to consumers door-to-door.



SHARING THE BENEFITS OF SOLAR WITH MORE AUSTRALIANS

The introduction of Origin's *Solar as a Service* offering is helping more Australian homes and businesses access the benefits of solar.

Installing a rooftop solar photovoltaic (PV) system is a great way to reduce a home or business' impact on the environment, while also potentially delivering cost savings. It's no wonder then that the popularity of solar energy in Australia is soaring, with more than 1.4 million residential solar systems currently installed across the country- the highest penetration of household solar in the world⁽¹⁾.

ABOVE
Rooftop Solar PV installations in Australia. *Solar as a Service* makes it easy to install and use solar energy without the need to purchase the system.



DISCOVER
MORE
ONLINE

The team at Origin have been long-term supporters of solar. Over the past decade we have installed solar in around 80,000 homes. Keeping with our commitment to provide innovative products to our customers, we're offering a new way for solar energy to be delivered to the home. Called *Solar as a Service*, residential customers and small business owners can access the benefits of solar without having to purchase the system.




"Solar in Australia has evolved beyond the traditional installer model," said Origin's General Manager Solar and Emerging Businesses, Phil Mackey.

"Under the new Solar as a Service model, customers don't have to pay to have the solar system installed; instead, Origin will install, own and maintain the system over its life, taking the hassle out of solar for customers. Plus, as Origin owns the solar system, we'll take care of any ongoing maintenance costs."

Solar as a Service works best for households that use a lot of their electricity during the day when the sun is out. This is because electricity generated from solar needs to be used as it is generated; it isn't stored for later use.

To date, the product is available in parts of New South Wales, Queensland and South Australia, with a focus on small-scale residential and commercial solar systems. It will shortly become available in parts of Victoria.

WHY CHOOSE SOLAR AS A SERVICE

-  You'll pay \$0 for the system⁽²⁾.
-  You'll lock in a low solar energy rate⁽³⁾.
-  You won't have the hassle of managing the ongoing maintenance and monitoring of the system.

(1) SunWiz Consulting, *Australian PV Market Insights*, July 2015.

(2) You may incur other costs in order for your property to be solar ready (such as electrical works, cabling or roof repairs) and for meter upgrade or changeover.

(3) Solar energy rate is subject to change for CPI annually and change in law.

ENERGY AFFORDABILITY AT A GLANCE

OUR PURPOSE

Empower customers by providing relevant and practical solutions that allow them to control their energy use and costs, and to support customers dealing with financial hardship.

Laws and regulations

The Australian Energy Market Agreement sets out the legislative and regulatory framework for Australia's energy markets.

Energy retailers are regulated under the National Energy Customer Framework.

Our additional actions

We offer online tools such as My Account to provide customers greater visibility and control of their energy accounts.

Our approach

We know problems can occur when customers are surprised by their bills – so we have worked hard to make sure our customers have greater understanding of their accounts, and are able to access a wide range of payment options.

Our performance

Approximately 917,000, or 24% of our total electricity and natural gas customer accounts have signed up to e-billing, enabling them to receive bills via email and pay them online using direct debit, BPAY® or credit card.

ENERGY AFFORDABILITY

Understanding energy costs

Australia is a large country with access to abundant energy resources. Our energy system is highly sophisticated and when compared to many other countries, is very reliable.

While historically Australians have seen some of the lowest cost energy in the world, recent investment in the networks of poles and wires that transport energy and the implementation of various state and federal government clean energy schemes have contributed to higher energy prices for customers.

In most states, the increase in electricity tariffs experienced over recent years is starting to plateau. However, domestic gas prices are increasing due to higher wholesale energy costs as well as international parity pricing.

Sustainable tariffs

Tariffs are determined in two ways depending on the state – by regulators, known as 'regulated tariffs', or by retailers, known as 'deregulated tariffs'.

We believe it is in the interests of all energy users over the long term, to set sustainable energy tariffs that consider long-term energy procurement costs; required future investments in energy generation; and the need to provide a broad range of products and services that meet Australia's diverse needs. We believe sustainable tariffs should, ideally, be set with reference to competition and that the best outcomes for customers will be achieved from deregulated markets that promote competition and innovation in products and services.

Sustainable tariffs allow energy retailers to recover costs, make an appropriate return on investments, and deliver value to customers.

How we set tariffs

We determine our deregulated tariffs for consumer and business customers by considering several underlying elements.

These include the costs of generating or buying energy, including the costs to supply energy to homes and businesses using the poles-and-wires network, as well as the costs of providing retail service to customers, which factors in our need to reconcile meter data and manage accounts.

There are still substantial compliance requirements when retailers set tariffs without regulatory oversight, including the need to post information to comparison sites and communicate price changes to customers.

Where tariffs are subject to regulation, such as electricity in Queensland and gas in NSW, we model our tariffs according to the methodology prescribed by the regulators in those states. While electricity in New South Wales is not yet fully deregulated, the state is on a pathway to complete deregulation.

Keeping customers informed

Energy prices vary from state to state and also within some states so we understand why tariffs can sometimes be difficult for customers to understand. To manage this, we proactively engage with our customers directly through bill messages, newspaper notices, online messaging and other forms of media. This helps keep them informed of any price movements, including the amount, timing and reason for the changes.

The repeal of the Australian Government's *Carbon Pricing Mechanism* had a major impact on the structure of energy tariffs and customers' energy costs during the 2015 financial year. This legislation was passed on 17 July 2014, and placed specific requirements on electricity and natural gas retailers like Origin.

To ensure our customers were aware of the changes, we implemented an extensive communication campaign via email and direct mail to inform them of the cost savings they would receive. We also backdated all price changes to 1 July 2014 for our customers.

Helping customers in need

Cost-of-living pressures weigh heavily on many Australians, and rising gas and electricity prices over recent years have been a contributing factor. We understand that there are periods of time when some customers may struggle to pay their energy bills.

In these situations we work closely with those customers to: offer products best suited to their needs; provide relevant, timely advice; make provisions and arrangements that help them work through short-term financial difficulties; and avoid unmanageable levels of debt, all the while maintaining their energy services.

Many factors influence how much electricity is used by a home or business including: the size of the property and age; its location; the outside area temperature; whether gas is used for cooking and heating; and whether the owners have air-conditioners, pools or other energy-intensive appliances.

Helping customers understand these factors allows them to more effectively manage their energy use and, in turn, better manage their energy costs. Educating our customers about effective energy management is a high priority for Origin.

Raising awareness through energy education

Energy plays a central role in our lives. If you think about your home, almost everything you use from lighting and heating to cooking or entertainment is powered by energy. Yet most people give little thought to where energy comes from or how to manage their usage of it.

We do our best to raise awareness about energy by keeping our customers up-to-date on the latest energy information including energy-saving tips, pricing information and suggesting new products that might be suited to a customer's individual needs. By making the customer's needs our first consideration, we empower them to take control of their energy bills and make better decisions on how best to manage their consumption.



In mid-2014, we launched a national brand campaign *Energy Made Fresh Daily* that aims to make Australians more aware of the nature of energy and how it's delivered. The second stage of the campaign was rolled out in May 2015, and focused on the benefits of solar power.

We are also working to educate tomorrow's leaders with our Energy for Schools program. Designed for both teachers and students, this program aims to educate students on the basic history, science and economics of the energy industry in Australia using both online education resources and face-to-face interaction during in-school visits. We visited 31 schools during the 2015 financial year, and 2,512 children and 90 teachers participated in our program.

During the period we also introduced the Origin Blog, an online hub that offers insight into global and national energy challenges, different energy technologies, policy issues and more.

Our blog is regularly updated, and allows us to share ideas, industry comments, practical tips, advice and opinion pieces.

Solutions to control energy use and costs

The introduction of smart meters has been one of the biggest developments in electricity supply since electric lights were introduced over a century ago. We've embraced this technology where it is most prevalent in Victoria, enabling Origin to provide greater transparency to our customers in that state by allowing them to view their energy use online with the Origin Energy Manager.

Accessible via the My Account online customer portal, this tool allows customers greater visibility of their energy usage, including where and when energy is being used in their home so they can make better energy-efficient decisions and potentially lower their energy costs.

While Origin Energy Manager works best in conjunction with smart meters, we have developed the technology in a way that allows Origin customers outside Victoria to use it, without requiring a smart meter to be installed.

Our collective investment in technological innovations and proactive education has provided our customers with unprecedented transparency, understanding and awareness of the energy they use. Customer registrations for the My Account online portal have grown from 568,000 to 972,000 in the past 12 months, a 71 per cent increase primarily driven by our auto-registration efforts. More than half of these registered customers subsequently activated their My Account service, representing about 17 per cent of total customer accounts.

My Account enhances our customers' experience by allowing customers to view and pay their bills online; check and update their account contact details; view and/or change their current energy plan; view current offers; and check energy consumption on their past bills.

My Account customer portal allows customers greater visibility of their energy usage including where and when energy is being used in their home so they can make better energy-efficient decisions and potentially lower their energy costs.

ABOVE

My Account customer portal helps customers monitor and manage their energy use.

Origin is ranked as the current industry leader in handling customers' financial hardship issues⁽¹⁾.

Our billing and payment options

To improve our customers' interaction with Origin, our service teams remain focused on helping our customers to understand bills, update account details and, when required, make special arrangements for payment.

We have also introduced new, innovative payment options that encourage our customers to pay their bills on time; and provided incentives that encourage them to pay online and set up automatic bill payments, using direct debit and other methods.

At the end of the 2015 financial year, we had approximately 917,000 electricity and natural gas customer accounts signed up for e-billing, representing around 24 per cent of our total electricity and natural gas customer accounts. Our online billing continues to increase in functionality, allowing customers to receive and pay bills in a variety of ways including direct debit, credit card, phone, BPAY®, over the internet and via email.

We also introduced the ability for customers to set up SMS notifications and payment reminders, in a way that suits their needs. At the end of the 2015 financial year, approximately 683,000 customer accounts had taken up direct debit, representing around 18 per cent of our total electricity and natural gas customer accounts. This growth in direct debit usage mirrors the take-up of our Pay On Time discounts to customers.

Support for customers experiencing hardship

Energy affordability is a growing concern for more Australians as price increases far outstrip CPI salary increases. We recognise people sometimes face challenges that can leave them in financial difficulty and we're required to design, implement and maintain a customer hardship program to address this. Origin is also working with community groups to build awareness of how we can assist our most vulnerable customers manage their energy costs. Many years of successful operation has proven that our hardship program – *Power On* – meets these requirements by assisting our customers through difficult times and helping them to get back in control of their energy use and bills.

Origin's *Power On* program is approved by the Australian Energy Regulator and offers energy efficiency information, referrals to financial counselling services, flexible payment options and general advice. It also informs customers of relevant government concessions and grants available in their state, ensuring they are receiving all possible financial assistance.

Customers are identified as potential *Power On* participants when they alert us to the fact they are having difficulty meeting a bill payment, or who require us to call them about an overdue payment. Our call centre team are trained to refer callers who seem to be experiencing hardship to our *Power On* team. Using this proactive early intervention approach to assist our customers before the problem becomes too large, we are able to identify customers who have a higher likelihood of falling into arrears in bill payments, and assist them in managing their energy costs before it becomes a larger problem.

Customers who enter into the program must work with us to reduce their energy usage to sustainable levels, repay their debt, and adhere to the terms we agree upon together. If they refuse to engage with us or repeatedly break the terms of the agreement, they lose the right to participate in the program.

In recent years, the number of disconnections resulting from non-payment has risen – but so too has the number of customers actively utilising *Power On*'s payment support. Customers that remain on the *Power On* program and are committed to meeting the program requirements are protected from energy supply disconnection.

At the end of the 2015 financial year, 23,453 customers were being financially supported through *Power On*, up from 20,670 the prior year.

During this period, 6,106 of our *Power On* customers successfully paid off their debts and moved out of the program. We remain in contact with these customers as part of our ongoing customer care program to help them manage their ongoing energy costs and provide early intervention calls if they fail to meet their payment thresholds.

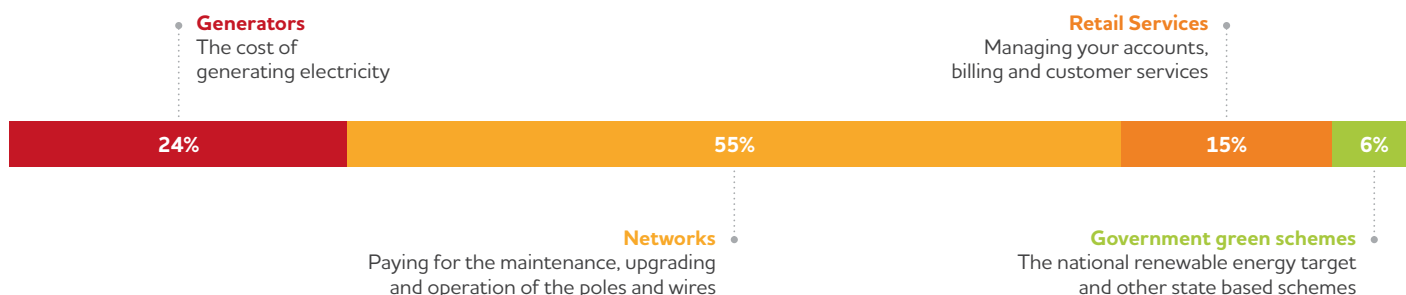
Our *Power On* program was recognised in a recent survey undertaken by the Financial and Consumer Rights Council, which saw Victorian financial counsellors rank the policies and practices of energy retailers for customers. Overall, financial counsellors ranked Origin as the current industry leader in handling customers' financial hardship issues⁽¹⁾.

If needed, we arrange free home energy audits to help our customers identify how they can reduce their energy usage to avoid financial issues. We conducted 441 of these audits during the 2015 financial year, and provided more than \$45,000 worth of energy efficiency upgrades that helped our customers conserve energy, reduce their bills and reduce their greenhouse emissions.

(1) Financial and Consumer Rights Council, *Rank the Energy Retailer*, August 2014. 111 financial counsellors contributed to the survey, representing 62 per cent of the sector.

(2) Independent Pricing & Regulatory Tribunal, *Review of regulated retail prices and changes for electricity 2013 to 2016*.

BREAKDOWN OF COSTS IN A TYPICAL NSW ELECTRICITY BILL⁽²⁾



WE HELP MAKE WARM BATHS FOR THOUSANDS OF DOGS

Our teams ensure
hot water is ready
to go whenever
it's needed.



Origin has diverse operations spanning across the energy supply chain, from gas exploration and production, to power generation and energy retailing. We employ a team of around 6,900 people who work hard to keep our business running smoothly and safely. A business of this size, scale and complexity requires considered management to ensure its ongoing success.

SAFETY AT A GLANCE

OUR PURPOSE

We aspire to conduct our business in a way that causes no harm to the health and safety of our people, or our facilities, and has no unforeseen impacts on the environment.

Laws and regulations

Our activities are governed by relevant federal and state safety laws and regulations, and industry specific codes.

Our additional actions

Our Health and Safety Policy outlines how we think about, plan and manage health, safety and environmental impacts and initiatives across our business.

Our approach

We are building a culture that encourages transparency and ownership, rewards safe behaviours and strives for continual improvement.

Our performance

TRIFR of 3.8, a 24% improvement on the prior year and our lowest ever. 80,456 safety observations recorded and closed out. Sadly, we lost one of our colleagues working on the Australia Pacific LNG project.

In this section we detail our performance for the 2015 financial year across the areas of health and safety, government policy, climate change and emissions, as well as our financial performance, corporate governance and our work towards improving diversity and inclusion.

SAFETY

Why safety is important

At Origin, safety is our first priority. It is important for our business and we believe that every employee and contractor should expect to return home safe at the end of every day. We continually strive to improve our performance in the areas of personal and process safety, as we work towards our goal to create an injury free workplace for our employees and contractors.

We work in an industry which, by its very nature, gives rise to a range of health and safety risks. Some of the activities regularly carried out in our business range from the operation of onshore gas drilling rigs, construction, to travelling to offshore gas production platforms, through to managing large gas processing facilities and power stations and driving on roads. Process safety is a critical part of ensuring our facilities and assets are maintained to safe standards, and we are committed to aligning our practices with industry standards.

Safety in our workplace is governed by relevant federal and state legislation and regulations related to safety, and the majority of the areas we operate in are highly regulated. For example, as Upstream operator of the Australia Pacific LNG project our work program is primarily regulated by Queensland's *Petroleum & Gas (Production & Safety) Act 2004* and *Work Health and Safety Act 2011*. At a minimum, we meet these requirements, but we also strive to do better where we can and, where appropriate, to apply higher standards that further safeguard our workforce.

Origin's Health, Safety and Environment (HSE) Policy can be found on our website and explains how we think about, plan and manage health, safety and environmental impacts and initiatives across our business. Our directives are derived from the commitments made within this HSE Policy, and they mandate the minimum requirements, responsibilities, and business rules that are needed to successfully implement this Policy and the HSE management system.

Towards a generative safety culture

Much of our focus in the 2015 financial year has been on improving our safety culture. A series of cultural climate surveys conducted across our business highlighted the opportunity for us to move towards a more generative culture, where people are recognised as the key to success, where failure is embraced as an opportunity to learn and improve, and safety performance is regarded as a core ingredient of good business.

During the year, we updated our HSE Policy to better articulate our aspiration for a safe workplace, and to highlight those actions and behaviours that we believe reflect a generative culture. Our new policy places greater emphasis on being mindful of risk, on personal ownership and accountability, and on continuously learning.

It is well known that operational excellence and safety performance are closely linked. For this reason, the Board determined that it is important that all our people have an incentive to focus on safety. Each year the Board is able to recognise the efforts of employees via the Employee Share Plan, which awards \$1,000 of Origin shares to all eligible employees, subject to the achievement of company-wide targets relating to safety. For the reporting period, the award of the Share Plan is linked to the achievement of our closed HSE actions target, which encourages employees to identify and complete actions that will make the workplace safer.

Managing personal safety

Origin's primary measure of safety performance is the Total Recordable Injury Frequency Rate⁽¹⁾ (TRIFR), which measures our company-wide work-related injuries. For the 2015 financial year, we recorded a TRIFR of 3.8, which was a 24 per cent improvement on the prior period, and ahead of our target of 4.5 for the financial year.

When we reflect on this achievement, however, it is with great sadness at the loss of one of our team members working on the Australia Pacific LNG project, who was fatally injured in September 2014 at Reedy Creek.

(1) TRIFR is calculated as a 12-month rolling average.

Origin continues to prioritise safety performance and during the period there has been increased management focus on both safety processes and communication. Some of the initiatives included:

- increased visibility of our front line and senior leadership team members in the field;
- emphasis on more engaging toolbox talks⁽¹⁾ and job pre-starts;
- continued promotion of our Observations Program, which enables employees to have safety conversations about safe and unsafe behaviours and to identify and address hazards in the workplace before they become incidents;
- introduction of our HSE action program which encourages employees to identify and complete actions that will make the workplace safer;
- development of risk reduction strategies and use of simplified risk assessment tools; and
- additional training to up-skill our front line employees.

In addition, Short Term Incentives for our senior executives are determined by reference to Group Performance as well as Business Unit and personal operational measures. Business Unit measures include safety outcomes, engagement scores, project milestones and production metrics or customer satisfaction and profitability.

Another metric used to track and improve our performance is Lost Time Injury Frequency Rate⁽²⁾ (LTIFR). This measure identifies the severity of injuries which impact upon our people and involves measuring the number of injuries resulting in an employee missing at least one full shift or work day.

LTIFR is a subset of TRIFR. During the 2015 financial year, there were 31 lost time cases and a total of 80⁽³⁾ days of work lost. Our LTIFR remained stable this year at 1.0. This can be attributed to a combination of increased management visibility across field locations, coupled with supervisor leadership programs and a decrease in project activity from the Australia Pacific LNG project.

Observation performance

Observations are a key tool we use to recognise safe and unsafe behaviours, identify and address hazards in the workplace and help prevent unsafe ones. Taking personal ownership and accountability, and being mindful of risk are key to improving the safety of our workplace. We know that the right conversations are crucial to reinforcing positive safety outcomes, so we encourage employees to include a personal conversation with their colleagues about the safe or unsafe behaviour they observe.

All employees are encouraged to make and record observations in an online database, regardless of their level or work area. Managers have the additional responsibility of coaching their teams in how to make quality observations and for sharing lessons learned.

We formally introduced this Observation Program across Origin in July 2011. For the 2015 financial year, 81,703 observations had been raised and 80,456 closed, against a target of 45,000.



Closed HSE actions

HSE actions are those tasks we identify through activities such as observations, incident reviews, audits and risk assessments, that when completed, can help to reduce a risk, or prevent an incident.

Closing out these tasks, and doing so within the time we committed to do them, demonstrates the level of urgency and priority we are placing on improving HSE for ourselves and others.

In July 2014, we introduced a new measure around closing HSE actions. Our target is to complete at least 80 per cent of the actions we identify and record in our HSE tracking system by their due date. Achievement of this target is linked to the Employee Share Plan.

Our closure rate for the 2015 financial year was at 85.3 per cent, and as a result the Board has approved an award to eligible employees under the Share Plan. All eligible full-time employees will be allocated \$1,000 of Origin shares.

Significant Incident Frequency Rate

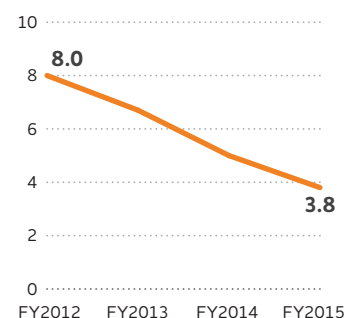
Going forward, we will introduce a new target to our safety measurement.

A 'Significant Incident' is one that has the potential to result in a critical or catastrophic consequence. We have been measuring our Significant Incident Frequency Rate (SIFR) in addition to TRIFR for more than five years, and in the 2016 financial year we will set an organisation-wide target for SIFR to help us focus on those areas with the most significant consequential risk – including process safety, aviation, land transport, environment and security.

ABOVE

Our focus has been on improving Origin's safety culture.

TOTAL RECORDABLE INJURY FREQUENCY RATE (TRIFR)



- (1) Toolbox talks are onsite small group discussions between managers and their team about important business issues or topics.
- (2) LTIFR is calculated as a 12-month rolling average.
- (3) The number of days lost FY2014 includes employees and contractors. Available data for FY2015 includes employees only.



BECOMING A NSW STATE EMERGENCY SERVICES CADET

Origin recognises the critical role of the SES in communities, which is why we have supported the organisation to help recognise, reward and recruit volunteers.

For many Australians, the orange State Emergency Services uniform is an iconic piece of clothing, conjuring images of community volunteers and heroes in times of need.

At Origin, we recognise the critical role the SES plays in our community, particularly when disaster strikes. During 2014 alone, NSW SES volunteers attended over 16,000 storm and flood-related jobs, responded to 604 road crashes and helped the NSW Rural Fire Service with over 800 bushfire support tasks.

Throughout 2014, approximately 10,000 volunteers of all ages, professions and backgrounds served in the NSW SES. Undertaking both operational and administrative roles, these volunteers supported over 200 units located throughout the state – a massive effort by any standard.

ABOVE
Students from the State Emergency Services Cadet Program practicing their rescue skills.

This is why in December 2014 Origin was proud to announce a new partnership with the NSW SES, aiming to help the organisation to recognise, reward, and recruit volunteers – the lifeblood of the organisation. Through our work with the NSW SES, we supported the NSW SES Cadet Program, which helps enlist the next generation of volunteers. The program aims to provide cadets with skills to service their local community, knowledge of the NSW SES service and other emergency service agencies, and encourages positive personal achievements.

The cadet program is tailored for students from Year Nine. The five-day short course facilitated by SES volunteers is based on best practice emergency services Australia-wide and sees students visit their local SES unit as well as other emergency services. They also gain hands-on experience by participating directly in activities aimed at educating them in safety, communication and working in a team.

Time spent in the program will count towards service as a full member of the SES, and upon successful completion of the program, participants will be given the opportunity to join their local SES unit.

Managing process safety

Process safety involves making sure our facilities are well designed, safely operated and properly maintained. When we manage process safety risk we are required to follow a range of national and state laws and regulations, which requires a positive demonstration of safety due diligence.

We have process safety related requirements contained in our HSE Management System and associated Directives, which we benchmark against industry guidance from the UK Energy Institute and the International Association of Oil and Gas Producers (IOGP).

Our process safety management practice is aligned with recognised industry standards. This involves understanding our hazards, identifying process safety critical controls, and implementing integrity management and performance monitoring to reduce the risk of process safety events 'so far as is reasonably practical'.

Process safety management extends across the design and construction of our assets, the safe operation of our facilities and the maintenance of plant, equipment and protection system integrity. We also seek to ensure that our people are trained and competent, that major changes to plant, people and processes are properly assessed in line with their risk profile, and we incorporate learnings from past issues to prevent future incidents.

Our process safety performance is tracked using leading and lagging indicators. Each Business Unit reports process safety performance internally, on at least a quarterly basis. Enterprise-wide process safety performance is reported to the Operational Risk Committee and process safety risks are regularly reviewed by Origin's Risk Committee.

We are currently part way through a three-year process safety improvement project, initiated in 2014 by our Operational Risk Committee. The project aims to streamline and consolidate process safety management practices across Origin, and develop common key performance indicators to facilitate governance of process safety management performance.

We actively participate in the APPEA's annual Stand Together for Safety event, which is dedicated to promoting the highest standards of safety for operations in Australia. In addition, Origin annually reports process safety management activities and incident performance across our Integrated Gas business to the IOGP.

Our performance

In the 2015 financial year, we recorded a total of eight process safety events⁽¹⁾. These comprised three tier one and five tier two loss of primary containment incidents, as defined by IOGP⁽²⁾, which were detected and controlled to prevent impact to the environment, community and our assets. Two of these incidents resulted in a recordable injury⁽³⁾. We also record, investigate and trend data for lower consequence process safety incidents, to ensure the integrity of our process safety critical controls.

(1) With the potential for a serious consequence or above, as defined by the Origin risk matrix.

(2) IOGP Report No. 456 defines tier one process safety events as losses of primary containment with the greatest consequences and provides a set of consequence-based criteria for this, as well as a set of threshold quantities for various materials. A tier two process safety event is a loss of primary containment with lesser consequences (IOGP 2011:12, www.ogp.org.uk/pubs/456.pdf).

(3) Included in FY2015 TRIFR.

CLIMATE CHANGE AND OUR BUSINESS

Origin acknowledges that climate change is a significant societal challenge and unequivocally supports measures to progressively reduce global carbon emissions. We also acknowledge the ultimate goal of the United Nations for a new global agreement that provides a pathway to achieving 2 degree Celsius warming or less, in order to have a realistic chance of avoiding the most extreme impacts of climate change.

We believe climate change requires a global response. Energy is a central part of the challenge, accounting for two thirds of global carbon production⁽¹⁾ and creating known environmental impacts. Yet energy is critical for continued economic and social development and is integral to helping bring people out of poverty in developing economies.

This creates challenges, risks and opportunities for energy producers and suppliers, including Origin.

The following section discusses the global context of climate change and energy, how our strategy helps us to manage risks and create opportunities within this context, as well as a comprehensive view of 2015 emissions performance and future emissions trends.

Our framework for managing climate change

Origin's strategy is to connect resources to markets, which we pursue via our three businesses: energy markets, natural gas and LNG and renewable energy. Below we discuss each of these businesses in the context of climate change.

Energy Markets

Historically, fossil fuels have been responsible for the majority of Australia's electricity production, delivering cheap and reliable energy. Over the past decade, Australia's electricity mix has become slightly less carbon-intensive, with gas-fired and renewable generation starting to make up a larger portion of the portfolio.

This shift is partly the result of the Australian Government's RET, which is discussed in the Policy Section on page 50.

Origin operates one of Australia's largest power generation portfolios with a capacity of approximately 6,000 MW, representing around 13 per cent⁽²⁾ of capacity in the National Electricity Market (NEM).

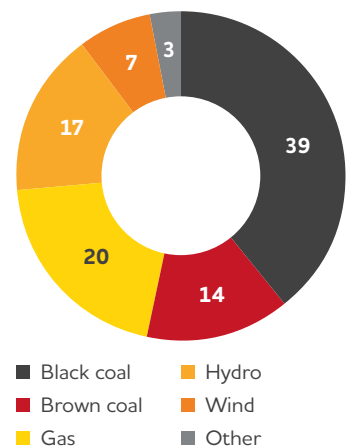
Origin is also one of the largest owners and developers of natural gas-fired power stations in Australia⁽³⁾. We own and operate seven natural gas-fired power stations across Victoria, South Australia, New South Wales and Queensland with a total capacity of 2,604 MW. Natural gas produces less carbon emissions per MWh than coal when burned to create electricity and highly efficient gas-fired power stations, such as Origin's Darling Downs Power Station, produce less than half of the emissions of a typical coal-fired power station.

At 2,880 MW, Origin's Eraring Power Station is Australia's largest power station. The black coal-fired Eraring is critical to providing secure and reliable energy supply to the people of NSW, and generated approximately 20 per cent of the electricity that customers in the state drew from the grid in the 2015 financial year. Eraring is one of the more efficient and low emissions intensity coal-fired power stations in Australia, as shown in the chart below, which ranks the station against the nation's large (greater than 400 MW) power stations. Origin does not have any investments in the more carbon intensive brown coal-fired power stations.

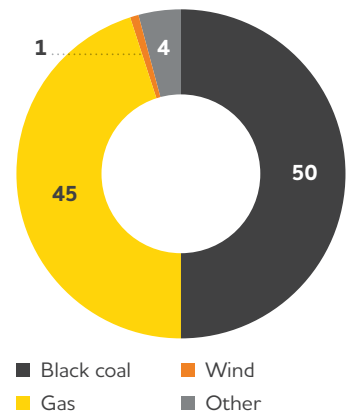
The relative shares of gas and black coal in our internal generation fleet are shown in the diagram at right, alongside a comparison with the relative contribution of fuel sources in the NEM.

These pie charts show that Origin's energy mix is made up primarily of black coal and natural gas, while the NEM is dominated by brown coal and black coal.

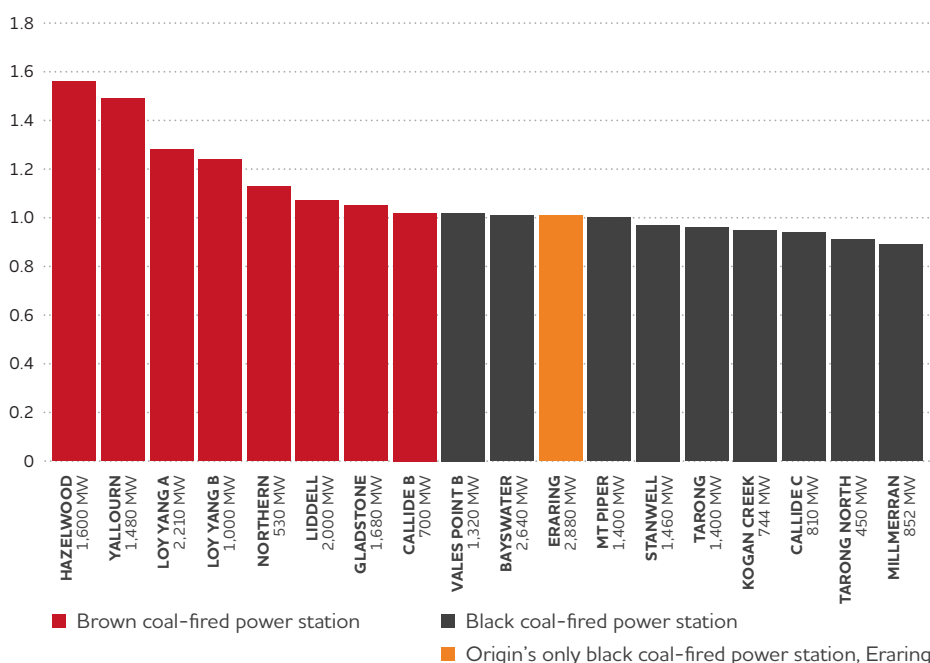
NATIONAL ELECTRICITY MARKET GENERATION CAPACITY BY FUEL TYPE FY2015 (%)⁽⁵⁾



ORIGIN INTERNAL GENERATION CAPACITY BY FUEL TYPE FY2015 (%)



2015 NATIONAL ELECTRICITY MARKET COAL-FIRED EMISSIONS INTENSITIES⁽⁴⁾
(TONNES CO₂/MWh SENT-OUT)



- (1) International Energy Agency, *Energy and Climate Change: World Energy Outlook Special Report 2015*.
- (2) Australian Energy Regulator, NEM Generation Capacity FY2015 YTD as at 1 April 2015.
- (3) Origin's generation capacity is ~6,000 MW compared with the National Electricity Market's generation capacity of 45,000 MW. Source: *The Australian Energy Regulator's Generation Capacity and Peak Demand*.
- (4) As at 20 July 2015. Power stations with a total nominal capacity of less than 400 MW have not been included. Source: AEMO Carbon Dioxide Equivalent Intensity Index 2015.
- (5) www.aer.gov.au.



RIGHT
Origin's Eraring Power Station is one of the more efficient and low carbon intensity coal-fired power stations in NSW.

One of Origin's priorities is to grow our capabilities and investment in renewable energy.

Renewable energy also plays an important role in our electricity portfolio. Including the 30 MW Cullerin Range Wind Farm in NSW, Origin has a portfolio of more than 700 MW of owned and contracted wind power. This is mostly secured via Power Purchase Agreements (PPAs), which are one of the key ways Origin contributes to renewable energy developments.

There is no current requirement for new investment in power generation in Australia, other than to meet the RET. This means that any new generation over the next five years is likely to be renewable, with Origin currently considering the development of the Stockyard Hill Wind Farm in Victoria and utility scale solar in Queensland. With the subdued demand for electricity and the ongoing growth of supply driven by renewable energy policy, Origin has no active plans in place to develop coal or gas-fired power stations in Australia.

Integrated Gas

Origin is one of the largest producers of natural gas on Australia's east coast and Australia Pacific LNG, in which Origin has a 37.5 per cent interest, will shortly begin exporting LNG.

Over time, Origin expects that its total carbon emissions related to gas will increase along with the growth of our gas business. However, we believe that in a global marketplace a narrow focus on emissions at the point of production does not recognise the role companies like Origin will play in providing lower carbon fuel choices to markets around the world.

At Origin, we understand that whether we generate and deliver electricity to customers, as with our domestic power generation business, or deliver energy via LNG to wholesale customers in Asia, climate change implications are best considered with life-cycle carbon emissions in mind. Natural gas has the potential to supply energy to the world at lower carbon-intensive rates than traditional coal.

This is particularly important given the scale of the challenge because, as the IEA estimates, without further measures (the 'Current Policies' scenario) world energy demand is estimated to increase by 50 per cent between 2012 and 2040⁽¹⁾.

The IEA provides guidance on a number of global warming scenarios and the appropriate energy mix to limit global warming to 2 degrees Celsius. These scenarios limit the use of high emission fuels such as coal and increase the contribution of gas and renewables in order to minimise the impact of climate change.

In the IEA '450 Scenario' gas continues to have a significant role in the energy mix, with global gas production forecast to rise by 23 per cent by 2040 compared to the base year of 2012⁽²⁾.

Origin is actively participating in delivering lower carbon energy solutions to Asia Pacific, via our interest in Australia Pacific LNG. Once the project's two LNG trains are operating, Origin will significantly grow gas production. While this will increase Origin's emissions in Australia, it is expected to reduce global emissions by a larger amount.

A Worley Parsons report found that each tonne of carbon emissions from LNG production in Australia reduces carbon emissions in China by 4.3 tonnes when this gas is used in place of conventional coal-fired electricity generation. This demonstrates one of the global benefits available from the development of Australia's abundant natural gas resources⁽³⁾.

Renewable energy

One of Origin's priorities is to grow its capabilities and investment in renewable energy.

Forecasts indicate that in decades to come societies demand for renewable energy sources will outstrip the demand for non-renewable energy sources⁽⁴⁾. Origin is looking for opportunities to harness renewable energy from world-class sources. Providing these fuels into markets where the demand and policy settings support renewable energy supply gives us strategic growth options in a fast-developing segment of the global energy portfolio.

This is a clear priority for Origin as we consider the development of energy solutions for the future. The direction of our strategic thinking is discussed further in Future Energy Solutions on page 60.

- (1) International Energy Agency, *World Energy Outlook 2014*.
- (2) International Energy Agency, *Energy and Climate Change: World Energy Outlook Special Report 2015*.
- (3) Worley Parsons, *Greenhouse Gas Emissions Study of Australian CSG to LNG*, 2011.
- (4) International Energy Agency, *World Energy Outlook 2014*.

Future trends in emission intensity

Today, Origin's total emissions and our emissions intensity are predominantly driven by our power generation portfolio, and in particular, the Eraring Power Station. Our gas business contributes a relatively small proportion of total emissions.

When Australia Pacific LNG begins exporting LNG to Asian markets later in 2015, Origin's total gas production will increase to meet the demand of the two train LNG plant. In line with this growth in gas production, Origin's total Scope 1 and Scope 2 carbon emissions are expected to increase.

Notwithstanding this increase, Origin believes we will be making an important contribution to the global challenge of addressing climate change by facilitating the substitution of higher carbon intensive fuels for lower carbon intensive fuels. Natural gas can be used to produce equal amounts of electricity as coal-fired generation, while resulting in around half of the carbon emissions⁽¹⁾.

In essence, we will be producing more energy to help meet demand, yet doing so in a way that helps reduce the emissions intensity of global energy production.

Emissions performance 2015

Reporting our emissions⁽²⁾

We are committed to complying with relevant emissions reporting frameworks. In Australia, Greenhouse Gas (GHG) emissions reporting is tightly regulated and aligned to the Intergovernmental Panel on Climate Change (IPCC) reporting framework.

We follow the Australian Government's *National Greenhouse Emissions Reporting Act 2007* (Cth) (NGER Act) to calculate and report GHG emissions produced directly and indirectly by our Australia based activities and operations. In New Zealand, we report our emissions under the *Climate Change Response Act 2002*.

Since 2007 we have also undertaken voluntary reporting of our GHG emissions to the Carbon Disclosure Project (CDP). Our responses to the CDP climate change survey have also been publicly available since 2008 and can be accessed via CDP's website www.cdp.net.

By 31 October each year, we report our audited GHG emissions to the Commonwealth regulator under the NGER Act.

Under the National Pollutant Inventory, Origin also reports annually on polluting substances that are emitted into the environment, including oxides of nitrogen (NOx) and oxides of sulphur (SOx). In line with regulatory requirements, our emissions are reported to the relevant state environment regulators by 30 September each year.

The majority of our current GHG emissions are direct emissions (Scope 1), resulting from our role as electricity generator and to some extent as a producer of oil and gas. Indirect emissions from purchased energy (Scope 2) and other indirect emissions account for a small portion of our total GHG emissions. Our reporting also includes emissions data from our New Zealand oil and gas assets.

In the 2015 financial year, Origin's Scope 1 and Scope 2 GHG emissions on an operational basis totalled 17,149 kilotonnes of carbon dioxide equivalent (kt CO₂-e). This is an increase of 14 per cent compared with the previous year of 15,064 kt CO₂-e. On an equity basis, Origin's Scope 1 and Scope 2 GHG emissions totalled 18,339 kt CO₂-e, up 12 per cent on the previous year.

Energy Markets emissions

Our Energy Markets business accounts for 92 per cent of Origin's Scope 1 GHG emissions.

The majority, or 80 per cent, of Scope 1 emissions for Energy Markets relate to Eraring Power Station. Eraring's Scope 1 emissions increased by 17 per cent to 12,410 kt CO₂-e on an operational control basis for the 2015 financial year. This is primarily due to higher generation output.

The remaining emissions relate to Origin's other power generation assets, and the LPG and Cogent businesses, which together produced Scope 1 emissions of 3,008 kt CO₂-e for the 2015 financial year.

For the 2015 financial year, the emissions intensity from our electrical energy production (power generation) was 0.77 t CO₂-e/MWh for Scope 1 emissions.

The Australian Energy Market Operator (AEMO) calculates the average emissions intensity of the NEM using estimated Scope 1 and Scope 3⁽³⁾ emissions. The emissions intensity of Origin's generation portfolio continued to compare favourably this year at 0.85 t CO₂-e/MWh⁽⁴⁾, approximately 6 per cent below the NEM average of 0.91 t CO₂-e/MWh⁽⁵⁾.

Origin GHG emissions performance 2015⁽⁶⁾

	Operational control basis	Equity basis
Scope 1 (kt CO ₂ -e)	16,752	18,106
Scope 2 (kt CO ₂ -e)	397	233
Scope 1 emissions intensity of electrical energy production (t CO ₂ -e/MWh)	0.77	0.65
Scope 1 and 2 emissions intensity of oil and gas production (t CO ₂ -e/TJ)	8.0	11.2
Scope 1 + Scope 3 emissions intensity (t CO ₂ -e/MWh)	0.85	—
NEM average (t CO ₂ -e/MWh)	0.91	—

EMISSIONS AT A GLANCE

OUR PURPOSE

Closely measure and report the emissions associated with our power generation activities.

Laws and regulations

Emission reporting is regulated at a national level, under the *National Greenhouse and Energy Reporting Act 2007*.

Our additional actions

Each year we voluntarily report our emissions to the Carbon Disclosure Project and have been doing so since 2007.

Our approach

We have built a portfolio of low carbon power generation assets including natural gas and wind.

Our performance

Emissions intensity of 0.85 t CO₂-e/MWh⁽⁴⁾ is below the NEM average of 0.91 t CO₂-e/MWh⁽⁵⁾.

- (1) <http://www.appea.com.au/oil-gas-explained/benefits/cleaner-energy/>.
- (2) Data is reported as an 11 month actual (July-May) + one month estimate (June).
- (3) Scope 3 emissions are all indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both Upstream and Downstream emissions.
- (4) Calculated using the AEMO approach, that is, intensity of Scope 1 + Scope 3 (supply chain) emissions.
- (5) NEM average intensity calculated using the load weighted average of the FY2015 carbon dioxide equivalent intensity index published by AEMO as at 10 July 2015.
- (6) FY2015 result includes Upstream Oil and Gas (NZ).

Emissions data

GHG emissions intensity⁽¹⁾ (t CO₂-e/MWh and t CO₂-e/TJ)

	FY2011	FY2012	FY2013	FY2014	FY2015
Operational control basis					
Generation (t CO ₂ -e/MWh)	0.44	0.75	0.74	0.77	0.77
Upstream Oil and Gas and LNG (t CO ₂ -e/TJ)	6.0	5.7	7.0	6.84	8.0 ⁽²⁾
Equity basis					
Generation (t CO ₂ -e/MWh)	0.33	0.33	0.39	0.62	0.65
Upstream Oil and Gas and LNG (t CO ₂ -e/TJ)	8.0	7.8	8.4	7.75	11.2

Direct GHG emissions (Scope 1) (kt CO₂-e)

	FY2011	FY2012	FY2013	FY2014	FY2015
Operational control basis					
Energy Markets, of which:	1,662	1,676	12,411	13,387	15,418
— Eraring ⁽³⁾	3,909	10,137	9,826	10,583	12,410
— Generation (exc. Eraring)	1,606	1,618	2,528	2,749	2,952
— LPG	48	48	45	40	41
— Cogent	8	10	12	15	15
LNG	—	—	657	892	742
Upstream Oil and Gas ⁽⁴⁾	1,189	1,050	592	652	590
Others	5	3	3	3	3
Total Scope 1 – operational control basis	6,765	12,866	13,663	14,934	16,753
Equity basis					
Energy Markets, of which:	3,277	3,598	4,741	15,182	16,089 ⁽⁵⁾
— Eraring	—	—	—	10,583	12,410
— Generation (exc. Eraring)	3,221	3,540	4,684	4,544	2,952
— JV Generation	—	—	—	—	671
— LPG	48	48	45	40	41
— Cogent	8	10	12	15	15
Contact Energy ⁽⁶⁾	—	—	—	—	956
LNG	—	—	295	390	274
Upstream Oil and Gas (Aus)	1,076	1,012	741	708	698
Upstream Oil and Gas (NZ)	—	—	—	—	87
Others	5	3	3	3	3
Total Scope 1 – equity basis	4,358	4,613	5,780	16,283	18,107

Indirect GHG emissions (Scope 2) (kt CO₂-e)

	FY2011	FY2012	FY2013	FY2014	FY2015
Operational control basis					
Energy producing sites	50	42	184	113	386 ⁽⁷⁾
Non-energy producing sites	21	19	18	17	11
Total Scope 2 – operational control basis	71	61	202	130	397
Equity basis					
Energy producing sites	22	28	56	99	223 ⁽⁸⁾
Non-energy producing sites	21	19	18	17	11
Total Scope 2 – equity basis	43	47	74	116	234

Origin believes we will be making an important contribution to the global challenge of addressing climate change by facilitating the substitution of higher carbon intensive fuels for lower carbon intensive fuels.

(1) Note from FY2015 the Upstream Oil and Gas and LNG intensities are a combined Scope 1 and Scope 2 intensity.

(2) This data point combines Scope 1 and Scope 2 emissions intensity, to include electricity emissions from the electrification of LNG assets.

(3) Origin assumed operational control of Eraring Power Station on 1 August 2013. Prior to this Origin owned the output of Eraring Power station from March 2011 under the previous GenTrader Arrangement with the NSW Government. Scope 1 and Scope 2 GHG Emissions for FY2011 and FY2012 are included in these emissions calculations. In FY2013, the emissions for these assets were transferred under a Financial Control Liability Transfer Certificate to an Origin owned entity and are included to align with our obligations under the Clean Energy Act 2011.

(4) Includes Upstream Oil and Gas New Zealand.

(5) Not including Contact Energy.

(6) Included for FY2015 however after the close of the period, Origin has divested its entire interest in Contact Energy.

(7) Comprised of Generation (112 kt CO₂-e), Upstream Oil and Gas (33 kt CO₂-e) and LNG (241 kt CO₂-e).

(8) Comprised of Generation (112 kt CO₂-e), LNG (89 kt CO₂-e) and Upstream Oil and Gas (22 kt CO₂-e).



Integrated Gas emissions

Together, our LNG and exploration and production activities account for 8.0 per cent of our direct GHG emissions.

Emissions were relatively steady for Origin operated facilities, except for Australia Pacific LNG. GHG emissions from this project remained at levels higher than what we would expect over the long term, as the Project's upstream assets progress through the peak construction and commissioning phase.

In FY2015, Scope 1 and Scope 2 emissions in our gas business grew from 1,582 kt CO₂-e to 1,606 kt CO₂-e, reflecting expanded production and delivery of ramp gas in the lead up to exports from Train 1 of Australia Pacific LNG. This includes methane and carbon dioxide from flaring and venting operations. Flaring rates, which are typically higher during production ramp-up prior to commissioning of gas plants, are expected to reduce once commissioning is complete.

Scope 1 emissions for the Integrated Gas business unit fell by 14 per cent due to the improvements in the commissioning process of the new gas plants.

Scope 2 emissions from our energy producing sites totalled 274 kt CO₂-e, a 625 per cent increase on the prior comparable period. This increase is largely attributed to the electrification of LNG assets, and the growth in our Integrated Gas business, which saw an increase in electricity use to support activities for new gas plants and water treatment facilities in our LNG business.

The emissions intensity from our Upstream Oil and Gas and LNG activities was 8.0 t CO₂-e/TJ for Scope 1 and Scope 2. Upon completion of flaring associated with commissioning of Australia Pacific LNG, it is anticipated that emissions intensity will reduce once the flaring associated with commissioning is completed.

Fugitive emissions from gas operations

There has been some uncertainty around the amount of GHG emissions from CSG extraction and processing in Australia, mainly driven by research associated with the United States shale gas industry. Fugitive emissions are the emissions and leaks from extraction and processing infrastructure that might accumulate in our atmosphere.

In the financial year 2015, Origin's fugitive emissions from oil and gas operations were 772 kt CO₂-e⁽¹⁾. This includes emissions of methane and carbon dioxide in natural gas that is flared or vented, including leaks. Australia Pacific LNG is currently experiencing higher flaring rates that are expected to decrease once commissioning is complete. For each new gas field there is a period when gas production ramps up prior to the gas plant being commissioned, resulting in higher flaring rates. This is a short-term requirement and gas flaring will be managed to a level required for safe and reliable production.

Origin, as the Upstream operator of Australia Pacific LNG, jointly sponsored an Australian CSG fugitive emissions study undertaken by the CSIRO⁽²⁾. As part of this study, CSIRO surveyed 43 wells in New South Wales and Queensland – operated by a range of CSG companies including Origin.

The study confirmed that the measured emissions are consistent with the current emission estimates for general equipment leaks and confirmed that equipment leaks comprise only a very small proportion of GHG emissions from CSG production. The results validate that our current approach to estimating minor emissions sources around wells is appropriate and that the uncertainty of the overall emissions from CSG production and processing is relatively low.

Natural gas can be used to produce equal amounts of electricity as coal-fired generation, while resulting in around half of the carbon emissions⁽³⁾.

ABOVE

Senior Plant Technician, Keith Part at Origin's 550 MW Mortlake gas-fired Power Station in Victoria.

- (1) Reported in Scope 1 direct emissions for LNG and Upstream Oil and Gas.
- (2) CSIRO, *Field Measurements of Fugitive Emissions from Equipment and Well Casings in Australian Coal Seam Gas Production Facilities*, June 2014.
- (3) <http://www.appea.com.au/oil-gas-explained/benefits/cleaner-energy/>.

Growth in global energy demand is a critical driver of economic development and Origin believes this can occur in tandem with the objective of reducing carbon emissions.

Methane emissions from gas basins

Methane emissions from gas basins, sometimes referred to as seeps, are a naturally occurring phenomenon historically used by gas explorers to identify potential resources.

There have been questions raised about whether these emissions from land, typically from water bores and old exploration bores, might increase as a result of gas developments in the Surat Basin. We are collaborating with and supporting public research undertaken by GISERA to help scientists and policymakers better answer those questions.

A project began in 2013 to focus on methane detection and measurement methodologies. These methodologies and technologies included mobile surveys using vehicles fitted with detection equipment, remote sensing techniques using aerial surveys and historic satellite data; and assessment of 'top-down' atmospheric background monitoring of methane emissions using fixed location monitoring stations.

The first of these monitoring stations is now established and operating at an Origin-owned property South West of Chinchilla. A second site to the North East of Chinchilla has been identified.

Results from the GISERA methodologies and technology trials will guide deployment of suitable atmospheric monitoring and other systems, to conduct long term monitoring of emissions at sites in the Surat Basin.

We are continuing our investigations into emissions occurring at four locations along a five-kilometre stretch of the Condamine River.

Following recommendations arising from the Norwest Technical Report⁽¹⁾, a detailed scientific investigation into natural gas emissions in the Condamine River, we are implementing a long term ongoing monitoring program.

During the 2015 financial year, this work included: the successful installation of eight monitoring bores at four locations near the emissions; a real-time telemetry system reporting sub-surface water pressure data; installation of in-stream water quality monitoring stations; and continued soil, air and aquatic ecological health surveys. Using data from these monitoring bores and related seismic work, we are gaining a better understanding of the sub-surface beneath the emissions area.

While emissions may be present because of the geology in the area, our ongoing monitoring and studies also suggest active management may be appropriate. As a result, we have started detailed planning on a range of active seeps management options, in combination with field production trials.

International best practice shows there are proven methods which can successfully intercept and capture methane below the surface prior to its release into the atmosphere and we are assessing a number of options which may be suited to the geology of the Condamine River. These options would only be implemented with full regulatory and environmental approval.

Other air emissions⁽²⁾

As part of the Australian National Pollutant Inventory (NPI), Origin's larger operating sites track and report emissions of NO_x, SO_x and total volatile organic compounds (TVOC). These primarily arise from the combustion of fuels such as natural gas, kerosene, diesel and coal. The majority of NO_x, SO_x and TVOC emissions and particulate emissions for Origin's operated Australian sites result from electricity generation at our Eraring Power Station.

During the 2015 financial year emissions of NO_x from Origin's operated Australian sites totalled 25,728 tonnes. SO_x emissions from Origin's operated Australian sites were 29,267 tonnes. TVOC emissions from Origin's Australian operations remained steady and in line with production at 1,711 tonnes.

For our Energy Markets sites the majority of NO_x, SO_x and TVOC emissions and particulate emissions for our operated Australian sites resulted from electricity generation at Eraring Power Station. Emissions of NO_x, SO_x and particulates from Eraring stacks are managed through low NO_x burners, boiler tuning, fabric filter maintenance and ensuring the use of quality coal and fuel oil.

In our LNG business, both NO_x and SO_x emissions remained at higher than expected long term levels, as the Australia Pacific LNG upstream assets progressed through the peak construction and commissioning phase.

Particulates discharged from stacks and dust from other operations on site is a community concern at our Eraring Power station.

In the 2015 financial year, Eraring Power Station emitted 829 tonnes of PM₁₀, an increase on the prior year emissions of 440 tonnes. PM₁₀ refers to particulates that are 10 micrometers or smaller in diameter and are typically associated with combustion sources, while dust refers to the larger diameter particles which are generally associated with nuisance and amenity impacts.

(1) Condamine River Gas Seeps Investigations: Independent Review Norwest Corporation, April 2014.

(2) The emissions reported in this section have been determined in accordance with the Australian National Pollutant Inventory, and excludes New Zealand operated sites. FY2015 NO_x, SO_x and TVOC emissions have been estimated based on the FY2014 emissions and the relative change in energy consumed between FY2014 and FY2015.

SOUND AND STABLE POLICY

The energy industry is highly regulated. Governments play an instrumental role in shaping market settings through the design and implementation of policy. The capital intensive nature of our business, together with the time required to bring many of our activities to market, requires a sound and stable policy environment.

Unexpected changes to policy or ineffective policy can be detrimental to our business and can also result in extra costs for our customers, large and small. To help mitigate the risks associated with policy and regulation, we regularly engage with policy makers to contribute to the setting of commercially viable policies.

We provide advice and support to various industry associations, and also contribute to broader policy debates by participating in a variety of public review processes.

Our policy advocacy

Central to our policy advocacy is the belief that energy policy should be assessed against the social imperatives of cost, reliability and environmental sustainability.

Origin encourages policy settings that will help progressive decarbonisation. One of Origin's business priorities is to grow its investment and capabilities in renewable energy, as well as exporting natural gas as LNG to Asia, where it can be used as a substitute for coal in power generation.

Climate change

Growth in energy demand is recognised as a critical driver of economic development. Origin believes this demand can occur whilst still meeting the objective of reducing carbon emissions, by substituting high carbon intensity fuels with low carbon intensity and renewable fuels.

Climate change has been one of the most substantial areas of policy development over recent years and Origin has invested substantial time in advocating for sound and stable policy that will deliver against Australia's emissions reduction objectives.

In the 2015 financial year, the key components of climate change policy debate in Australia have been long-term emissions reduction targets, the RET and Direct Action. These policies are discussed in detail below, and Origin's full submissions to Government on these issues can be viewed at www.originenergy.com.au.

Long-term carbon emissions reduction targets

If the world is to address climate change, we believe long-term targets for emissions reductions are required as a key area in Australia's climate change policy.

Australia currently has bipartisan commitment to reduce greenhouse gas emissions by 5 per cent on 2000 levels by 2020⁽¹⁾. With the upcoming United Nations Framework Convention on Climate Change meeting in Paris in December 2015, the policy focus has shifted to Australia's emissions targets beyond 2020. A number of nations have already made formal commitments relating to longer-term emission reduction pledges – including the 'big three' emitters of China, the US and the European Union.

(1) Climate Change Authority, *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress Review – Final Report*, 2014.

BELOW

Origin's 30 MW Cullerin Range Wind Farm in NSW.



If the world is to address climate change, long-term targets for emission reductions are required and Australia must play its role.

In August 2015, the Federal Government announced that Australia will adopt a target to reduce greenhouse gas emissions by between 26 and 28 per cent on 2005 levels by 2030. The government plans to meet the 2030 target through policies built on the Direct Action Plan. Origin plans to work with both sides of politics to develop sound and enduring energy and carbon policies that will help Australia to meet or exceed the target.

To better understand Australia's contribution to the reduction in emissions and to contribute to a more informed debate on this policy matter, Origin commissioned Deloitte Access Economics to produce a report on carbon. The report examined Australia's greenhouse gas emissions, compared to the nations in the G20. The analysis examined the link between carbon emissions and economic growth to help understand how effectively countries are using the carbon they produce to grow their economies.

The report shows that Australia's performance as measured in carbon emissions per unit of GDP is better than the G20 average, and that over time, Australia's emissions intensity has reduced at a faster rate than this average.

We feel that simplistic measures like carbon emissions per capita – traditionally used to discuss Australia's performance in this area – do not provide a complete view of performance. As such, additional metrics including efficiency of converting carbon into GDP should be used to provide a more comprehensive view of the current landscape.

Ultimately, the internationally agreed goal is to limit average global temperatures rising to 2 degrees Celsius or less, in order to have a realistic chance of avoiding the most extreme impacts of climate change. It is hoped the Paris agreement will place the world on a pathway to achieve this goal and Origin supports Australia making a contribution to such an agreement, consistent with other developed nations.

Renewable Energy Target Scheme Review⁽¹⁾

There were some important amendments to the composition of the RET during the 2015 financial year, ending several years of policy uncertainty.

The Large-scale Renewable Energy Target (LRET), which supports wind farms and large solar projects is now legislated at 33 TWh, down from the previous target of 41 TWh. We estimate that a 33 TWh LRET will require about 5,000 MW of wind farms or equivalent to be built by 2020, or around 12 large projects.

The Small-scale Renewable Energy Scheme (SRES), which supports small-scale solar PV systems, is expected to contribute at least 12 TWh by 2020. The uncapped nature of the SRES means that this figure may end up being higher, particularly as new solar products emerge. This means that in total, targets are expected to generate about 45 TWh from renewable sources by 2020.

Origin is and continues to be a long-time supporter of the RET. Origin's options to acquit its liability under the RET, which is roughly a third of the entire liability, include the potential development of the Stockyard Hill Wind Farm in Victoria and utility scale solar in Queensland. These options are discussed in Future Energy Solutions on page 60 of this report.

Direct Action Plan

The Australian Government's Direct Action Plan is designed to reduce carbon emissions through federal government-funded incentives. The policy comprises two main aspects: the Emissions Reduction Fund (ERF) and the Safeguard Mechanism.

The \$2.55 billion ERF came into effect on 13 December 2014⁽²⁾. It enables industry and other businesses to sell carbon abatements back to the Australian Government. The second component, the Safeguard Mechanism, is currently the subject of a consultation process expected to be finalised in October 2015 with obligations commencing from 1 July 2016.

The Safeguard Mechanism is designed to ensure that emission reductions achieved through the ERF are not offset by growth in emissions elsewhere in the economy. The Safeguard Mechanism could potentially cover two main aspects of our business – natural gas production and electricity generation.

Origin actively contributed to the development of the policy framework, and has consistently stated its belief that the ERF can deliver a meaningful contribution to Australia's emissions reduction efforts.

We have also stated that to achieve long-term emission reduction targets, a well-designed market mechanism for the electricity generation sector is required. This could include a transition from the Safeguards Mechanism to a market-based system. Policies to facilitate the orderly retirement of emission intensive plants and to encourage the deployment of low emissions technologies (without the need for excessive subsidies) should also be considered.

Energy White Paper

The other major policy development during the year was the release of the Australian Government's Energy White Paper in April 2015. The Paper sets out the government's vision for the energy sector, which includes a desire for competitively priced and reliable energy, with an emphasis on productivity and consumer choice.

The White Paper also reiterated the government's support for a number of key policy reforms that are aligned with Origin's views. These include: the need for tariff reform and cost reflective network prices; privatisation of state-owned energy assets; and the streamlining of the major projects approval process. Ultimately, achieving these objectives will depend on cooperation from state governments that play an important role in regulating the energy industry.

(1) Renewable Energy (Electricity) Amendment Bill 2015.

(2) Carbon Farming Initiative Amendment Bill 2014.

OUR FINANCIAL PERFORMANCE

In the 2015 financial year, Origin delivered solid operational performance with significant progress across its key priorities.

We improved returns in Energy Markets, Australia Pacific LNG remains on track, our capabilities in renewables continue to grow with important progress made in solar, and liquidity is sufficient to meet our remaining contributions to Australia Pacific LNG and other business initiatives.

For the 2015 financial year, Origin announced a Statutory Loss of \$658 million, primarily reflecting the impairment of Origin's investment in Contact Energy and upstream assets, the non-cash impact of the recent depreciation of the Australian dollar on the fair value of financial instruments and debt, and interest expense which would otherwise be capitalised if the Australia Pacific LNG project was held by Origin rather than via an equity accounted investment.

Underlying Profit was \$682 million, a 4 per cent decrease compared to the prior year.

Underlying EBITDA increased by \$10 million to \$2.15 billion, driven by an increase in contribution from Energy Markets, offset by lower contributions from Exploration & Production, Corporate and Contact Energy.

Contact Energy, which has been presented as a discontinued operation in Origin's financial statements, contributed \$199 million to Statutory Loss after the impairment of Origin's investment in that company, and \$79 million to Underlying Profit.

Our Group Operating Cash Flow after Tax was \$1.58 billion, a 23 per cent decrease on the prior year, primarily due to higher working capital reflecting the final carbon scheme payment, and the timing of tax instalments.

The total dividend payable to shareholders in the 2015 financial year was 50 cents per share, in line with the prior year.

Year in review

Work on Australia Pacific LNG is nearing completion and the project remains on track to commence sustained LNG production from Train 1 from the second quarter of the 2016 financial year and from Train 2 approximately six months later.

Notwithstanding the strong Energy Markets performance for the year, market conditions remain challenging. In our Integrated Gas business, the significant fall in oil price, if sustained at current levels, will result in lower growth in cash flow and earnings than previously expected.

It is therefore prudent that we continue to focus on reducing operating and capital costs, realigning debt across the group entities and where appropriate divest assets, in order to increase Origin's financial flexibility in the short to medium term.

Consistent with this approach, following the close of the 2015 financial year, Origin Group divested its 53.09 per cent interest in Contact Energy and received net cash proceeds of NZ\$200 million and approximately \$1.4 billion.

Following the completion of this sale, Origin has \$5.8 billion⁽¹⁾ of committed and undrawn debt facilities and cash, which is more than sufficient to fund the Company's remaining contributions to Australia Pacific LNG and other business commitments.

During the year, we continued to focus on maintaining adequate liquidity and completed further funding initiatives which extended Origin's debt maturity profile and enhanced liquidity. Origin amended its syndicated loan facilities to reduce the interest rate margin, extend the maturity and increase the limit of the facilities by \$750 million to \$7.4 billion.

Origin also issued €1 billion in hybrid capital securities on the Luxembourg Exchange, which were swapped into \$1.4 billion.

Following a careful review of the carrying value of all assets, Origin has recognised a non-cash impairment charge of \$705 million. The impairment charge primarily relates to Contact Energy and the Company's upstream assets.

There is no impairment related to Australia Pacific LNG; the economics of Origin's investment in Australia Pacific LNG remain robust.

Improved operational performance

We have consistently stated that the 2015 and 2016 financial years are transitional years for Origin, as we complete the final stages of our investment in Australia Pacific LNG.

Underlying EBITDA in our **Energy Markets** business increased 20 per cent to \$1.26 billion. This was mainly due to a higher contribution from the natural gas segment due to increased sales. Our ability to take advantage of attractively priced ramp gas in the Energy Markets business as production commenced at the Queensland LNG projects led to increased natural gas sales.

In Australian dollars⁽²⁾, **Contact Energy** Underlying EBITDA decreased \$46 million to \$487 million (NZ\$525 million), reflecting continued competition and retail price discounting eroding tariff increases to recover increased distribution costs. This was partially offset by increased geothermal generation following the commissioning of Te Mihi power station.

Underlying EBITDA in our **Exploration & Production** business decreased 18 per cent to \$399 million due to lower liquids production and lower liquids prices. As foreshadowed at the half year, the availability of Queensland ramp gas allowed Origin to use less gas from its own production, with the consequential reduction in liquids production. This forgone gas and liquids production will be produced in subsequent periods.

Underlying EBITDA in our **LNG** business decreased 13 per cent to \$72 million.

Origin's net cash contribution to Australia Pacific LNG was \$2.17 billion⁽³⁾ during the period. As of 30 June 2015, \$25 billion⁽⁴⁾ had been spent by Australia Pacific LNG and estimated costs to complete are not expected to be materially different from budget⁽⁵⁾.

- (1) As at 30 June 2015, adjusted to include net proceeds from the sale of Contact Energy. Excludes Contact Energy and bank guarantees.
- (2) In consolidating Contact Energy's results, Origin used a monthly average exchange rate. For this year it is NZ\$1.08 to the Australian dollar, compared with NZ\$1.10 to the Australian dollar in the prior year.
- (3) Origin's cash contribution to Australia Pacific LNG for the current year is net of \$165 million of interest income (30 June 2014: \$7 million) received on Mandatorily Redeemable Cumulative Preference Shares (the mechanism by which remaining funding to Australia Pacific LNG will be provided by the shareholders of Australia Pacific LNG in proportion to their equity interest). Interest on the Mandatorily Redeemable Cumulative Preference Shares is paid to shareholders twice per annum based on a fixed interest rate.
- (4) Includes an unfavourable foreign exchange translation impact of A\$362 million relative to project cost estimates announced in February 2013, which were based on 31 December 2012 exchange rates and around \$500 million of accrued expenses.
- (5) As announced in February 2013 based on December 2012 exchange rates.

Since commencement of the Project, Origin as the Upstream operator of Australia Pacific LNG, has spent \$18.3 million on community investment.

Looking ahead

To further build resilience in Origin to periods of low oil prices, a number of initiatives have been announced to reduce operating and capital costs. Origin, as Upstream operator for Australia Pacific LNG, has initiatives in place to reduce Australia Pacific LNG's operating and capital costs by \$1 billion per annum below costs experienced during the construction phase. Of this, approximately \$650 million has been achieved in the 2015 financial year with the remaining \$350 million of cost reduction initiatives to be implemented by the end of the 2016 financial year.

In financial year 2016, Origin expects to reduce operating costs in the Energy Markets business by a further \$65 million and capital costs by \$50 million.

Origin has also initiated a program to further reduce costs across the Company by \$200 million a year on a sustainable basis by the 2017 financial year.

More detail about Origin's performance, prospects and outlook can be found at originenergy.com.au.

Value distribution

At Origin we strive to sustainably grow our business by adding value to the resources that come under our control, and to share this value with our stakeholders.

Our operations and energy developments create significant economic value which is represented in the form of interest and dividend payments to our capital providers, wages to our employees and contractors, taxes and royalties to state and federal governments, as well as initiatives that support the communities in which we operate.

The value distribution calculation and commentary in this section is based on the income and expenses reported in the Income Statement of Origin Energy Limited.

In the 2015 financial year, we distributed \$15.5 billion to our stakeholders which was up 4 per cent on the prior year. A total of \$1.3 billion was distributed to our capital providers through interest expense and dividends paid to our shareholders.

We also distribute value to employees through wages and other benefits. In the 2015 financial year, our value distribution to employees increased by 6 per cent to \$831 million. Commensurate with the importance we place on safety throughout the organisation, we again met our annual safety performance target. As a result, eligible employees were awarded with up to \$1,000 worth of Origin shares.

Royalties and tax expenses totalled \$58 million in the 2015 financial year.

This year we distributed \$13 million to the communities in which we operate, as defined by the methodology of the London Benchmarking Group. This expenditure represents various community investment programs, charitable donations, as well as grants provided by the Origin Foundation. Approximately 25 per cent of the \$13 million was awarded through the Origin Foundation.

Additional value

Our operations and energy developments also create economic value for the communities through significant investment via the procurement of local goods and services from local suppliers. Since commencement of the Australia Pacific LNG project, Origin as Upstream operator of Australia Pacific LNG, has spent \$18.3 million on community investment.

Economic value distributed (\$m)

	FY2015	FY2014
Net expenses (excluding stakeholders' payments) ⁽¹⁾	12,523	12,061
Depreciation and amortisation	809	732
Total operating costs	13,332	12,793
Employee wages and benefits net of taxes	831	783
Interest expense ⁽²⁾	481	453
Dividends paid to shareholders	801	634
Total payments to providers of capital	1,282	1,087
Current income tax (benefit)/expense ^{(3) (4)}	(20)	210
Royalties to government	23	39
Other taxes	55	50
Total government expenses	58	299
Community investments ⁽⁵⁾	13	7
Total community contributions	13	7
Economic value distributed	15,516	14,969

(1) Excludes capital expenditure.

(2) Excludes capitalised interest.

(3) Income tax includes only current income tax (benefit)/expense. GST and deferred taxes are excluded.

(4) Includes all subsidiaries in Australia and overseas.

(5) Community investment totals \$12.9 million in FY2015 and \$6.7 million in FY2014. Rounded to the nearest million.

CORPORATE GOVERNANCE

Origin's Board and management are committed to the creation of shareholder value and meeting the expectations of stakeholders by practising sound corporate governance.

In accordance with the Third Edition ASX Corporate Governance Principles and Recommendations⁽¹⁾, Origin's Annual Report contains a statement which summarises the Company's governance practices which were in place throughout the 2015 financial year. During the financial year Origin has complied with all of the ASX Principles.

The information on this page is an extract from Origin's FY 2015 Corporate Governance Statement, which was released on 20 August 2015 and will be published in our Annual Report, which will soon be available at www.originenergy.com.au.

Lay solid foundations for management and oversight

The Board's roles and responsibilities are formalised in a Board Charter, which is available on Origin's website. The Charter sets out those functions that are delegated to management and those that are reserved for the Board. The Company Secretary is accountable directly to the Board, through the Chairman, on all matters to do with the proper functioning of the Board.

Origin's Board and management team are committed to workplace diversity and to providing equality of opportunity and a rewarding workplace for all employees. Our diversity performance is discussed in detail in Diversity and Inclusion on page 55.

The performance of all key executives, including the Managing Director, is reviewed annually against:

- a set of personal financial and non-financial goals;
- Company goals; and
- adherence to the Company's Compass, which reflects the role that Origin's Purpose, Principles, Values and Commitments play in everyday decision making.

The Remuneration Committee and the Board consider the performance of the Managing Director and all members of the Executive Management Team when deciding whether to award performance-related remuneration through short-term and long-term incentives for the year completed and when assessing fixed remuneration for future periods.

Each year, the Directors review the performance of the Board, Board committees and individual directors. This year, a full review was undertaken with assistance from an independent external consultant, covering individual Director performance, the Board and Committees' activities and work program, time commitments, meeting efficiency and Board contribution to Company strategy, monitoring, compliance and governance. The results of the review were discussed by the whole Board and initiatives to improve or enhance Board performance and effectiveness were considered and recommended.

Structure the Board to add value

Our Board of Directors brings vast experience to governing our business strategy and is accountable to shareholders for the performance of the Company. As at 30 June 2015, the Board comprised nine Directors, including seven Non-executive Directors, all of whom are considered independent by the Board, and two Executive Directors. Directors' profiles, details of their skills, experience and special expertise are set out in the Directors' Report.

The Board seeks to have an appropriate mix of skills, experience, expertise and diversity to enable it to discharge its responsibilities and add value to the Company. The Board values diversity in all respects, including gender and differences in background and life experience, communication styles, interpersonal skills, education, functional expertise and problem solving skills.

Five committees assist the Board in executing its duties in relation to audit, remuneration, health, safety and environment, nomination and risk.

Act ethically and responsibly

All Directors and employees are expected to comply with the law and act with a high level of integrity. Origin has a Code of Conduct and a number of policies governing conduct in pursuit of Origin's objectives in dealing with shareholders, employees, customers, communities, business partners, suppliers, contractors and other stakeholders. The Code of Conduct is based on Origin's Statement of Purpose, Principles, Values and Commitments (Origin Compass), which serves as a guide to Origin's decision making, behaviours and actions for its employees.

The Origin Compass (page 4 of this report) and a summary of the Code of Conduct is available on the Company's website.

Integrity in corporate reporting

The Audit Committee oversees the structure and management systems that are designed to protect the integrity of Origin's corporate reporting. The Chairman of the Audit Committee, Mr Bruce Morgan, is an independent Director with significant financial expertise. All members of the Committee are financially literate and the Committee possesses sufficient accounting and financial expertise and knowledge of the industry in which Origin operates.

The Audit Committee reviews Origin's half and full year financial reports and makes recommendations to the Board on adopting financial statements. The Committee provides additional assurance to the Board with regard to the quality and reliability of financial information.

Timely and balanced disclosure

Origin has adopted policies and procedures to ensure compliance with its continuous disclosure obligations and accountability of senior management for that compliance. Origin is committed to providing timely, full and accurate disclosure and to keeping the market informed. Both the Continuous Disclosure Policy and the Communications with Shareholders Policy are available on the Company's website.

Origin's Board and management are committed to the creation of shareholder value and meeting the expectations of stakeholders by practising sound corporate governance.

(1) ASX Corporate Governance Council.

Our Diversity and Inclusion Policy guides behaviours and actions, and aims to create an environment in which all individuals are supported and respected.

Respect the rights of shareholders

Origin respects the rights of its shareholders and has adopted policies to facilitate the effective exercise of those rights through participation at general meetings, and the provision of regular information about Origin and its operations. Origin is committed to providing a high standard of communication to its shareholders and other stakeholders.

Shareholders are able to review the financial and non-financial performance of the Company via a half year report, annual Shareholder Review, a full Annual Report, Sustainability Report and annual general meeting material. These reports are also available on the ASX and in online digital format via Origin's website.

Sustainability reporting is guided by the Global Reporting Initiative and includes disclosures of material environmental, social and governance (ESG) aspects of the Company's business activities.

The Company also discloses other ESG information via regulated National Greenhouse Emissions Reporting, as well as voluntary disclosure platforms such as the Carbon Disclosure Project and the Dow Jones Sustainability Index. ESG disclosures are also made to meet FTSE4Good requirements.

All communications from, and the majority of communications to, the Company's share registry are available electronically, including the publication of company reports, and shareholders are encouraged to take up the option of e-communications.

The Company's website contains a list of key dates and all recent announcements, presentations, past and current company reports and notices of meetings. Shareholder meetings and results announcements are webcast and an archive of these meetings is published on the Company's website.

The Company welcomes and encourages shareholders to attend and participate at its AGM, either in person, by proxy or attorney or by other means adopted by the Board. At each AGM, the Chairman will allow a reasonable opportunity for shareholders to ask questions of the Board. Shareholders who are unable to attend the AGM will be able to view a webcast of the meeting (and certain past AGMs) on the Company's website.

The Company has a dedicated investor relations function to facilitate effective two-way communication with investors. This is in conjunction with a wider stakeholder engagement program.

The Communications with Shareholders Policy is available on the Company's website.

Recognise and manage risk

The Board has an overarching policy governing Origin's approach to risk oversight and management and internal control systems.

The Risk Committee oversees its policies and procedures in relation to risk management and internal control systems.

The Risk Committee reviews Origin's risk management framework annually. Origin's risk policies are designed to identify, assess, address and monitor strategic, operational (including risks to health, safety and the environment), legal, reputational, commodity, environmental, social and financial risks to achieve business objectives. Certain specific risks are covered by insurance and the Board has also approved policies for hedging interest rates, foreign exchange rates and commodities.

Management is responsible for the design and implementation of the risk management and internal control systems to manage Origin's business risks. Management has reported to the Risk Committee and the Board that, as at 30 June 2015, its material business risks are being managed effectively.

Beyond the financial results, the Company is witnessing changes in community attitudes and increased focus on local and global environmental challenges. The Company recognises the need for disclosure to help investors assess both short term and long term risks and prospects. The Sustainability Report is re-examined each year to assess the quality and extent of that disclosure.

Origin assesses the environmental and social risks associated with all projects and operations. Projects are developed with precautionary engineering and management measures in place to mitigate or manage key environmental and social risks, and operations are managed using policies and procedures to control remaining environmental and social risks. Environmental and social risk management is subject to periodic audits and assurance.

As one of Australia's largest power generators, Origin closely measures, manages and reports on the emissions associated with its generation operations. A large proportion of these are governed by laws and regulations. In addition, the Company voluntarily reports its emissions, and management of this extends to the active development of a low carbon power generation portfolio including natural gas and wind.

Further detail on Recognising and Managing risk can be found in the Annual Report and on Origin's website.

Remunerate fairly and responsibly

The remuneration of Non-executive Directors is structured separately from that of the Executive Directors and senior executives.

The Remuneration Report sets out details of the Company's policies and practices for remunerating Directors, key management personnel and employees. Further information about the Remuneration Committee's activities is provided in the Remuneration Report.

DIVERSITY AND INCLUSION

Origin is committed to providing equality of opportunity and a rewarding workplace for all employees. Increasing gender diversity, especially in senior roles, is an ongoing policy priority. Our Diversity and Inclusion Policy guides behaviours and actions, and aims to create an environment in which all individuals are supported and respected.

Our Policy applies to all aspects of employment including recruitment, selection, promotion, training, remuneration, benefits, performance management, and all other terms and conditions of employment. A particular priority is improving gender balance, especially in senior roles.

Origin continues to be recognised as Workplace Gender Equality Agency's Employer of Choice for Gender Equality. Origin is also the only Australian company to rank in the top 20 in a global Ernst & Young report⁽¹⁾ on gender diversity in the Power and Utilities industry. We were the best performer in the Asia Pacific region, and ranked fifth globally.

We have also been recognised by Females in IT and Telecommunications (FITT) in its 2015 Diversity Report as the most supportive place for women to work in IT in Australia. Of 30 companies named in FITT's report, Origin was chosen as number one for women. To date, women make up 41 per cent of Origin's IT team compared with the IT sector average of 28 per cent.

As part of our commitment to increase gender diversity at Origin, we have committed to three voluntary targets.

Voluntary targets

Accordingly the Company committed in FY2015 to:

1. continue to deliver equal average pay for men and women at each job grade;
2. increase the number of women in senior roles, with a target to improve the rate of appointment of women to senior roles by 15 per cent; and
3. improve our retention of women in senior roles, with a target to improve our turnover rate among women in senior roles by 15 per cent.

Progress against these targets is reported internally on a quarterly basis to the Diversity Council comprising the Executive Management Team and chaired by the Managing Director.

Performance against targets

Deliver equal average pay for men and women at each job grade

Average pay for men and women at each job grade fluctuates through the year with turnover, recruitment and promotions, but once a year the Company undertakes a comprehensive review of all aspects of remuneration. In FY2015 the average female pay was higher at some grades than average male pay and lower at others. The average difference between male and female pay across all job grades was within our targeted range of less than one per cent. Job grades are defined using standard Hay Pay Scales.

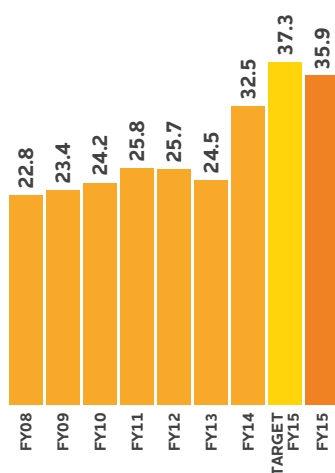
(1) Ernst & Young, *Talent at the table: Women in Power and Utilities Index*, 2015

BELOW

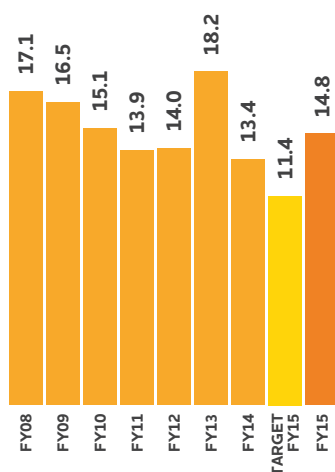
Origin is committed to workplace diversity and equal opportunity for its people.



APPOINTMENT TO SENIOR ROLES, FEMALE (%)



SENIOR FEMALE TURNOVER (%)



Improve our rate of appointment of women to senior roles by 15 per cent versus the prior year

The percentage of women recruited into senior roles (35.9 per cent) was comfortably the highest ever, as shown in the chart on the left. Key policies and actions to drive this result included: every interview panel for a senior role must be made up of both men and women; where possible⁽¹⁾ every shortlist must have at least one woman; and progress versus target for each Business Unit is reported to and reviewed by the Diversity Council each quarter.

Improve our turnover rate among senior women by 15 per cent versus the prior year

The rate of senior female turnover actually increased this year. Like FY2013, which included a significant downsizing program in Energy Markets, both male and female turnover increased in FY2015.

As at 30 June 2015, 40 per cent of Origin's employees were female⁽²⁾. Eleven per cent of the Executive Management Team and 28.1 per cent of senior roles were filled by women.

Definition of seniority

For the purpose of setting targets, we define seniority by reference to standard Hay Pay Scale job grades rather than by reference to reporting relationship to the CEO. We do this for two reasons:

- to make genuine comparisons of seniority. Executives leading four support functions currently report to the CEO. A large number of people in areas such as legal, company secretary, human resources and communications are therefore only two or three steps below the CEO, whereas many roles with significant line management responsibility, large teams or bottom line accountability are not; and
- to make analysis comparable over time. Any restructure that changes Executive Management Team roles also changes the reporting relationship of hundreds of people at lower levels, making it impossible to accurately compare progress on gender pay equality at those levels before and after the restructure.

The cohort we define as 'senior roles' includes all people in Hay Pay Scale job grades that pay approximately \$150,000 per year or more in total remuneration⁽³⁾. As at 30 June 2015 there were 1,861 people in senior roles, of which 28.1 per cent were women.

Gender breakdown by reporting relationship to the CEO

While the Company does not use reporting relationship to the CEO to define Origin's gender diversity targets, the gender profile of these cohorts is of interest to some external stakeholders and is presented in the following diagram.

FEMALES IN SELECTED COHORTS AS AT 30 JUNE 2015⁽⁴⁾

33%  **Females on the Board**

9 people in cohort

11%

CEO-1
Executive Management Team

9 people in cohort

29%

CEO-2
Other executives, general managers and managers

51 people in cohort

34%

CEO-3
Managers

158 people in cohort

28.1%

Females in senior roles
See discussion on this page

1,861 people in cohort

Targets for FY2016

Origin's targets for equal pay and for senior appointments will remain the same as last year.

However, Origin's turnover target will change. In recent years Origin has targeted a 15 per cent year on year reduction in turnover of senior women. However our turnover rate for senior women, as for men, has been mainly driven by economic factors unrelated to differential treatment by gender.

For FY2016, the Company will instead measure the difference in male turnover and female turnover rates among our senior employees, with a target to reduce the gap between female and male turnover to zero. While male and female turnover is strongly correlated, female turnover in senior roles has on average been higher than male turnover for most of the last ten years. In FY2015 the turnover rate for women in senior roles was 1.8 percentage points higher than the male rate.

In summary Origin's targets for FY2016 are:

- continue to deliver equal average pay for men and women at each job grade;
- improve the proportion of senior roles occupied by women, with targets to:
 - improve our rate of appointment of women to senior roles by 15 per cent compared to FY2015; and
 - reduce the gap between female and male turnover rates to zero.

The Board is responsible for overseeing the Company's strategies on gender diversity, including monitoring of the Company's achievements against any gender targets set by the Board. The Board has set itself a target of having at least 40 per cent females by 2020.

(1) Some senior roles, mainly engineering and technical, receive no female applicants.

(2) This excludes Eraring Power Station and New Zealand employees.

(3) The number can only be approximate because exact remuneration varies by individual by year according to their assessed performance under the Short Term Incentive Scheme.

(4) Definitions of CEO-1, CEO-2 and CEO-3 are as per Workplace Gender Equality Agency guidelines. That is, they do not include clerical and administrative staff or other staff that do not themselves manage other people. With all staff included, CEO-3 at Origin was 49 per cent female out of a total cohort of 269 as at June 30 2015.

RECONCILIATION ACTION PLAN

There is still on average a large gap between the lives and prospects of Aboriginal and Torres Strait Islander Australians and those of other Australians. Many organisations across Australia are taking action to close this gap and Origin's first Reconciliation Action Plan (RAP) is our contribution to this collective effort.

Launched in April 2015, Origin's RAP officially outlines our commitment to respect the rights and interests of the Aboriginal and Torres Strait Islander communities in which we operate, and is underpinned by our principles of diversity and inclusion. The plan also serves to highlight the Company's recognition that we have the

opportunity – and the obligation – to play a more active role in Australia's reconciliation efforts. The plan provides a list of our aspirations for 2015 and 2016 under four areas: culture of respect; education, skills, jobs and careers; commerce and community development; and relationships and partnerships that will add value to our efforts, and the efforts of others.

As part of the 2015 National Reconciliation Week, Origin Managing Director Grant King and Origin CEO Integrated Gas David Baldwin met with Reconciliation Australia's CEO Justin Mohamed. It was an opportunity for us to share with Reconciliation Australia our plans and aspirations, as we look to deliver on our commitments contained within the RAP.



A PERSONAL REFLECTION FROM AN ORIGIN EMPLOYEE

Melanie Grills is the Manager, Aboriginal and Torres Strait Islander Strategy and Engagement for Integrated Gas, and a member of Origin's Reconciliation Advisory Committee. Melanie and 10 other Committee members are helping guide implementation of Origin's first Reconciliation Action Plan.

ABOVE
Origin's Melanie Grills with son Charlie.



DISCOVER
MORE
ONLINE

**Origin's RAP
officially outlines
our commitment
to respect the
rights and interests
of the Aboriginal
and Torres Strait
Islander communities
in which we operate.**

"I am a Gomeroi Woman from Moree in New South Wales. I've worked for Origin for almost three years and as I reflect on our reconciliation journey so far, I am excited about the ways in which Origin can and will make a contribution to reconciliation in Australia.

"Every day that I come to work, I am motivated by hope. Hope that more and more people will open themselves to acknowledging our shared history and seeing the beauty of the world's oldest living culture through a lens free from bias.

"Hope for my daughter that outside our family home, she can see, feel and hear others celebrate her culture in a society where inclusivity is the norm. Hope that our organisation realises its potential to become leaders of authenticity in this space."

In early 2015, we launched the ECHO app which enables employees to use their smart phone to fast track customer support and sales enquiries for family and friends.

EMPLOYEE ENGAGEMENT

Origin is committed to creating a rewarding workplace for its people by valuing their contribution, encouraging personal development, recognising good performance and fostering diversity and equality of opportunity. An engaged, high performing workforce is intrinsically tied to a company's performance, innovation, productivity and overall success.

Steps to strengthen engagement

At Origin, we have been taking steps to create a more rewarding workplace for our employees. An important first step was developing a better understanding of what our employees think and feel about Origin, to help us create targeted action plans. We undertake employee surveys to capture feedback and provide employees with a voice to help shape their workplace.

Past engagement surveys demonstrate employee recognition of the emphasis Origin places on safety, diversity and work-life balance; as well as the company's drive to set clear direction through KPIs. Our results in these areas are well above average for an Australian company.

We use AON Hewitt's methodology to measure engagement, which helps us understand how much our people want to improve business performance, and how much they are actually contributing.

During the 2015 financial year, our employee engagement score was introduced as a Key Performance Indicator (KPI) and linked to executive remuneration.

Eighty-six per cent of Origin employees participated in the survey and our 2015 engagement score improved from 47 per cent to 52 per cent, an increase of 11 per cent. While we have more work to do to reach the Australian average of 57 per cent⁽¹⁾, the results demonstrate that more employees were connected to Origin's vision and direction, were more positive about the brand and their day-to-day roles.

Working@Origin

Our 2014 Origin-wide engagement survey told us some important things, and helped to crystallise the following three focus areas for the business as we strive to create a more effective and rewarding workplace:

1. improved systems and processes;
2. manager and leader capability; and
3. communicating our story.

This year, we created a new program, Working@Origin which is how we refer to these initiatives. During the period, we undertook a number of actions as part of Working@Origin.

Improved systems and processes

A priority has been investment in people-related systems and processes. Our new portal will make it easier for our employees to access People & Culture services and up-to-date people-related information. We are also introducing a new advisory service which provides our people managers with immediate access to Business Partner advice via phone and email. These new services will be available across the Company early in the 2016 financial year.

Manager and leader capability

We are committed to building the capability of people managers across the business through our Management and Leadership program. During the year, we defined the 13 behaviours expected of all people managers at Origin. We've also introduced three key learning initiatives as follows:

- Monthly Management-In-Focus Sessions;
- training across the areas of self-awareness, communications skills and managing performance; and
- peer-based learning groups.

Our learning initiatives are currently being undertaken by all people managers across Origin.

Communicating our story

The Origin brand is one of our most valuable assets, and we believe our employees can be great advocates of Origin. As such, it is imperative we invest in communicating our story – who we are, what we do, what we stand for – so our employees can be proud of where they work.

Increasingly, more and more people are using online channels to access information and interact with Origin. Reflecting this trend, we launched a new responsive website which enables a consistent look across all devices – phone, tablet, laptop etc. Customers have been at the heart of the new design and as part of the new website, we have also refreshed our My Account so customers can truly do business with us at any time of the day, or day of the week.


We have also launched the Origin 'Blog'. This provides us with a new way to engage and connect with our customers, the community, government and media on matters related to energy.

Our *Energy Made Fresh Daily* campaign was relaunched in May. The campaign continues our story and encourages Australians to make energy fresh daily through solar power.

Earlier in 2015, we also launched the *Everyone Can Help Out* (ECHO) app, which enables employees to use their smart phone to fast track support for customer enquiries and sales.

Our Next Generation communication program delivered new and improved ways to communicate with our employees and continued our focus on building employee engagement.

(1) AON Hewitt's methodology.



WE HELP BRUCE AND KATE WHIP UP A MEAL

We provide natural gas to aspiring chefs across Australia so they can show off their skills in the kitchen.

The world is facing the challenge of increasing energy supply to meet growing demand, while at the same time limiting emissions from energy production to help combat climate change.

As an energy company planning long-term investments in energy solutions, Origin thinks deeply about these challenges and the role we can play in solving them. In this section, we discuss how the pursuit of Origin's business strategy will drive the Company's roll out of lower carbon and renewable energy solutions.

Origin's business is well-positioned for a carbon-constrained future, as it is made up primarily of investments in natural gas and renewable energy.

DEVELOPING CLEANER ENERGY SOLUTIONS

Origin's business is well-positioned for a carbon-constrained future, as it is made up primarily of investments in natural gas and renewable energy. These fuels will remain the primary focus of Origin's investment in future energy solutions, whether in Australia or internationally, as pursued through our three businesses:

- a regional leader in energy markets;
- a regionally significant position in natural gas and LNG production; and,
- a growing position in renewable energy.

Energy Markets

Our Energy Markets business generates power on a utility scale, provides distributed energy solutions such as solar PV to both residential and commercial customers and also pursues an innovation program aiming to provide new energy technologies and solutions to help customers use energy more efficiently.

At a utility scale, Origin is currently considering potential future investments in renewable energy generation. The Australian power generation market is currently over-supplied and so new generation is not required in order to meet growth in demand. However, the Australian Government's legislated RET requires that 33 TWh of electricity will come from renewable sources by 2020. Substantial investment is required in large-scale renewable energy projects over the next five years in order to achieve the target.

We are currently considering the potential development of Stockyard Hill Wind Farm in Victoria, which has already received planning approval, and the potential for utility scale solar plants in Queensland, to help meet the target.

In addition to large scale renewable energy assets, distributed forms of power generation such as solar PV have grown substantially over the past five years, giving people the opportunity to generate their own renewable energy. Australia has the highest penetration of solar anywhere in the world⁽¹⁾ and Origin is one of the largest solar providers. Today, we have more than 391,000 solar customers, having directly installed more than 80,000 solar systems.

In 2014, we announced a renewed commitment to our solar business, bringing new products and services to market such as *Solar as a Service*, a Power Purchase Agreement (PPA) product which provides customers with the benefits of solar without having to purchase the system. This is helping to open up solar to new markets, including small, medium and large businesses. Approximately 40 per cent of solar sales are now coming from *Solar as a Service*. Origin continues to see a strong opportunity to grow our solar business, with reports that solar penetration in Australia could grow from around 4 GW today to 18-20 GW by 2030 aided by new technologies⁽²⁾.

Energy Markets also seeks to develop new solutions for consumers and businesses that help make their energy consumption more visible, efficient, affordable and deliver lower carbon outcomes. These solutions include smart metering, battery storage and electric vehicles, among other things.

This year, Origin has been trialling a battery product in market. We expect the battery market to initially be small, but to grow larger beyond 2020 when the economics improve as technology costs come down. It is Origin's expectation that batteries will work as a complement to the existing grid, as opposed to working in direct competition with it.

(1) Energy Supply Association of Australia, *Household Solar: Australia First, Daylight Second*, 2015

(2) Bloomberg New Energy Finance

Natural Gas and LNG

Origin is a leader in the development of natural gas resources in Australia. Through our natural gas and LNG business, we explore for commercial quantities of gas that can be economically developed and connected to markets, including opportunities to liquefy the gas for safe transportation to regional markets such as Asia.

As a cleaner burning fuel that is safely transportable, natural gas will continue to play a critical role in meeting the world's growing demand for energy. Natural gas can produce up to 70 per cent⁽¹⁾ less carbon emissions than coal when used for power generation, and as the world's fastest growing fossil fuel it is expected to play an increasing role in displacing coal.

The IEA expects global gas demand to increase by an annual average of 2.0 per cent between now and 2020⁽²⁾. The outlook for gas demand in China, non-OECD Asia and Africa to 2020 is higher, with compound average growth rates of 10, 2.9 and 3.0 per cent respectively⁽²⁾.

Origin's Integrated Gas business comprises the Australia Pacific LNG project, which is nearing completion, as well as a number of exploration and production interests in Australia and New Zealand.

Australia Pacific LNG, in which Origin has a 37.5 per cent shareholding, is contracted to export approximately 8.6 million tonnes per annum of LNG to customers in China and Japan under long-term contracts for approximately 20 years.

In Australia, the LNG market is expected to triple between now and 2017 with the completion of a number of projects and ramp up of exports from the east coast, making Australia the world's largest producer of LNG by 2018⁽³⁾.

A Worley Parsons report found that for each tonne of carbon emissions from LNG production in Australia, carbon emissions in China are reduced by 4.3 tonnes when this gas is used in electricity generation in place of coal⁽⁴⁾. This demonstrates one of the global benefits available from the development of Australia's abundant natural gas resources.

Origin also has natural gas exploration and production interests principally located in eastern and southern Australia, the Browse and Perth basins in Western Australia, the Bonaparte Basin in north western Australia and Beetaloo basins in the Northern Territory and in New Zealand.

The appraisal and development focus is on executing projects with the highest returns and shorter payback periods. The success of the Halladale and Speculant drilling program will enable increased utilisation of the onshore Otway facilities, with first gas expected early in the 2017 financial year. The Ironbark field has also been prioritised for development.

The Secencio and Waitsia drilling programs in the Perth Basin identified significant conventional and tight gas potential. Origin will continue to work with its joint venture partner, AWE Limited to appraise the discovery.

Origin continues to participate in other exploration permit and joint venture commitments, including the acquisition of seismic survey data in the Canterbury Basin in New Zealand.

- (1) www.appea.com.au/oil-gas-explained/benefits/cleaner-energy/
- (2) International Energy Agency, *Medium-Term Gas Market Report 2015*.
- (3) RBA Bulletin, *Australia and the Global LNG Market: March Quarter 2015*.
- (4) Worley Parsons, *Greenhouse Gas Emissions Study of Australian CSG to LNG*, 2011.

BELOW
Australia Pacific LNG's project remains on track.



Origin has an interest in the 69 MW Javiera solar project in Chile's Atacama Desert – one of the world's best solar resources.

RENEWABLE ENERGY OPPORTUNITIES

One of Origin's priorities is to grow our capabilities and investment in renewable energy. In 2014, renewable energy accounted for nearly half of all new power generation globally⁽¹⁾. We expect energy sources like hydro, geothermal and solar to play an increasingly important role in the global energy mix in the future and Origin will play a part in that growth.

In addition to the Australian solar and wind opportunities pursued through the Energy Markets business, Origin also has interests in a range of hydro, geothermal and large-scale solar projects in Chile and Indonesia.

Chile

Over the past decade, Chile has become one of the fastest growing economies in South America, and in 2010 was the first South American country to join the OECD. It is also the world's dominant producer of copper, and with increasing demand for copper, electricity consumption is expected to nearly double from around 66 TWh to almost 130 TWh by 2030⁽²⁾. Chile has abundant renewable energy resources and limited fossil fuels, driving strong growth in renewable energy. The government has also set a renewable energy target of 20 per cent by 2025.

Origin has been pursuing opportunities in geothermal and solar with its interest in Energía Andina, its joint venture with Antofagasta Minerals in Chile, the Alfa solar development project and in hydro with Energía Austral Cuervo hydroelectric plant.

During the 2015 financial year, Origin increased its investment in Energía Andina by 9.9 per cent to 49.9 per cent. In the same period, Energía Andina acquired a 40 per cent stake in the 69 MW Javiera solar project in Chile's Atacama Desert, which is considered to be one of the world's best solar resources. It commenced commercial operations in the second half of the 2015 financial year. US-based solar leader SunEdison is also a partner in Javiera, which has a long-term PPA to sell energy to the Los Pelambres copper mine. Origin also acquired 100 per cent of the Alfa solar development project, which is approved for 280 MW with a possible expansion to 530 MW, also located in the Atacama Desert. Origin has a 33 per cent interest in Energía Austral, which is currently progressing the potential development of a 640 MW hydro project known as Cuervo.

Indonesia

With a population of around 257 million⁽³⁾ Indonesia is the world's fourth most populous nation behind China, India and the US. Estimated to have about 40 per cent of the world's potential geothermal reserves⁽⁴⁾, Indonesia's potential for renewable energy is high. In the lead up to the United Nations Framework Convention on Climate Change meeting in Paris, the government has announced a further renewable energy target of 19 per cent by 2019. The existing target envisages 25 per cent of renewable energy by 2025.

Through our interest in Geothermal Services Indonesia (OTP), Origin is pursuing geothermal opportunities. OTP continues to progress its geothermal developments and recently signed a PPA for the Sorik Marapi project in North Sumatra. Securing this agreement will help underpin the next stage of development of the resource.

- (1) International Energy Agency, *Energy and Climate Change: World Energy Outlook Special Report, 2015*.
- (2) National Electricity Commission, April 2015, *Node Price Report*.
- (3) United Nations, *World Population Prospects, 2015 Revision*.
- (4) www.worldbank.org/en/news/feature/2011/07/26/indonesia-expand-geothermal-power-alternative-coal.

BELOW

The 69 MW Javiera solar project in Chile.





WE HELP YOUNG PEOPLE BE THEIR BEST

We're committed to giving young Australians a brighter future through education, training and development.

The Origin Foundation is our philanthropic body, funded and established by Origin in 2010. Our focus, chosen by the people of Origin, is to support programs that use education to help break the cycle of disadvantage and empower young Australians to reach their potential.

Since its inception, the Origin Foundation has committed to giving \$17.8 million and helped more than 22,000 Australian children with their education.

The Foundation provides funding to Australian non-profit organisations that use education, training and development to help young people become the best that they can be. Since inception, the Origin Foundation has committed to giving \$17.8 million and helped more than 22,000 Australian children with their education.

While the focus of the Foundation has spanned the education lifecycle, from early childhood intervention to life-long learning, we have now sharpened our focus on the following areas:

- creating greater gender diversity in 'STEM' education – science, technology, engineering and maths;
- providing equality of educational opportunity for Indigenous students, and children in rural and remote Australia;
- building a stronger community sector by increasing the professionalism and productivity of the not-for-profit sector through training and development; and
- facilitating engagement in the community by Origin employees.

Through our Grants Program, we have funded more than 187 scholarships for current and future leaders in the not-for-profit sector over the past four years. We are funding research by the Centre for Social Impact, which we hope will demonstrate the positive impact of continuing education and training and shift attitudes within the sector and among funders.

We have long believed that educational opportunity should be available to all children. More than 33 per cent of our grant commitments have gone towards Indigenous education programs in Australia and parts of the Asia Pacific region. Forty-five per cent of our funding has been directed at programs operating in rural and regional Australia.

For the past three years we have been funding the development of The Smith Family's *Let's Count* early math program for pre-school children. Evaluation of the program has shown that *Let's Count* has positively impacted on the children, parents and educators who participated, demonstrating that children who undertake the program are achieving to a significantly greater level than their peers who were not involved in the program. We profile this program in the story Boosting Maths Skills and Confidence on page 65.

Origin's employees play a critical role in the Origin Foundation through the *Give Time* program. With fully paid volunteer leave, Origin employees donate their time and professional skills to help our Foundation partners. In the 2015 financial year, 940 employees gave 5,809 hours to a wide variety of projects, including helping young Indigenous children with their reading, hosting high school industry career visits, assisting with bushfire recovery efforts, renovating a rooftop playground, and providing mentoring for disadvantaged teenagers.

The Foundation also matches the donations Origin employees make to charitable organisations through the workplace giving program. In the 2015 financial year, Origin employees donated more than \$370,000 through the *Give2* program. When matched by the Origin Foundation, over \$740,000 went to the not-for-profit sector, to support over 238 organisations representing causes such as cancer research, men's health, and sustainable solutions to poverty.

The performance of the Origin Foundation is published annually and can be read at www.originfoundation.com.au. We look forward to the continued growth of the Origin Foundation's activities and impact in coming years.



BOOSTING MATHS SKILLS AND CONFIDENCE

The Origin Foundation has supported The Smith Family's *Let's Count* program, an innovative early numeracy program, which helps three to five year olds boost their mathematical skills.

It would be hard to find a better cause than assisting children in disadvantaged communities improve their mathematical skills and confidence.

The Smith Family's *Let's Count* program is an innovative early numeracy program, helping three to five year olds do just that.

Let's Count gives young children early exposure to mathematics, including counting, measurement, patterns and spatial awareness as well as support and learning resources for families and care givers.

The Smith Family's Head of Research and Advocacy Anne Hampshire said numeracy is a critical skill for everyday activities and early mathematical literacy assists children in building a bright future.

"The results clearly show how we can improve disadvantaged children's mathematical skills and confidence and help set them up for success at school," Anne said.

"We know that childhood maths skills predict later maths achievement – children who start ahead generally stay ahead. So if we can get disadvantaged children off to a great start with their mathematics, we're setting them up for future success.

"Having proven the effectiveness of *Let's Count*, there is now great scope to expand the program to support many more children across Australia. We encourage governments, educators, philanthropy and corporates to embrace the potential of this program for the benefit of all young children and the long-term future of Australia."

Through the financial support of \$1.6 million from the Origin Foundation, the program has reached 8,500 children, 4,500 parents and more than 300 educators across 17 Australian communities.

Let's Count for Origin employees

The Origin Foundation has also worked with The Smith Family to create a condensed version of the *Let's Count* program for Origin employees who are parents of young children. More than 300 Origin employees have participated in *LetsCount@Work* one-hour workshops, to learn fun and practical ways to support their child's early numeracy development.

The Smith Family is now offering these workshops to other organisations, which pay for the sessions for their employees. An innovative social enterprise model, the revenue raised is channelled back into the delivery of the *Let's Count* program to help children in disadvantaged communities across Australia.

ABOVE

Crunching the numbers at Gowrie St Preschool and Occasional Care. Ned Pattison and Steele Bajada enjoy the *Let's Count* program.



DISCOVER
MORE
ONLINE



ENGINEERS WILL BE CRUCIAL TO MEETING THE CHALLENGES THAT LIE AHEAD

The Origin Foundation and Engineers Without Borders Australia are working together to promote careers in engineering and science, to make sure Australia has the skills available in the future to meet the challenges that lie ahead.

According to Professor Ian Chubb, Australia's Chief Scientist, the nation needs to invest in all levels of STEM education – science, technology, engineering and maths – to meet the challenges that lie ahead this century.

This is one reason the Origin Foundation partnered with Engineers Without Borders Australia – a not-for-profit organisation working to improve access to clean water, sanitation and hygiene, energy and waste systems in countries that need it most. Promoting careers in engineering and science to senior school students in southern Queensland.

ABOVE
Origin employees, Naz Riffah (Completions and Workovers Engineer) and Tom Hansford (Mechanical Integrity Engineer) inspiring school students in the Toowoomba region.



DISCOVER
MORE
ONLINE

Over two hundred school students in the Toowoomba region were asked to imagine a career which could take them to remote locations around the world, building and delivering critical infrastructure for the communities where it is needed most.

Given the nature of Origin's business, we employ a large number of engineers and scientists. Some of these people were asked to volunteer and share their careers with the students and facilitate hands-on learning, such as building a functioning water filter out of common household materials, and constructing housing which can adapt to changing water levels.

Over 25 of our engineering and science experts travelled to Toowoomba to share first-hand STEM expertise including mechanical, pipeline, drilling and civil engineering, information technology, and environmental science.

Michelle Cheah, from Engineers Without Borders Australia said, "The day helps inspire the next generation of engineers and demonstrates how science, technology, engineering and maths can be applied to make a positive impact on people's lives. It's a side of the profession that students don't often associate with engineering."

The Origin Foundation provided funding and access to engineering experts who currently work with Origin.

The day helps inspire the next generation of engineers and demonstrates how science, technology, engineering and maths can be applied to make a positive impact on people's lives.

Michelle Cheah
Engineers Without Borders

During the year, Origin participated in a number of surveys commissioned by different sustainability ratings agencies.

These help our stakeholders review our performance using common benchmarks.

RATINGS AND BENCHMARKS

RATINGS AND BENCHMARKS

MEMBER OF

Dow Jones Sustainability Indices

In Collaboration with RobecoSAM

Dow Jones Sustainability Index

We were included in the Dow Jones Sustainability Index. This tracks the performance of the top 30 per cent of companies in the S&P/ASX 200 that lead the field in terms of sustainability. The Index is based on an analysis of corporate economic, environmental and social performance, assessing issues such as corporate governance, risk management, branding, climate change mitigation, supply chain standards and labour practices.



London Benchmarking Group

LBG is the global standard for measuring and benchmarking corporate community investment. Our community investment data is independently verified by LBG, which promotes a consistent set of criteria for determining community investment, donations and commercial initiatives in the community.



CDP

Origin participates in CDP's annual request for disclosure of climate change impact. CDP is an international not-for-profit organisation providing the only global system for companies and cities to measure, disclose, manage and share vital environmental information.



FTSE4Good

Since 2004, Origin has been a member of the FTSE4Good Index Series, which is designed to measure the performance of companies demonstrating strong Environmental, Social and Governance practices.



Energy Supply Association of Australia

Since 2009, Origin has been a signatory to the Energy Supply Association of Australia's (esaa) Sustainable Practice Framework, which is a major platform for the energy supply sector's work in improving sustainability in the industry.

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GLOSSARY

NON-IFRS FINANCIAL MEASURES

This document includes certain Non-IFRS Financial Measures. Non-IFRS Financial Measures are defined as financial measures that are presented other than in accordance with all relevant Accounting Standards. Non-IFRS Financial Measures are used internally by management to assess the performance of Origin's business, and to make decisions on allocation of resources. The Non-IFRS Financial Measures have been derived from Statutory Financial Measures included in the Origin Consolidated Financial Statements, and are provided in this report, along with the Statutory Financial Measures to enable further insight and a different perspective into the financial performance, including profit and loss and cash flow outcomes, of the Origin business. The key Non-IFRS Financial Measures included in this report are defined below.

Group OCAT Group Operating Cash Flow After Tax (OCAT) of the Consolidated Entity (including Origin's share of Australia Pacific LNG OCAT).

Underlying profit and loss measures

- Profit
- EBITDA

Underlying measures are measures used internally by management to assess the profitability of the Origin business. The Underlying profit and loss measures are derived from the equivalent Statutory Profit measures disclosed in the Origin Consolidated Financial Statements and exclude the impact of certain items that do not align with the manner in which the Managing Director reviews the financial and operating performance of the business. Underlying Profit is disclosed in note A1 of the Origin Consolidated Financial Statements.

NON-FINANCIAL TERMS

1P reserves Proved Reserves are those reserves which analysis of geological and engineering data can be estimated with reasonable certainty to be commercially recoverable. There should be at least a 90 per cent probability that the quantities actually recovered will equal or exceed the estimate.

2P reserves The sum of Proved plus Probable Reserves. Probable Reserves are those reserves which analysis of geological and engineering data indicate are less likely to be recovered than Proved Reserves but more certain than Possible Reserves. There should be at least a 50 per cent probability that the quantities actually recovered will equal or exceed the best estimate of Proved Plus Probable Reserves.

3P reserves Proved plus Probable plus Possible Reserves. Possible Reserves are those additional Reserves which analysts of geological and engineering data suggest are less likely to be recoverable than Probable Reserves. The total quantities ultimately recovered from the project have at least a 10 per cent probability of exceeding the sum of Proved plus Probable plus Possible, which is equivalent to the high estimate scenario.

Availability The time a generation plant was available for use, after deducting planned and unplanned outage hours, compared with the total time under review.

Biodiversity values A system's biodiversity value can be determined from and defined as its productivity, its ability to provide habitats for its dependent species and the diversity of species it supports.

CSIRO Commonwealth Scientific and Industrial Research Organisation.

CSG Coal Seam Gas is natural gas contained within coal seams.

Cultural Management Heritage Plans

Policies and protocols to manage and protect cultural heritage.

Downstream Operations and activities that take place after gas has been delivered via pipeline to the LNG Facility, including dehydration and compression of gas into liquid form, storage in LNG tanks & transfer to LNG shipping tankers.

ERF Australian Government's Emissions Reduction Fund.

Electricity measures:

Watt (W) A measure of power when a one ampere of current flows under one volt of pressure.

Kilowatt (kW) One kW equals 1,000 watts.

Kilowatt Hour (kWh) Standard unit of electrical energy representing consumption of one kilowatt over one hour.

Megawatt (MW) One MW equals 1,000 kW or one million watts.

Gigawatt hour (GWh) One GWh equals 1,000 megawatt hours or one million kilowatt hours.

Terawatt hour (TWh) One TWh equals 1,000 gigawatt hours, or one million megawatt hours.

Gas measures:

Joule Primary measure of energy in the metric system.

Gigajoule (GJ) A Gigajoule equals one billion joules.

Terajoule (TJ) A Terajoule equals 1,000 gigajoules.

Petajoule (PJ) A Petajoule equals one million gigajoules.

Petajoules equivalent (PJe) An energy measurement Origin Energy uses to represent the equivalent energy in different products so the amount of energy contained in these products can be compared. The factors used by Origin Energy to convert to PJe are: one million barrels crude oil equals 5.8 PJe; one million barrels condensate equals 5.4 PJe; one million tonnes LPG equals 49.3 PJe; one TWh of electricity equals 3.6 PJe.

Geothermal Energy that is generated by converting hot water or steam from deep beneath the Earth's surface into electricity.

GHG Greenhouse Gas.

Groundwater Water beneath the surface of the ground, that has come mainly from the seepage of surface water and is held in pervious rocks.

Hydrocarbons Oil and gas, including condensate and gas liquids (LPG and ethane).

IEA International Energy Agency.

Kbbls Kilobarrels equals 1,000 barrels.

Kt Kilotonnes equals 1,000 tonnes.

LNG Liquefied natural gas.

LPG Liquefied petroleum gas.

LRA Origins Landholder Relations Adviser.

LTIFR Lost time Injury Frequency Rate.

Material Aspects Activities against which we measure sustainability performance.

NEM The National Electricity Market.

NGOs Non-government organisations.

Offshore exploration The search for hydrocarbon deposits under the sea, such as natural gas or oil.

Onshore exploration The search for hydrocarbon deposits beneath the Earth's surface, such as natural gas or oil.

Origin Foundation Origin's philanthropic arm.

Photovoltaic Cells convert sunlight into electricity.

Power On Origin Energy's hardship program which provides payment options for customers experiencing financial difficulty.

Produced Water Water in oil and gas reservoirs brought to the surface during hydrocarbon production. Typically, the water is highly saline and contains traces of inorganic and organic contaminants, as well as residual chemical additives.

RET The Federal Government mandated Renewable Energy Target.

Seismic survey A geophysical survey to understand rock formations beneath the Earth's surface.

SIMP Origin's Social Impact Management Plan

TRIFR Total Recordable Injury Frequency Rate is the total number of fatalities and injuries resulting in lost time, restricted work duties or medical treatment per million hours worked.

Train A series of specialised equipment and machinery to purify, dewater and compress natural gas, either to high pressure for transport in a pipeline, or to liquid for shipping.

Upstream Origin activities involving the exploration and production of hydrocarbons.

Water measures:

KL One kilolitre equals one thousand litres (1,000 L).

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

INFORMATION ON RESERVES AND RESOURCES

This Sustainability Report includes disclosures of Origin and Australia Pacific LNG's reserves and resources as at 30 June 2015. These reserves and resources were announced on 31 July 2015 in Origin's Annual Reserves Report for the year ended 30 June 2015 (Annual Reserves Report).

Origin confirms that it is not aware of any new information or data that materially affects the information included in the Annual Reserves Report and that all the material assumptions and technical parameters underpinning the estimates in the Annual Reserves Report continue to apply and have not materially changed. Petroleum reserves and contingent resources are typically prepared by deterministic methods with support from probabilistic methods. Petroleum reserves and contingent resources are aggregated by arithmetic summation by category and as a result, proved reserves (1P reserves) may be a conservative estimate due to the portfolio effects of the arithmetic summation. Proved plus probable plus possible (3P reserves) may be an optimistic estimate due to the same aforementioned reasons. Some of Australia Pacific LNG CSG reserves and resources are subject to reversionary rights to transfer back to Tri-Star a 45 per cent interest in Australia Pacific LNG's share of those CSG interests that were acquired from Tri-Star in 2002 if certain conditions are met. Approximately 22 per cent of Australia Pacific LNG's 3P CSG reserves as of 30 June 2015 are subject to the reversionary rights. If reversion occurs this may mean that the uncommitted reserves that are subject to reversion are not available for Australia Pacific LNG to sell or use after the date of reversion. Origin has assessed the potential impact of reversionary rights associated with such interests based on economic tests consistent with these reserves and resources and based on that assessment does not consider that reversion will impact the reserves and resources quoted in the Annual Reserves Report. In October 2014, Tri-Star filed proceedings against Australia Pacific LNG claiming that reversion has occurred. Australia Pacific LNG will defend the claim.

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