





“Sustainable Development
is development that meets the needs of
the present without compromising the
ability of future generations to meet their
own needs.”¹

Cooper Energy

We find, develop and commercialise oil and gas.

We do this with care and strive to provide attractive returns for our shareholders and good commercial outcomes for our customers.

Our values and what they mean.

We have chosen to be a values-driven business.

We strive to think, decide and act at all times in accordance with our 7 core values:

Care: prioritising safety, health, the environment and community

Integrity: striving to be consistent; staying true to our values and being accountable for our actions

Fairness and Respect: valuing diversity and difference; acting without prejudice; and communicating with courtesy

Transparency: being honest; addressing problems; and being clear with our communications

Collaboration: sharing ideas and knowledge; encouraging cooperation; listening to our stakeholders; and building long term relationships

Awareness: taking account of all identified key issues in our decisions and considering future impacts

Commitment: staying focused on core objectives; making pragmatic, quality technical and commercial decisions; and being decisive with the courage of our convictions

¹UN Brundtland Commission, 1987

Table of Contents

Managing Director’s Review	3
Our FY19 Sustainability Performance	4
Our Sustainability Approach	5
Definition of Sustainability	5
Cooper Energy Values	5
Governance	5
Risk Management	5
Material Sustainability Issues	5
Reporting Framework	5
About this Report	6
Scope of this report	6
Ethics and business conduct	6
Code of Conduct	6
Our People	8
Our operating model	8
Culture	8
Talent and Resourcing	8
Engagement and Enablement	8
Diversity and Inclusion	8
Learning and Development	10
Health and Safety	12
Our Safety Performance	12
Health and Well-being Initiatives	12
Environment	14
Our environmental performance	14
Environmental Initiatives	14
Community	15
Marine and Fishing Industries	15
Sponsorship initiatives	15
Climate Change	16
Climate related Financial Disclosures (TCFD)	16
Emissions Summary	18
Emissions Boundaries	18
Energy Produced	18
Operational Emissions – Scope 1	18
Initiatives to reduce Scope 1 emissions	18
Purchased Electricity Emissions – Scope 2	19
Indirect and Customer Emissions – Scope 3	19
Adapting to the Impacts of Climate Change	19
Risks and Opportunities	19
Scenarios	19
Direct Contributions to the Economy	20
Cooper Energy Product Mix	20
The role of Natural Gas	20
Jobs, Royalties & Taxes	20
Glossary	Inside back cover

Managing Director’s Review

Thank you for taking the time to review Cooper Energy’s first standalone sustainability report. As we grow to a position in the ASX 200 index, it is appropriate for us to provide greater detail regarding our performance and initiatives in this area.



Welcome to Cooper Energy’s first standalone sustainability report. As we grow to a position in the ASX 200 index, it is appropriate for us to provide increased detail regarding our performance and initiatives in this area.

Cooper Energy chooses to be a values driven organisation. This is a simple statement to make but requires significant effort to put into practical effect. We place particular importance on the central value of Care. This encompasses a balanced approach to all of our activities and all of our decisions, prioritising safety, health, the environment and the communities in which we work.

During 2019, Cooper Energy continued its rapid growth trajectory and matured significantly as an offshore oil and gas operator. Our service partners are a critical part of the Cooper Energy team. Together with our service partners we drilled, completed and tested the Sole-3 and Sole-4 development wells and fabricated and installed the 64 kilometre subsea pipeline and associated control umbilical. Once the upgrade to the Orbost Gas Plant is completed, Cooper Energy will deliver gas from Sole to our south-east Australian gas customers.

The company also managed a significant repair and upgrade to the subsea control system at the Casino Henry operations, offshore in the Otway Basin which positions this asset for future growth. Meanwhile, almost in the background, we continued our production operations, delivering 6.6 PJs of gas and 240,000 barrels of oil to the south-east Australian domestic market.

These activities involved more than half-a-million hours of work in the 12 month period from 1 July 2018 to 30 June 2019. This was completed with zero recordable injuries, which is a pleasing safety record over this period and a tribute to the positive safety culture embedded in our organisation. In this period there was also an excellent environmental record with zero reportable incidents. These are results to be proud of and sustained attention will be required to maintain this performance.

Cooper Energy has an empowered and enabled workforce, as demonstrated by the results from the extensive staff survey we conducted in July 2018. Following the survey, we are progressing several initiatives which focus on upgrading our systems and processes as we grow and the further training and development of key functional leaders.

I am pleased to be able to report that 34% of our staff workforce are female; 29% when we consider both staff and contractors. The ability to attract and retain a diverse workforce gives us a competitive advantage in having a team with broad experience, skills and viewpoints.

Cooper Energy is proactive within the communities in which it operates in establishing and maintaining relationships and promoting the benefits that gas brings. The commercial fishing industry is a key stakeholder where we have good relationships via the industry fishing organisations.

Natural gas has a significant and growing role as the cleanest-burning fossil fuel in a world transitioning to a lower carbon economy. The Sustainable Development Scenario from the International Energy Agency suggests an 11% increase in global gas demand by 2025. This compares with their slower transition scenario which suggests a 43% increase in gas demand through to 2040.

At a local level, the forecasts indicate a growing gas supply-demand imbalance in south-east Australia through the next decade. Cooper Energy is focused and positioned to increase gas supply to help reduce this imbalance.

The development and growth of Cooper Energy is made possible by the dedication, diligence and hard work of our people and the acceptance of the communities where we work. I thank our staff, contractors, service providers and the communities we work with for their contribution to our success. I invite and welcome your feedback on our performance as we continue our journey.

David P. Maxwell

David Maxwell

Our FY19 Sustainability Performance



¹ Based on International Energy Agency New Policies Scenario

Our Sustainability Approach

Definition of Sustainability Cooper Energy has adopted the definition of sustainability developed by the UN Brundtland Commission in 1987:

“Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Cooper Energy Values

2019 has seen heightened recognition of the role of corporate culture in company decision-making and its implications for corporate reputation and trust. Cooper Energy has long been a values-driven organisation; seeking to deliver sustainable growth in total shareholder return whilst managing its business and making decisions with the Cooper Energy Values of care, integrity, fairness and respect, collaboration, awareness, transparency and commitment.

The articulation of values is no guarantee of their recognition or adherence. The values must guide decisions and what is acceptable behaviour. In this context, it is heartening to note the results of the independently conducted and benchmarked staff perception study. The study noted an extremely high level of staff engagement, comparable to high performing industry benchmarks. In particular it highlighted the clear and promising strategic direction, respect and recognition within the workforce and confidence in the company's leaders.

Governance

Cooper Energy's Board has overall oversight regarding corporate governance responsibilities. These responsibilities are discharged in accord with the various policies, including the Code of Conduct, the Risk Management Policy and the Equal Opportunity and Diversity Policy.

The corporate governance policies and procedures are reviewed annually against ASX Corporate Governance Principles and Recommendations. The Cooper Energy Values and Code of Conduct are articulated and regularly reinforced through the actions of senior management and staff. Whistle blower procedures are in place should they be necessary.

Risk Management

Risk is inherent in Cooper Energy's business. Consequently, effective risk management is essential to the viability of the company, over short, medium and long term time horizons.

The Risk and Sustainability Committee of the Board, which comprises 3 non-executive directors, supports the Board in fulfilling its oversight responsibilities in relation to risk management and the company's sustainability policies and practices.

Day-to-day management of risk, is carried out by the Management Team, with oversight from the Health Safety Environment and Community Committee, which is chaired by the Managing Director.

Material risks are documented in the Corporate Risk Register. At least twice yearly, General Managers review the risks in their areas of responsibility and formally sign off on their accountability for the risks and the implementation and maintenance of risk reduction measures and action plans to manage and mitigate those risks.

The risk management process is currently being reviewed and upgraded consistent with what is required for a larger and growing company.

Details of the Risk and Sustainability Committee Charter and Health Safety Environment and Community protocols are available in the Corporate Governance and Policies section of the company's website.

Material Sustainability Issues

A subset of the risks included in the Corporate Risk Register are assessed as material from a sustainability perspective. This assessment reflects the issues most critical to both the business and its stakeholders. The process allows us to track current issues and to identify emerging ones.

Key Material Sustainability Issues:

- Safety and Health
- Environmental Performance
- Social Licence and Community Engagement
- Climate Change Impacts

Reporting Framework

Cooper Energy is undertaking a review of the material sustainability topics in line with the principles of the Global Reporting Initiative (GRI) framework. Once complete, the GRI content index will be available on the Cooper Energy website.

About this report

Scope of this report

This report describes Cooper Energy’s sustainability performance and covers assets owned by Cooper Energy for the period 1 July 2018 to 30 June 2019. People-related data refers to both employees and direct contractors.

Assets operated by Cooper Energy comprise:

Exploration

- Otway Basin, offshore and onshore Victoria
- Gippsland Basin, offshore Victoria

Development and production

- Sole Gas Project; Gippsland Basin, offshore Victoria (in development)
- Casino Henry Netherby “Casino Henry”, Otway Basin, offshore Victoria

Non-production phase

- Basker Manta oil / gas field, Gippsland Basin, offshore Victoria
- Patricia Baleen gas field, Gippsland Basin, offshore Victoria

The Cooper Energy non-operated assets comprise:

Exploration

- Otway Basin licences, onshore Victoria and South Australia
- Cooper Basin licences, onshore Cooper Basin, South Australia

Production

- Minerva gas field, Otway Basin, offshore Victoria
- Minerva Gas Plant, Otway Basin, onshore Victoria
- Oil fields in the western flank of the Cooper Basin, onshore South Australia

Ethics and business conduct

Transparency and Accountability, as embedded in our values, are key to the way we do business.

Code of Conduct

The Code of Conduct sets out the standards of behaviour expected of all Cooper Energy employees, directors, officers, contractors and consultants.

The key principles of this Code are that all personnel are expected to:

- operate with care, prioritising the safety and health of all personnel, the environment and the communities in which Cooper Energy operates;
- act honestly and with high standards of personal integrity;
- comply with the laws and regulations that apply to Cooper Energy and its operations;
- not knowingly participate in any illegal or unethical activity;
- not misuse or take advantage of the property or information of, or their position in, Cooper Energy for personal gain or to cause detriment to Cooper Energy;

- act in the best interests of Cooper Energy and not enter into any arrangement or participate in any activity that would conflict with Cooper Energy’s best interests or that would be likely to negatively affect Cooper Energy’s reputation; and
- strive to be a good corporate citizen and achieve community respect.

There are a range of policies that underpin this Code. These policies are designed to foster and maintain ethical business conduct within Cooper Energy and govern such things as workplace and human resources practices, handling of confidential information, insider trading, risk management and legal compliance.



Offshore Otway Basin:

Gas production and exploration

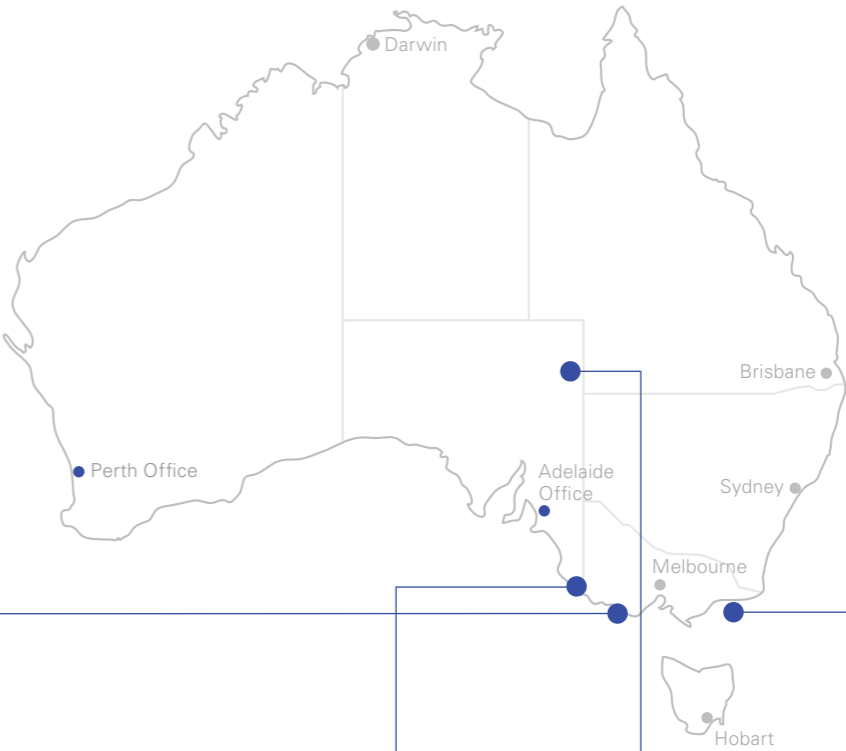
- Casino Henry gas production and development
- Annie gas field
- Exploration permits



Gippsland Basin:

Offshore gas development and exploration

- Sole Gas Project
- Manta gas and liquids resource
- Exploration permits



Onshore Otway Basin:

Gas exploration

- South Australia and Victoria



Cooper Basin:

Onshore oil production

- Western flank oil production and exploration



Our People

We succeed through the efforts and diligence of our people

Cooper Energy continued to grow in 2019, expanding the size and scope of its activities. The year’s success was enabled by the management of the asset portfolio by our people, who are a combination of staff and contractors.

Our operating model

At Cooper Energy, the organisation structure is based on the full value chain which includes acquisition, exploration, development, projects and operations, abandonment and rehabilitation. A flexible resourcing model has enabled Cooper Energy to access the right resources at the right time to deliver the work program consistent with regulations. Functional teams are a key part of the corporate governance and risk framework providing the discipline, expertise and the framework with the supporting processes and systems.

Culture

The Cooper Energy operating model is based on collaboration and a “one team” approach with a strong and clearly communicated set of values at the heart of the company’s culture. All staff and contractors are expected to work consistently with the Cooper Energy Values and we have several active initiatives which support the Values.

In 2019, there was an increased focus on legacy and the support that can be provided to the communities where the company works. An annual event is held to recognise the internal and external stakeholders who contribute to the success of Cooper Energy and to acknowledge the importance of legacy in all we do.

Cooper Energy has a well-established charitable programme which is administered through the Cooper Energy Legacy Foundation. The Foundation is focused on supporting three major areas:

- education - in particular indigenous education;
- health - in particular mental health and children; and
- sustainability - in particular the marine environment

with emphasis on the local communities within which Cooper Energy interacts in country Victoria, Adelaide and Perth.

Cooper Energy staff may take up to two days paid leave for volunteering activities as part of the program. More detail is provided in the Community section of this report.

Talent & Resourcing

There is a very clear recruitment strategy focusing on competency, experience and team fit. In the past year, the number of permanent staff has increased by approximately 40% from 39 to 54 full time equivalent staff as at 30 June 2019, with hiring from local, interstate and international markets. Overall, 50% of staff and contractors in the organisation have commenced work within the past 2 years. Access to skilled contractors provides the flexibility needed to achieve project outcomes.

Voluntary staff turnover was less than 9% during the FY19 period which is below comparable industry benchmarks.

Engagement and Enablement

The workforce is highly engaged, and a high level of discretionary effort is evident. In July 2018, an independent organisation carried out a wide ranging survey of staff and direct contractors which demonstrated a highly engaged workforce, with a high level of discretionary effort evident. The current focus is on enhancing the Cooper Energy processes and systems to provide a similar high level of enablement in the workforce as the company grows.

Cooper Energy is committed to formal and informal communication to underpin team effectiveness across its offices in Adelaide and Perth. Monthly staff meetings, a facilitated annual offsite and the investment in video-conferencing technology are examples of some of the initiatives used to promote collaboration and help ensure alignment of purpose and objectives.

Diversity and Inclusion

The Cooper Energy “Fairness & Respect” value is defined as “valuing diversity and difference; acting without prejudice; and communicating with courtesy”. People can see things differently based on their own unique set of thoughts, values and beliefs. Cooper Energy regards different perspectives, experiences and an inclusive work culture as a key to organisational growth and success.

Gender diversity is present at all levels of the organisation including the board, management team, functional management, staff and contractors. There are many examples in the company of flexible work practices for women and men which assist people in balancing their work, family and caring responsibilities.

Organisations with 100 or more employees are required by the Workplace Gender Equality Act 2012 to report annually to the Workplace Gender Equality Agency (WGEA) on 6 gender equality indicators. Cooper Energy is not yet at this threshold size and therefore did not report to the WGEA in FY19. However, review of performance in key areas has been initiated.

Robyn Tamke, Well Test Engineer, participation in Incident Management Training

Phil Clegg, Technical Assistant (right), and Zacc Papparella, Geologist



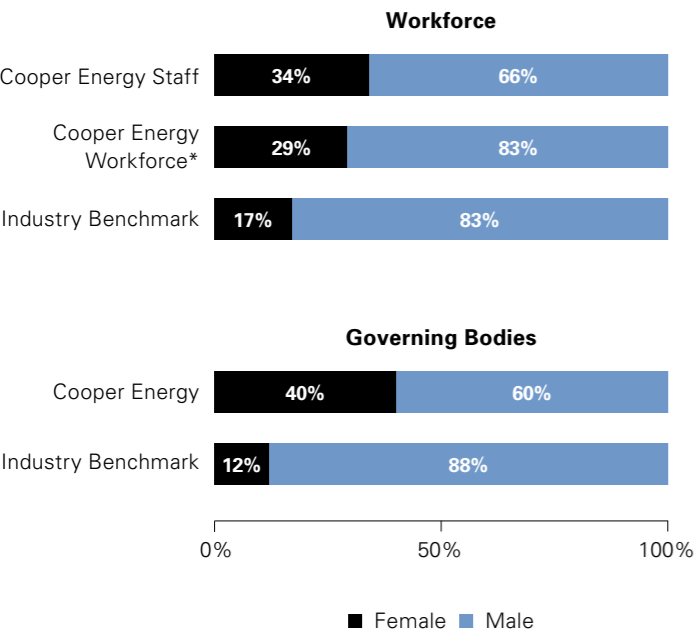
Our People

The WGEA considers the following 6 gender equality indicators:

1. Overall composition of the workforce.

2. Composition of governing bodies.

Female representation in the overall Cooper Energy workforce (both staff and direct contractors) is 170% of the industry benchmark¹ and in the governing body² it is more than three times the industry benchmark.



*Comprises staff and contractors

¹Industry Benchmark is the Workplace Gender Equity Agency (WGWA) Mining Division, which includes our oil and gas peers.

²Governing Body is the company’s Board of Directors (Chairman plus non-executive directors). The Managing Director is included in the workforce statistics.

3. Equal Remuneration between women and men.

In 2018, Cooper Energy conducted an internal gender pay analysis which was provided to a Board sub-committee. The report made some general observations including an opportunity to increase our gender diversity in geoscience and in functional management with recent progress in these areas. The Diversity and Equal Opportunity Policy and the Recruitment Policy both reinforce a strong commitment to diversity and gender equity.

4. Availability and utility of employment terms, conditions and practices relating to: flexible working arrangements for employees; and working arrangements supporting employees with family and carers responsibilities.

17% of staff are part time (including men and women) and 83% of staff are full time. Informal work from home arrangements are available where needed and practical. Cooper Energy provides 8 weeks paid parental leave to the primary care giver plus 5 days company-paid dad and partner paid leave after the birth of a child.

5. Consultation with employees on workplace gender equality issues.

A confidential Employee Assistance Program (EAP) is available to provide support to both staff and direct contractors, including with respect to gender equality issues. The scope of the Bullying and Harassment Policy includes sexual harassment.

6. Any other matters specified by the Minister in a legislative instrument: sex-based harassment and discrimination.

No matters of significance identified.

Learning and Development

Cooper Energy looks to its employees to be self-driven to develop themselves and others. Managers are responsible for ensuring the right level of competency within their teams and the right level of support for developing people. Targeted individual development plans and company-initiated activities provide the foundation for the development of people. Partnership with reputable external providers is providing invaluable support to organisation development.

During the period, the management team participated in a 360 degree feedback process. The outcomes were used to identify individual development paths to meet the needs of a growing ASX 200 company. Newly appointed Team Leaders in the exploration and subsurface team attended a leadership development program with the Melbourne Business School.

Practical skills training such as business writing skills and certified first aid qualifications is provided in-house by specialist external trainers. Selected staff attended various external programs to build skills and to ensure compliance with the technical and regulatory requirements of offshore and onshore operations.

Cooper Energy is currently supporting seven students from The University of Adelaide through mentoring and industry relevant projects.

2019 saw the launch of the Cooper Energy Legacy Foundation. Ngathoo Wampa Tyama-Ki Teen, a resource of the Portland District Health Education and Learning Centre, was among the regional and community causes to which the foundation provided financial support during the year. The centre is a valuable resource for the provision of regional training in nursing and healthcare in the Victorian South West.



Health and Safety

The safety of our people and the wider community in which we work remains Cooper Energy’s top operational priority. A strong safety culture is embedded in the Cooper Energy Values and is viewed as essential to the success of the company.

Our Safety Performance

Cooper Energy and its contractors worked 505,300 hours during the financial year with zero Lost Time Incidents and a Total Recordable Case Frequency rate of zero.

	2019	2018
Hours worked	505,300	491,100
Recordable incidents	0	2
Lost time injuries	0	0

This is an exceptional result. It is a credit to the safety leadership and the diligence of the Cooper Energy staff and contractors and to the positive safety culture. The company works hard with its staff and contractors to engender this in all activities.

The company’s operations were, and continue to be, conducted in an environment recognised as high risk. This included drilling and completing the Sole-3 and Sole-4 development wells in the hostile environment of the Bass Strait in winter, onshore fabrication of 64 kilometres of pipeline at Crib Point in Eastern Victoria and the reel-laying of that pipeline on the seafloor to connect the Sole field to the Orbest Gas Plant.

The year’s activities included a successful hyperbaric subsea weld repair to the Sole pipeline, the first such operation in Australia in 14 years. This was well managed by Subsea 7 Australia utilising the Seven Eagle vessel after an extensive planning, safety assessment and technical qualification process.

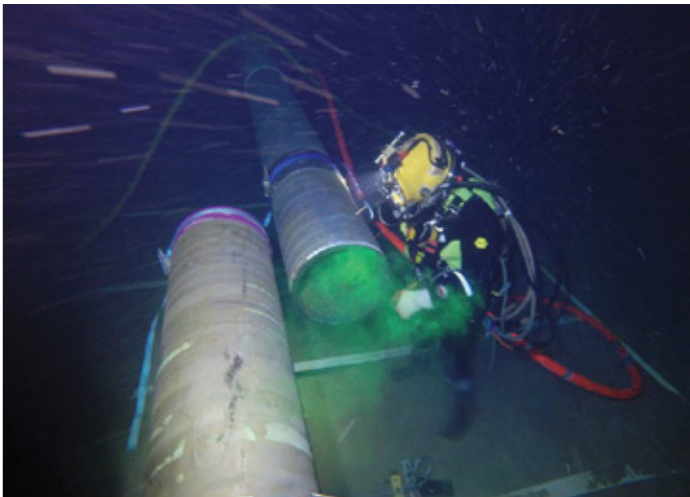
In addition the company worked with Sapura using the Sapura Constructor vessel and Remote Operated Vehicle (ROV) technology specifically developed to repair and upgrade the subsea control system at Casino Henry. This enabled operational redundancy to be restored, underpinned long term production reliability and increased the capacity of the offshore system to accommodate additional production wells.

Health and Well-being Initiatives

The annual offsite event for all staff and contractors featured facilitated programs to build on teamwork, collaboration and mindfulness. Other initiatives during the period included well-being support for offshore contractors working in a rig and shift environment. The Employee Assistance Program (EAP) is available 24 hours per day, 7 days per week for all staff and contractors.

Case Study - Hyperbaric weld 72 metres below sea level

During the year it was necessary to repair damage to the Sole subsea pipeline before bringing it in to service. The system used consists of a subsea “habitat”, or pressurised workshop which is lowered to the seabed and installed over the section of pipeline needing repair. The workshop is sealed over the pipeline and pumped out so highly trained divers can weld the pipeline in a controlled environment, breathing a mixture of helium and oxygen. Safety precautions include a fully pressurised hyperbaric lifeboat system built in to the vessel so divers in decompression are able to evacuate in case of a vessel emergency.



Pre-job safety meeting, Portland Shore Base

Environment

Delivering excellent environmental performance is a core community expectation

Our environmental performance

Cooper Energy completed the year with zero reportable environmental incidents.

Environmental Initiatives

In addition to delivering excellent environmental performance, the focus during 2019 was to rationalise and improve the environmental procedures, processes and documentation.

During the year the consolidated Gippsland Environmental Plan, combining, rationalising and simplifying several previous documents, was approved by the offshore regulator, the National Offshore Petroleum Safety and Environmental Agency (NOPSEMA).

This enables consistency and makes it more straightforward to focus on delivering against the key performance standards described. This work included refining the tactical response plans which describe proactive measures designed to protect environmentally sensitive areas in the event of an emergency situation. This work was shared with other regional operators in a collaborative initiative.

Cooper Energy is now developing a similar consolidated Otway Environmental Plan for submission in 2020.

The company continues to work closely with the Australian Marine Oil Spill Centre (AMOSOC) in Geelong, Victoria to achieve a high level of emergency preparedness. This involves training for the Incident Management Teams and the Crisis Management Team with various rigorous exercises conducted throughout the year.



Community

The support of the local communities where we work is essential to operate effectively. Cooper Energy has multiple initiatives in place to contribute as a positive member of these communities

Marine and Fishing Industries

The company’s activities are focused mainly offshore Victoria and the commercial fishing industry is a key stakeholder. Cooper Energy has a constructive long-term relationship with the Lakes Entrance based South East Trawl Fishing Industry Association (SETFIA) and with Seafood Industry Victoria (SIV) based in Melbourne.

Cooper Energy is supporting the Seafood Directions Conference in Melbourne in October 2019, sponsoring the environment award and the Environment Manager will be presenting a paper on collaboration opportunities between the oil and gas industry and the fishing industry.

Sponsorship initiatives

48 requests for sponsorship or support were received during the year. The requests are managed in accord with the Sponsorship Procedure by the Cooper Energy Legacy Group. The requests are assessed having regard to the company’s areas of operations, the opportunity for staff and contractor participation and the following core themes:

- education - in particular indigenous education;
- health - in particular mental health and children; and
- sustainability - in particular the marine environment.

There has also been a long-term initiative focused on supporting the disadvantaged in the 2 capital cities where the company works, (Adelaide and Perth) primarily via organisations working to combat homelessness.

The proposals were assessed against these principles and 28 were accepted with a total company monetary contribution of \$87,125.

The company gives every staff member two days per year of paid leave to contribute to volunteering activities. Many staff and contractors will also assist these programmes in their own time well in excess of the time that the company contributes.

Examples of the programmes supported in the Gippsland area are the Snowy Rovers Football Club and the Orbost Hockey Club. In the Otway area, the company is supporting the Heywood Men’s Shed and has provided various first aid and training equipment to the Portland and District Health Authority.



Case Study – yacht rescue in the Bass Strait

At the end of the 2018 drilling campaign, just as we were about to pull rig anchors on Sole-4 drilling we were contacted by the Australian Marine Safety Authority and directed to assist a vessel in distress. One of our anchor handlers, the Solstad Marine Far Saracen, was dispatched on a rescue mission.

Initially it sounded bad – damage to the yacht’s mast, two elderly gentlemen on-board in bad shape and the yacht taking on water. A container ship was also sent to assist by placing itself upwind of the yacht to provide shelter. The Saracen arrived on location, the vessel Master evaluated the situation and sent a crew on the fast rescue craft to recover the sailors on the yacht. The rescue was successful and the Saracen returned to the rig to continue operations. The rescued sailors were taken on board the rig, checked out by the medic, fed and able to rest. The next morning they were flown to Tooradin on the next available crew change helicopter.

The master and crew of Far Saracen did what they are trained to do and did it very well. It cost Cooper Energy some time but, in this instance, there are at least two families grateful to get their loved ones back.



Otway Basin coastline

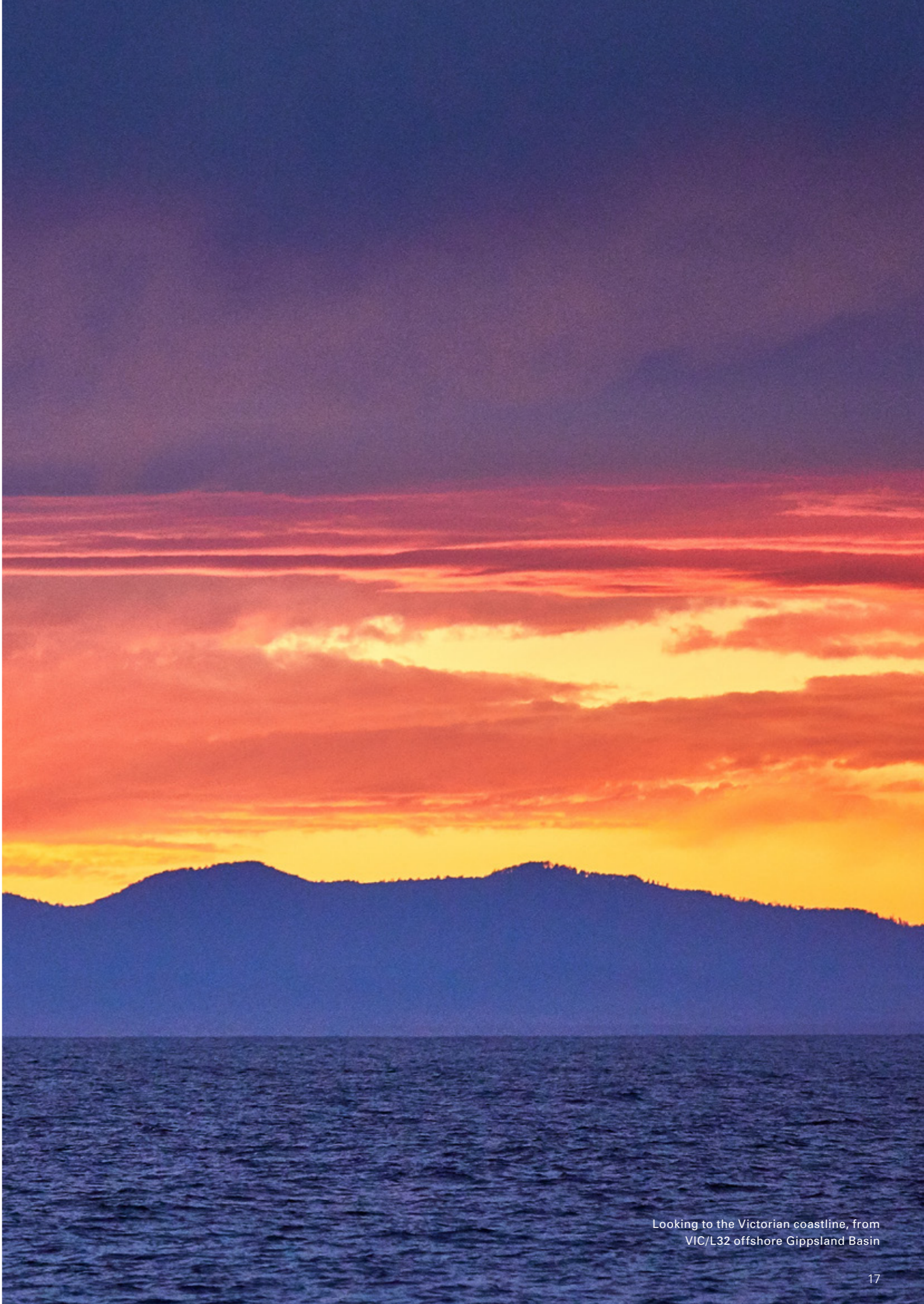
Climate Change

As a part of the energy industry, Cooper Energy recognises climate-related risks and the need for these to be managed effectively.

Climate related Financial Disclosures (TCFD)

Cooper Energy has aligned its climate change related disclosures with the Taskforce on Climate-related Financial Disclosures (TCFD) These are summarised in the table below:

Governance Disclose the organisation’s governance around climate-related risks and opportunities	
Board Oversight of climate-related risks and opportunities.	Climate-related risks and opportunities are reported to the Risk and Sustainability Committee, which is a sub-committee of the Board. The Committee meets 4 times per annum.
Management role in assessing and managing climate-related risks and opportunities.	Management conducts the risk assessment and includes it in the Corporate Risk Register. This is reviewed and updated by the accountable General Manager on at least a 6-monthly basis.
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation’s businesses, strategy and financial planning where such information is material	
Climate-related risks (opportunities and threats) identified over short, medium and long term.	As discussed in the following sections commencing page 18.
Impacts of climate-related risks (opportunities and threats) on organisation’s businesses, strategy and financial planning.	As discussed in the following commencing page 18.
Resilience of organisation’s strategy taking into account different climate scenarios, including a 2 degree scenario.	Cooper Energy is in the process of modelling climate change scenarios, including a 2 degree scenario to test the resilience of the organisation’s strategy. More information on risk, opportunity and scenario analysis is to be provided through 2020 on the company’s website.
Risk Management Disclose how the organisation identifies, assesses and manages climate-related risks	
Processes for identifying and assessing climate-related risks.	Climate-related risks are included in Cooper Energy’s Corporate Risk Register which is reviewed by management and by the Risk and Sustainability Committee on a periodic basis as part of a standard risk management process.
Processes for managing climate-related risks.	The risk register is a comprehensive document describing causes, risk events, interim effects and long term consequences.
How processes for identifying, assessing, and managing climate-related risks are integrated into the organisation’s overall risk management.	The existing preventive and reactive risk controls are documented, along with their effectiveness to establish an initial risk rating in terms of likelihood, consequence and severity. Future treatment actions are described to determine a residual risk ranking. Depending on the initial and residual risk ranking, appropriate monitoring and follow up action is taken.
Metrics and Targets Disclose the metrics and targets used to assess and manage the relevant climate related risks and opportunities where such information is material	
Metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	Cooper Energy monitors Scope 1, Scope 2 and Scope 3 emissions and compares both the absolute values and intensity measures (tonne CO ₂ e per tonne hydrocarbon produced and tonne CO ₂ e per GJ) against industry benchmarks and against the trajectory that will be required for Australia to meet its Paris Accord emissions targets. Initiatives to reduce direct Scope 1 emissions and a discussion regarding indirect / customer Scope 3 emissions are included commencing page 18. Scope 2 emissions are not material.
Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Cooper Energy’s Scope 1, Scope 2 and Scope 3 emissions are summarised in the Emissions section commencing page 18.
Targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	Cooper Energy is in the process of developing targets to manage climate related risks and opportunities.



Looking to the Victorian coastline, from VIC/L32 offshore Gippsland Basin

Climate Change

Emissions Summary

Cooper Energy’s greenhouse gas emissions are summarised as follows:

Category	Calculation Basis	FY19	FY18	Units
Scope 1 (direct) emissions	Operational Control	12,731	15,991	tonne CO ₂ e
Scope 2 (purchased electricity) emissions	Operational Control	70	90	tonne CO ₂ e
Scope 3 (indirect) emissions	Equity Share	534,213	536,346	tonne CO ₂ e
Energy Produced	Operational Control	11,721	11,500	TJ
Total Emissions Intensity (Scope 1+2+3)	Equity Share	68.05	68.58	tonne CO ₂ e/TJ
Total Emissions Intensity (Scope 1+2+3)	Equity Share	3.14	3.16	tonne CO ₂ e / tonne hydrocarbon production

Emissions Boundaries

The Clean Energy Regulator (CER) administers the Australian *National Greenhouse and Energy Reporting Act 2007* (NGER Act). Under this Act, registration and reporting is mandatory for corporations whose energy production, energy consumption or greenhouse gas emissions meet specified thresholds, from facilities under the operational control. Defining a ‘facility’ and determining a facility’s boundaries are central to reporting under the Act.

Cooper Energy has undertaken facility delineation and operational control determination several times since 2014, particularly following purchase and sale of asset facilities, in line with the NGER national framework for corporations to report.

The company’s Operational Control is based on 100% share of the sites where it has the greatest authority to introduce and implement operating policies, health and safety policies, and environmental policies for the facility.

There are four facility areas where ongoing activity occurs across a group of assets that exist onshore and offshore: Otway Basin Facility, Gippsland Basin Facility, the Adelaide corporate head office and Perth corporate office.

Activities undertaken at each facility include;

Otway Basin Facility, Victoria

Production

- Casino Henry offshore
- Casino Henry onshore

Exploration

- Various permits offshore

Gippsland Basin Facility, Victoria

Development

- Sole Gas Project; Gippsland Basin, offshore

Non-production phase

- Basker Manta oil / gas field Gippsland Basin, offshore
- Patricia Baleen Gas Field, Gippsland Basin, offshore

Adelaide and Perth Office Facilities

- Corporate business and administration for primary production processes

NGER submissions and reporting boundaries are reviewed by an external third party specialist, Resource Intelligence Pty Limited, who have assisted multiple oil and gas entities with carbon emissions measurement, led by a Certified Measurement and Verification Professional.

Energy Produced

Produced gas in the form of unprocessed natural gas with some condensate is transported by a subsea pipeline to the processing facility at Iona owned by Lochard Energy from the Otway Basin Facility production leases VIC/L24 and VIC/L30. Cooper Energy has established data capture for reporting this energy production.

Operational Emissions – Scope 1

Cooper Energy reports Scope 1 and Scope 2 emissions in accordance with the National Greenhouse and Energy Reporting Act 2007 (the NGER Act). As required by the Act, this is done on an Operational Control basis, i.e. as 100% share of the sites where Cooper Energy is Operator and hence has control of the emissions practices.

Cooper Energy’s operations consist primarily of offshore subsea gas developments, supplying gas into the domestic south-east Australian market. The operations are highly efficient with extremely low direct emissions.

Initiatives to reduces Scope 1 emissions

Ongoing initiatives which have a significant impact on the company’s direct (Scope 1) emissions include:

- Elimination of well testing and flaring where possible. The Annie-1 gas discovery (in September 2019) offshore Otway was evaluated without conducting a flow test, which eliminated the need to flare, thereby avoiding approximately 2,000 tonnes of CO₂e emissions. The necessary evaluation was carried out using downhole logging while drilling measurement tools and with wireline conveyed downhole formation pressure measurement and gas sampling tools. This approach delivers multiple benefits in enhanced safety and reduced costs as well as reducing greenhouse gas emissions.

- Minimise flaring where possible. On a development project such as Sole, it is necessary to flow the wells for a short period of time to ensure that they are cleaned up and ready to flow for future

production. At both Sole-3 and Sole-4, the program was designed to minimise the amount of gas flared while meeting these objectives.

- Minimise the number of long-distance rig mobilisations. Another major component of operational emissions results from fuel use on the contracted offshore drilling rigs and associated support vessels. The fuel use, and hence the emissions is primarily a function of time. The company can reduce emissions and save cost by collaborating with other local operators to reduce the number of long-distance drilling rig mobilisations, with additional direct benefits in terms of cost reduction.

Purchased Electricity Emissions – Scope 2

These are not material at 70 tonne CO₂e for the financial year.

Indirect and Customer Emissions – Scope 3

The company has undertaken a detailed analysis to estimate Scope 3 emissions. These are calculated on an equity share basis to reflect a holistic view of the emissions contributed by its sold gas and oil.

The producing assets are:

- 50% interest and Operator of the Casino Henry, offshore Otway Basin.
- 10% non-operated interest in the Minerva gas field offshore Otway Basin and the associated onshore Minerva Gas Plant. Minerva ceased production in September 2019.
- 25% non-operated interest in various onshore oil fields (referred to as an ex-PEL 92 fields) Western Flank, Cooper Basin, South Australia.
- 30% non-operated interest in the Worrior oil field (licence PPL 207), onshore Cooper Basin, South Australia.

82% of Scope 3 emissions occur when the ultimate downstream customer burns the gas the company has produced for electrical power generation, heating and cooking, and when using the oil produced in vehicles after it has been refined into petrol or diesel.

For the purposes of estimating Scope 3 emissions, Cooper Energy makes the conservative assumption that all the company’s produced gas and oil is combusted rather than being used in chemical processes. A further 6% of Scope 3 emissions relates to downstream fugitive emissions. The balance is embedded in the steel used in subsea pipelines and wells, in the direct Scope 1 emissions at non-operated sites and in smaller items such as air travel for business and commuting by staff.

The Scope 3 emissions intensity is already low in the context of the hydrocarbon industry because of the large bias towards gas in the company’s portfolio, which is the cleanest burning of the fossil fuels. Gas fired power plants are capable of delivering electrical power with approximately half the emissions intensity of coal.¹

Pipeline transmission losses are noteworthy in this context. Methane (CH₄), the primary constituent of natural gas, has a global warming potential of 25 times that of CO₂ based on the factors used by the Australian government. In a long distance, high pressure gas pipeline network, as a result of this multiplier, very small methane fugitive emissions have a disproportionate effect on Scope 3 emissions, an effect which grows rapidly more significant with distance. For example, when Cooper Energy’s customers are distributing gas within Victoria, a notional 0.2% loss in methane through the system appears as a 5% contribution to Scope 3 emissions in CO₂ equivalent terms.

From not only an emissions perspective, but for many other good business reasons, this supports Cooper Energy’s view that the best place to source gas for south-east Australia is from south-east Australia.

¹ IPCC (2011), Summary for Policymakers. In: IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation

While combustion of gas and oil products by downstream customers dominates the Scope 3 emissions, a small way Cooper Energy can, and is directly reducing, the Scope 3 emissions is by reducing the emissions associated with business travel. A significant investment in video-conferencing technology enables staff and contractors to conduct meetings and workshops effectively between the Adelaide and Perth offices without the need to always have direct face to face contact. As well as the emissions reduction, there are benefits in multiple areas, including direct cost savings, much more effective use of staff time and improved quality of life for our people through less time spent away from family.

Cooper Energy plans to provide further information on the makeup of Scope 3 emissions during 2020 via the company website.

Adapting to the Impacts of Climate Change

An assessment of climate-related risks and opportunities has identified several areas impacting operations.

Risks and Opportunities

The key physical risks identified are sea level rise, increased bushfire risk and an increased number of extremely hot days (> 40 degrees Celsius) during summer, particularly in the non-operated Cooper Basin ventures.

The key non-physical transition risks are the potential for reduced oil demand in the medium to long term and the societal attitude to investment in gas and oil companies.

The increasing role of gas represents a significant opportunity for Cooper Energy to contribute to emission reduction. This is the outcome of both the anticipated increase in global demand for gas as the world transitions to a less carbon intensive energy system and the forecast increasing gas supply-demand imbalance in south-eastern Australia.

Scenarios

Cooper Energy is developing scenarios to assess both the physical and non-physical transition climate-related risks and opportunities.

The scenarios are based on the International Energy Agency (IEA) New Policies Scenario. Under this scenario, total global gas demand is set to grow by 43% between 2017 and 2040. Even the more radical IEA Sustainable Development Scenario, designed with a view to limiting warming to under 2 degrees Celsius and which envisages no change in overall primary energy demand between 2017 and 2040, anticipates global gas demand growing by 11% by 2025 and flattening after that through to 2040.

At a local level, in south-east Australia, the Australian Energy Market Operator (AEMO) in their 2019 Gas Statement of Opportunities report, forecasts a rapidly declining availability of local gas supplies with essentially flat demand outside Queensland LNG exports. This results in a significant and growing supply-demand imbalance, especially from 2024 onwards which Cooper Energy, through its Victorian gas projects, is well positioned to rectify. Cooper Energy’s projects are notable in that they have a relatively short time to production start, with major increases in production from 2020 onwards.

Overall, given the time horizon of the current and anticipated Cooper Energy projects, it is considered the company’s operations are resilient to the risks identified and the company is well placed to both contribute to emissions reduction and to benefit as society moves to lower carbon power sources, particularly gas.

Cooper Energy plans to actively review and update the risk, opportunity and scenario analysis in 2020.

Direct Contributions to the Economy

Natural gas is a key enabler and a perfect partner for renewables

Cooper Energy Product Mix

Cooper Energy’s production is approximately 80% natural gas, all of which is used in domestic supply to south-eastern Australia.

The remaining 20% is mostly oil from non-operated joint ventures in central Australia which is sold to refineries in Victoria and in Western Queensland. Ultimately most of the produced oil is converted to either diesel or petrol and distributed via local service stations.

The role of Natural Gas

Gas-fired electrical power generation is a natural complement to the intermittency of renewables, in particular when used in fast start open cycle gas turbine (OCGT) generation plant. Gas is by far the cleanest of the fossil fuels. Multiple references document that electricity generated from natural gas has approximately 50% of the greenhouse gas emissions per unit of electrical output compared to the best coal fired power stations.

Beyond the more obvious uses in power generation, heating, cooking and a multitude of industrial direct heat uses, natural gas is ubiquitous in our modern lifestyles.

Methane, which is the main constituent of natural gas, is the key feedstock for many petrochemical processes. As a feedstock for ammonia production, it is used to manufacture fertiliser, cleaning products and explosives. Steam reforming uses methane as an input to produce hydrogen. Methanol production, again using methane as an input, results in products as diverse as paint remover, adhesives, acrylic signs and particle board.

Jobs, Royalties & Taxes

Cooper Energy employed 97.3 full time equivalent (FTE) personnel at 30 June 2019, comprising 53.5 FTE staff and 43.8 FTE directly employed contractors.

Beyond this, Cooper Energy projects supported approximately 700 jobs through the year among its contracting partners.

Many of the jobs were on the Diamond Offshore Ocean Monarch drilling rig and its support vessels, the Far Saracen, Far Senator and Far Statesman from Solstad Marine together with the personnel at the company’s Melbourne and Portland shore-bases.

The above estimate of jobs supported includes the Subsea 7 personnel on board the Seven Oceans pipelay vessel and the Seven Eagle diving vessel and the welding teams from PAME employed at Crib Point in Victoria where the Sole pipeline was assembled. Also included is the team aboard the Sapura Constructor vessel who carried out the Casino Henry subsea control system repair.

Indirectly the Sole project also supported up to 300 personnel working on the APA owned Orbest Gas Plant upgrade. The company’s gas production also supported the team at the Lochard Energy owned Iona Gas Plant where Casino Henry gas is processed. These people are additional to the 700 positions noted above.

Cooper Energy contributed \$1,902,000 in royalties, \$530,000 in Petroleum Resource Rent Tax, \$1,155,646 in Payroll Tax and \$114,359 in Fringe Benefit Taxes in FY19, as detailed in the relevant statutory accounts.

Glossary

2019, 2020	The 12 months to 30 June of the year cited, unless otherwise stated
AEMO	Australian Energy Market Operator, responsible for managing the National Electricity Market
APPEA	Australian Petroleum Production and Exploration Association
ASX	Australian Securities Exchange
ASX 200	S&P ASX 200 an equity index of the 200 leading stocks listed on the ASX as measured by market capitalisation and liquidity
CH ₄	Methane. The primary component of natural gas and also a greenhouse gas
company	Cooper Energy Limited and/or its subsidiaries
CO ₂	Carbon dioxide. Combustion product from burning natural gas or oil. Also a greenhouse gas
CO ₂ e	Measure of greenhouse gas emissions, converted back to the equivalent amount of CO ₂
EAP	Employee Assistance Programme. Cooper Energy support programme available to all staff and direct contractors
FTE	Full Time Equivalent
FY	Financial Year (July 1 to June 30)
GHG	Greenhouse gases. The most significant for our purposes are carbon dioxide (CO ₂), methane (CH ₄) and oxides of nitrogen (NOx)
GRI	Global Reporting Initiative. Standardised reporting framework for organisations to report their economic, environmental and social performance
HSEC	Health Safety Environment and Community
LNG	Liquefied Natural Gas
LTI	Lost Time Injury
LTIFR	Safety Indicator. Lost Time Injury Frequency Rate = LTI per million hours worked
MTI	Medical Treatment Injury

NGER Act	National Greenhouse and Energy Reporting Act 2007, and associated regulations
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Agency. Australian Commonwealth government safety and environmental regulator for the offshore oil and gas industry
NOx	Generic term for various oxides of nitrogen, principally combustion products NO, NO ₂ , and also N ₂ O which is a greenhouse gas
PJ	Peta-joule. Energy measurement, equivalent to a thousand Terajoules (TJ) or a million Megajoules (MJ).
PRRT	Petroleum Resource Rent Tax
ROV	Remote Operated Vehicle. Unmanned tethered mini-submarine capable of various subsea inspection, maintenance and repair tasks
Scope 1	Emissions - direct emissions of greenhouse gases at Cooper Energy facilities
Scope 2	Emissions – greenhouse gas emissions associated with purchased electricity
Scope 3	Emissions – Third party greenhouse gas emissions arising either from combustion of the gas and oil we sell, or from transformation into further petrochemical products. Scope 3 also includes downstream fugitive emissions, emissions embedded in purchased capital goods, emissions from business travel (e.g. air travel, vehicle travel) and various other factors
SETFIA	South East Trawl Fishing Industry Association
SIV	Seafood Industry Victoria
TCFD	Taskforce on Climate Related Disclosures
TRCFR	Safety Indicator, broader than LTIFR. Total Recordable Case Frequency Rate = (LTI+MTI) per million hours worked
WGEA	Workplace Gender Equality Act 2012 / Workplace Gender Equality Agency
year	the 12 months ended 30 June 2019 unless otherwise stated