



# Health, Safety & Environment Report 2014-2015



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# Safety and health

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## APPEA programs support excellence in the Australian oil and gas industry's health and safety performance.

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APPEA works with members and key stakeholders to improve the efficiency and effectiveness of regulation, share good practices to address health and safety risks, and develop new programs and initiatives to continuously improve the industry's health and safety performance.

Since 2007, APPEA has worked with the industry to achieve a significant improvement in personal safety performance. Industry-wide and company-specific initiatives have successfully reduced injury rates while work hours have tripled.

The oil and gas industry has one of the lowest injury and fatality rates of any industry in Australia. But the international oil and gas industry's injury rates, reported through the International Association of Oil & Gas Producers (IOGP) set the world standard. APPEA continues working with its members to drive further improvements to match this world standard.

APPEA coordinates several specialist safety network groups. There include the APPEA HSO Committee, the Safety Case Drilling Industry Steering Committee, the Human Factors Subcommittee, the Safety Performance Reporting Subcommittee, and the Aviation/Search and Rescue Working Group.

It also continues to collect and publish data on industry high-potential incidents to foster rapid transfer of lessons between oil and gas industry companies.

### Safety databases

Each year APPEA collects safety performance data from its member companies and all of their contractors.

In 2014, APPEA's Health, Safety and Operations Committee agreed to align APPEA's safety performance data reporting with IOGP guidelines in order to better benchmark the Australian oil and gas industry's safety performance globally.

As part of this process, APPEA is now establishing a new online reporting portal system that will be flexible, intuitive, interactive and easy to use.

The portal will let members extract safety performance reports immediately according to their specific requirements.

Members began retrospectively entering data into the portal from September 2015.

APPEA will resume reporting on safety performance data from 2015-16, but will place more focus on high-potential incidents and process safety indicators.

### New focus on process safety and preventing major accident events

Australia's oil and gas industry is heavily focused on improving its process safety performance.

Process safety involves the controls or barriers that ensure containment of hydrocarbons and chemicals in plants, pipes or wells and prevent major accidents occurring. It requires the application of sound engineering, design and operating practices.

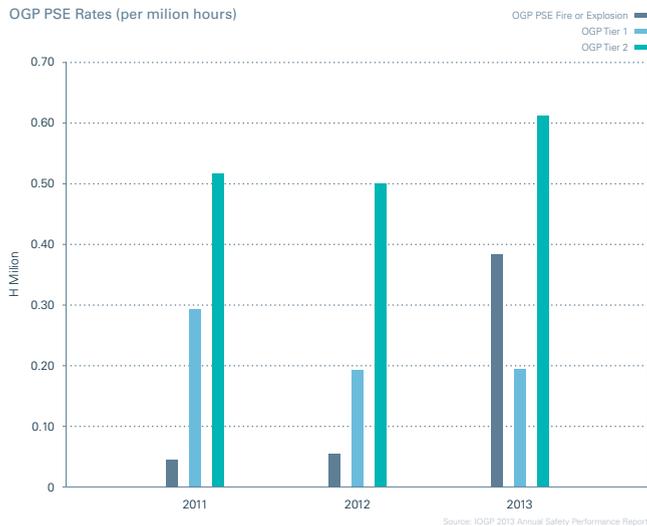
The industry faces some major challenges in this area:

- Critical assets are ageing, requiring decommissioning or plant-life extensions;
- New technologies are being deployed;
- Several new large projects are becoming operational;
- In some locations, construction and production are occurring simultaneously; and
- Cost pressures are mounting.

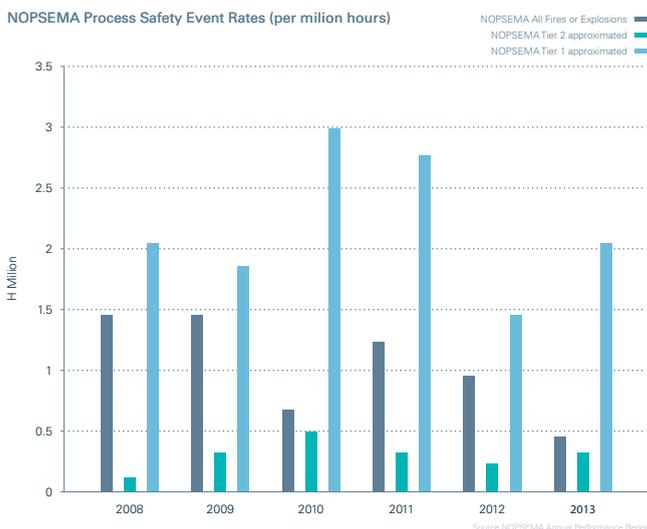
Industry leaders have agreed that they must take advantage of the lessons and experience gained from the industry's persistent and successful focus on personal safety, and convert this into a leadership program for addressing process safety challenges.

## Safety metrics

International oil and gas industry process safety performance data shows no discernible improvement in performance since data collection began in 2011.



The National Offshore Petroleum Safety and Environment Management Authority (NOPSEMA) collects similar data for offshore operations in Commonwealth waters. It also shows a similar lack of discernible improvement over an extended period.



This data captures “lag indicators” in process safety, such as fires, explosions and hydrocarbon releases. From 2015-16, APPEA’s new safety data portal will also collect such metrics.

Lag indicators measure events that have occurred and their consequences (such as lost hours, injuries and fatalities). But using only lagging indicators of safety performance fails to measure how well a company or industry is doing at preventing incidents and accidents.

In contrast, leading indicators focus on future safety performance and continuous improvement. These measures show what people and organisations are doing on a regular basis to prevent accidents and injuries. They indicate proactive systems and behaviours, and they aid risk assessment and prediction of possible events.

Process safety events usually occur as a result of a combination of ‘hard to see’ and often complex factors. The relative rarity of these events means the absence of an incident is no predictor of the risk of an event. Therefore, Australian petroleum industry leaders and regulators have identified that the effective lead indicators must be developed.

In 2014-15, the IChemE Safety Centre (ISC) developed a common set of leading metrics for process safety. These are designed to be qualitative, which enables adoption by a diverse range of companies across multiple industries. See [www.ichemesafetycentre.org](http://www.ichemesafetycentre.org) or [www.stfs.com.au](http://www.stfs.com.au) for more information.

The Institution of Chemical Engineers (IChemE) is a UK-based organisation that oversees the chemical engineering profession internationally. In 2013, several APPEA member companies agreed to work with IChemE and fund the establishment of the ISC for an initial three years through APPEA. The ISC is broadening its member base and networks around the world to foster leading-edge thinking in process safety on a global basis. This is an opportunity for APPEA members to contribute to global best practice.

**Effective lead indicators must be developed for measuring safety performance**

## Stand Together for Safety (STFS)

At the direction of the 2014 CEO Safety Leadership Forum – which comprises chief executives from exploration and production companies and from major contractors – APPEA's Stand Together for Safety brand has shifted from being an annual industry-wide stop-work safety event.

STFS is now an ongoing safety leadership program that engages industry leaders, workers, contractors, regulators and safety experts to help prevent major accident events and eliminate fatalities.

Its initial priority is a focus on process safety. STFS is intended to foster an industry-wide discussion around process safety and develop a common understanding of this issue. It emphasises that every worker in the industry has a responsibility to verify the ongoing effectiveness of safety critical controls or barriers. International research shows that this is as significant as engineering solutions in preventing process safety incidents.

An STFS video – *Process Safety – Who's Responsible?* – was launched in September 2014 at APPEA's HSE Conference in Perth. This video has been taken up widely across the global oil and gas industry, translated into other languages, and used in university programs for chemical engineers.

The STFS Steering Committee has endorsed the development of Process Safety – a Good Practice Guide – a template and overarching implementation plan for improving process safety performance across the Australian oil and gas industry. This guide will use the proven successes from the personal safety management approach and will define “golden rules” for process safety and the behaviours associated with these rules. It is expected to be released before the end of 2015.

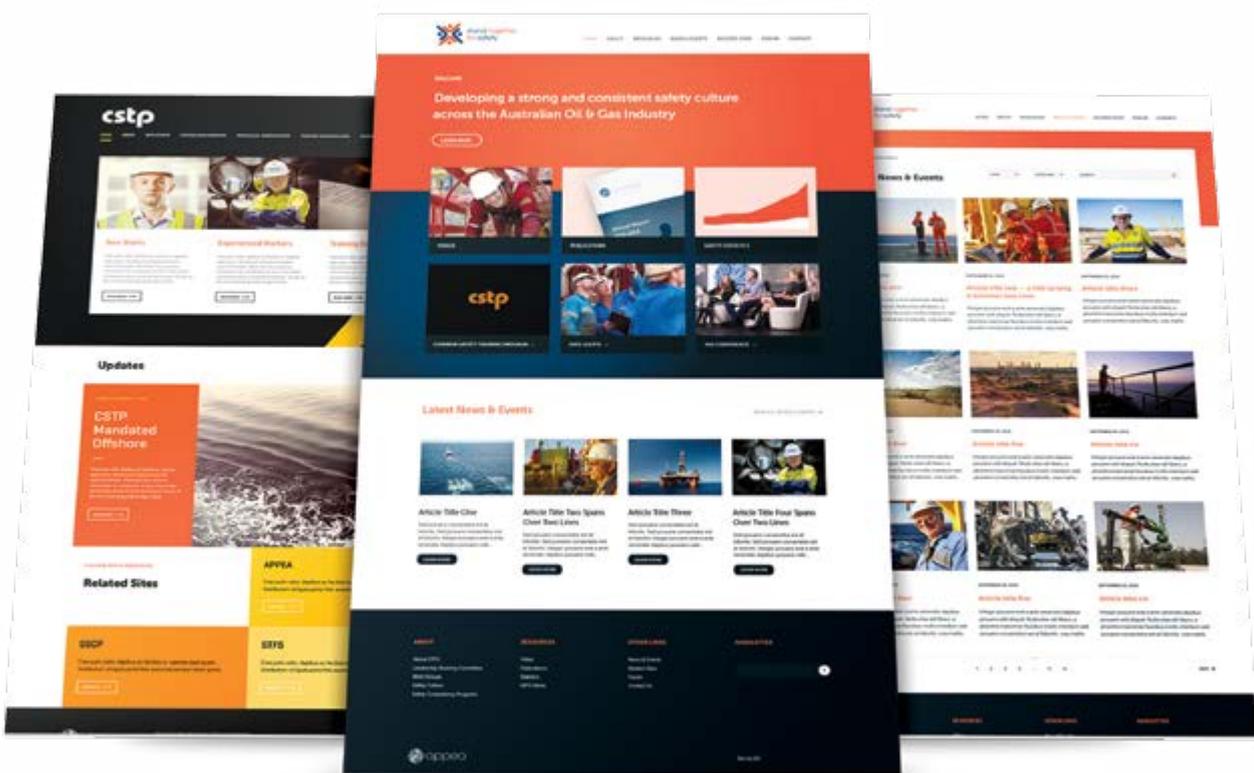
New materials, resources and toolkits are being developed and will be rolled out under the STFS leadership banner. These practical solutions will have industry-wide application.

## APPEA redevelops safety websites

The Common Safety Training Program and Stand Together for Safety websites have been extensively redeveloped and relaunched – see [www.cstp.com.au](http://www.cstp.com.au) and [www.stfs.com.au](http://www.stfs.com.au).

These new websites are designed to be more user-friendly, to have distinctive styles appropriate to their subject matter, yet also to be consistent with other APPEA websites.

The STFS website also now acts as a general safety portal with an emphasis on safety culture and process safety.



APPEA has redeveloped the STFS and Cstp websites.

# Safety training programs

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## Significant changes have been made to the CSTP and SSCP programs.

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### Common Safety Training Program (CSTP)

In May 2015, the 8000th participant completed the Common Safety Training Program.

CSTP is recognised as a world leader among industry safety training programs.

It provides fully immersive, workplace simulation and a hands-on approach to developing safety skills and establishes a common safety culture from the onset of a worker's career in the oil and gas industry. The immersive learning is then backed up by trainees demonstrating key safety behaviours in their own workplaces and having their supervisors sign off on workplace observations.

Following a 2014 review, changes to the CSTP program were implemented on 1 April 2015.

The safety modules and assessment processes have been updated. The most significant changes are the separation of offshore specific training, inclusion of some process safety awareness, and a streamlining of processes.

Experienced workers no longer need to attend a one-day course. The three-day course has been updated and continues for people new to the industry.

The CSTP national database has been moved into a new data management program, Vantage POB, which is used by 64 oil and gas operators globally, as well by as many Australian oil and gas training organisations.

Using the Vantage POB system has reduced the handling of data; reduced the time between completing training and uploading critical information into a central database; and freed up resources to focus on providing greater industry advice and support. Vantage POB will also ensure complete confidentiality of data while enhancing portability of training records.

The next phase of development for CSTP will focus on integrating new process safety risk awareness content from the Stand Together for Safety program.

### Safe Supervisor Competency Program (SSCP)

With the offshore oil and gas industry now moving out of the construction phase and into production, in 2014-15 the Industry Advisory Group reviewed the Safe Supervisor Competence Program (SSCP).

Consultation with industry confirmed that:

1. The program's safety leadership content is considered to be excellent.
2. There is demand for a common benchmark for safety leadership skills.
3. SSCP's on-the-job component is far too complex and costly.

Following this review, significant changes will be made to the program and these will take effect on 1 November 2015.

SSCP has been re-established as an entry-level program, providing a benchmark for common safety leadership skills across the Australian oil and gas industry. Companies can also use it to help select personnel best suited to move into more extensive in-house supervisory training.

SSCP remains as a guideline for developing safe and competent frontline supervisors. But is no longer limited to the offshore construction and installation sector. Instead, it is now available to any prospective and existing supervisors or frontline leaders in the oil and gas industry.

To obtain an SSCP card, participants must now demonstrate safety leadership behaviours in a work-simulated training environment with an approved SSCP training organisation. They will no longer have to be assessed in on-the-job-observations. SSCP cards will be issued by approved training organisations rather than by APPEA.

For more information, see [www.stfs.com.au](http://www.stfs.com.au)

# Environmental management

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## APPEA has coordinated efforts to further improve the industry's environmental performance.

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### Oil Spill Response Forum

The APPEA Oil Spill Response (OSR) Forum was established in 2013 to support joint industry initiatives and enhance information sharing between OSR specialists. In 2014-15, the forum released a document, *Sharing Environmental Solutions: planning for dispersant use in oil spill response – an Australian perspective*.

It also held three events:

- An operators' workshop on oil spill impact assessment;
- A workshop to consider the use of remote surveillance technologies for oil spill monitoring and response; and
- The first Oil Spill Response Forum seminar, which drew more than 70 participants.

### Marine stakeholder engagement

In November 2014, APPEA and five peak commercial fishing and seafood industry associations signed a Memorandum of Understanding. This set out a cross-industry engagement framework aimed at:

- Establishing a cross-industry roundtable;
- Discussing and developing joint policy frameworks; and
- Identifying, developing and delivering joint initiatives.

The major goals include:

- Emphasising common ground shared by the two industries, such as a desire for evidence-based approaches to regulation and public engagement;
- Seeking ways to modify consultation processes so that they are more effective and efficient for both industries;
- Finding a science and researched-based pathway to explore concerns about marine seismic surveying; and
- Pursuing practical solutions to continually improve maritime vessel interactions.

The signatories included the WA Fishing Industry Council, the Commonwealth Fisheries Association, Seafood Industries Victoria, the Northern Territory Seafood Council, Wildcatch Fisheries South Australia, and APPEA.

### Marine Environmental Science Program

The industry's Marine Environmental Science Program has commissioned several research projects, including:

- *Underwater Sound and Vibration from Offshore Petroleum Activities and its Potential Effects of Marine Fauna: an Australian perspective* – awarded to Curtin University's Centre for Marine Science and Technology;
- *Understanding the potential consequences of unplanned discharges: the Australian context* – awarded to BMT Oceanica; and
- *An Oil Spill Response Capacity and Preparedness Review of the Australian Offshore Upstream Oil and Gas Industry* – awarded to Social Resources.

These projects will deliver their findings in 2015-16. More projects will soon be considered for commissioning.

### IGEM meta-database system

For any data set, there is metadata – or information on where, when and how the data is collected, who owns it, where it is stored, and so on. Sharing environmental data can pose legal, commercial, regulatory and practical difficulties. But sharing metadata is less problematic and still offers significant benefits.

In a 2013 pilot project, several APPEA member companies, marine research institutes and Western Australian government agencies shared key marine environmental meta-datasets online. In 2014 the participants agreed to develop a full system.

The Industry-Government Environmental Meta-database (IGEM) system will enable quicker identification of data sets for environmental planning and spill response following an oil spill. Subscribers will be able to search for relevant environmental studies by: research activity in a specific area; the date it was collected; the organisation that collected the data; type of data; and key words. Seven operator members have signed up through APPEA for IGEM and two others have expressed interest. The WA Marine Science Institution will develop and host the new system, which is intended to go live by early 2016.

# Environmental regulation

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## Throughout 2014-15, APPEA worked with governments to achieve more efficient environmental regulation regimes.

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APPEA continues to advocate for the removal of significant areas of overlap and costly duplication between Commonwealth and state/territory jurisdictions. Regulatory reform can deliver significant efficiency changes without impairing environmental outcomes. Achieving streamlined regulation and reducing inefficient duplication and inconsistency between regulators will redirect resources and efforts to actual environmental benefit in place of bureaucratic process. APPEA will continue to advocate in all jurisdictions for this process.

### Financial assurances

The Offshore Petroleum and Greenhouse Gas Storage Amendment (Compliance Measures No. 2) Act 2013 enshrines the “polluter pays” principle. This compels offshore titleholders to demonstrate an appropriate financial capacity for managing the cost of avoiding, containing or abating potential pollution.

APPEA has worked with the Commonwealth Department of Industry and Science, as well as the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), to develop practical and effective financial assurance guidelines. These enable titleholders to quickly determine the credible costs, expenses and liabilities that may arise from their operations and the financial assurances required by the regulator. NOPSEMA and an independent review process have validated APPEA’s *Method to Assist Titleholders in Estimating Financial Assurance*. On 1 January 2015, NOPSEMA implemented the new financial assurance provisions of environmental regulations under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.

This development of an industry-led methodology and its independent validation by government shows how government, regulators and the industry can work together to develop robust and efficient regulatory frameworks. In 2016, industry will review the guidelines to maintain their applicability.

### NOPSEMA Review

In April 2015, Environmental Resources Management Australia began an independent review of NOPSEMA’s performance in meeting the objectives of the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.

Its report – tabled on 10 September 2015 – found NOPSEMA is a generally effective regulator that has improved safety and environmental outcomes. Further streamlining is proposed by removing duplication between the Commonwealth EPBC Act and State and Territory environmental regimes. This requires negotiating assessment and approval bilateral agreements between the Commonwealth and the states and territories.

### Commonwealth Marine Reserve Review

The review into the Commonwealth Marine Reserves began in September 2014 and arose from the Government’s 2013 election policy to “appoint an expert scientific panel to review the science supporting the boundary area for each zone” and to deliver a “more competitive and sustainable fisheries sector”. For more information, see page 8.

### Biosecurity Bill 2014

In November 2014, the Australian Government put forward *Biosecurity Bill 2014* to replace the century-old *Quarantine Act 1908*. Federal Parliament passed the bill in May 2015.

Under this legislation, the international waters classification shifts from the Exclusive Economic Zone (200 nautical miles from the coast) to “Australian waters” (12 nautical miles from the coast). There are concerns that without appropriate risk-based regulation, this change would impose unnecessary costs and burden on vessels and aircraft servicing the 66 industry facilities lying outside the 12 nautical miles zone, which were not previously covered by the legislation. These journeys would effectively be considered international voyages, but previously they were treated as domestic.

The Government has given a commitment to APPEA that it intends to establish a system of exemptions and other arrangements to minimise unnecessary impacts and costs on the oil and gas industry.

APPEA continues to work with the Commonwealth Department of Agriculture to identify optimum risk-based options for oil and gas operations, including exemptions.

# Marine Reserve Review

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**APPEA continues to work closely with the Review and Government to ensure marine reserves protect the environment without unnecessarily increasing the regulatory burden.**

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The review into the Commonwealth Marine Reserves arose from the Government's 2013 election policy to "appoint an expert scientific panel to review the science supporting the boundary area for each zone"

The reserves cover about 60 oil and gas permits and several prospective areas.

The review's Bioregional Advisory Panel and Expert Scientific Panel engaged with many APPEA member companies in March-April 2015. The review also held more than 165 smaller meetings with individuals and groups, as well as eight larger multi-sector forums around Australia, and received more than 13,000 submissions and 1,800 online survey responses.

APPEA is strongly advocating for a scientific evidence-based process for determining zoning options. The debate on marine reserves must take into account an area's actual environmental values and whether an industry activity can occur without compromising these values.



# Hydraulic fracturing

Hydraulic fracturing – or fracking – is a well-established, tightly regulated technology that has been used safely to enhance oil and gas production for 65 years in more than 2 million wells worldwide. Hundreds of studies and decades of industry operations have shown that it can be effectively regulated and used safely.

Yet fracking remains contentious, not only in Australia, but around the world. Unfortunately, this technology is the subject of fear campaigns and misinformation. As Dr Allan Hawke noted in the introduction to the *Report of the Independent Inquiry into Hydraulic Fracturing in the Northern Territory*, “there is confusion or poor understanding within the community about some aspects of hydraulic fracturing.”

## Major reports

In 2014-15, two major reports found that the risks associated with hydraulic fracturing can be safely managed.

On 30 September 2014, NSW Chief Scientist and Engineer, Professor Mary O’Kane released the final report of *Independent Review of Coal Seam Gas Activities in NSW*. And in February 2015, the NT Government released the *Report of the Independent Inquiry into Hydraulic Fracturing in the Northern Territory* (the Hawke Report).

Both of these reports found that risks associated with gas operations – including hydraulic fracturing – can be managed effectively under a robust regulatory regime. The Hawke Report explicitly stated that there is no justification for imposing a moratorium on hydraulic fracturing in the Northern Territory. It recommended that its findings and the proposed environmental assessments and approvals bilateral agreements with the Commonwealth should be used to guide a restructuring of the NT Environmental Assessment Act to develop a better regulatory framework for industry operations.

APPEA believes these reports should give the green light to responsible development of natural gas resources in these jurisdictions.

## Hydraulic fracturing moratoriums

Following the Victorian State Election on 29 November 2014, the Andrews Labor Government continued the hydraulic fracturing moratorium implemented by the Napthine Coalition Government.

In January 2015, the new government also announced a Parliamentary Inquiry into Unconventional Gas. As APPEA said at the time, Victoria needs more natural gas, not another unnecessary and lengthy inquiry that will delay developing new gas supplies in Victoria for years.

In February 2015, Tasmania decided to extend a moratorium imposed in 2014 for another five years.

In April, the Northern Territory Labor Party’s conference – despite the findings of the Hawke Report – passed a motion supporting a “moratorium on all fracking activities in the NT pending an independent science-based investigation”. APPEA is seeking to ensure that the risks to investment are well understood and that the party considers other options for addressing any concerns.

In August 2015, the WA Labor Party’s state conference also called for a moratorium on hydraulic fracturing.

## Western Australian hydraulic fracturing inquiry

Established in August 2013, the WA Legislative Council’s Inquiry into the Implications for Western Australia of Hydraulic Fracturing for Unconventional Gas delivered its final report on 17 November 2015. The Committee received evidence from a broad cross-section of interested stakeholders, and its findings were broadly positive for the industry. It proposed stricter regulation but also found that hydraulic fracturing poses negligible risk and that any concerns about fracking could be addressed through robust regulation and ongoing monitoring.

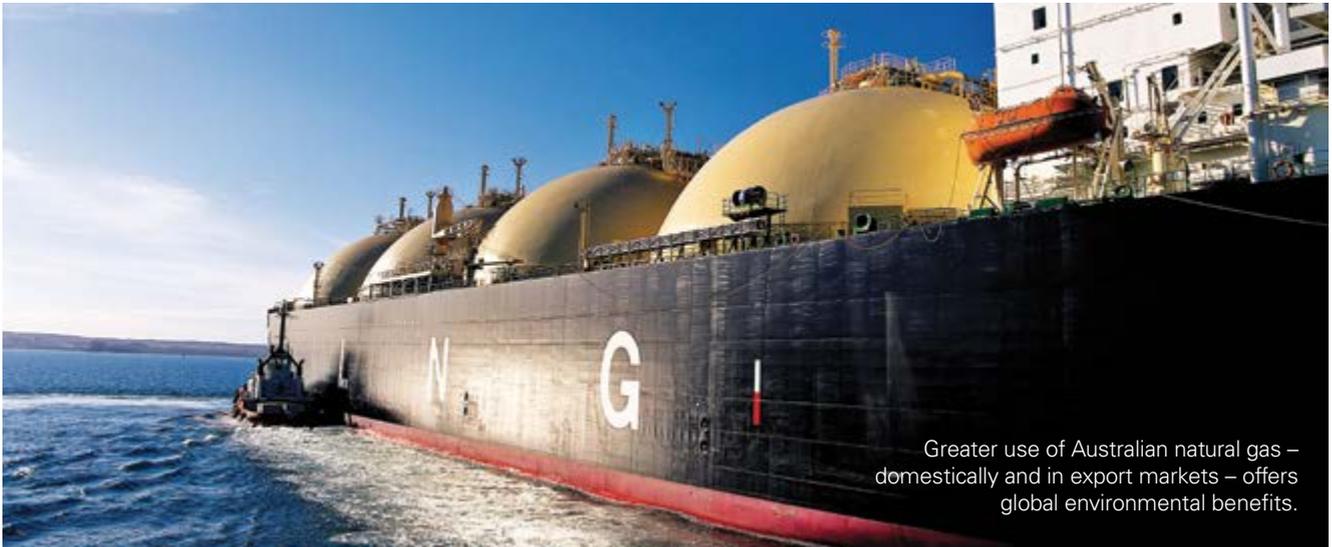
## South Australia Inquiry into Unconventional Gas

In November 2014, the South Australian Legislative Council tasked its Natural Resources Committee with conducting an inquiry into unconventional gas in the state’s south-east. It is focusing on risks to groundwater, impacts on landscapes, the effectiveness of the regulatory framework, and the industry’s potential net economic outcomes. Hearings are scheduled through to the end of 2015. The Committee expects to deliver an interim report by the end of 2015 and a final report by mid-2016.

Much of the evidence provided to-date identifies concerns over whether onshore gas operations can coexist with agriculture and protect the environment. APPEA is working with member companies and the South Australian Chamber of Minerals and Energy on monitoring and responding to the inquiry.

# Climate change policy

In 2014-15, APPEA worked with the Commonwealth, the states and the Northern Territory on a range of climate change policy issues.



Greater use of Australian natural gas can significantly reduce greenhouse gas emissions, while also enhancing energy security and delivering other environmental, economic and social benefits, both in Australia and in LNG customer nations.

Climate change policy should deliver carbon abatement at least cost. APPEA continues to work to ensure that climate change policy does not hinder the Australian oil and gas sector's domestic or international competitiveness.

In 2014-15, APPEA worked with the states and territories on a range of climate change policy issues. In particular, APPEA contributed to climate change policy arrangements in Western Australia, Queensland and Victoria.

APPEA advocates that states avoid duplicating national policy approaches and remove policies that do not complement the national approach.

## Clean energy legislation

Following the election of the Abbott Government in September 2013, legislation was introduced to repeal the carbon pricing mechanism and to develop and implement an alternative approach, the Emissions Reduction Fund.

In July 2014, Parliament passed legislation to repeal the existing *Clean Energy Act 2011*. This removed a cost imposed upon Australian LNG exporters that was not faced by their international competitors.

## Energy Efficiency Opportunities (EEO) program repealed

In September 2014, Parliament passed legislation to repeal the *Energy Efficiency Opportunities Act 2006* and the Energy Efficiency Opportunities (EEO) program. APPEA has long maintained that the EEO imposed a range of unnecessary administrative and compliance costs on participants that did little to enhance energy efficiency. It required large energy-using businesses to assess their energy use and to identify and report on cost-effective energy savings opportunities.

But oil and gas companies already have strong business reasons for minimising their energy use. The industry has a long history of reducing the energy intensity of its activities and making its energy production more efficient. APPEA member companies already have broad-ranging energy management policies, systems and measurement indicators that are integral to their operational performance.

## Emissions Reduction Fund (ERF)

The Emissions Reduction Fund is designed to drive private sector investment to achieve emissions reductions. The ERF White Paper, released in April 2014, sets out the Government's positions on the fund's design and implementation and its ongoing development.

The ERF's design has been guided by three principles:

- **Lowest-cost:** the ERF will seek to identify and purchase emissions reductions at least cost.
- **Genuine reductions:** the ERF will purchase emissions reductions that genuinely contribute to reducing Australia's greenhouse gas emissions.
- **Streamlined administration:** the ERF is intended to make it easy for businesses to participate.

Two elements of the ERF – crediting emissions reductions and purchasing emissions reductions – started on 1 July 2014. The first ERF Auction was held in April 2015. The Clean Energy Regulator awarded 107 Carbon Abatement Contracts to deliver a total of 47.3 million tonnes of abatement. The total value of contracts awarded was \$660.5 million. The average price per tonne of abatement was \$13.95. A second auction was held in November 2015.

The third element of the ERF – the safeguard mechanism – is proposed to begin operating from 1 July 2016 (following a delay from the initial starting date of 1 July 2015). This mechanism is designed to ensure that emissions reductions are not displaced by significant increases in emissions elsewhere in the economy. It involves setting emissions baselines based on the highest emissions over the past five years and ensuring that a facility's emissions do not exceed this baseline. According to the White Paper, the mechanism will be restricted to about 130 facilities with direct carbon dioxide emissions of 100,000 tonnes or more per year.

Unless its development is managed carefully, the safeguard mechanism could impose costs on the LNG industry that overseas competitors do not face. In 2014-15, APPEA met with the Minister for the Environment and the Department of the Environment on several times ahead of the passage of legislation in October 2014 to establish the framework for the mechanism.

In March 2015, the Government released a consultation paper seeking feedback on the design of detailed rules to implement the mechanism.

APPEA had discussions with the Government, the Department and other interested parties to ensure the mechanism did not impose inappropriate cost burdens on the industry and that further development of the ERF would make Australia's more competitive in attracting oil and gas investment.

## Review of the Renewable Energy Target

In 2014-15, APPEA participated in a review of the Renewable Energy Target (RET). APPEA's submission maintained reiterated that the RET is an inefficient policy that should be discontinued.

APPEA also recommended maintaining the existing exemption from RET obligations for those generating their own electricity on site (such as some LNG facilities) and improving the treatment of trade-exposed industries, such as LNG, that draw electricity from the grid and face RET costs.

After months of negotiation, the Government and the Opposition agreed to a package of amendments to the RET legislation.

Legislation passed in June 2015 reduced the burden of the RET, increased the exemption for existing emissions-intensive trade-exposed industries to 100 per cent, and maintained the existing exemption for self-generation of electricity.

But the Government and Opposition have not yet agreed to an amendment to the definition of LNG production that would ensure all aspects of LNG production, particularly those that do not take place at the LNG plant, are eligible for the exemption. APPEA will continue to advocate for this amendment.

## The Australian Industry Greenhouse Network

APPEA is part of the Australian Industry Greenhouse Network (AIGN), a group of industry associations and businesses that coordinates industry action on climate change policy issues to promote sustainable industry development.

In 2014-15, the AIGN provided input to numerous submissions, with a particular focus on the development of the ERF.

## National Greenhouse and Energy Reporting (NGER)

A CSIRO report for the Department of the Environment, released in August 2014, found greenhouse gas emissions from Australian CSG production wells were very low, especially when compared to the volume of gas produced from the wells.

CSIRO scientists measured fugitive methane emissions from many production wells in Queensland and NSW. The CSIRO found that actual measurements for identified equipment leaks yield emission factors that are consistent with those used in the NGER methodology for estimating equipment leaks.

In December 2014, the Government released National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2015 (No.1).

This proposed minor amendments to the National Greenhouse and Energy Reporting (Measurement) Determination 2008 that would apply to the reporting year 2015-16, which would affect NGER reports to be submitted in October 2016.

The amendments updated Global Warming Potentials adopted by the Parties to the UN Framework Convention on Climate Change and its Kyoto Protocol, and reflected values used in the Intergovernmental Panel on Climate Change's Fourth Assessment Report. They also provided additional methods for estimating emissions from carbon capture and storage.

In May 2015, the Department of the Environment released an exposure draft of National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2015 (No. 2).

Schedule 1 and 2 of the National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2015 (No. 2) will apply to the reporting year 2015-16 and would affect NGER reports to be submitted in October 2016.

Schedule 1 and 2 of the draft amendments contained in this document aim to refine guidance on applying methods for estimating coal mine waste gas fugitive emissions; include a Method 2 option for estimating fugitive emissions from oil and gas operations; clarify methods for estimating scope 2 emissions from network operators' consumption of purchased electricity; and finalise additional methods to complete NGER guidance for estimating emissions from carbon capture and storage activities.

APPEA's June 2015 submission on the exposure draft points out several technical errors with the proposed Method 2 for estimating fugitive emissions from oil and gas operations. Following this, the Department has confirmed these errors will be corrected before amendments proceed.

Schedule 3 of the National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2015 (No. 2) will apply to the reporting year 2016-17. This would affect NGER reports to be submitted in October 2017.

## International developments

In November 2014, the Intergovernmental Panel on Climate Change released its Synthesis Report of the Fifth Assessment Report. This found: "GHG emissions from energy supply can be reduced significantly by replacing current world average coal-fired power plants with modern, highly efficient natural gas combined-cycle power plants or combined heat and power plants, provided that natural gas is available and the fugitive emissions associated with extraction and supply are low or mitigated."

In March 2015, the Australian Government began reviewing its emissions reduction targets in preparation for the UN Climate Change Conference in December 2015, where negotiations on a new global climate agreement will conclude. A UN taskforce released an issues paper for the review in March 2015. APPEA's submission to the taskforce – lodged in April 2015 – highlighted the role of natural gas as a lower emissions energy source and the need to maintain Australia's international competitiveness. APPEA also participated in a May 2015 Ministerial Roundtable that discussed this issues paper.

In August 2015, the Government released its final 2030 emissions reduction commitment – a 26-28 per cent reduction in emissions from 2005 levels. This will require reducing emissions by about 900 million tonnes from 2020 to 2030.

The policies and programs that might be used to deliver this commitment remain a key area of ongoing focus. Now that Australia's 2030 emissions reduction commitment has been announced, focus has turned to the status of international negotiations and the prospects for the upcoming UN Climate Change Conference.

# Safety and environment awards

## APPEA HSE Awards

The APPEA Health, Safety and Environment Awards are presented at the annual APPEA National Health, Safety and Environment Conference.

These awards demonstrate how companies are continuously raising the bar in health, safety and environment performance, sharing best practice and providing inspiration to the entire industry.

The HSE Awards are for specific initiatives, which may be collaborative across organisations or projects.

They are open to individuals, teams and companies from across the whole of industry.

Submissions ranged from high-level management and system improvements that affected the whole of an organisation to very practical frontline innovations.

All finalist entries were featured in a poster presentation at the 2014 APPEA National Health, Safety and Environment Conference and HSR Forum.

The winner of the 2014 APPEA Health and Safety Award was Woodgroup for *Improving subcontractor safety performance*.

The Industry Choice Award for Health and Safety was presented to Weatherford Australia and Workforce Safety Products for their initiative, *Hand Safety – Exceeding Industry Best Practice*.

INPEX received the 2014 APPEA Environment Award and the Industry Choice Environment Award for *Ichthys LNG Project Environmentally and Socially Successful Dredging Program*.

**Companies are continuously raising the bar in HSE performance.**



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## The Safety Excellence Award and the Environment Excellence Award are given to APPEA full member companies for displaying organisational excellence in a calendar year.

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### Safety Excellence Award

ExxonMobil Australia received the APPEA Safety Excellence Award at the APPEA 2015 Conference Dinner in Melbourne on 19 May.

The award recognises responsible management of risk based on sound science; application of new technologies; and constructive engagement with the workforce, project partners, government and the wider industry in enhancing workplace health and safety.

The judges noted that ExxonMobil's management, workforce and project partners have collaborated systematically and effectively to minimise risks.

ExxonMobil uses safety training, reporting and audits to learn from minor events, identify priorities for improvement and drive continuous improvement in safety performance.

In 2014 ExxonMobil undertook drilling operations at its Marlin B platform; completed deepwater development drilling on the Jansz-lo fields (as part of the Gorgon venture); began building a new gas conditioning plant at Longford; and undertook major maintenance shutdowns.

This entailed almost 4.5 million work hours across the company's operations. Yet ExxonMobil achieved a new company record for personnel safety with no lost time injuries.

The judges also recognised ExxonMobil's participation in many industry activities, including Stand Together for Safety, the Australian Maritime Spill Response Committee, IChemE Safety and the Safety Case Working Group.

### Environment Excellence Award

Woodside Energy was presented with the APPEA Environment Excellence Award at the APPEA 2015 Conference.

The judges found that Woodside had shown consistent excellence in environmental management. This included strategic planning, risk management, monitoring and evaluation.

The company is an industry leader in community and stakeholder engagement, and in developing and implementing environmental projects that deliver public benefits.

Woodside has also shown a strong commitment to environmental research, particularly in marine science. Its marine research projects have involved collaboration with a range of organisations, including: universities, CSIRO, the Australian Institute of Marine Science, the Western Australian Museum, and the Western Australian Department of Parks and Wildlife.

Woodside's flagship research projects include the Scott Reef Maxima Seismic Survey and the Rankin Bank and Glomar Shoals Study.

Initiatives for Woodside's workforce include an environment guide book to support managers and "environment walks" that complement traditional safety walks.

The environmental walk involves leaders walking around work sites, such as the Karratha Gas Plant, and using site-specific environmental management checks and questions to acquire information that can inform environmental risk planning workshops.

# APPEA HSE events

## APPEA National Health, Safety & Environment Conference

1-3 September 2014

In 2014, APPEA combined Health, Safety and Environment (HSE) into one major conference for the Australian upstream oil and gas industry. The inaugural APPEA National Health, Safety & Environment Conference was held at Perth Crown, Burswood on 1-3 September 2014. More than 600 delegates attended.

The event delivered a world-class program of presentations, panel discussions, and key networking events. Top-quality international and local presenters (industry leaders, regulators, safety staff and frontline workers, and technical and other experts) addressed critical issues facing the industry.

RiAus Director Dr Paul Willis – a former ABC TV science communicator (Catalyst and Quantum) – facilitated two panel sessions on the science, perception and communication of risk, and how industry can better engage with the public, communities and stakeholders.

## HSR Forum

1 September 2014

The 2014 HSR Forum was held at Crown Perth, immediately preceding the APPEA National HSE Conference. The forum enabled health and safety representatives to share their safety experiences, lessons and good practices, and also focused on helping them develop their safety leadership and representative skills.

## OSR Forum

1 September 2014

The Oil Spill Response Forum was held as an adjunct to the APPEA National HSE Conference.

It allowed participants to hear from regulators and to share regional, national and international oil spill response and oil pollution research findings and best management practices, as well as lessons from member company operations.

A diverse group of guest speakers presented on a range of issues, including ongoing lessons for Australian oil spill response from the Macondo (Deepwater Horizon) incident; insights from an offshore regulator's perspective; updates on international joint industry efforts in oil spill response planning and capacity building; and presentations from technical experts.

## Introduction to the Oil & Gas Industry Seminars

Delivered nationally, these half-day seminars give participants a broad understanding of the Australian oil and gas industry. Attendees gain an appreciation of the geological, technical and economic aspects of the industry, features of the onshore and offshore environments, as well as the exploration, development and production phases.

Developed and delivered in partnership with Curtin University, these seminars are facilitated by Professor Peter Moore with guest APPEA presenters. This material can also be delivered through in-house seminars. For more information, see the APPEA website.



Chevron Australia Managing Director  
Roy Krzywosinski addressing the  
2014 APPEA HSE Conference.