



# Health, Safety & Environment Report 2012–2013

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# Safety and health

## APPEA's safety, health and environment program supports excellence in the Australian oil and gas industry's performance.

In safety, health and environment, APPEA:

- uses the CEO Leadership Forum to drive commitment across the industry
- promotes high standards through benchmarking, identifying and sharing lessons learnt and implementing global and local best practice across the industry
- develops and rolls out collaborative initiatives to drive improvements in industry performance
- promotes a performance-based regulatory regime that is applied consistently, cost-effectively and efficiently across all operations and jurisdictions
- increases government and community understanding of the industry's safety, health and environment performance.

### Safety and health performance

#### CEO Safety Forum

While there has been significant improvement in the last decade, Australia's safety performance remains in the third quartile globally, and incidents with high potential for fatalities or major accident events continue to occur.

There has also been rapid growth in all sectors of the industry and new entrants are required to reach 'work autonomy' more quickly than ever before. This demands a focus on the level and quality of supervision and training.

In light of this, in 2012 the Australian Oil and Gas CEO Safety Leadership Forum focused collective efforts and resources on process safety (keeping hydrocarbons contained), safety competency, vehicle safety and sharing of High Potential Alerts across the industry.

#### Process Safety

Benchmarking and reporting on safety performance has tended to focus too strongly on personal injury statistics and not enough on what must be done to prevent losses of containment and potential major accidents.

The CEO Safety Forum agreed to focus collective industry efforts on reporting and understanding high potential incidents, in particular losses of containment.

Through APPEA the CEO Safety Forum projects have:

- significantly increased the profile of process safety, placing it at the top of the agenda for APPEA all safety events
- made process safety the theme and focus of the industry's annual Stand Together for Safety campaign
- established a baseline of reporting on losses of containment, using reporting and analysis against API Standard 754 for Tier 1 & 2. Reporting began in 2012 with initial data shared and analysed at HSO committee and workshops and forums - focus on pipework and corrosion, life extension of facilities, safety critical equipment, small bore tubing and joints
- aligned with international reporting (International Oil and Gas Producers – OGP) on process safety to enable benchmarking and global sharing of root causes of such incidents.
- partnered with the Institute of Chemical Engineers to establish the IChemE Process Safety Centre. This centre's initial focus is on helping develop leading metrics and competencies for process safety, but it will also foster participation from other major hazard/process industries to maximise access to data, lessons and good practice.

## High potential incident reporting and alerts

The High Potential Incident Reporting and Alert Program is now well established with wide dissemination of information, root causes and lessons learned. It covers incidents capable of causing fatalities or Tier 1 or 2 loss of containment. The three top activities being undertaken in the high-potential (HiPo) incidents reported to APPEA are production, construction and drilling (See Chart 1 and 2). Under a cooperative effort with the International Oil and Gas Producers Association (OGP), APPEA's alerts are now being uploaded into the OGP incident database and shared across its global membership.

### Vehicle safety

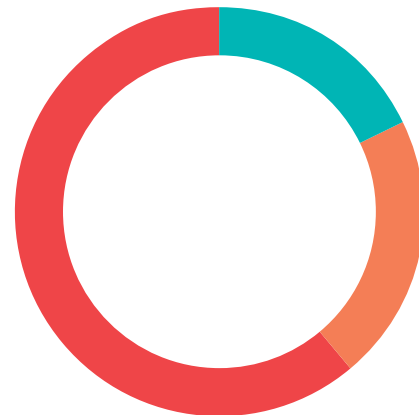
Vehicle safety remains a high priority, reflecting the rapid growth in onshore activity. An APPEA Vehicle Safety Guideline launched at the 2012 CEO Safety Forum addresses the operation of vehicles in urban, rural and remote locations. It also defines minimum expectations for vehicle safety and provides toolkit solutions for key risks. Key components include driver behaviour and competence, journey management, light vehicle specifications (including in-vehicle monitoring systems which have shown results in improving vehicle safety), heavy vehicle load transport and restraint and key performance indicators.

### Common Safety Training Program

The Common Safety Training Program (CSTP) is now recognised as a world leader because of its fully immersive, workplace simulation and hands-on approach to developing safety skills and culture from the onset of a workers' career in the oil and gas industry, backed up by workplace demonstration of key safety behaviours.

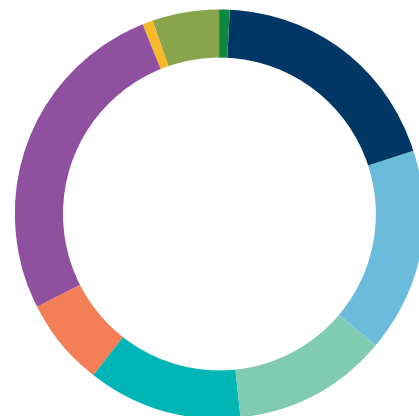
Over the last 12 months CSTP has achieved enormous growth in take-up across the Australian offshore oil and gas industry. CSTP is an industry requirement for all personnel working on offshore production and drilling facilities in the Australian oil and gas industry. The program is now also available to workers in onshore oil and gas facilities.

Total reported HiPo 2012



- Containment Failure (16%)
- Major accident event (19%)
- Personnel HPI (65%)

Activity being conducted when HiPO incidents occurred 2012



- Commissioning (1%)
- Construction (19%)
- Drilling (16%)
- Driving (12%)
- Maintenance (12%)
- Other (7%)
- Production (27%)
- Loading (1%)
- Workover (5%)

## Safe Supervisor Competence Program

The Safe Supervisor Competence Program (SSCP) is an industry requirement for offshore construction and marine supervisors. APPEA took over the management of this program in 2012-13.

The SSCP is a step change in safety leadership training for oil and gas industry supervisors and it provides the common and minimum safety skills and behaviours that all supervisors across the oil and gas industry need to lead safe teams.

Based on demonstrating industry-established safe behaviours required for critical safety activities and safety leadership, the SSCP, like the CSTP, provides a direct link between the training environment and the workplace, delivering and reinforcing the same safety behaviours and culture.

Building on the approach of the CSTP, it delivers a very practical hands-on and behavioural-based learning experience to develop highly effective frontline supervisors. There is deliberate alignment between the CSTP and SSCP in terms of the language of safety, the discussion of safety culture and the understanding of the ways in which individuals can influence safety outcomes in their workplaces.

## Safety and health performance

In incident and injury data reported to APPEA in 2012:

- the reported hours worked by both employees and contractors increased by 16 per cent from the previous year.
- the number of lost time injuries per million hours worked was 0.8 – the same rate as 2011.
- the total recordable injury frequency rate (recordable injuries per million hours worked) was 4.9 compared to 4.7 in 2011.
- overall, there is a general downward trend in the injury frequency rate.

## Stand Together for Safety

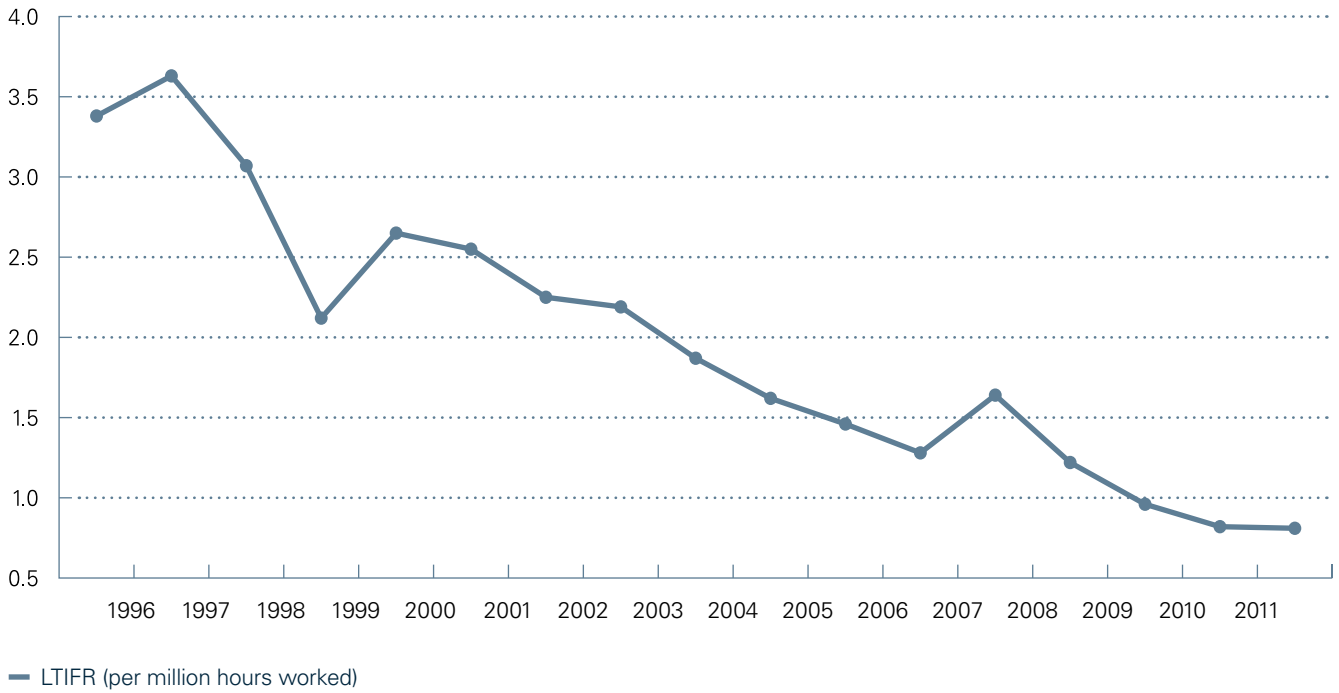
Stand Together for Safety (STFS) is a stop-work event held annually across the Australian oil and gas industry.

The fourth annual STFS was held in May 2012. An array of activities were conducted across the industry and a wide range of events were registered on the STFS website.

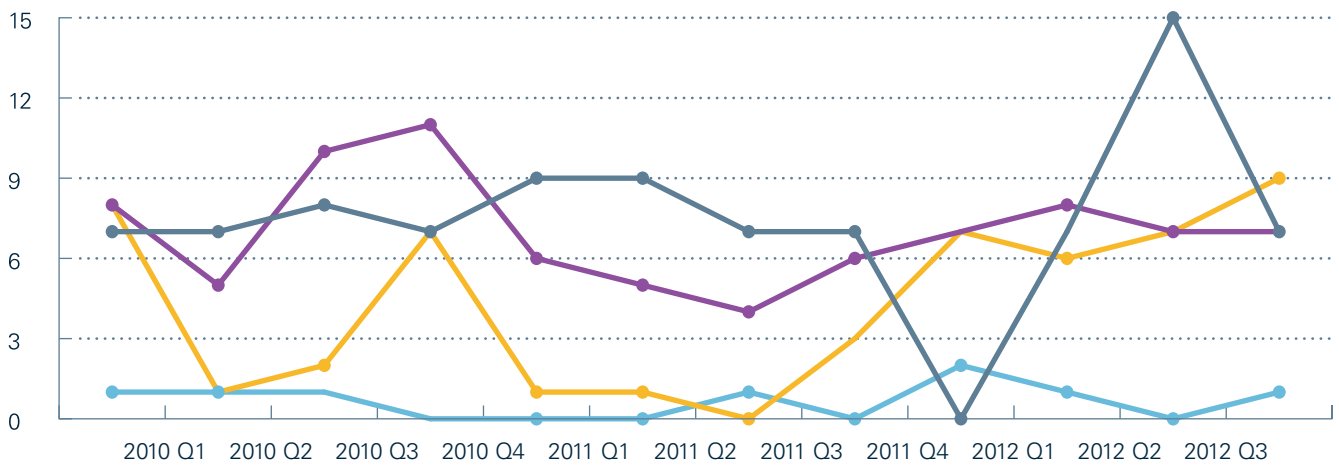
More than 36,500 participants from 70 registering companies were involved. About 30 per cent of registered participants were contractors.

Events included chief executives and senior management as well as frontline staff, and were held at a range of sites, both on and offshore, and as far afield as Singapore and Pakistan.

### Lost Time Injury Frequency Rate 1996 – 2012



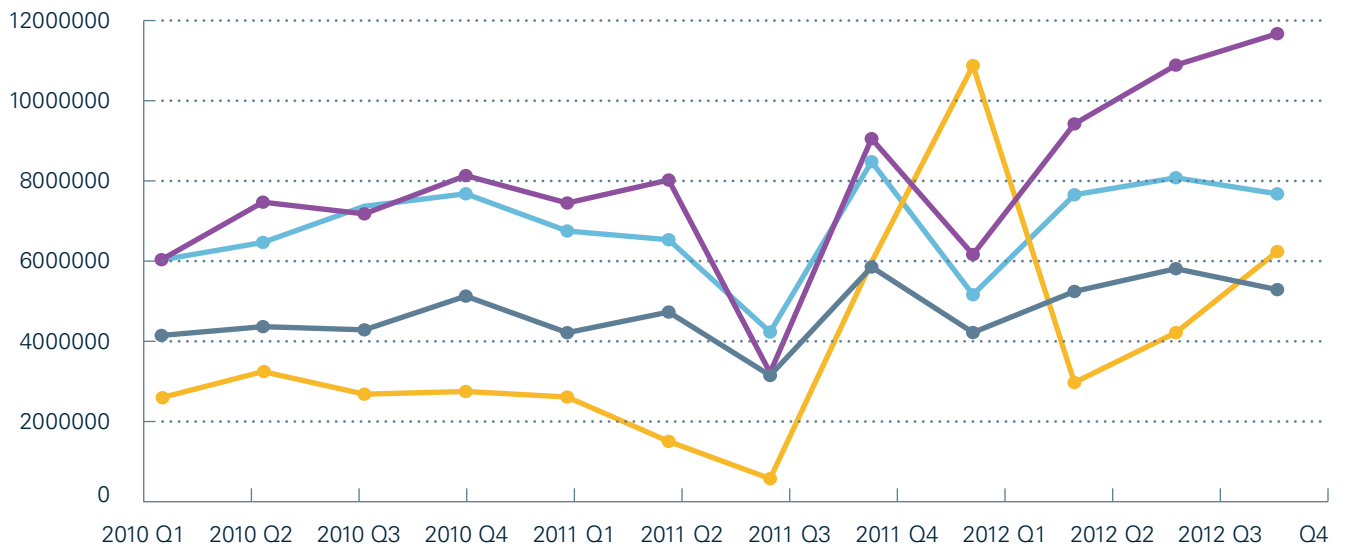
### Lost Time Injuries by Operating Areas 2010 – 2012



	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q4
—	7	7	8	7	9.00	9.00	7.00	0.00	7.00	7.00	7.00
—	8	5	10	11	6.00	5.00	4.00	6.00	7.00	8.00	7.00
—	8	1	2	7	1.00	1.00	0.00	3.00	7.00	6.00	9.00
—	1	1	1	0	0.00	0.00	1.00	0.00	2.00	1.00	1.00

— Offshore field operations — Onshore field operations — CSG field operations — Non field offices

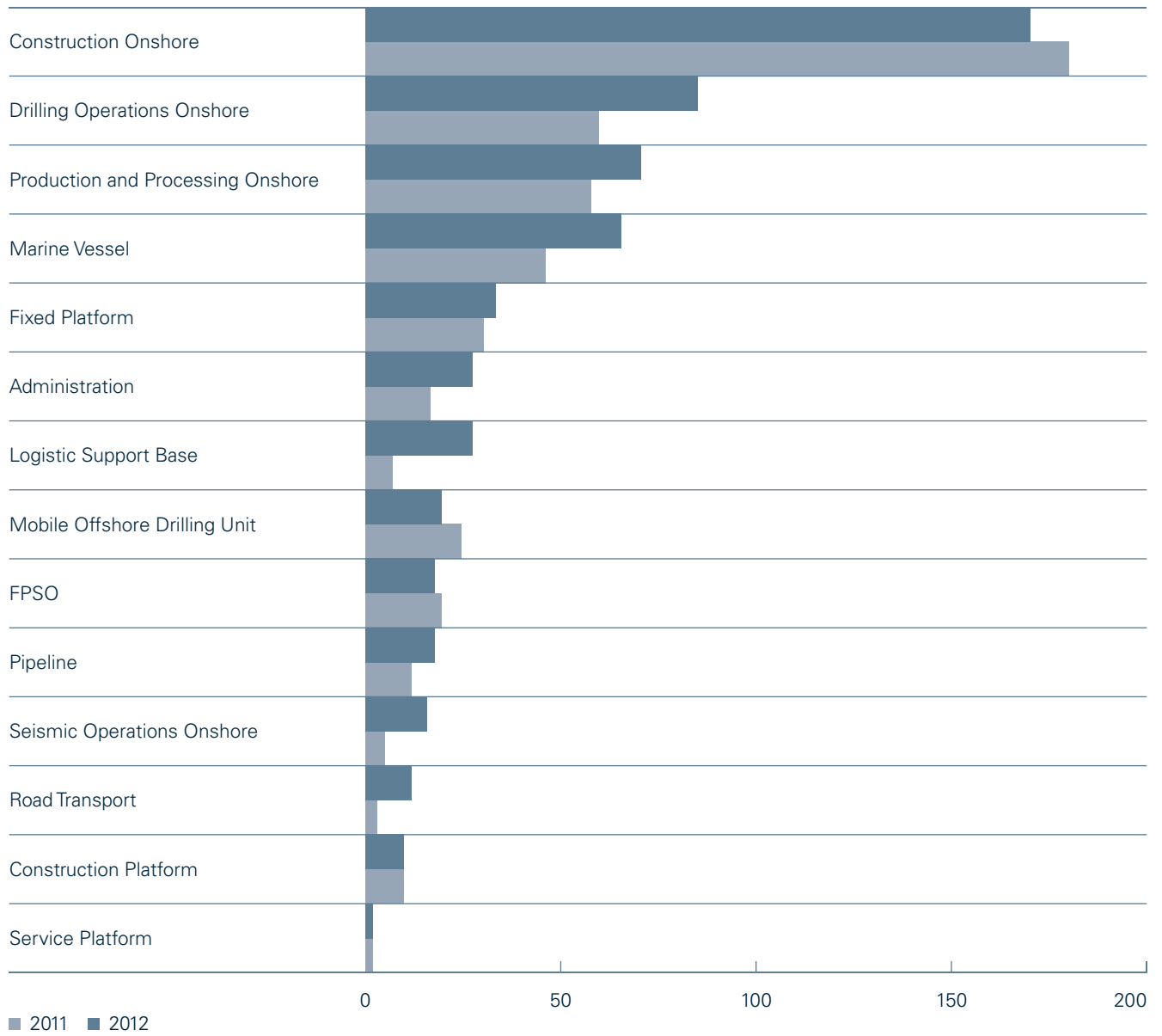
### Total work hours by operating areas



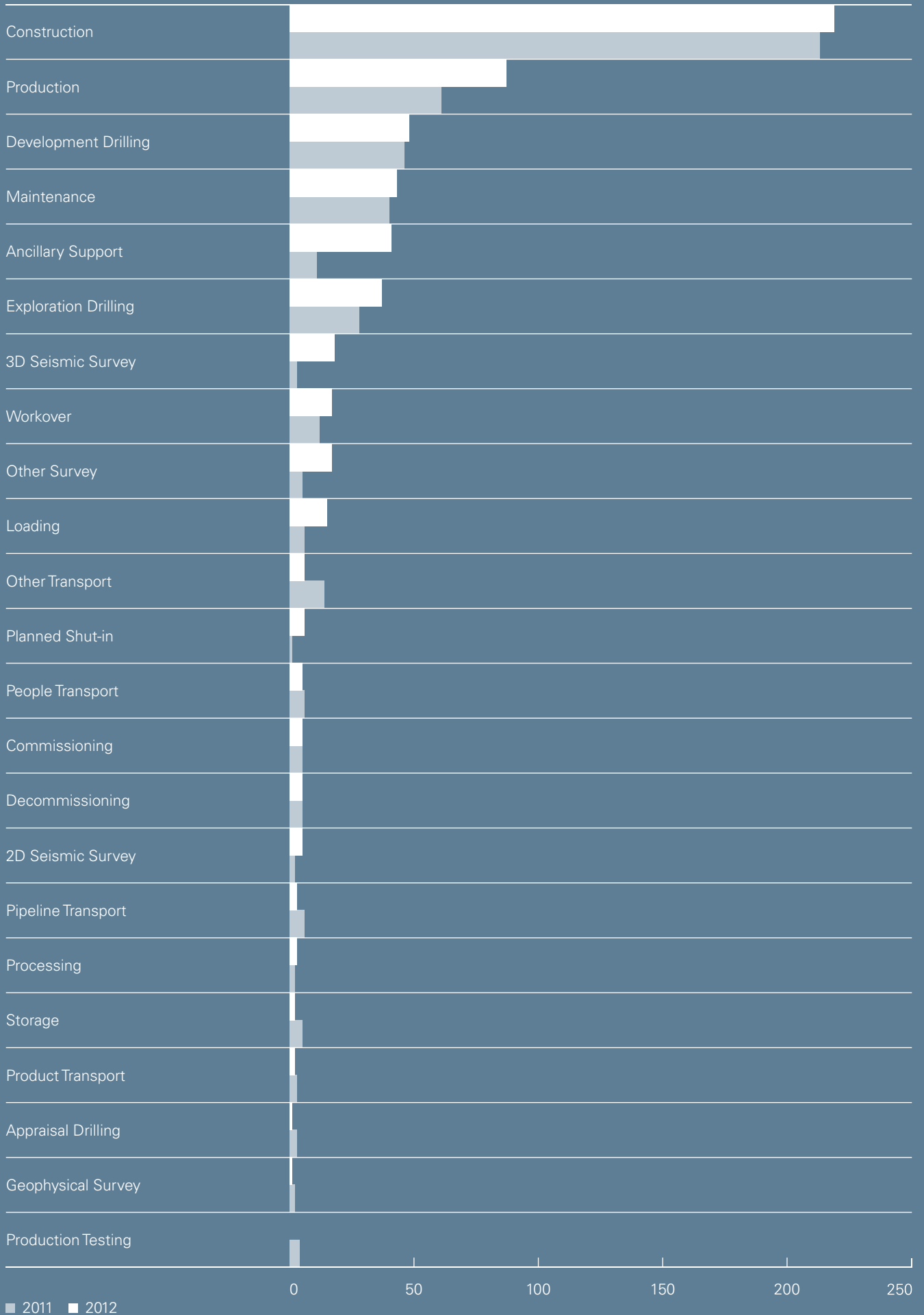
	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q1	2012 Q1
Offshore field operations	4146149	4365793	4285887	5127429	4215099	4729944	3148591	5852284	4218837	5243543	5811188	5289136
Onshore field operations	6035682	7470256	7178393	8132632	7448948	8022464	3217091	9054041	6163357	9422173	10887928	11671953
CSG field operations	2593748	3244999	2681721	2748694	2610435	1503924	574356	5974942	10875553	2972906	4215788	6238765
Non field offices	6030588	6466566	7367713	7679534	6751189	6533225	4231092	8479052	5161860	7654805	8078952	7678046

— Offshore field operations — Onshore field operations — CSG field operations — Non field offices

### Incidents by Facility Type 2011– 2012



## Incidents by Facility Type 2011– 2012





# Environmental management

In Australia, exploration and production operations are conducted in a wide range of onshore and offshore environments.

The industry works to highest standards and has a long history of responsible environmental management.

APPEA and its member companies are committed to sound resource and environmental management practices as an integral part of industry operations.

## Seismic exploration and marine life research

Internationally, the oil and gas industry continues to invest in better understanding the environmental implications for marine seismic surveys.

In 2004, several international companies and the International Association of Geophysical Contractors formed the Sound and Marine Life Joint Industry Programme to engage leading academics on how sound from seismic surveys affects marine life.

This program has commissioned almost 70 research contracts to a value of almost \$35 million, and currently has 12 member companies and a \$6 million annual research budget. Research findings are available at [www.soundandmarinelife.org](http://www.soundandmarinelife.org). Australian companies contributing to this research included Woodside, Santos and BHP Billiton.

While research into marine sound continues, Australia's oil and gas industry undertakes a range of precautionary mitigation strategies such as timing seismic exploration to avoid peak migration periods, adopting a whale exclusion zone when firing and implementing soft-start procedures, which involve gradually increasing the sounds as operations begin.

## Millions in environmental research

The industry is strongly committed to investing in environmental research to further improve its environmental performance and further reduce its operating environmental footprint both onshore and offshore.

Over the past three years alone, oil and gas companies have invested tens of millions of dollars to undertake dozens of new environmental studies, generating a wide range of research.

These included environmental baseline research, onshore water systems, marine sound and other topics.

This research not only improves industry's environmental management, it also generates wider community benefits by increasing scientific knowledge and understanding of the Australian environment.

In 2012-13, the industry began investing, through APPEA, in a major marine science project that will collate research on key priority areas in the marine environment, such as marine sound, water management, light pollution and more.

This work will start in the 2013-14 financial year and is expected to be a three-year project.

**The industry is strongly committed to investing in environmental research.**

# Environmental regulation

## The Australian oil and gas industry supports effective, efficient and transparent regulation based on sound science.

Throughout 2012-13 Australian Government policy deliberations have considered, and in some cases delivered, substantial changes to environmental policy and regulation of the Australian oil and gas industry.

APPEA will continue working with the Government throughout 2013-14 to achieve a more efficient offshore regulatory regime.

### Green tape and streamlining

APPEA continues to advocate the case for more effective, efficient and streamlined development assessment processes, particularly with regard to environmental regulation.

APPEA's *Cutting Green Tape* report, released in February 2012, showed how the oil and gas industry faces overlapping state and federal laws with duplicative and inconsistent requirements. This increases costs and delays projects without improving environmental outcomes.

Reforming environmental regulations could save taxpayers and industry millions of dollars without impacting safety and environmental outcomes.

Reform would reduce costs for regulatory agencies and taxpayers, and would increase returns to project developers, suppliers, workers and governments.

Policies that undermine the development of energy projects and curtail energy production impose real costs on Australia through lost jobs, forgone economic growth, and higher energy bills.

The recently elected Federal Government has declared that minimising unnecessary duplication and streamlining of environmental legislation is a matter of priority. The new Government has taken some initial decisions that are quite encouraging.

APPEA will continue to engage with the Government throughout 2013-14 to explore the full range of options available to achieve a more efficient regulatory outcome and help meet the Government's policy commitment.

### Offshore regulation

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is the federal agency that regulates all petroleum activities in Commonwealth offshore areas under the *Offshore Petroleum and Greenhouse Gas Storage Act 2009 (OPGGS Act)*.

Offshore oil and gas activities are also subject to the federal government's Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), which imposes many regulatory controls that duplicate the OPGGS Act.

Throughout 2012-13, APPEA worked closely with NOPSEMA and the now Department of Industry (previously Resources, Energy and Tourism) to implement several legislative changes to the OPGGS Act and its supporting regulations.

The department has begun a review of the OPGGS Act environment regulations to examine whether the current regime meets the objectives of the offshore petroleum legislation. This led to the *Offshore Petroleum Greenhouse Gas Storage Act Amendment (Compliance Measures No. 2) Act 2013 (Cth)*, which passed through Parliament in May 2013. This created several new provisions of the offshore petroleum legislation, including enshrining the 'polluter pays' principle into the legislation.

In December 2012, the Department of Industry also began a review of the OPGGS Act environment regulations, which dictate how NOPSEMA regulates the potential environmental impacts of offshore activities.

In May 2013, the *Offshore Petroleum Greenhouse Gas Storage Act Amendment (Compliance Measures No. 2) Act 2013 (Cth)* passed through Parliament. This created several new provisions of the offshore petroleum legislation, including enshrining the 'polluter pays' principle into the legislation.

From 29 November 2013, a titleholder must demonstrate to NOPSEMA – as a condition of the acceptance of an environment plan – that it holds sufficient financial assurance to meet potential costs, expenses or liabilities associated with work done

under a title. These include expenses relating to the new polluter pays statutory duty to control the source, clean the source and remediate the environment.

In 2012-13, work also began on a strategic assessment (under Part 10 of the EPBC Act) of the environmental regulatory processes conducted by NOPSEMA.

This process is intended to identify whether NOPSEMA can be designated as the sole environmental regulator for offshore petroleum activities, which would potentially remove duplicative requirements for assessment under the EPBC Act. APPEA will continue to work with the new Government on this review.

## Water trigger

In June 2013, an amendment was made to the EPBC Act to create a new matter of national environmental significance – an industry-specific “water trigger” applicable only to coal seam gas and large coal mining developments. The water trigger brings any such developments within the coverage of the EPBC Act.

APPEA strongly opposed this amendment because it failed to recognise the range of processes and regulations already in place to extensively consider the possible impacts of coal seam gas operations on water resources.

At a time when clarity and investor certainty are required, introducing the water trigger added duplication and inefficiency for no environmental benefit.

Regulatory approvals and processes must ensure safe and sustainable operations while also avoiding unnecessary increases to costs and delays in securing gas supplies.

## Marine reserves

November 2012 saw the proclamation of the Commonwealth marine reserves network. Management plans for each of the five bioregions passed through Parliament in March 2013. These plans establish the zoning of the individual reserves and how they are to be managed, including restrictions and conditions on certain activities. The management plan for the South-east Network came into effect on 1 July 2013; the remaining five management plans come into effect on 1 July 2014.

The new Federal Government has a policy commitment to appoint a bioregional advisory panel for each of the five marine bioregions. These panels will provide advice on the design of management plans with a requirement for peer-reviewed scientific evidence of threats to marine biodiversity (available to all stakeholders) before any decision is made.

As a result of substantial concern from Australian fishing organisations that are subject to additional gear restrictions and fishery closures in marine reserves, the Abbott Government has committed to revisit Marine Reserve Management Plans. It will appoint an expert scientific panel to review the science supporting each zone. The panel will report within six months, at which point the new Government will reconsider any changes to the proposed boundaries in consultation with stakeholders.



*Seals sunbaking on a Bass Strait rig.*

*Photo courtesy ExxonMobil Australia.*

# Offshore well integrity and spill response

## National Offshore Petroleum Safety and Environmental Management Authority

In January 2012, the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) was set up as the single national offshore regulator of safety, well integrity and environmental management. The regulatory regime implemented by NOPSEMA since 2012 recognises the importance of preventing major offshore loss of hydrocarbon containment events, but also of preparing to respond to low-likelihood but high-consequence events.

In 2012-13 oil spill contingency planning has emerged as a major focus for industry and for NOPSEMA. The industry has continued to work with the Australian Government and international industry to ensure our activities are carried out to world-class standards, safely and with minimal impact on the environment. The industry has been working throughout 2012-13 to ensure each petroleum activity has well intervention and oil spill response arrangements ready to go. Such plans must be commensurate with the potential consequences of a 'worst case' credible spill scenario.

## Oil spill contingency planning

In 2012 the APPEA Environment Committee identified priorities for oil spill preparedness and response and collaborative action to address the continuous improvement requirements of the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009*. These include:

- investigating options for increasing oiled wildlife response capability and capacity in northwest Australia.
- reviewing current science and research on the use of oil spill dispersants, their applicability to Australian conditions and identifying any research gaps.
- reviewing oil spill trajectory modelling and monitoring capacity.

Several strategies have been implemented throughout 2012-13. These include Vermillion Oil and Gas Australia's donation of an oiled wildlife response container (which provides a mobile operational base along with specialised equipment) to the Australian Marine Oil Spill Centre (AMOSC). Final reports and/or products for each project are expected before the end of 2013.

APPEA's Environment Committee has also established the Oil Spill Contingency Planning Forum. This will bring together a range

of industry environmental and operational specialists as well as affiliated partner organisations (such as AMOSC) to ensure that lessons from the working groups are shared broadly across industry.

APPEA has pursued this global engagement to build both subsea intervention and oil spill response capability. It has engaged with the International Petroleum Industry Environmental Conservation Association (IPIECA) and the international Oil and Gas Producers Association (OGP) Oil Spill Response Joint Industry Project (OSR-JIP). The working groups are drawing upon the findings of the OSR-JIP and on the strategies developed in Australia.

## Subsea First Response Toolkit

In May 2012, industry chief executives announced the funding of a Subsea First Response Toolkit (SFRT) for Australia's offshore petroleum activities. APPEA has been working throughout 2012-13 to finalise commercial and legal arrangements for the construction and deployment of this world-class subsea response capacity.

The SFRT will be in place in Australia before the end of 2013. It will form part of an international and regional response strategy for rapid and effective mobilisation in the event of loss of control of a subsea wellhead. The SFRT contains equipment needed to clean the area around the wellhead, enable intervention, prepare for drilling a relief well and safely install a capping device.

The highly specialised subsea response equipment has been built in Norway by Oceaneering, a global oilfield provider of engineered services and products, and contracted through AMOSC.

Oceaneering will also be responsible for storage, maintenance, training for response personnel and immediate mobilisation of the equipment at the onset of any subsea well control event through agreements with individual members of the SFRT.

The global oil industry has made arrangements through the Subsea Well Response Program (SWRP) for setting up capping stacks and first response equipment. Since June 2013, the capping and subsea first response equipment has been positioned at four locations – Norway, Brazil, South Africa and Singapore. The capping stacks and first response equipment, owned by Oil Spill Response Limited (OSRL), include four capping stack toolboxes and two kits for the subsea application of dispersant at a wellhead. OSRL will also maintain, store and mobilise the equipment to the nearest port or airport in the event of an incident. From there, the incident owner will transport the equipment to where it is needed.



*There has been a strong emphasis on offshore well integrity and spill management in 2012-13.*

## APPEA Well Integrity Committee

The Australian oil and gas industry continues to apply the lessons learned from the Montara and Macondo incidents, and there has been an increased effort at international collaboration in order to apply the best global solutions to Australia.

The APPEA Well Integrity Committee (AWIC) was formed out of the APPEA Montara Taskforce to establish a more permanent forum to proactively address common industry challenges on well integrity and process safety (prevention of release/escalation of major hazard events) and to adapt global lessons and good practice for the Australian offshore petroleum industry.

Throughout 2012-13, the Committee met to share as rapidly as possible across the Australian drilling industry actual and potential process safety incidents and good practices.

AWIC has overseen the development of a subsea intervention solution for Australia, including a Subsea First Response Toolkit to ensure local capability to respond rapidly and effectively to any offshore well control incident.

It has also developed a guide (referencing global work undertaken by OGP and UK Oil and Gas) to help title-holders, operators and service providers develop and review 'fit for purpose' competency management systems for well integrity. This guide covers all aspects and elements of drilling and can also apply to training and assessment.

AWIC is currently undertaking work on process safety leading metrics for well operations in conjunction with the APPEA Health, Safety and Operations Committee's work on process safety.

# Environment awards

## Category A (Production)

winner: Santos GLNG

This award recognises Santos GLNG's automated real-time groundwater monitoring system's contribution to openness, accountability and environmental excellence.

Santos's groundwater monitoring program integrates automated telemetry with existing landholder bores in its field operations areas.

The system lets Santos use real-time data to efficiently monitor groundwater on a regional scale.

This enables fast, accurate reporting to the regulator, as well as early identification of potential problems and rapid response to any issues.

It also reduces the time field staff spend on on-site monitoring, reducing inconvenience to landholders.

Because it is open and transparent to landholders, the monitoring system offers reassurance on Santos's operations and protection of groundwater.

**The Category A Environment Award recognises the groundwater monitoring system's contribution to openness, accountability and environmental excellence.**

## Category B (Exploration)

winner: ConocoPhillips Australia

ConocoPhillips Australia has opted to gather baseline environment data early in the exploration phase of its Poseidon exploration program.

In January 2012, the company began a new environmental research program at Seringapatam Reef and the surrounding region off the north-western Australian coast. This unspoilt region supports diverse marine life. The data gathered will tie in with similar studies at Scott Reef to give a more complete view of the Browse Basin's deepwater ecosystem. The data on reef spawning, water quality, and ocean floor communities, including satellite remote sensing and noise data, have increased understanding of the regional environment.

Establishing baseline conditions helps in assessing changes and impacts to this unique ecosystem. Data from several field studies have already been collected and analysed. As the research continues, the data will be published and shared with scientists and regulatory bodies. This will help develop operational frameworks to minimise the environmental footprint of exploration and production in this part of the Browse Basin.

## The Environment Innovation Award

winner: Chevron Australia

This award was presented to Chevron Australia for "Control Charts: An Innovative Approach for Ecological Impact Assessment of Rare Species"

Operating on Barrow Island, a Class A Nature Reserve and an important nesting area for sea turtles. Chevron Australia had to re-think statistical approaches for identifying impacts on local wildlife. In collaboration with consultancies in statistical modelling and marine turtles, Chevron Australia ecologists are using time-series control charts as a decision-aiding tool to monitor uncharacteristic variations in key parameters for Barrow Island's flatback turtle population. This can help detect trends whose impacts might not be apparent for several years and enable Chevron to address the cause of any such variation.

This is the first comprehensive control-chart-based monitoring and management scheme used for an endangered species exposed to a potential major anthropogenic hazard.

# Safety awards

*ConocoPhillips Australia undertook several significant projects and campaigns, including a shutdown and an asset integrity management campaign at Bayu-Undan.*



## Safety Excellence Award winner: ConocoPhillips Australia

ConocoPhillips received an APPEA Safety Excellence Award for the fourth year in a row. In presenting the award, APPEA Chairman David Knox said ConocoPhillips had been outstanding in several key areas – preventing major accidents, safety culture, workforce engagement and industry safety leadership.

“In 2012, ConocoPhillips Australia delivered a highly demanding operational program while also improving its safety outcomes. Its busiest year ever was also its safest year yet,” Mr Knox said.

ConocoPhillips Australia undertook four significant projects and campaigns (APLNG LNG plant construction, Bayu-Undan and Darwin LNG shutdowns, Bayu-Undan asset integrity management campaign and Browse exploration drilling campaign) in 2012.

Total hours worked by the company and its contractors rose by 163 per cent (up from 3.8 million hours to 10 million hours), but ConocoPhillips had no major accident events or high-level loss of containment incidents. It significantly exceeded world-best injury performance benchmarks, posting a lost-time injury frequency rate of 0.29 injuries per million work hours and total recordable injury frequency rate of 2.49 injuries per million work hours.

## The Health, Safety & Environment Innovation Award winner: Woodside Energy

Woodside's “The Good Day Frequency – a new measure for health, safety and environmental performance” focuses on performance areas such as occupational health, the potential for major accident events and the environment. It is calculated as the number of days worked without one of the following indicators occurring:

- significant injuries, including all lost work day cases and restricted work day cases lasting more than four days caused by injury or occupational illness
- high-potential safety related incidents with a potential consequence level of C or above
- significant environmental incidents with an actual consequence level of D or above
- overdue corrective actions arising from investigations of the incidents above, and health, safety and environmental audits.

The Good Day Frequency has provided a more balanced measure of Woodside's overall health, safety and environmental performance. It has focused Woodside on preventing significant incidents and promptly addressing corrective actions, which is helping give a broader view of safety performance.

## Safety conferences and forums

### 2012 SPE/APPEA International Conference on Health, Safety & Environment in Oil & Gas Exploration & Production 11-13 September, Perth

For the first time, the International Conference on Health, Safety & Environment was held in Australia. Co-organised by the Society of Petroleum Engineers (SPE) and APPEA, the conference theme was Protecting People and the Environment – Evolving Challenges. It featured three plenary sessions, 12 panel sessions and more than 140 papers presented in 53 technical sessions and knowledge-sharing formats.

### 2012 HSR and Safety Workforce Forum 12 November, Perth

The annual APPEA HSR Forum is the only safety forum in Australia specifically for oil and gas health and safety representatives. The 2012 HSR Forum included several practical sessions and panel discussions on fatigue.



*Above – The Exhibition area at the 2012 SPE/APPEA International Conference on Health, Safety & Environment in Oil & Gas Exploration & Production.*