



Australian Government
**Department of Industry,
Innovation and Science**

Submission from the Department of Industry, Innovation and Science
to the Environment and Communications Legislation Committee
Inquiry into the

Great Australian Bight Environment Protection Bill 2016

January 2017

Table of Contents

| | | |
|-------|---|----|
| 1 | Executive Summary | 3 |
| 2 | Role of the Department of Industry, Innovation and Science in relation to offshore oil and gas operations | 5 |
| 3 | Overview of offshore oil and gas operations in Australia..... | 7 |
| 4 | Offshore exploration | 9 |
| 4.1 | Exploration in the Great Australian Bight | 9 |
| 5 | <i>Great Australian Bight Environment Protection Bill 2016</i> | 12 |
| 5.1 | Implications for current titleholders and exploration work programs..... | 12 |
| 5.2 | Australia’s appeal as an investment destination | 12 |
| 6 | Australia’s offshore oil and gas regulatory framework..... | 14 |
| 6.1 | Regulatory Reforms..... | 14 |
| 6.2 | Regulatory responsibilities | 16 |
| 6.2.1 | Regulation of Petroleum Titles and Resource Management..... | 16 |
| 6.2.2 | Regulation of offshore oil and gas facilities and activities | 17 |
| 6.3 | Operational Reviews of NOPSEMA and NOPTA | 18 |
| 7 | Offshore Petroleum Titles | 19 |
| 7.1 | Offshore Petroleum Exploration Acreage Release..... | 19 |
| 7.2 | Issuing Titles | 20 |
| 7.3 | Process of awarding BP’s and Bight Petroleum’s titles in the Great Australian Bight 21 | |
| 7.4 | Current Status of BP’s petroleum titles in the Great Australian Bight..... | 22 |
| 7.5 | Planned Exploration Commitments in the Great Australian Bight | 23 |
| 8 | Objective-based regulation..... | 26 |
| 9 | Environmental Regulation of offshore oil and gas activities | 27 |
| 9.1 | Commonwealth Marine Reserves..... | 28 |
| 9.2 | Streamlining offshore oil and gas environmental approvals | 29 |
| 9.3 | Oil Pollution Emergency Plan..... | 31 |
| 9.4 | Financial assurance..... | 32 |
| 9.5 | Oil Spill response | 32 |
| 9.6 | Role of the Australian Government in responding to an oil spill..... | 33 |
| 10 | Conclusion..... | 35 |

1 Executive Summary

The Department of Industry, Innovation and Science (the department) is responsible for providing offshore oil and gas related policy advice to the Australian Government. This includes supporting the Minister for Resources and Northern Australia in his role as the Commonwealth member of the Joint Authorities for the offshore areas of each State (except Tasmania) and the Northern Territory, and as the Joint Authority for the offshore areas of the External Territories, Tasmania and Eastern Greater Sunrise. Through the National Offshore Petroleum Titles Administrator (NOPTA), the department is also responsible for the day-to-day administration of petroleum and greenhouse gas titles in Commonwealth waters in Australia.

The department welcomes the opportunity to make a submission to the Inquiry into the Great Australian Bight Environment Protection Bill 2016 (the Bill). The Bill proposes to prohibit mining activities in the Great Australian Bight marine area including the prospecting for the exploration of minerals or any other geological material.

The department's submission provides an overview of the offshore oil and gas sector, including the titles and regulatory frameworks, matters arising from the Bill, the importance of objective-based regulation, the environmental regulatory regime for offshore oil and gas activities and oil pollution emergency response arrangements.

From the first oil and gas discoveries in Bass Strait, the North West Shelf and the Timor Sea through to more recent discoveries in the Carnarvon and Browse basins, offshore Australia has proved to contain some of the world's most highly prospective areas for oil and gas.

Oil and gas exploration has occurred in Australia over several decades with the first Australian oil and gas exploration permit granted in 1959 in the Gippsland Basin. Throughout this time Australia's offshore oil and gas resources have contributed significantly to the Australian economy by way of export revenue, job creation and regional development. In 2015-16 the oil and gas extraction industry (including both onshore and offshore oil and gas) accounted for 1.9 per cent of GDP, contributed around \$31 billion to industry gross value added and employment of around 26,000 people.

Direct benefits are returned to the Australian people during development and production, as well as benefits during the exploration phase, such as direct and indirect employment and infrastructure development. Oil and gas production in Australia continues to play a part in maintaining global and domestic long term energy security. Australia is self-sufficient in terms of domestic gas supply and is increasing its Liquefied Natural Gas (LNG) export capacity, delivering energy security to the Asia-Pacific region.

Australia's offshore oil and gas sector is playing a significant role in the expansion of our LNG industry, supporting four of Australia's seven new LNG projects. The four new offshore-based LNG projects represent approximately \$160 billion in investment. They will add 37 million tonnes per annum to Australia's liquefaction capacity once completed over the next few years, putting Australia on track to become the world's largest LNG exporter by the end of this decade.

Offshore oil and gas exploration and development involves long lead times and significant financial investment. Competition, costs and price pressures present challenges for new offshore oil and gas projects in Australia and around the world. Australia is competing on a

global scale for investment and development of its resources. It is essential that Australia continues to identify and maintain access for exploration to areas that are moderately to highly geologically prospective for oil and gas hydrocarbons to allow for new discoveries. This will ensure critical continuity of resource supply to support existing and potential new investment in Australian oil and gas projects. In doing so, it will ensure the Australian community continues to receive the significant economic and social benefits from the responsible management of our valuable offshore oil and gas resources.

A key element of the success of the offshore oil and gas sector in Australia has been our high quality resources combined with stable policy and regulatory regimes and low sovereign risk for the offshore sector. In Australia, offshore oil and gas activities beyond state and territory coastal waters are governed by the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGSA). The legislation provides for the orderly exploration for, and recovery of, offshore oil and gas resources and sets out a basic framework of rights, entitlements and responsibilities of government and industry.

The regulatory framework ensures a high level of environmental protection whilst allowing development of an internationally competitive industry. The legislation provides that all titleholders must carry out operations in accordance with good oilfield practice, including in a manner which is safe and prevents the escape of oil and gas into the environment. The legal framework is objective-based and encourages continuous improvement, rather than minimum compliance.

Under the OPGGSA, the Joint Authorities (who are Ministers or their delegates) are responsible for making decisions with respect to the release of offshore oil and gas exploration areas, the granting of titles, imposition of and changes to title conditions, as well as core decisions about resource management and resource security.

Before undertaking an offshore petroleum activity under a title, including exploration activities such as seismic surveys and exploration drilling, the titleholder must apply to the independent regulator, the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), for regulatory approval. NOPSEMA is an independent statutory authority and it has responsibility for the regulation of environmental management under the OPGGSA for oil and gas activities. Environmental approvals for offshore oil and gas activities in Commonwealth waters are governed by the provisions of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Environment Regulations). This framework ensures optimal environmental protection whilst allowing development of an internationally competitive and sustainable industry.

It is good regulatory practice that an independent, expert regulator is responsible for ensuring a safe and environmentally responsible offshore oil and gas sector once a title has been issued. NOPSEMA's regulation of Australia's oil and gas sector has been subject to numerous independent statutory reviews and in every review NOPSEMA has been found to be a robust and competent regulator.

2 Role of the Department of Industry, Innovation and Science in relation to offshore oil and gas operations

The Australian Government has jurisdiction for the regulation of oil and gas, greenhouse gas storage and minerals activities for Australia's offshore areas beyond coastal waters, i.e. those areas within Australia's Exclusive Economic Zone more than three nautical miles from the territorial sea baseline. These areas are defined as 'Commonwealth waters'.

Key functions of the department in offshore oil and gas matters include:

- Administration of the legal and regulatory framework for all offshore oil and gas exploration and production activities in Commonwealth waters. This framework ensures risks to the environment, health and safety and well integrity are managed to be as low as reasonably practicable and within acceptable limits, whilst providing for an internationally competitive and sustainable industry.
- Administration of policy which encourages oil and gas exploration and development in Australia's offshore areas. The department aims to provide a stable, transparent and internationally competitive offshore exploration investment regime through best practice policy development, implementation and advice to government.
- Management and facilitation, in partnership with the states and the Northern Territory through Joint Authority arrangements, of the release of offshore oil and gas exploration areas, the granting of oil and gas titles and ongoing management and compliance with title conditions, as well as core decisions about resource management and resource security.
- Leading the Australian Government's strategic involvement in emergency response arrangements.
- Day-to-day administration of petroleum and greenhouse gas titles in Commonwealth waters in Australia through NOPTA.

The department also works with its portfolio agencies, Geoscience Australia, the Australian Institute of Marine Science (AIMS) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) in consideration of its policy for offshore oil and gas matters.

- Geoscience Australia is Australia's pre-eminent public sector geoscience organisation, providing a broad range of scientific information and advice about the management of Australia's natural resources both now and into the future. The department works with Geoscience Australia to reduce commercial risks in oil and gas exploration by collecting and disseminating geoscientific information and investigating ways to remove impediments to industry competitiveness.
- AIMS is Australia's premier tropical marine research agency. It plays a pivotal role in providing large-scale, long-term and world-class research that helps governments, industry and the wider community to make informed decisions about the management of Australia's marine estate.
- CSIRO is Australia's national science agency, conducting world-renowned research and providing innovative solutions for industry, society and the environment.

This submission is provided on behalf of the department only.

The department works with several other Australian Government agencies, such as NOPSEMA, the Department of the Environment and Energy, the Department of Agriculture and Water Resources and the Australian Maritime Safety Authority to ensure its policy formation and implementation reflects a range of considerations across government.

3 Overview of offshore oil and gas operations in Australia

Offshore Australia has proved to contain some of the world's most highly prospective areas for oil and gas exploration and development. The first Australian oil and gas exploration permit was granted in 1959 in the Gippsland Basin and as of 10 January 2017, there are now 164 offshore exploration permits, 85 retention leases and 92 production licences in Commonwealth waters.¹

Over this time, Australia's offshore oil and gas resources have contributed significantly to the Australian economy. In 2015-16 the oil and gas extraction industry (including both onshore and offshore oil and gas) accounted for 1.9 per cent of GDP, contributed around A\$31 billion to industry gross value added and employment of around 26,000 people.²

In addition, oil and gas production in Australia continues to play an integral part in maintaining global and domestic long term energy security. Australia is self-sufficient in terms of domestic gas supply and is increasing its LNG export capacity delivering energy security to the Asia-Pacific region.

Australia's offshore oil and gas sector plays a significant role in the expansion of Australia's LNG industry, supporting four of Australia's seven new LNG projects. This includes four offshore gas based projects (Gorgon, Wheatstone and Ichthys and the Prelude Floating LNG (FLNG) project). The Gorgon LNG project recently commenced production, while Wheatstone and Ichthys are expected to start in 2017. The Prelude FLNG project is also expected to commence production in 2017. The rest of Australia's LNG sector expansion comes from Queensland's three onshore coal seam gas based LNG projects which recently entered production.

Australia's four new offshore based LNG projects represent US\$140 billion in investment and will add 37 million tonnes per annum (mtpa) to Australia's liquefaction capacity once completed. Combined with the operating North West Shelf, Darwin and Pluto LNG projects, the completion of these projects will bring the combined capacity of Australia's offshore based LNG projects to approximately 62 mtpa out of Australia's total liquefaction capacity of 87 mtpa.

Largely as a result of investment in Australia's offshore oil and gas sector, Australia's LNG exports are projected to increase from 37 million tonnes in 2015-16 to 75 million tonnes in 2020-21.³ This rapid export growth has the potential to make Australia the largest LNG exporter in the world.

¹ <https://neats.nopta.gov.au/>

² Sourced from company reports.

³ Sources from company reports.

As a result, the value of Australia's LNG exports is projected to increase to from \$16.5 billion in 2015-16 to \$47.1 billion in 2020-21.⁴

Competition, cost and price pressures present challenges for new LNG projects in Australia and around the world. Australia is not alone in facing rising LNG project costs. The rapid development of LNG projects in Australia has seen pressure on project costs. Should market conditions improve, the focus will be on ensuring Australia is well positioned to attract investment through new projects and brownfield expansions.

The Australian Government is working with industry on a range of measures to ensure the cost competitiveness of Australia's LNG projects. This includes regulatory reform, workforce productivity measures, promoting technology and innovation, and skills and migration initiatives. These measures seek to reduce production costs, ensure access to skilled labour and increase productivity and efficiency. The stability in regulatory and policy settings is important to encourage continued investment to provide ongoing benefits for Australia's economy.

⁴ Sourced from company reports.

4 Offshore exploration

Although oil and gas exploration over the past 50 years has resulted in numerous discoveries and has enabled oil and gas production in distinct offshore provinces, Australia is, by global comparison, largely underexplored. Many of the offshore sedimentary basins represent vast frontier regions in which very little or no previous exploration has taken place. In order to gain a better understanding of the hydrocarbon prospectivity in these frontier regions, the Australian Government supports pre-competitive geoscience, which aims to attract investment in offshore oil and gas exploration by reducing commercial risk. This is achieved through the collection and dissemination of geoscientific data and information that reduces geological uncertainties, increases efficiency by avoiding duplicative industry spend on the same information, and reduces large-scale exploration in areas of low prospectivity.

Pre-competitive work is primarily carried out by Geoscience Australia through a range of activities including:

- acquiring new regional geological, geophysical and marine data sets
- integrating newly acquired data with existing open file data sets
- assessing hydrocarbon prospectivity at the basin scale
- providing rigorous and updated stratigraphic frameworks for offshore basins
- providing regional geological overviews

Geoscience Australia develops its forward pre-competitive geoscience oil and gas work program in consultation with industry. This consultation allows the sector to contribute its ideas and interests to the pre-competitive work program and the regional geological studies. It also enables the work program to remain relevant.

4.1 Exploration in the Great Australian Bight

Offshore oil and gas exploration has occurred safely in the Great Australian Bight (Eyre, Ceduna and Duntroon sub-basins) in three major cycles – the late 1960s to early 1970s, the early 1990s, and 2000 through to the present exploration activities. The areas currently being explored in the Great Australian Bight have all previously been explored, under oil and gas titles, since the late 1960s.

Under the OPGGSA and its preceding legislation, 46 oil and gas exploration titles have been granted in the Great Australian Bight and 13 exploration wells have been drilled without incident. The last exploration well in the region was drilled in 2003 by Woodside Energy Pty Ltd (partnered by US-based Anadarko Petroleum and Canada's Encana). However, since this time, only seismic surveys have been conducted in the region.

A review of the oil and gas prospectivity of Australia's offshore frontier basins (those areas where oil and gas resources have not yet been found) determined that the Ceduna Sub-basin of the Bight Basin was the most prospective for oil and gas of the 35 areas studied.⁵

During the 1960s and 1970s, exploration was undertaken in this region by Shell Development (Australia) (Shell) and Outback Oil. Seismic, shipboard magnetic and aeromagnetic data

⁵ Petroleum geology inventory of Australia's offshore frontier basins, 2014, Geoscience Australia, Canberra.

were acquired. Several prospects were developed from these activities and three exploration wells were drilled – Echidna 1 (Duntroon Sub-basin, 1972), Platypus 1 (Ceduna Sub-basin, 1972) and Potoroo 1 (Ceduna Sub-basin, 1975). By 1977, Shell had surrendered its titles. In the early 1980s, limited exploration took place in the central Ceduna Sub-basin, with exploration efforts concentrating on shallower, flanking depocentres. Esso Exploration and Production Australia (Esso), in a joint venture with Hematite Petroleum acquired seismic surveys and drilled Jerboa 1 (1980) in the Eyre Sub-basin, and Outback Oil and BP drilled Duntroon 1 (1986) in the Duntroon Sub-basin.

In early 1990, BP acquired an Airborne Laser Fluorosensor (ALF) survey over the inboard Bight Basin. The initial results were disappointing, but reprocessing and reinterpretation of the data resulted in the identification of 941 confident fluors. In 1991, BHP Petroleum (Australia) (BHP) commenced an exploration program focussing on the eastern Ceduna and Duntroon sub-basins. In 1993, BHP drilled three wells – Borda 1 and Greenly 1 in the Ceduna Sub-basin, and Vivonne 1 in the Duntroon Sub-basin. Although all three were plugged and abandoned, their results vastly improved knowledge of the basin succession. Gas shows and oil indications in Greenly 1 provided some encouragement for further exploration.

The current phase of exploration commenced in 2000 when exploration permits EPP28, EPP29 and EPP30 were awarded to a joint venture comprising Woodside Energy (operator), Anadarko and Encana in the Ceduna Sub-basin. The joint venture acquired approximately 15,400 line kilometres of 2D seismic data and, in 2003, drilled Gnarlyknots 1/1A exploration well in EPP29. No exploration well has been drilled in the Bight Basin since then. In early 2006, Woodside acquired 1,250 km² 3D seismic data. In 2007, Woodside surrendered its three titles in the Great Australian Bight. Also during this period, titles were held in the Duntroon Sub-basin and on the eastern margin of the Ceduna Sub-basin by the Woodside-Anadarko-Encana joint venture and Santos Offshore. Approximately 2,300 line kilometres of seismic data were acquired within the permits, prior to surrender in 2007.

The Bremer Sub-basin, in the far western part of the basin, is a frontier exploration province in which no wells have been drilled. The western Bight Basin has seen two phases of exploration – in the early 1970s and 2005-14. Between 1972 and 1974, initial exploration in the area was undertaken by Esso Australia Limited and Continental Oil Company. During this time, seismic and aeromagnetic data were acquired across the Bremer Sub-basin and shelfal areas to the east. Although Esso identified large structures in the Bremer Sub-basin, no further work was undertaken. Between 2003 and 2005, Geoscience Australia undertook a petroleum prospectivity study of the Bremer Sub-basin, acquiring seismic data and undertaking dredge sampling.

Geoscience Australia's petroleum prospectivity study underpinned the release of areas as part of the 2005 acreage release and this resulted in two titles (WA-379-P and WA-380-P) being awarded to Cathay Petroleum (formerly Plectrum Petroleum). In 2009-10, over 4,000 line kilometres of 2D seismic data was acquired over the titles. In 2014, both exploration titles were cancelled and the acreage is now vacant.

In 2007, Geoscience Australia embarked on a regional geological and sampling survey of the Bight Basin, as part of the Australian Government's Offshore Energy Security program. Addressing a key exploration risk in the basin, analytical results indicated the organic-rich rocks recovered by the survey are capable of generating liquid hydrocarbons. The discovery of these potential source rocks underpinned the 2009 Offshore Petroleum Exploration Acreage Release that contained six areas available for bidding in the central Ceduna Sub-

basin. Another two areas were released as part of the 2010 acreage release that were located in the eastern Ceduna Sub-basin.

In January 2011, BP Developments Australia Pty Ltd (BP) was awarded four titles (EPP37–40) from the 2009 acreage release and in June 2011, Bight Petroleum Pty Ltd (Bight Petroleum) was awarded two release areas from the 2010 acreage release. In August 2013, Statoil Australia Theta B.V. (Statoil) acquired a share of BP’s four exploration licenses.

Building on the renewed interest in the Ceduna Sub-basin, as part of the 2012 acreage release, the Commonwealth-South Australia Offshore Petroleum Joint Authority made available three further release areas. All three areas received competitive work program bids and in October 2013, exploration titles were awarded to Murphy Australia Oil Pty Ltd⁶ (Murphy)/Santos Offshore Pty Ltd (Santos) and Chevron Australia New Ventures Pty Ltd⁷ (Chevron).

Between November 2011 and May 2012, the Ceduna 3D Seismic Survey was conducted over part of BP’s permit area (EPP37-40). Since then, the Nerites MC3D seismic survey has been acquired over Chevron’s Ceduna Sub-basin EPP44 and EPP45 titles. In November 2014, Petroleum Geo-Services acquired 8000 km² Springboard 3D seismic survey over EPP43 and parts of EPP37 and EPP38.

In response to ongoing interest in the region, a large area in the Eyre Sub-basin was released in 2014. This sub-basin has not been explored since the 1980s, when Esso Australia recorded a palaeo-oil column in the Jerboa 1 well. Karoon Gas Browse Basin Pty Ltd (Karoon Gas) applied for this area and was subsequently awarded a title in October 2016.

The Geoscience Australia submission to this inquiry provides further information about exploration in the Great Australian Bight.

⁶ Now known as Murphy Australia EPP43 Oil Pty Ltd

⁷ Now known as Chevron Australia (EPP44) Pty Ltd

5 Great Australian Bight Environment Protection Bill 2016

If passed by both Houses of Parliament, the Bill will make it an offence to engage in mining operations within the Great Australian Bight marine area, except for the purpose of research or investigations relevant to conservation or protection of the Great Australian Bight marine area.

Mining operations include all activities connected with or incidental to the mining or recovery of minerals and other geological material. This definition includes petroleum exploration activities such as exploration drilling and seismic surveys.

The department has identified a range of concerns arising from the Bill, as outlined below.

5.1 Implications for current titleholders and exploration work programs

If passed, the Bill would require an immediate halt to mining operations in the Great Australian Bight. This would impact 11 exploration permits currently active in the Bight Basin. These permits are managed by six different explorers and joint venturers including Bight Petroleum, BP, Chevron, Karoon Gas, Murphy, Santos and Statoil (further details on these activities are provided in section 7.5).

Exploration in the permit areas has been underway for several years, with expenditure on the permits to date of more than \$200 million since 2011. Should the legislation pass, companies will realise no benefit from these sunk costs and in some cases may incur significant further costs relating to cancelled contracts and unrealised income for services companies. This will likely result in loss of local jobs for Australian workers at supply bases and through loss of logistical and contract opportunities.

Lack of certainty in the regulatory environment could also impact major LNG projects in other parts of Australia, including the North West Shelf (Gorgon, Pluto, Wheatstone and Browse).

5.2 Australia's appeal as an investment destination

Australia has one of the most resilient economies in the Organisation for Economic Co-operation and Development (OECD), with 25 consecutive years of economic growth. Australia is an attractive investment location with abundant energy resources for development and export, a stable business environment with active participation by some of the largest multinational companies in the world, close proximity to the major demand markets of Asia and access to a highly skilled workforce and innovative technologies.

Australia promotes itself as having a stable regulatory regime, providing an attractive policy and legal framework for oil and gas exploration and development, conducive to investment by companies of all sizes, security of title with the right to retain and/or develop a discovery, subject to meeting the specified terms of a retention lease or a production licence, and transparent and practical regulatory requirements covering all stages of petroleum operations.

In addition, Australia is an open economy with a highly effective intellectual property rights regime. Australia's geographic location ensures it is well placed to meet the rapidly expanding energy needs of the Asia-Pacific region.

The strong consumption growth of oil in non-OECD markets provides the economic drivers for ongoing investment in exploration in Australia. Increased demand for energy with the

industrialisation of China, India and other emerging Asian economies underpins these positive market conditions.

Therefore, regulatory certainty is fundamental to Australia's appeal as an investment destination. A perceived lack of certainty could result in reduced exploration investment. Exploration is particularly important in frontier areas such as the Great Australian Bight.

As noted above, a number of titleholders in the Great Australian Bight are large multinationals with interests in major LNG development projects. A ban on mining activities in the Bight region would reduce certainty in the Australian regulatory environment, and may lead to titleholders reconsidering the future viability of their investment projects.

6 Australia's offshore oil and gas regulatory framework

A key element of the success of the offshore oil and gas sector in Australia has been our high quality resources combined with a stable policy and regulatory regime for the offshore sector. At the core of the regime is a system built on predictability and clarity around rights, returns and obligations while ensuring an appropriate return to the owners of the resources, the Australian people.

While the regime is based on optimising resource recovery through timely commercial development, it also provides for effective long-term management of Australia's oil and gas resources through the application of good oilfield practice and the principles of safe and sustainable development.

In Australia, offshore oil and gas activities beyond designated state and territory coastal waters are governed by the OPGGSA. The legislation provides for the orderly exploration for, and recovery of, offshore oil and gas resources and sets out a basic framework of rights, entitlements and responsibilities of government and industry.

The regulatory framework ensures a high level of environmental protection whilst allowing development of an internationally competitive and sustainable industry.

The OPGGSA is supplemented by a set of regulations including:

- Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009 (Safety Regulations)
- Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Environment Regulations)
- Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011 (RMA Regulations)

Underpinning this legal framework are four key principles:

1. Australia's offshore oil and gas resources are best exploited (and risks managed) through commercial development.
2. Operations are to be undertaken in accordance with good oilfield practice and be compatible with the optimal long-term recovery of oil and gas.
3. All associated risks to health and safety and the marine environment are to be managed to be as low as reasonably practicable, and must be deemed acceptable.
4. Property rights are applied and respected through a system of licencing and titles - this gives titleholders generally exclusive rights and incentives to move through the oil and gas lifecycle, provided activities comply with the OPGGSA, supporting regulations and title conditions.

6.1 Regulatory Reforms

In 2011-12, the Australian Government implemented a package of regulatory reforms to further strengthen Australia's offshore legislative framework. These changes were in response to recommendations coming out of the Commission of Inquiry into the 2009 incident at the Montara oil field off the north-west coast of Australia.

On 21 August 2009, during activity being undertaken by a drilling rig in the Timor Sea, an oil and gas release was observed at the Montara oil field, operated by PTTEP Australasia (Ashmore Cartier) Pty Ltd. The resulting uncontrolled discharge of oil and gas was stopped on 3 November 2009.

Following the Montara incident, the Australian Government moved quickly to learn the lessons from the incident to improve the protection of human health and safety and of the marine environment so as to ensure that Australia continued to have a safe, strong and competitive offshore oil and gas sector which is able to contribute to our ongoing energy security and economic prosperity.

On 5 November 2009, a Commission of Inquiry into the Montara Incident was announced, to examine the likely cause of the incident and the adequacy of the regulatory regime.

On 24 November 2010, the Montara Commission of Inquiry Report (the Report) was publicly released. The findings of the Inquiry highlighted a number of operator, design and regulatory failures.

The Report contained 100 findings and 105 recommendations with wide-ranging implications for government, regulators and the offshore oil and gas sector. The Report recommended, amongst other things, that the establishment of a national offshore oil and gas regulator should be pursued at a minimum. The Commission specifically recommended that a single, independent regulatory body looking after safety as a primary objective, and the interdependent well integrity and environmental management, should be established.

The Australian Government released its draft response to the Inquiry in late 2010 and, following a period of detailed consideration, released the final response on 25 May 2011. Of the 105 recommendations in the Report, the Australian Government accepted 92 recommendations, noted 10 and did not accept three.

In response to the recommendations, in 2011, several amendments to the OPGGSA were made. The most significant of these included:

- Regulation of offshore petroleum operations and titles administration were separated to avoid any potential or perceived conflicts of objectives. This resulted in the administration of titles becoming centralised in the new National Offshore Petroleum Titles Administrator (NOPTA).
- Amendments to the RMA Regulations that took effect from April 2011, which gave the former National Offshore Petroleum Safety Authority (NOPSAs) (now NOPSEMA) the responsibility for regulation of well operations management plans and approval of well activities.
- Regulation of environmental management of activities in Commonwealth waters was added to the former NOPSAs's remit. The change in name, from NOPSAs to NOPSEMA, reflected these additional regulatory responsibilities.

NOPSEMA was established to ensure a single independent regulator is responsible for regulating the safety of Australia's offshore oil and gas workers and the environment, from exploration through to decommissioning. Safety, environment protection and day-to-day operational consents are all related to structural integrity. Because there is no clear divide

between these functions, it is essential that they be regulated in an integrated manner by a single regulator to ensure appropriate and effective administration.

NOPSEMA is staffed by highly trained, qualified technical experts with extensive experience in offshore oil and gas and environmental sciences. NOPSEMA's functions extend beyond approvals and involve extensive compliance monitoring and enforcement programs to ensure the necessary environmental safeguards are maintained.

Further information on the roles of NOPSEMA and NOPTA is provided below.

6.2 Regulatory responsibilities

Within Australia's offshore oil and gas legal framework, three Australian Government entities administer the regulatory regime, together with state and Northern Territory governments - these are outlined below.

6.2.1 Regulation of Petroleum Titles and Resource Management

Joint Authority

There is a Joint Authority for each offshore area, comprising the responsible Commonwealth Minister (currently the Minister for Resources and Northern Australia) and the relevant state or Northern Territory Resources Minister. The Joint Authority for the Eastern Greater Sunrise offshore area, the offshore area of each external territory (e.g. the Territory of Ashmore and Cartier Islands) and for the Tasmanian offshore area is the responsible Commonwealth Minister only.

The Joint Authorities make major decisions under the OPGGSA, including: the release of offshore oil and gas exploration areas; the granting of titles; imposition of and changes to title conditions (such as variation or additional time to undertake an activity); as well as core decisions about resource management and resource security.

National Offshore Petroleum Titles Administrator

NOPTA is a statutory position under the OPGGSA and is responsible for the day-to-day administration of petroleum and greenhouse gas titles in Commonwealth waters in Australia. NOPTA is the first point of contact for all matters relating to offshore titles administration. NOPTA is part of the department.

NOPTA's key functions in Commonwealth waters are to:

- provide information, assessments, analysis, reports and advice to the Joint Authorities
- manage the collection, administration and release of data
- facilitate life of title administration, including but not limited to Joint Authority consideration of changes to title conditions, and approve registration of transfers and dealings associated with offshore petroleum titles
- maintain the registers of petroleum and greenhouse gas titles

6.2.2 Regulation of offshore oil and gas facilities and activities

National Offshore Petroleum Safety and Environmental Management Authority

NOPSEMA is an independent statutory authority established under the OPGGSA, with the purpose of regulating all offshore oil and gas facilities and activities in Commonwealth waters, as well as designated coastal waters where regulatory functions have been conferred under relevant state or Northern Territory legislation. This mandate comprises oversight for health and safety, structural integrity of facilities and wells, and environmental management of offshore oil and gas and greenhouse gas storage activities in Commonwealth waters.

The single national regulator model reflects international leading practice for the regulation of offshore oil and gas and provides nationally consistent regulation of safety, structural integrity and environmental management across the offshore oil and gas sector for Australia.

Governance

NOPSEMA is accountable to the responsible Commonwealth Minister. NOPSEMA's regulation of offshore oil and gas activities is subject to a range of governance controls, including parliamentary oversight, ministerial policy direction and independent statutory reviews.

NOPSEMA has an advisory Board that provides advice and makes recommendations to the responsible Commonwealth Minister and the Council of Australian Governments (COAG) Energy Council (comprising Commonwealth and State and Territory Energy and Resources Ministers) on the performance by NOPSEMA of its functions and strategic matters relating to:

- Occupational health and safety of persons engaged in offshore oil and gas operations.
- Structural integrity of facilities, wells or well-related equipment in offshore waters.
- Offshore oil and gas environmental management.

The Board also gives advice and recommendations to the NOPSEMA Chief Executive Officer (CEO) about operational policies and strategies in the performance of NOPSEMA's functions.

In accordance with the OPGGSA, Board members are approved by the COAG Energy Council prior to being formally appointed by the responsible Commonwealth Minister. NOPSEMA Board members are appointed for a period of no longer than three years, but may be re-appointed for a second term.

The responsible Commonwealth Minister has issued NOPSEMA with a Statement of Expectations, which embodies the guiding principles for NOPSEMA to perform the functions and powers conferred on it under the OPGGSA and associated regulations. Following the Australian Federal Election in July 2016, a review process commenced into the Statement of Expectations issued to NOPSEMA by the responsible Commonwealth Minister. The Statement of Expectations is expected to be finalised in early 2017.

The responsible Commonwealth Minister, after consultation with relevant state or territory Ministers, may also issue policy principles to NOPSEMA, with which NOPSEMA must

comply. These policy principles direct the manner in which NOPSEMA fulfils its responsibilities.

NOPSEMA is also required to report annually to the Commonwealth Minister for the Environment detailing decisions made on assessments, findings of any compliance inspections, reported environmental incidents and any investigations underway. These reports are publically available on NOPSEMA's website⁸.

6.3 Operational Reviews of NOPSEMA and NOPTA

The OPGGSA requires periodic reviews of the operations of NOPSEMA and NOPTA. On 23 December 2014, the Minister for Industry and Science, the Hon Ian Macfarlane MP, commissioned the 2015 Operational Review of NOPSEMA and the 2015 Operational Review of NOPTA. These were conducted as two separate reviews.

The NOPSEMA Operational Review was conducted by a panel of experts and covered the three year period from NOPSEMA's establishment on 1 January 2012 to 31 December 2014. The NOPTA Operational Review covered the same period of time and was conducted by an independent consultancy. Subsequent operational reviews will occur every five years, in accordance with the requirements of the OPGGSA. The Government responses to each review were tabled in both Houses of the Parliament in December 2015.

The NOPSEMA Operational Review found that NOPSEMA is an effective regulator that has made positive contributions to improving safety, well integrity and managing Australia's offshore environment. The Review made 16 recommendations, 15 of which were accepted by the Government, with one being noted.

The NOPTA Operational Review found that NOPTA is effectively carrying out its assigned functions, including contributing effectively to the decision-making of the Joint Authority, and concluded that NOPTA's establishment and subsequent operations have to a large extent met the Australian Government's response to the *2009 Productivity Commission Review of the Regulatory Burden on the Upstream Petroleum (Oil and Gas) Sector*. The NOPTA Operational Review made 12 recommendations. The Government response noted six, accepted five and agreed in principle with one.

Implementation of the recommendations has begun and progress reports were provided to the Minister for Resources and Northern Australia on 30 August 2016. The reports are publicly available on the department's website⁹.

⁸ <https://www.nopsema.gov.au/about/people-planning-and-performance/#Compliance-reporting>

⁹

<https://industry.gov.au/resource/UpstreamPetroleum/Pages/NationalOffshorePetroleumSafetyandEnvironmentalManagementAuthority.aspx>

<https://industry.gov.au/resource/UpstreamPetroleum/OffshorePetroleumDevelopment/Pages/National-Offshore-Petroleum-Titles-Administrator.aspx>

7 Offshore Petroleum Titles

In Australia, offshore oil and gas exploration and development is regulated by a title system.

Oil and gas activities can only occur if a company holds a valid title. This provides holders with a right to conduct safe oil and gas operations in the title area, subject to further regulatory approvals from NOPSEMA.

Petroleum titles are awarded on a successive basis, beginning with an exploration permit. If a discovery is made and a location declared, the titleholder may apply for a production licence (if the discovery is commercial) or a retention lease (if the discovery is not commercial but is likely to become commercial within 15 years). From a retention lease, the titleholder progresses to a production licence once the discovery becomes commercial.

7.1 Offshore Petroleum Exploration Acreage Release

The annual Offshore Petroleum Exploration Acreage Release is a key part of the Australian Government's strategy to increase and promote oil and gas exploration and development in Commonwealth waters.

'Acreage' refers to vacant offshore areas in Commonwealth waters that companies can place a competitive bid for. The regular release of acreage provides explorers with new opportunities to invest in Australia's oil and gas sector and enables the industry to undertake longer term planning to support the ongoing investment in, and development of, Australia's offshore oil and gas exploration sector. It is the first of several steps towards being able to undertake exploratory activities under a six-year exploration title.

Prior to the acreage release being announced by the responsible Commonwealth Minister, the department and Geoscience Australia undertake a 10-12 month process in order to select the areas. Three key components of this are: the nomination of an area by industry, the states/Northern Territory or Geoscience Australia; consideration of nominated areas and a consultation process. The consultation process considers a range of factors that may include: prospectivity; existence of title; proximity to sensitive marine zones; or other factors deemed relevant.

In recognition of the multi-use nature of the marine environment, once the areas have been short-listed, the department undertakes consultation in two phases. Phase one is a targeted consultation with Commonwealth, state and Northern Territory agencies responsible for managing the marine environment, and representative industry groups whose members have access rights such as fishing licences. The department consults with officers in the Commonwealth Department of the Environment and Energy, who provide comments on the environmental considerations of each release area, including whether the area overlaps a Commonwealth Marine Reserve. In addition, the department consults with Parks Australia.

The targeted consultation assesses factors such as maritime boundaries, environmental and fisheries impacts, defence and communications requirements, maritime safety and native title interests. The information is then collated and published as part of the final acreage release package. The outcomes of this consultation may also lead to the inclusion of specific conditions if a title is awarded in that area and/or the reshaping or removal of an area to balance competing interests.

Phase two is undertaken at the conclusion of the targeted consultation. The department makes the proposed areas for the following year's acreage release publicly available. This has traditionally been done through the department's occasional e-newsletter on oil and gas matters known as the 'Australian Petroleum News'. As part of the 2016 acreage release, and in response to increased community interest in the acreage release process, the department implemented a public consultation period on the proposed areas for release. This is made available December/January of each year on the department's consultation hub and provides the Australian community an opportunity to comment on the proposed areas. The consultation hub is also advertised through the Australian Petroleum News, the department's social media channels and the use of the government's business.gov.au subscription service.

Following the consultation processes, the areas are then finalised and the responsible Commonwealth Minister announces the acreage release to the global oil and gas sector. The oil and gas sector is then invited to submit a competitive work program or cash bid on the area/s of interest. Further information on the acreage release is available at www.petroleum-acreage.gov.au.

7.2 Issuing Titles

Once an acreage release bid is submitted, the bid is assessed by NOPTA to determine if it meets the requirements of the OPGGSA and the relevant guideline¹⁰. The applicant must provide evidence of financial and technical capability and comprehensively detail the proposed exploratory activities to be carried out in the release area. The release of an area as part of the acreage release does not always result in a title being awarded. An area may not receive any bids or the bid(s) may not meet the requirements of the OPGGSA and/or the guideline.

Following a comprehensive assessment of the bid by NOPTA, advice is provided to the relevant Joint Authority. The Joint Authority considers the advice provided and any other factors deemed relevant, to determine the most deserving bidder to whom to offer the grant of an exploration title. The OPGGSA provides that the Joint Authority may grant an exploration title subject to any conditions it considers appropriate.

NOPTA, on behalf of the Joint Authority, executes the decision and makes an offer to grant the title to the most deserving bidder, who can accept or refuse the offer. If the offer is accepted, NOPTA, on behalf of the Joint Authority, will grant an exploration title and publish a notification in the Australian Government Gazette and on the National Electronic Approvals Tracking System (NEATS)¹¹. If the offer is refused and a second bidder was also deemed suitable, an offer will be made to the second bidder.

It is important to note the granting of an exploration title authorises the holder to undertake oil and gas exploration activities subject to the OPGGSA and the regulations. This includes the requirement for the titleholder or operator to apply to the independent regulator, NOPSEMA, for safety, well integrity and environment-related permissions, prior to undertaking exploration activities. Further detail on environmental approvals is in Section 9.

¹⁰ http://www.nopta.gov.au/_documents/guidelines/Offshore-Petroleum-Exploration-Guideline-Work-bid.pdf

¹¹ <https://neats.nopta.gov.au/>

7.3 Process of awarding BP's and Bight Petroleum's titles in the Great Australian Bight

In June 2009, the responsible Commonwealth Minister invited bids on areas released as part of the 2009 Offshore Petroleum Exploration Acreage Release. In April 2010, BP Exploration (Alpha) Ltd¹² lodged a bid over four release areas located in the Great Australian Bight.

Following an assessment and due diligence process that examined the technical and financial competence of BP to undertake the proposed work program, in accordance with the requirements of Australian legislation, on 14 January 2011 the Commonwealth-South Australia Offshore Petroleum Joint Authority awarded four petroleum exploration titles (EPP37-40) to BP in the Great Australian Bight.

In light of the Macondo incident in the Gulf of Mexico, and acknowledging the sensitive environmental and agricultural elements underpinning the rural economy in the Bight Basin, the Commonwealth-South Australia Offshore Petroleum Joint Authority imposed additional special conditions on all four of BP's titles. The legislative option to impose additional conditions at the time of granting an exploration title is an important consideration for decision-makers.

The conditions imposed on BP's titles were in addition to the standard conditions imposed by the Joint Authority on exploration titles, with which BP must also comply. The conditions are publicly available and address specific technical requirements for well design, environment, health and safety. They are as follows:

- Exploration well design: All well casing and cement design is to be undertaken by an appropriately qualified and experienced engineer, who, along with other such personnel associated with permit activities, will make themselves available for peer review at the discretion, and to the satisfaction of NOPSEMA.
- Prior to the commencement of drilling, the permittee is required to lodge with NOPSEMA:
 - An approved well design integrity monitoring plan designed to assure well integrity within each well, which must be agreed by NOPSEMA and will include quarterly compliance reporting.
 - Independent certification by the original provider, prior to installation, that each Blowout Preventer to be used has been satisfactorily tested to design pressures.
- Prior to the commencement of drilling activities, the permittee must satisfy and have approved by NOPSEMA, the hydrocarbon spill mitigation technologies and risk mitigation processes that it will deploy throughout the drill and maintain for the active life of the well.
- As soon as practicable after the completion of drilling, and prior to the commencement of any other exploration activity, the permittee will conduct and

¹² The titles were later transferred to BP Developments Australia Pty Ltd in 2012.

report to NOPTA, for review by NOPSEMA, on Cement Bond Logging to demonstrate effectiveness of cement jobs behind well casing.

- The permittee will undertake an annual Environment, Health and Safety Management System self-assessment each year, as per requirements determined by NOPSEMA, in relation to the effectiveness of system elements, including the Management of Change processes and procedures.

Throughout the course of its exploratory activities, BP must satisfy regulators that they have complied not only with the special conditions, but also all standard title conditions and any other legislative requirements, in order to retain their titles.

Special conditions were also placed on Bight Petroleum's titles (EPP41 and 42) in the Great Australian Bight in 2011. The conditions are publicly available and address specific technical requirements for well design and spill mitigation. They are as follows:

- Prior to commencement of each drill operation within the title, in addition to the standard reporting and monitoring plans required by the legislation, the permittee will lodge with, and have approved by, the Regulator or their delegate:
 - a well design and integrity monitoring plan to assure well integrity within each well drilled, to include detail of maintenance for the active life of the well including quarterly compliance reporting.
 - independent certification by the original provider, prior to installation, that each Blowout Preventer (BOP) to be used has been satisfactorily tested to design pressures.
 - a report detailing hydrocarbon spill mitigation technologies and risk mitigation process that it will deploy through the drill and maintain for the active life of the well.
 - a report delineating relevant operational risks identified and associated risk mitigation strategies and processes that will be deployed by the permittee and any third party contractors involved in the drilling operation.

7.4 Current Status of BP's petroleum titles in the Great Australian Bight

On 11 October 2016, BP Australia announced its intention not to progress its exploration drilling program in the Great Australian Bight, citing commercial reasons and a change in their global investment strategy. BP and Statoil hold permits EPP37, EPP38, EPP39 and EPP40 (see Figure 1) which are located in Commonwealth waters offshore of South Australia in the Ceduna sub-basin of the Great Australian Bight.

BP has held the permits since January 2011 and has undertaken significant seismic data acquisition and interpretation across the permits. Important scientific information has been derived from this data acquisition which is publicly available.

The titleholders have been working towards completing four exploration wells with a total indicative expenditure of \$538 million¹³. If the exploration wells within EPP37, EPP38 and EPP39 are not drilled by 30 June 2017, the title will be in default on its work program commitments and may be cancelled at that time.

The titleholders have the option to seek another investor to take over BP's commitments; this could result in continuation of the permits.

If the permits do cease to exist, they will revert to vacant acreage – an area that does not have a petroleum title over it. Vacant acreage may be nominated as part of a future acreage release.

On 20 December 2016, BP withdrew their environment plan submissions for their Great Australian Bight Exploration Drilling Program and their Great Australian Bight Exploration Drilling Programme (Stromlo-1 and Whinham-1).

As of 11 January 2017, BP and Statoil had not made an application to the Commonwealth-South Australia Offshore Petroleum Joint Authority regarding the future of the permits. Any applications made will be assessed against the OPGGSA and the relevant guideline.

7.5 Planned Exploration Commitments in the Great Australian Bight

Oil and gas exploration has occurred in Australia over several decades and in the Great Australian Bight for over 50 years. Throughout this time Australia's offshore oil and gas resources have been significant contributors to the Australian economy by way of export revenue, job creation, domestic supply of oil and gas, and regional development.

Direct benefits are returned to the Australian people during infrastructure development and production, as well as benefits during the exploration phase, such as direct and indirect employment. A drilling program in the Great Australian Bight would create jobs and opportunities for local suppliers. As an example, it was expected by BP that 25 businesses in Ceduna and surrounding towns would be engaged in the EPP37-40 drilling program; 100 workers including 25 Ceduna-based workers and a 20 per cent indigenous worker component¹⁴.

The Australian Government remains committed to encouraging the exploration for, and development of, Australia offshore petroleum resources. This includes the Great Australian Bight where offshore petroleum exploration has occurred safely in the past.

In addition to the four permits held by BP and Statoil, there are seven other exploration titles currently active in the Bight Basin (see Table 1 and Figure 1). These are managed by five different titleholders.

¹³ <https://neats.nopta.gov.au/>

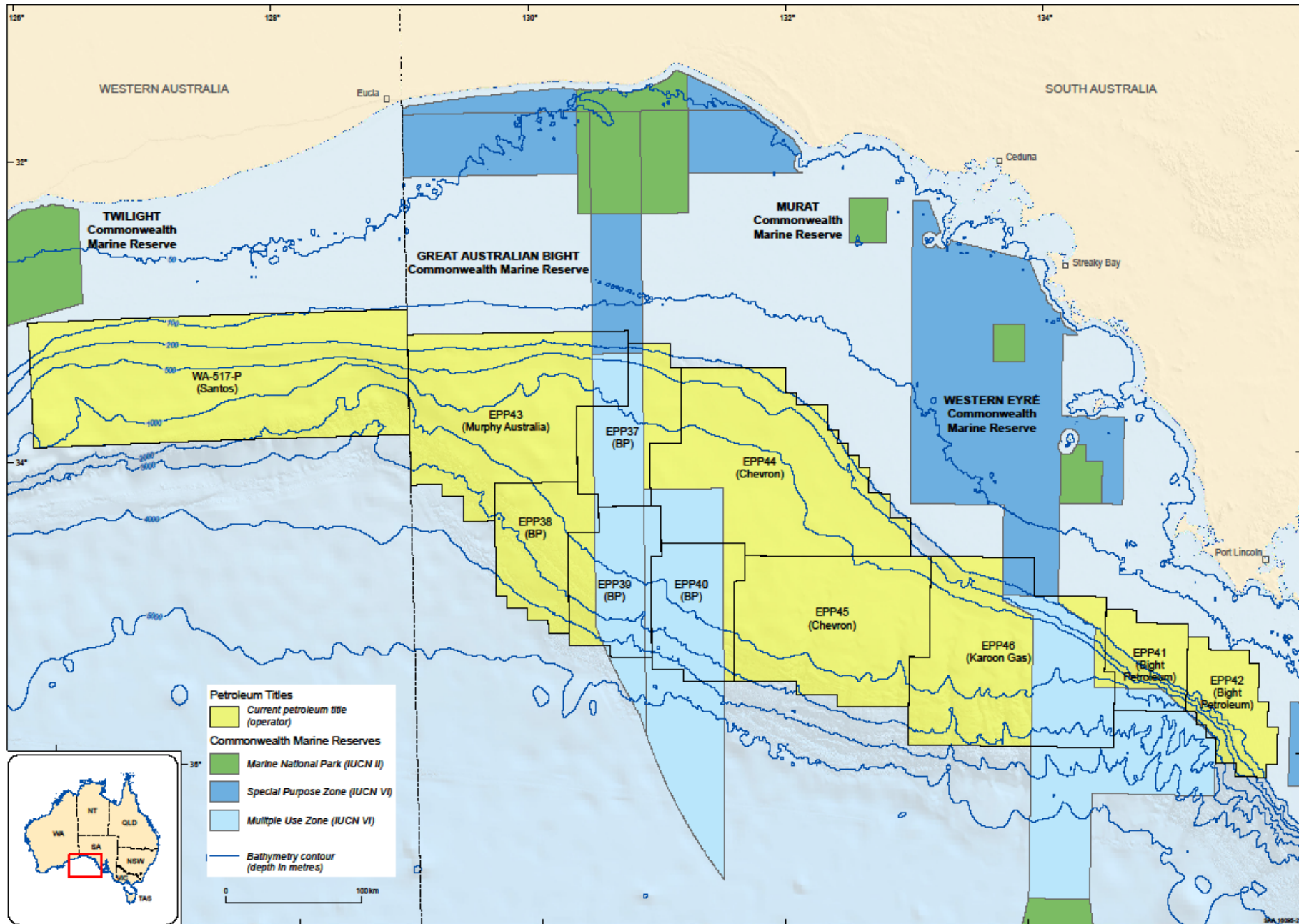
¹⁴ http://www.bp.com/en_au/australia/about-us/what-we-do/exploring-in-great-australian-bight/jobs-economic-benefits-great-australian-bight.html

Table 1 Title areas and titleholders in the Great Australian Bight

| Title | Titleholders | Title Instrument Minimum Exploration Commitment |
|----------------|--|---|
| EPP41 EPP42 | Bight Petroleum Pty Ltd | Acquire a 1,031 km ² 3D seismic survey, a 405 km 2D seismic survey and drill one exploration well (in EPP41) by July 2018. |
| EPP43 | Murphy Australia EPP43 Oil Pty Ltd Santos Offshore Pty Ltd | Currently processing seismic data. |
| EPP44 | Chevron Australia (EPP44) Pty Ltd | Currently undertaking geological studies and planning two exploration wells due to be drilled by October 2018. |
| EPP45 | Chevron Australia (EPP45) Pty Ltd | Currently undertaking geological studies and planning two exploration wells due to be drilled by October 2018. |
| EPP46 | Karoon Gas Browse Basin Pty Ltd | Acquire or licence and process new 2D and 3D seismic surveys, 3D gravity magnetic and bathymetric surveys by October 2019. |
| WA-517-P | Santos Offshore Pty Ltd JX Nippon Oil and Gas Exploration (Australia) Pty Ltd | Geological and geophysical studies |

(Source: National Electronic Approvals Tracking System - <http://neats.nopta.gov.au/TitleRegister>)

Figure 1 Map of petroleum titles in Great Australia Bight



(Source: Geoscience Australia)

8 Objective-based regulation

Under objective-based regulatory regimes, such as is used in Australia's regulation of offshore oil and gas, project developers must consider and identify the acceptable outcomes for all environmental matters, including matters of national environmental significance. The activity approved must also include a clear demonstration of how those outcomes will be delivered. This is in contrast to requirements under a prescriptive regulatory regime, where the project developers only consider those matters specifically identified by the regulation and meet the minimum standard of protection the regulator prescribes.

The outcome of an objective-based regime is that project developers consider the costs and implications to the environment as part of their investment decisions. In this regard, objective-based regulation encourages continuous improvement to achieve appropriate environmental outcomes and ecologically sustainable development. It ensures flexibility in operational matters to meet the unique nature of different projects, and avoids a 'one size fits all' approach to regulation, allowing industry to determine the most effective and efficient way to operate.

Objective-based regulation is regarded as world's best practice for high hazard industries, such as the offshore oil and gas sector. The evolution from prescriptive-based regulation to objective-based regulation stemmed in large part from the 1988 Piper Alpha disaster in the United Kingdom sector of the North Sea, where the Piper Alpha offshore oil and gas platform suffered an explosion. The incident led worldwide to a fundamental reassessment of how best to regulate the offshore oil and gas sector. The UK Committee of Inquiry into the Piper Alpha disaster recommended moving from prescriptive regulation to an objective-based regime.

NOPSEMA regulates occupational health and safety, well integrity and environmental management of offshore oil and gas sector activities under an objective-based regime. Objective-based regulatory regimes are based on the principle that the legislation sets the broad goals (e.g. safety, environmental) to be attained and those undertaking operations or activities must develop the most appropriate methods of achieving those goals. In the environmental context, it places the onus for environmental protection on project developers seeking to undertake an offshore oil and gas activity. For oil and gas activities, the project developers must demonstrate to NOPSEMA – and NOPSEMA must assess and accept or not accept – that they will reduce the impacts and risks of an activity to as low as reasonably practicable. These environmental impacts and risks must also be of an acceptable level.

Key components of objective-based regulation include:

- The titleholder's risk management can be tailored to the impacts and risks unique to the specific oil and gas activity and location.
- Responsibility for managing risks rests with the titleholder, who is best placed to identify and manage the impacts and risks of their activity to as low as reasonably practicable and acceptable levels, and to set appropriate performance measures (outcomes and standards).
- The titleholder has the flexibility to implement new technologies to meet and exceed the performance outcomes and standards they have set for the activity, promoting continuous improvement.

9 Environmental Regulation of offshore oil and gas activities

Prior to commencing an activity under an offshore petroleum title, including an exploration title, the titleholder must apply to the independent regulator, NOPSEMA, for approvals to undertake the activity within the title area.

Environmental approvals for offshore oil and gas activities in Commonwealth waters are governed by the provisions of the Environment Regulations. Under those Regulations, before commencing an activity in Commonwealth waters, a titleholder must have an Environment Plan for the activity accepted by NOPSEMA. The Environment Regulations set out the criteria for acceptance and the content requirements for Environment Plans. A titleholder must comply with the accepted Environment Plan while carrying out the activity. NOPSEMA monitors compliance with the Environment Plan through planned inspections, and may take enforcement action if a compliance defect is identified.

The object of the Environment Regulations is to ensure that petroleum and greenhouse gas activities are carried out in a manner that is consistent with the principles of ecologically sustainable development, and in a manner by which all environmental impacts and risks of the activity will be reduced to as low as reasonably practicable and to acceptable levels. The Environment Regulations include requirements for consideration of matters of national environmental significance that are protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), including Commonwealth Marine Reserves.

For ongoing activities, titleholders must continue to demonstrate that all impacts and risks, including impacts and risks to Commonwealth Marine Reserves, are at acceptable levels and reduced to as low as reasonably practicable. Titleholders must also ensure that activities are consistent with the relevant Commonwealth Marine Reserve management plans, where applicable.

The Environment Regulations also include rigorous consultation requirements. In the course of preparing an Environment Plan, or a revision of an Environment Plan, the titleholder for an activity must consult with relevant persons including a person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the Environment Plan, or any other person or organisation that the titleholder considers relevant. The Environment Plan must demonstrate consultation processes are in place and the titleholder, having undertaken appropriate consultation in preparation of the Environment Plan, has adopted or proposes to adopt appropriate management measures resulting from the consultation (if any).

The Environment Regulations also specify that a titleholder is required to provide sufficient information to allow the relevant person to make an informed assessment of the possible consequences of the activity on the functions, interests or activities of the relevant person and a reasonable period for the consultation. This provides a mechanism to ensure that titleholders can better meet specific information needs of relevant stakeholders and more readily address any claims or objections raised.

‘Relevant persons’ may include Australian Government agencies, individuals, community groups, non-government (including conservation) organisations, fishing, tourism and other business operators, depending on the proposed activity and the environment that may be impacted by that activity.

Under the Environment Regulations, NOPSEMA cannot accept an Environment Plan that does not demonstrate that requirements relating to consultation, including ongoing consultation arrangements, with all relevant persons have been met.

As part of the Environment Plan, titleholders must also include a comprehensive oil pollution emergency plan including detailed arrangements for responding to and monitoring any oil pollution event. Further detail is included in section 9.3.

If a titleholder is unable to demonstrate that their Environment Plan meets the criteria for acceptance under regulation 10A of the Environment Regulations, NOPSEMA must refuse to accept the plan.

This refusal is subject to NOPSEMA providing the titleholder a reasonable opportunity to modify and resubmit the Environment Plan. A refusal decision does not preclude a titleholder from submitting a new Environment Plan for assessment if they choose to do so.

NOPSEMA is staffed by highly trained qualified technical experts with extensive experience in offshore oil and gas and environmental sciences. As an independent regulator, NOPSEMA makes merit-based decisions based on the material evidence and facts of each proposal. NOPSEMA's functions extend beyond approvals and involve extensive compliance monitoring and enforcement programs to ensure the necessary environmental safeguards are maintained.

NOPSEMA's environmental regulation of Australia's oil and gas sector has been subject to numerous independent statutory reviews, including five yearly reviews in accordance with the OPGGSA to assess NOPSEMA's operational effectiveness.¹⁵ In each review NOPSEMA has been found to be a robust and competent regulator.

9.1 Commonwealth Marine Reserves

The Commonwealth Marine Area (CMA) is a matter of national environmental significance protected under Part 3 of the EPBC Act.

Commonwealth Marine Reserves (CMR) are areas within the CMA that are proclaimed under the EPBC Act for the purpose of protecting and maintaining biological diversity and which contribute to a national representative system of marine protected areas. There are five networks of CMRs plus the stand-alone Coral Sea CMR.

The South-West Marine Reserves Network extends offshore from the eastern end of Kangaroo Island in South Australia to Shark Bay in Western Australia. The Network includes 14 Commonwealth Marine Reserves, some of which intersect with the Great Australian Bight Marine Area identified in the Bill.

The CMRs were independently reviewed from September 2014 to December 2015. The review considered what management arrangements would best protect our marine environment and accommodate the many activities undertaken in our oceans. Following the

¹⁵ The most recent Operational Review of NOPSEMA was undertaken in September 2015. A copy of the report is available [here](#). The Australian Government Response to the review was released in December 2015 and is available [here](#).

completion and release of the reports of the independent Commonwealth Marine Reserves Review, the Director of National Parks will develop new management plans.

During the preparation of an Environment Plan, titleholders must demonstrate that impacts and risks on the CMA and relevant CMRs, from both planned petroleum activities and emergency response activities, will be reduced to as low as reasonably practicable and will not result in unacceptable impacts to the environment.

Titleholders must continue to demonstrate throughout an activity that impacts and risks to CMRs are not unacceptable, reduced to as low as reasonably practicable and consistent with relevant CMR management plans and any associated requirements.

If there is no CMR management plan in place for a relevant CMR, titleholders should ensure that their activities within that CMR are consistent with the Australian International Union for Conservation of Nature (IUCN) reserve management principles for the IUCN category to which the reserve or reserve zone was assigned by the proclamation.

9.2 Streamlining offshore oil and gas environmental approvals

On 28 February 2014, the Ministers for the Environment and Industry announced a new streamlined approach for environmental approvals for offshore oil and gas and greenhouse gas activities, which established NOPSEMA as the sole designated assessor for these activities in Commonwealth waters.

Prior to 28 February 2014, offshore oil and gas and greenhouse gas activities in Commonwealth waters that are likely to impact on matters of national environmental significance – as defined in the EPBC Act – were subject to regulation under both the OPGGSA and the EPBC Act. This dual assessment, monitoring and enforcement imposed an unnecessary burden on stakeholders without any additional environmental protection benefits.

Several independent reviews recommended streamlining the regulatory requirements of the EPBC Act and the OPGGSA. These reviews include:

- Productivity Commission Research Report on Review of Regulatory Burden on the Upstream Petroleum (Oil and Gas) Sector (April 2009)
- Report of the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999 (the Hawke Review) (October 2009)
- Report of the Montara Commission of Inquiry (June 2010)
- Draft Productivity Commission Report on Mineral and Energy Resource Exploration (May 2013).

On 24 October 2013, the Ministers for Industry and for the Environment and the CEO of NOPSEMA agreed to undertake a strategic assessment of the environmental management process administered by NOPSEMA under the OPGGSA. The strategic assessment was undertaken under Part 10 of the EPBC Act and examined NOPSEMA's environmental management processes for offshore oil and gas projects against the EPBC Act.

A taskforce was established by the (then) Department of Industry to progress the strategic assessment. The taskforce was comprised of officers from the Department of Industry, the

(then) Department of the Environment, NOPSEMA, Woodside and Santos to develop the Program and Strategic Assessment Report for assessment under the EPBC Act.

The taskforce undertook extensive public consultation with thirteen information sessions on the Program, draft Strategic Assessment Report, and draft regulations held during November and December 2013. Sessions were attended by individuals representing industry, community groups, the fishing industry and government.

The strategic assessment demonstrated that streamlining environmental approvals leads to environmental outcomes equivalent to those that would be achieved under the EPBC Act. This means that the current high environmental standards of the EPBC Act are maintained. The protective mechanisms of the EPBC Act, such as recovery plans and threat abatement plans, continue to be applied.

On 27 February 2014, the Minister for the Environment granted a class of action approval for oil and gas and greenhouse gas activities undertaken in Commonwealth waters in accordance with the endorsed offshore environmental management authorisation process for oil and gas and greenhouse gas activities administered by NOPSEMA under the OPGGSA (the Program), subject to the exclusions described in the final approval decision notice.

The Minister's approval means titleholders seeking to undertake offshore oil and gas or greenhouse gas activities in Commonwealth waters in accordance with the Program no longer need to refer those actions for assessment under the EPBC Act. Under these arrangements, environmental protection is examined through the NOPSEMA decision-making processes.

The endorsed Program describes a range of commitments by NOPSEMA to ensure that activities carried out do not have unacceptable impacts on matters protected under Part 3 of the EPBC Act. These commitments include:

- NOPSEMA will not accept an Environment Plan that involves the activity or part of the activity, other than arrangements for environmental monitoring or for responding to an emergency, being conducted in any part of a declared World Heritage property within the meaning of the EPBC Act.
- NOPSEMA will not accept an Environment Plan that proposes activities that will contravene a plan of management or proposes unacceptable impacts to a matter protected under Part 3 of the EPBC Act.
- In undertaking assessments, NOPSEMA will have regard to relevant policy documents, plans, conservation advice and guidelines on the Department of the Environment and Energy website.

In order to measure the performance of the Program against the Program objectives and commitments, a framework for evaluating, reporting and monitoring the Program was developed. Reviews will be conducted against Terms of Reference and the results provided to the Department of the Environment and Energy. The review framework includes:

- A review of the Program after 12 months of operation, to be submitted within 18 months of Program endorsement.
- A review of the Program every five years for the life of the Program to assess progress in achieving the objectives of the Program.

- An annual report detailing all relevant decisions made under the Program.

In 2015, an independent review of NOPSEMA's compliance with the Program was undertaken. The independent reviewer determined that the Program commitments that were triggered during the review period have been met and the required processes and procedures are in place for Program commitments to continue to be met in the future.

9.3 Oil Pollution Emergency Plan

Under the Environment Regulations, a titleholder is responsible for preparing and maintaining an Environment Plan. The Environment Plan must have an implementation strategy that must include an oil pollution emergency plan.

The intent of the Environment Regulations is to ensure that oil pollution risks associated with the activity have been detailed and evaluated, enabling appropriate control measures to be put in place to meet set standards of performance. The titleholder must demonstrate all measures reasonably practicable are being done to prepare for and minimise the likelihood of their specific oil pollution risks.

An oil pollution emergency plan is required to include the following information:

- The control measures (e.g. systems, equipment, people or procedures) necessary for timely response to an emergency that results or may result in oil pollution.
- The arrangements and capability that will be in place, for the duration of the activity, to ensure timely implementation of the control measures, including arrangements for ongoing maintenance of response capability.
- The arrangements and capability that will be in place for monitoring the effectiveness of the control measures if they are required to be deployed, and ensuring that the control measures are performing to the required standard.
- The arrangements and capability in place for monitoring oil pollution to inform response activities.

The oil pollution emergency plan is intended to ensure that the titleholder has demonstrated that it can respond as quickly and effectively as possible in the event of an emergency that has resulted or may result in oil pollution, to avoid or minimise potential environmental damage.

In assessing an oil pollution emergency plan as part of an Environment Plan, NOPSEMA will consider the adequacy of the arrangements proposed in deciding whether to accept or refuse to accept the overall Environment Plan.

Although the oil pollution emergency plan is assessed by NOPSEMA as part of the Environment Plan assessment process prior to the commencement of an activity, it is intended to be a 'living' document. As further information or improved technology becomes available, the plan should be updated to ensure the continued adequacy and appropriateness of control measures for timely and effective response to an emergency which results or may result in oil pollution.

9.4 Financial assurance

The OPGGSA requires a titleholder, at all times while the title is in force, to maintain financial assurance sufficient to give the titleholder the capacity to meet costs, expenses and liabilities arising in connection with the carrying out of an oil and gas activity in the title area. This requirement is intended to ensure that the titleholder will have the capacity to meet extraordinary costs, expenses and liabilities that go beyond the normal operational and commercial costs of engaging in the offshore oil and gas sector. This includes costs, expenses and liabilities arising in connection with complying with the titleholder's legislative obligations under the OPGGSA, including its duty in relation to controlling, cleaning up and monitoring the effects of any escape of oil and gas, or reimbursing NOPSEMA, or the responsible Commonwealth Minister, if the titleholder has failed to comply with its duty.

The amount of financial assurance held by titleholders should consider the most potentially 'costly' unplanned incident or event that could occur in connection with the activity, and the worst realistically predictable consequences of that incident or event, having regard to the relevant circumstances in which the activity is to be carried out.

The Environment Regulations provide a mechanism for NOPSEMA to assess a titleholder's compliance with the requirement to maintain financial assurance as a condition precedent to the acceptance of an Environment Plan. The titleholder is required to demonstrate that it has complied with the financial assurance obligations along with the submission of the Environment Plan for the relevant oil and gas activity. NOPSEMA must not accept the Environment Plan unless it is reasonably satisfied that financial assurance in relation to the activity (or activities) is sufficient, and in an acceptable form.

The Environment Regulations also provide that a failure by a titleholder to continue to maintain sufficient financial assurance is a ground for NOPSEMA to withdraw its acceptance of an Environment Plan.

9.5 Oil Spill response

In the event of an offshore oil and gas environmental incident, the titleholder has responsibility under the OPGGSA for emergency response.

- Titleholders are required to report any incident to NOPSEMA within two hours of the first occurrence, or first detection of the occurrence, of the incident.
- Titleholders operate as the Control Agency in responding to a spill, as per their oil pollution emergency plan.

Under the OPGGSA an offshore oil and gas titleholder must do the following:

- Take all reasonably practicable steps to eliminate or control the escape of oil and gas, as soon as possible after becoming aware of it.
- Clean up the escaped petroleum and remediate any resulting damage to the environment.
- Carry out environmental monitoring of the impact of the escape on the environment.

The Australian Maritime Safety Authority (AMSA) may, upon request, support an offshore oil and gas titleholder in responding to an incident. AMSA has a number of memoranda of understanding (MOUs) with offshore oil and gas operators in relation to oil spill preparedness and response.

Titleholders may also establish arrangements in their oil pollution emergency plan to use equipment and expertise from industry-funded cooperatives such as the Australian Marine Oil Spill Centre (AMOSOC) or Oil Spill Response Limited (OSRL).

9.6 Role of the Australian Government in responding to an oil spill

The Australian Government Crisis Management Framework (AGCMF) outlines that leadership of the Australian Government's response to a crisis will, in the first instance, be the responsibility of the relevant portfolio minister. In the event of a significant oil and gas incident in Commonwealth waters, the Minister for Resources and Northern Australia is the lead Commonwealth Minister.

In response to the Report of the Montara Commission of Inquiry, the Australian Government agreed that in responding to future oil and gas incidents, a central incident coordination committee be convened and chaired by the Department of Industry, Innovation and Science. That Committee is the Offshore Petroleum Incident Coordination Committee (OPICC).

The Offshore Petroleum Incident Coordination Framework outlines the governance arrangements for the OPICC, including its purpose, membership and key protocols for member agencies. The OPICC's purpose is to effectively coordinate Australian Government efforts and resources, and communicate to the public and affected stakeholders all matters relevant to a significant offshore oil and gas incident in Commonwealth waters. The OPICC's responsibilities are:

- providing leadership and strategic coordination in response to an incident
- developing and communicating a common operating picture on behalf of the Australian Government
- reporting to relevant Ministers and governments on the conduct and associated risks of emergency and response operations
- developing and implementing a whole-of-government approach to media management in response to the incident
- developing and implementing a whole-of-government approach to community engagement in response to the incident
- providing support to the Control Agency as required.

The Framework recognises, and is intended to interface with, other emergency incident response/coordination frameworks including: titleholders' oil pollution emergency plans; the National Plan for Maritime Environmental Emergencies; the Australian Government Crisis Management Framework and other whole of Australian Government Crisis Management Plans, and State or Northern Territory marine pollution contingency plans, as appropriate.

The OPICC is not a mechanism to:

- Deploy Commonwealth resources for the operational response. Deploying resources is, in the first instance, the offshore petroleum titleholder's responsibility and shall be coordinated in accordance with their oil pollution emergency plan and other regulatory instruments.
- Take responsibility for incident control or implementing operational response arrangements. This is the responsibility of the Control Agency.
- Assume regulatory responsibilities, which remain at all times with the relevant regulatory agencies.

The decision to activate the OPICC will be determined by the scale and nature of the incident and may be taken by the responsible officers within the Department of Industry, Innovation and Science in consultation with other agencies and regulators.

The OPICC is convened and chaired by a Deputy Secretary of the Department of Industry, Innovation and Science (or their delegate) and includes senior representatives from relevant government agencies at the Commonwealth and State/Territory levels and industry representatives where appropriate. The exact OPICC composition will be determined by the Chair depending on the nature of the incident.

10 Conclusion

Offshore oil and gas exploration and production has occurred in Australia over many decades, providing direct returns to the Australian economy and communities.

Offshore oil and gas exploration and development involves long lead times and significant financial investment. The future of this important industry depends on continuing to allow for the discovery of new supply. This will ensure the Australian community continues to receive the significant economic and social benefits from the responsible management of our valuable offshore oil and gas resources.

Australia's objective-based offshore oil and gas regulatory framework has proven to be an effective and robust regime, allowing for the exploration and development of Australia's offshore resources and the development of an internationally competitive industry, while ensuring stringent and high levels of environmental protections. All activities to date in the Great Australian Bight have been undertaken in accordance with the requirements of this regulatory framework.