
**Australian Government**

**Department of Industry, Innovation and Science**

Submission by the Department of Industry, Innovation and Science to the Standing Committee on Education and Employment

# *Inquiry into the work health and safety of workers in the offshore petroleum industry*

March 2018

# Contents

# 1. Introduction

The Australian Government's policy framework for offshore petroleum aims to expand Australia's resource base, increase the international competitiveness of our resources sector and improve the regulatory regime, consistent with the principles of leading health and safety performance, environmental responsibility and sustainable development.

The Department of Industry, Innovation and Science (the department) is responsible for providing upstream 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 and the Northern Territory, the Joint Authority for the offshore areas of the External Territories and of the Eastern Greater Sunrise and as the Commonwealth Resources Minister.

The department welcomes the opportunity to make a submission to the inquiry into the work health and safety (WHS) of workers in the offshore petroleum industry. The department's submission provides an overview of Australia's offshore oil and gas sector, and outlines the current regulatory regime for the offshore resources sector. The submission describes how the regulatory regime has evolved, and how Australia's offshore occupational health and safety (OHS) regime has developed over time, reflecting important changes and continuous improvement in international leading practice in the regulation of the health and safety of workers in the offshore petroleum industry. The submission also describes the effectiveness of the regime and the important role of the independent offshore regulator, the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The health and safety of workers involved in offshore petroleum activities is of the utmost importance to government, industry and the community. Workplace safety relies on strong collaboration between government, industry, the regulator, the workforce and unions. The Australian resources sector is a world leader in health and safety performance and Australia's offshore petroleum industry is one of the safest in the world[1]. To ensure this continues to be the case, it is essential that both the Australian Government and industry remain committed to ensuring offshore workers are safe and free from harm, and fostering a strong workplace culture to prevent fatalities, injuries and diseases.

Typical of modern OHS regimes, Australia's offshore regulatory regime sets out broad performance objectives with respect to the identification and management of hazards and risks. This objective-based approach is regarded as world's best practice for high hazard industries, such as the offshore resources industry, as it can evolve with technological developments and encourages continuous improvement and innovation. It requires those

[1] International Regulators' Forum Country Performance Measures Project 2016 http://irfoffshoresafety.com/country/performance/

that create risks to manage the impacts of these risks, rather than allowing minimum compliance.

In line with international leading practice, Australia has adopted the use of safety cases – a structured argument, supported by a body of evidence that provides a compelling, comprehensible and valid case that a system (facility and operation) is safe and risks have been suitably managed. Petroleum operators are responsible for preparing safety cases for all offshore petroleum facilities, which must be assessed and accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

Genuine, quality worker involvement and consultation on health and safety issues is of key importance to achieving positive safety outcomes. Under the offshore OHS regime, the involvement of members of the workforce is essential to the development of safety cases and operators must demonstrate effective consultation with and participation by the workforce in the preparation of safety cases.

Pivotal to ensuring an effective regulatory regime is the periodic review of regulation to test its continuing relevance and overall net benefit. The department is committed to regularly assessing and evaluating the regulation of offshore resources activities, including OHS, to ensure it is contemporary, fit for purpose and represents international leading practice. The *Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009* will sunset in April 2020, and as part of the department's regular process, a review of the regulations will be done prior to this date.

This submission is provided on behalf of the department only.

# 2. Role of the Department of Industry, Innovation and Science

Under international law, Australia has sovereign rights for exploring and developing mineral and petroleum resources within its Exclusive Economic Zone and its Continental Shelf. The Australian Government has jurisdiction for the regulation of petroleum (oil and gas) and greenhouse gas activities in Australia's offshore areas beyond coastal waters, those areas more than three nautical miles from the Territorial sea baseline. These areas are defined as 'Commonwealth waters'.

The Australian Government's role in relation to the petroleum sector is to:

- establish the macroeconomic environment (broad economic policy)
- provide a regulatory framework for exploration, development, safety, environmental assessment and revenue collection
- reduce commercial risk in petroleum exploration by collecting and disseminating geoscientific information
- investigate ways to remove impediments to industry competitiveness.

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

- Managing the offshore petroleum and greenhouse gas storage regulatory regime, to ensure the sustainable development of Australia's offshore resources, while encouraging further investment.
- Providing regulatory and policy oversight for the occupational health and safety (OHS) of people involved in offshore petroleum activities, environmental management and offshore well integrity issues.
- Managing and facilitating, in partnership with the states and the Northern Territory through Joint Authority arrangements, 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 involvement and strategic response to a significant offshore petroleum incident.

The department also works with its portfolio agencies, Geoscience Australia (GA), 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.

- GA is Australia's pre-eminent public sector geoscience organisation. GA works with the department 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.

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

# 3. Overview of offshore oil and gas operations in Australia

The Australian resources sector is one of the largest and most advanced in the world and provides Australia with a major advantage over other countries. Its contribution to Australia's national income, growth and employment objectives is immense and its long term growth potential is strong.

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 Northern Carnarvon and Browse basins, offshore Australia has proven to be one 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 petroleum exploration permit granted in the Gippsland Basin in 1959.

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 and regional development. In 2016-17, the industry gross value added for the oil and gas extraction industry and gas services industry was AU$28.5 billion[2]. The number of people employed in the sector in 2016-17 was 20,000, which increases to 32,000 if people involved in the gas supply chain are included[3]. Benefits are returned to the Australian people from oil and gas exploration, development and production, including direct and indirect employment, infrastructure development, and security of supply of energy resources and petroleum products.

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 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 ongoing expansion of our LNG industry. The four most recent offshore LNG projects – Wheatstone, Prelude, Ichthys and Gorgon – will represent an investment of US$138 billion[4] and will add 37 million tonnes per annum to Australia's liquefaction capacity once completed[5]. Australia is the second largest LNG producer and these projects will enable Australia to become the world's largest exporter of LNG by the end of the decade.

[2] Australian Bureau of Statistics, 5204.0 - Australian System of National Accounts, 2016-17
[3] Australian Bureau of Statistics, 6291.0.55.003 - Labour Force, Australia, Detailed, Quarterly, Nov 2017
[4] Department of Industry, Innovation and Science
[5] Department of Industry, Innovation and Science

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 now facing tough international competition as more countries export resources. To ensure Australia continues to benefit from the sector, it needs to remain competitive, productive, safe and sustainable. Industry, government and the community all have a role to play in ensuring this occurs.

# 4. Australia's offshore oil and gas regulatory framework

Australia's offshore petroleum and greenhouse gas storage legislation, regulations and guidelines provide for the orderly exploration for and production of petroleum and management of greenhouse gas storage, and sets out a framework of rights, requirements and responsibilities of government and industry.

The regime is based on optimising resource recovery through timely commercial development, and its regulation of environmental, safety and well integrity matters is designed to encourage continuous improvement rather than minimal compliance. A core principle in environmental, safety and well integrity regulation under the regime is that the offshore resources company is responsible for evaluating risk and achieving fit for purpose design that reduces risk to 'as low as reasonably practicable' (ALARP). This allows offshore resources companies to adopt practices and technologies best suited to individual circumstances, activities and locations, maximising safety outcomes in this technically complex environment.

In Australia, offshore oil and gas activities in Commonwealth waters are governed by the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act).

The OPGGS Act is supplemented by a set of regulations:

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

Underpinning this regulatory framework are four key policy 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 the health and safety of persons, well integrity and the environment are to be managed to as low as reasonably practicable, and risks to the environment must also be deemed to be of an acceptable level.

4. Property rights are applied and respected through a system of licencing and titles - this gives titleholders exclusive rights and incentives to move through the oil and gas

lifecycle, so long as all activities comply with the OPGGS Act, supporting regulations and title conditions.

## 4.1 Commonwealth jurisdiction

The Australian Government has responsibility for offshore resources and oil and gas activities in Commonwealth waters which extend from the edge of the three nautical mile limit of designated coastal waters to the outer extent of the Australian Exclusive Economic Zone at 200 nautical miles from the baseline. Petroleum exploration and development in coastal waters is regulated under the relevant state or Northern Territory legislation, except where a jurisdiction has conferred powers or functions on to NOPSEMA. To date, Victoria has conferred structural (well) integrity and OHS powers and functions on to NOPSEMA, but not conferred powers and functions for environmental management.

The regulatory framework within which offshore petroleum exploration and production activity takes place in Australia has its origins in the 1979 Offshore Constitutional Settlement and the division of powers and responsibilities between the Australian Government and the state/Northern Territory governments. Initially, Commonwealth legislation conferred powers on state and NT Ministers (the Designated Authorities) to regulate offshore petroleum operations, including occupational health and safety, environmental management and well integrity. In 2012, after a series of regulatory reforms, state and territory Designated Authorities were abolished, and the Australian Government, together with the state and the Northern Territory governments, commenced administration of the regime of petroleum titles in Commonwealth waters through a Joint Authority arrangement.

## 4.2 Regulatory reforms

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. This incident resulted in the uncontrolled discharge of oil and gas, which was stopped and contained on 3 November 2009.

The Montara incident led to major regulatory reform to the offshore petroleum regime governing Commonwealth waters. 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, to ensure that Australia has a safe, strong and competitive offshore oil and gas sector, which is able to contribute to ongoing energy security and economic prosperity.

On 5 November 2009, a Commission of Inquiry into the Montara Incident was announced, to look into the likely cause of the incident and the adequacy of the regulatory regime. In April 2010, further impetus was provided by the Macondo Deepwater Horizon disaster that unfolded in the Gulf of Mexico, claiming 11 lives.

On 24 November 2010, the Montara Commission of Inquiry Report (the Report) was publicly released. The findings of the Montara Commission of 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 should be created, looking after safety as a primary objective, and well integrity and environmental approvals.

The Australian Government released its response to the Inquiry in 2010. 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, several amendments to the OPGGS Act were made in 2011. The most significant of these include:

- Offshore regulations 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).

- Regulation of environmental management activities in Commonwealth waters was added to the former National Offshore Petroleum Safety Authority (NOPSA)'s remit. The change in name, from NOPSA to NOPSEMA, reflected these additional regulatory responsibilities.

- Amendments to the RMA Regulations which gave the former NOPSA (now NOPSEMA) the responsibility for regulation of well operations management plans and approval of well activities.

In addition to the suite of regulatory reforms implemented immediately after the Montara and Deepwater Horizon incidents, the regulatory and operational environment for the offshore resources sector in Australia has undergone a cycle of continuous improvement. Further reform work includes:

- the introduction of a polluter-pays obligation and a third party cost-recovery mechanism in the event of an offshore petroleum incident;

- NOPSEMA becoming the sole Commonwealth environmental management regulator for offshore oil and gas activities;

- review of the Environment Regulations to clarify and simplify regulatory requirements and duties and responsibilities of titleholders;

- review of the compliance and enforcement measures and introduction of a broader range of enforcement tools; and

- review and amendments to Part 5 of the RMA Regulations (Wells Regulations) to ensure the regulation of well integrity is leading practice.

The Australian Government Report on the implementation of the recommendations from the Montara Commission of Inquiry is available on the department's website[6].

## 4.3 Regulation of Petroleum Titles

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 Authority for each offshore area makes key decisions under the OPGGS Act concerning the granting of petroleum titles, the imposition of title conditions and the cancelling of titles, as well as decisions about petroleum-related resource management and resource security.

Before any offshore petroleum activity can begin in Commonwealth waters a number of government approvals must be gained. Firstly, the company proposing the activity must obtain an offshore petroleum title which secures rights to undertake petroleum activities in the title area. The relevant state and federal ministers of the Joint Authority and the National Offshore Petroleum Titles Administrator (NOPTA) grant titles. The Joint Authorities may delegate any or all of their functions and powers to officials in the respective Commonwealth and state/Northern Territory departments with responsibility for resources and energy.

NOPTA 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.

6 https://www.industry.gov.au/resource/UpstreamPetroleum/MontaraInquiryResponse/Pages/ProgressReport.aspx

- Facilitate life of titles administration, including 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 storage titles.

## 4.4 Role of NOPSEMA

While the granting of a title provides a company with rights to undertake petroleum activities in the title area, NOPSEMA's role is to ensure the activity does not begin until the company proposing it can demonstrate that it will be undertaken in accordance with the law and in a manner that protects the offshore workforce and environment. An outline of the role of NOPSEMA is provided below and further information can be found in NOPSEMA's submission to the Inquiry into the WHS of offshore workers.

NOPSEMA regulates the OHS of people involved in offshore petroleum activities, well integrity, environmental management and day-to-day operations of offshore petroleum facilities in Commonwealth waters, and in coastal waters where state and Northern Territory powers have been conferred.

As an independent statutory authority, NOPSEMA is granted powers under the OPGGS Act and associated regulations to undertake assessments, inspections, and investigations of petroleum related activities offshore to ensure compliance.

NOPSEMA's functions are set out in section 646 of the OPGGS Act, and specifically in relation to the regulation of safety and well integrity include:

- Promotion of OHS

- Structural integrity of facilities, wells and well related equipment

- Monitoring and enforcement to secure compliance

- Investigation of incidents and complaints

- Providing advice

- Cooperation with government agencies

NOPSEMA is also the sole designated assessor of petroleum and greenhouse gas activities in Commonwealth waters under Part 10 of *the Environment Protection and Biodiversity Conservation Act 1999*.

The role of NOPSEMA, as an independent regulator, is to ensure that decisions to accept or refuse risk management plans for safety, well integrity and environment focus exclusively on the technical and scientific merits of the proposal. These decisions are made independently

of economic, commercial and political factors and the workings of government. Neither the Minister for Resources and Northern Australia, Minister for the Environment and Energy nor the department have direct involvement in NOPSEMA's regulatory decision-making processes for offshore petroleum activities.

Approval to begin an offshore petroleum activity is only granted after NOPSEMA has conducted a thorough and rigorous technical assessment of the relevant risk management plans and has determined the plans meet all the requirements of the law. NOPSEMA assesses whether the duty holder's proposed measures in their risk management plans are appropriate and meet the high-level requirements set out by the regulatory regime. Risk management plans may include a safety case, diving safety management system, well operations management plan, offshore project proposal and environment plan.

There are strict criteria set out in the relevant legislation and regulations for plans to be assessed by highly-qualified experienced industry experts in NOPSEMA, with a plan needing to clearly demonstrate how a company will undertake a proposed activity to protect the health and safety of offshore workers, and the environment, in order to be accepted. Unless NOPSEMA accepts the risk management plan following its assessment, the activity cannot proceed. Once accepted, NOPSEMA carries out checks to ensure that the duty holder is doing what they said they would do, through monitoring and enforcing compliance.

### 4.4.1 NOPSEMA Governance

As outlined in NOPSEMA's submission, NOPSEMA was established as an independent statutory authority under the OPGGS Act and as a Commonwealth corporate entity under the *Public Governance, Performance and Accountability Act 2013 (PGPA Act).*

The responsible Commonwealth Minister, with support from each of the relevant state and Northern Territory ministers, appoints the NOPSEMA Chief Executive Officer (CEO) who has overall responsibility for the management of NOPSEMA. The CEO has all the powers and functions that the OPGGS Act and associated regulations assign to NOPSEMA. The CEO also reports to the responsible state and territory minister where conferral has occurred.

NOPSEMA's regulation of the offshore oil and gas is subject to a range of governance controls, including parliamentary oversight, ministerial policy direction and independent statutory reviews. These governance controls, while providing necessary political and government oversight, do not affect NOPSEMA's professional independence and regulatory decision making process.

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 of Commonwealth and State and Territory Energy and Resources Ministers) on the performance by NOPSEMA of its functions and policy and strategic matters relating to OHS, structural integrity and environmental management.

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

In accordance with the OPGGS Act, Board members are selected for appointment by the COAG Energy Council prior to being formally appointed by the responsible Commonwealth Minister.

The Commonwealth Minister for Resources and Northern Australia 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 OPGGS Act and associated regulations. This Statement of Expectations will be reviewed in July 2018.

The Commonwealth Minister may also issue policy principles to NOPSEMA about the performance of its functions, with which NOPSEMA must comply when performing its functions. Before issuing a policy principle that relates wholly or principally to NOPSEMA's operations in the designated coastal waters of one or more state or the Northern Territory, the Commonwealth Minister must consult with relevant state and territory petroleum ministers.

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.

### 4.4.2 Operational Review of NOPSEMA

A requirement under the OPGGS Act is the periodic review of the operations of NOPSEMA. This independent operational review is of NOPSEMA's regulatory performance and its performance as the sole environment regulator for offshore petroleum activities in Commonwealth waters.

The 2015 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 Government response to the review was tabled in both Houses of the Parliament in December 2015.

The 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 report is publicly available on the department's website[7].

[7] https://industry.gov.au/resource/UpstreamPetroleum/Pages/NationalOffshorePetroleumSafetyandEnvironmentalManagementAuthority.aspx

Subsequent operational reviews will occur every five years, in accordance with the requirements of the OPGGS Act, with the next review scheduled for 2020.

# 5. Australia's offshore OHS regime

Until the early 1990s, the offshore petroleum industry in Australia was regulated by a combination of State and Commonwealth legislation. This legislation prescribed specific laws that had to be complied with. In practice, it was the regulator that identified what was safe or not safe for the industry. Rapid changes in technology and operations meant that legislation and regulation were constantly catching up.

The major accident events that have shaped the Australian offshore petroleum regulatory regime, including Piper Alpha, Montara and Deepwater Horizon, have all contributed to a regulatory focus on the prevention of major accident events. The role of the regulator in driving process safety improvements in the offshore petroleum sector should not be under-estimated.

## 5.1 History of the offshore OHS regime

A key international turning point in how governments and the offshore petroleum industry manage the health and safety of workers involved in offshore petroleum activities was the Piper Alpha disaster in 1988 and the subsequent introduction of the safety case regime.

In 1988, Piper Alpha, a large North Sea oil platform, experienced a massive leakage of gas condensate which ignited and caused an explosion and large oil fires. The disaster resulted in the deaths of 167 people. This incident prompted change across offshore petroleum exploration and development sectors worldwide.

In 1991, an Australian Consultative Committee on Safety in the Offshore Petroleum Industry recommended that key outcomes of the United Kingdom Committee of Inquiry into the Piper Alpha disaster be implemented in Australia.

The Australian Government made a policy decision to adopt a safety case regime (described in Section 5.3.2) and new objective-based regulations to replace the then-prescriptive safety regulations in the *Petroleum (Submerged Lands) Act 1967* (PSLA). In 1992, the PSLA was amended to establish legislation and regulations to require the preparation and submission of a safety case for every offshore petroleum facility, and in 1996, the safety case regime was enacted in Australia.

In 1999, the Australian Government commissioned a review into the adequacy of offshore safety regulation in Australia. At the time, the states and Northern Territory governments carried out day-to-day offshore safety regulation in Commonwealth waters. The review recommended the establishment of a national petroleum safety regulatory authority.

In 2001, a Council of Australian Governments (COAG) accepted the review's proposals and recommended that there be a single Commonwealth offshore safety regulator, and in 2005 the National Offshore Petroleum Safety Authority (NOPSA) was established.

In 2006, the PSLA was replaced by the *Offshore Petroleum Act 2006* (OPA). In 2008, the OPA was replaced by the OPGGS Act, which continued the established approach to OHS for petroleum activities and extended this to the storage of greenhouse gases offshore.

Section 4.2 outlines the establishment of NOPSEMA in 2012.

## 5.2 Objective-based regime

Australia's offshore petroleum activities are regulated using an objective-based regime (also known as performance- or goals-based). This approach sets high-level requirements that must be achieved, but does not prescribe how those requirements must be met. Australia's objective-based regime maintains clarity of responsibility, where the onus is on the industry (the duty holder) to identify and evaluate risk, and achieve fit-for-purpose design to prove to the regulator, NOPSEMA that their offshore petroleum activities are safe and risks have been reduced to ALARP. In all cases, no activity can proceed until NOPSEMA has accepted the relevant permissioning documents.

The ALARP principle recognises that 'as low as reasonably practicable' is generally the point where the sacrifice required to reduce the risks of an activity any further would be extraordinarily disproportionate to the benefit gained and may not be practically feasible. It is not possible to eliminate some risks entirely, but ALARP aims to demonstrate that the risk of an activity has been reduced to a level acceptable to stakeholders. It originates from the concept of 'reasonably practicable' set out in England in 1949[8], and later confirmed by the Australian High Court in 2001[9].

Key components of objective-based regulation for offshore resources activities include:

- The duty holder's risk management can be tailored to the impacts and risks unique to the specific activity and location.
- Responsibility for managing risks rests with the duty holder, who is best placed to identify and manage the impacts and risks of their activity to ALARP and acceptable levels, and to set appropriate performance measures (outcomes and standards).
- The duty holder 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.

The outcome of an objective-based regime is that costs and implications to health, safety and the environment are considered as part of a company's investment decisions. In this regard, objective-based regulation encourages continuous improvement to achieve appropriate health and safety and environmental outcomes. It ensures flexibility in

[8] United Kingdom Court of Appeal (Edwards v. National Coal Board, [1949] 1 All ER 743)
[9] Australian High Court, Slivak v Lurgi (Australia) Pty Ltd (2001) 205 CLR 304

operational matters to meet the unique nature of different activities, and avoids a 'one size fits all' approach to regulation, allowing industry to determine the most effective and efficient way to operate.

## 5.3 Principles of the offshore OHS regime

Australia's current OHS regulatory regime for offshore petroleum activities is an objective-based regime, which sets out broad performance objectives with respect to the identification and management of hazards and risks. The underlying principle is that the primary responsibility for ensuring health and safety rests with those who create risks and those who work with them. This is in contrast to requirements under a prescriptive regulatory regime, where those who create risks need to consider matters specifically identified by the regulation and meet the minimum standard of protection that the regulator prescribes.

In Australia's offshore petroleum regime, general duties are imposed on duty holders (titleholders and operators of facilities), other contractors, suppliers and all those who work at or near facilities. Duty holders are responsible for evaluating and managing risks and demonstrating to NOPSEMA that risks are reduced to ALARP. For OHS, the operator of the facility bears the principal duty in the OHS regime, whereby it is responsible for taking all reasonably practicable steps to ensure the facility and its activities are safe and without risk to health.

### 5.3.1 OPGGS Act and Safety Regulations

The OHS regime for offshore petroleum operations is set out by parts of the OPGGS Act and its associated regulations for Commonwealth waters.

The relevant Commonwealth OHS laws for the purposes of the OPGGS Act are:

- Schedule 3 to the OPGGS Act;
- *Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009*;
- Part 5 of the *Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011*, to the extent to which that Part relates to OHS matters; and
- Section 603 or 609 of the OPGGS Act, to the extent which the conduct prohibited by that section results in damage to, or interference with, a facility, or interference with any operations or activities being carried out at a facility.

Schedule 3 of the OPGGS Act imposes duties on the operator of a facility and a range of other parties including employers, manufacturers and members of the workforce. The operator and these other parties must take all reasonably practicable steps to protect the health and safety of the facility workforce and of any other persons who may be affected. Schedule 3 also places duties on titleholders in relation to wells, to ensure that the design, construction, maintenance and operation of wells reduces risks to the health of safety of persons at or near the facility to ALARP.

To support the OPGGS Act, associated regulations set out particular matters which duty holders must address prior to and while undertaking offshore petroleum activities. The objective of the Safety Regulations is to ensure risks to the health and safety of persons at facilities are reduced to ALARP. It does this by setting high-level requirements for risk management plans, including facility safety cases and diving safety management systems. The Safety Regulations also include specific provisions regarding exposure to hazardous substances, fatigue management, possession or control of drugs or intoxicants and exposure to noise.

### 5.3.2 Safety case regime

The Safety Regulations outline the safety case obligations on duty holders and require the operator of a facility to commit to ongoing improvement of all aspects of the operator's safety management system. The introduction of the safety case, underpinned by an objective-based approach, has strengthened the offshore OHS regime to require a comprehensive and integrated risk management system describing how the duty holder will fulfil their obligations.

A safety case is a document produced by the duty holder to describe the facility, identify the hazards and risks, the risk controls and the safety management system which provides for the continual identification and assessment of hazards and how risks will be minimised[10]. A safety case is a sophisticated, comprehensive, integrated risk management system which must identify the safety-critical aspects of the facility, both technical and managerial, and defines appropriate performance standards for the operation of the safety-critical aspects.

The involvement of members of the workforce is essential in the development of a safety case, and the operator must demonstrate how the safety case has been prepared with effective consultation with and participation by the workforce. Workforce involvement is necessary so they are able to arrive at informed opinions about the risks and hazards to which they may be exposed, and in turn, means they are more likely to do the right thing regarding safety because they know and understand why it is required.

A safety case must be in force and accepted by NOPSEMA in order for a facility (including pipelines) to be constructed, installed, operated, modified or decommissioned, and throughout the life of the facility. NOPSEMA undertakes a detailed assessment of safety cases and only accepts a safety case if it is satisfied that the arrangements set out in the document demonstrate that the risks will be reduced to ALARP.

NOPSEMA conducts inspections to monitor the duty holder's compliance with the accepted safety case. Inspections involve communication with all levels of the workforce, including health and safety representatives. When there is a potential breach of the legislation, NOPSEMA will investigate to determine what, if any course of action is warranted. When NOPSEMA determines a breach of the legislation or regulations has occurred, the authority

[10] https://www.nopsema.gov.au/safety/safety-case/what-is-a-safety-case/

may take enforcement action to rectify the breach, avoid a recurrence, and act as a deterrent. Enforcement action can include issuing improvement and prohibition notices, giving directions, requesting a revision or withdrawing acceptance of a risk management plan, and prosecution.

A Bill has been approved for inclusion in the legislative program for the Autumn sittings of the Australian Parliament that proposes to amend the OPGGS Act to allow for enforceable undertakings as an additional graduated enforcement measure. The department has been working closely with NOPSEMA on a project to expand the graduated enforcement measures to include a robust civil penalty regime within the Safety Regulations.

# 6. Effectiveness of the offshore OHS regime

Australia's offshore petroleum industry is one of the safest in the world, with some of the lowest injury and fatality rates. Australia's offshore safety performance, reported as part of the International Regulators' Forum (IRF) for Global Offshore Safety Country Performance Measures Project, has consistently performed well against counterpart IRF countries[11]. The Australian offshore regulatory regime is highly regarded internationally and has been specifically designed, and continues to be refined, to address the unique OHS hazards of offshore petroleum activities.

The objective-based regulatory approach is typical of modern OHS regimes and is the approach used by leading practice offshore petroleum safety regulatory regimes internationally. Key to the objective-based regime is the unambiguous assigning to the creator of the risk the responsibility for evaluating and managing the risk and reducing risk to ALARP, as outlined in section 5.2. ALARP is a principle used internationally in a number of other occupational health and safety and high-hazard regulatory systems, including international leading practice regimes in the United Kingdom and Norway[12]. It is also used by global petroleum industry bodies such as the International Association of Drilling Contractors and the International Association of Oil and Gas Producers. As a result, it is a well-known and widely used concept and is understood legally and in practice, including in Australia.

It is leading 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. This model of a single national offshore oil and gas regulator seeks to ensure only one independent authority is responsible for regulating the health and safety of Australia's offshore oil and gas workers and the environment, from exploration through to decommissioning. Safety, environmental management and day-to-day operational consents are all concerned with structural integrity. Given this overlap between these functions, an integrated approach to regulation by a single national regulator is an appropriate and effective means of regulating the offshore resources industry, where the consequences of incidents may be significant.

As outlined in NOPSEMA's submission into this Inquiry, NOPSEMA has substantial internal expertise and seeks external advice where necessary to ensure that leading practice regulation is used in Australia's offshore resources regime. NOPSEMA is staffed by 110 professionals that make decisions free of policy or economic development considerations. NOPSEMA has systems in place to ensure that regulatory staff obtain and maintain relevant competencies.

NOPSEMA's Safety and Integrity Division is staffed by 36 highly trained and qualified technical experts with extensive practical domestic and international experience in offshore

[11] http://irfoffshoresafety.com/country/performance/
[12] http://www.hse.gov.uk/risk/theory/alarpglance.htm

petroleum activities. This staffing unit comprises 29 offshore petroleum OHS specialists and seven offshore petroleum well integrity specialists and is the largest concentration of offshore petroleum OHS regulatory specialists in Australia. The Safety and Integrity Division is further supported by another 30 specialists that provide legal services, stakeholder education and communications, independent investigations, and data analysis and reporting.

On behalf of the Australian Government, NOPSEMA actively leads in international oil and gas safety forums, primarily through the International Regulators' Forum, to promote the adoption of globally agreed safety standards worldwide. NOPSEMA's regulation of Australia's oil and gas sector has been subject to previous independent reviews and analysis, including the 2015 statutory review outlined in section 4.4.2, which found NOPSEMA to be a competent regulator[13].

The offshore resources industry in Australia is regulated under a separate and specific OHS regime to that of the national *Work Health and Safety Act 2011* (WHS Act). The Australian Government considers that the objective-based OHS regime offers greater protection for workers in the high-hazard, technically complex environment of the offshore petroleum sector. While broadly consistent with the national WHS Act, the offshore OHS regime has additional requirements to address the high-hazard, and technically complex nature of offshore resources activities. For example, the offshore regime applies duties of care to a more specific set of persons directly relevant to offshore resources activities, and in more detail.

In the Productivity Commission Review of regulatory burden on the upstream petroleum (oil & gas) sector released on 30 April 2009, the Commission determined that 'the highly specialised nature of upstream petroleum operations (particularly offshore operations) would justify legislation for the upstream petroleum sector remaining separate from a principal (model) occupational health and safety Act' (Finding 7.4)[14]. The Commission considered that 'the highly specialised (and high risk) nature of the upstream petroleum sector justifies separate OHS legislation in addition to that provided under one principal OHS legislation. This is particularly the case for regulation of the offshore sector'[15]. Additionally, the Commission heard 'overwhelming support for current arrangements' favouring separate OHS legislation for the offshore oil and gas sector[16].

For the offshore petroleum sector, a high-hazard, technically complex environment, the best regulatory model continues to be objective-based, with a single independent expertise-based

[13] For example, the 2014 Western Australian Parliamentary Inquiry into safety-related matters relating to FLNG projects off the coast of Western Australia found the independent objective-based regulatory regime administered by NOPSEMA to be world's best practice and did not recommend any changes to NOPSEMA's regulatory regime.
[14] http://www.pc.gov.au/inquiries/completed/upstream-petroleum/report/upstream-petroleum.pdf
[15] Ibid.
[16] Ibid.

regulator with the capacity and capability to undertake the integrated regulation of health and safety, well integrity and environmental management.

# 7. Conclusion

The department plays an important role in shaping policy and regulation development for the occupational health and safety of workers involved in offshore petroleum activities. The regime is cognisant that the development of a prosperous resources sector, maximising the benefits it offers Australia, and the Australian people, must be done in a safe and sustainable manner.

Central to the role of the department is the development of strong working relationships with safety stakeholders to ensure a collaborative approach to policy and regulation development. Constructive and inclusive consultation processes are a fundamental part of the department's ongoing evaluation and assessment of the regulatory regime.

The offshore petroleum regime, and specifically its regulation of OHS, has evolved over many years to keep pace with the development of international leading practice and in response to global and local incidents where lessons have been learned to improve the protection of the health and safety of offshore workers. The department remains committed to the ongoing refinement of the offshore petroleum regime to ensure it continues to represent leading practice and delivers the best possible safety outcomes.