

**Economics Legislation Committee**  
ANSWERS TO QUESTIONS ON NOTICE  
Industry, Innovation and Science Portfolio  
2016 - 2017 Additional Estimates  
2 March 2017

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**AGENCY:** NATIONAL OFFSHORE PETROLEUM SAFETY AND ENVIRONMENTAL  
MANAGEMENT AUTHORITY

**TOPIC:** NOPSEMA

**REFERENCE:** Written Question – Senator Bushby

**QUESTION No.:** AI-90

1. Can you provide the Committee with a quick overview of latest trends in safety and compliance in the offshore petroleum industry? How many compliance enforcement inspections did NOPSEMA undertake last year? Have incidents been increasing or decreasing in recent years? [what have been the reasons for this?]
2. The offshore oil and gas industry has experienced a long period of low prices and therefore presumably companies have needed to try to improve production efficiencies and cut costs to stay profitable. Is this going to be a challenge for NOPSEMA in coming years? If so, how will you/are you managing this?
3. How important is NOPSEMA's statutory independence for effective regulation?
4. NOPSEMA was set up to employ objective or performance-based regulation in managing safety and environmental risks. What are the advantages of this relative to more prescriptive-based regulation for managing petroleum activities? Are there challenges for NOPSEMA in helping industry understand their regulatory obligations?
5. You have spoken in previous hearings about NOPSEMA having a good mix of highly skilled people. Has maintaining the right mix of people been a challenge given there are presumably high demands for people with your skills in the industry as well?
6. How important is stability and regulatory certainty for the industry. How would any perceived lack of certainty affect exploration investment?
7. Transparency and accountability – mechanisms in place to ensure NOPSEMA remains accountable.
  - a. How long has drilling been done in the Great Australian Bight and have there been any incidents?
  - b. How many wells have been drilled across all Australian waters (not just the Bight)? Over what timeframe?
  - c. [I understand it has been several thousand wells going back many decades.] Of these thousands of wells, how many major environmental or safety incidents have there been?

## ANSWER

1. There was a clear improvement in personal safety outcomes observed in 2016 given it was the first year in which there have been no accidents resulting in deaths or serious injuries reported since the establishment of NOPSEMA's predecessor, the National Offshore Petroleum Safety Authority (NOPSA) in 2005. The annual rate of accidents, resulting in greater than three day lost time continued the downward trend observed since 2010.

The total number of injuries (recordable cases) also decreased by 42% (down from 88 in 2015 to 51 in 2016) while the rate of injuries decreased from 5.64 to 5.26 per million hours worked. This decrease was reflected across all injury categories, from the less serious injury types (medical treatment and alternative duties injuries) to lost time injuries. Furthermore, there were no fatalities or major injuries reported in 2016.

Measures for process safety outcomes are less definitive with the number of hydrocarbon releases increasing while the number of dangerous occurrences decreased. From 2015 to 2016, there was a 28% increase (from 18 to 23) in the total number of hydrocarbon releases reported to NOPSEMA. While the majority of the releases were in the lower release category (> 1-300kg), any uncontrolled hydrocarbon release still warrants attention due to the risk of ignition and the potential widespread damage and associated threat to lives they could cause. Conversely, the number of dangerous occurrences reported decreased by 17% (from 365 to 303) with the majority relating to unplanned events.

NOPSEMA conducted 143 inspections in 2016 which is 26% lower than the total number of inspections (195) conducted in 2015. This reduction is largely attributed to a decline in industry activity, in particular, exploration activity.

2. The prolonged period of lower oil and gas prices does present a challenge for regulation of the offshore oil and gas industry. NOPSEMA has been monitoring the way in which industry has been dealing with the change in economic climate, including through our compliance monitoring inspections. NOPSEMA's strategic inspection topic areas include a focus on matters which may be the subject of cost cutting, such as maintenance management, use of management of change processes, and ensuring that spill response arrangements are appropriate to the risk posed by the activity.

Where non-compliance is found with regulatory requirements, NOPSEMA has broad ranging powers which can be used to enforce compliance. NOPSEMA will continue to regulate industry compliance and to challenge duty holders to ensure that all risks, impacts and hazards arising from their operations are managed in accordance with the law, including the reduction of impacts to a level that is as low as reasonably practicable.

NOPSEMA also collaborates with regulators internationally through involvement in a range of forums such as the International Regulators Forum (IRF) and the International Offshore Petroleum Environmental Regulators (IOPER) forum where observations, lessons learnt and data are shared between regulators. The impact of lower oil and gas prices has been the subject of significant discussion in these forums.

3. NOPSEMA is a statutory authority established under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*. In delivering its legislated functions, NOPSEMA ensures that all decisions focus exclusively on the technical and scientific merits of risk management plans and are independent of economic, commercial and political factors.

NOPSEMA's regulation of the offshore petroleum industry is subject to a range of governance controls including parliamentary scrutiny, ministerial policy direction, and independent statutory reviews established under the OPGGS Act.

NOPSEMA has been subject to an independent operational review of its regulatory performance every three years. It has also been subject to a review of its environmental management performance under the endorsed EPBC Act Program after the first 12 months of operating under this arrangement. Both reviews were most recently completed in 2015 and the reports from these reviews are public documents. The 2015 statutory operational review of NOPSEMA's performance concluded that NOPSEMA is an effective regulator that has made positive contributions to improving safety and well integrity, and managing Australia's offshore environment.

Most recently, the Department of the Environment and Energy in their State of the Environment report for 2016 (released March 2017), found that;

*“With the implementation of NOPSEMA, there has been an increased level of scrutiny of offshore petroleum environmental management through assessment processes and compliance inspections. Investigation and enforcement powers for environmental management have also been strengthened, which has resulted in better understanding of the impacts of activities, greater focus on industry compliance and better preparedness for unplanned events.”*

In terms of the merits of the independence of regulators, NOPSEMA notes that the Organisation for Economic Co-operation and Development (OECD) recognises that;

*“Establishing a regulator with a degree of independence (both from those it regulates and from government) can provide greater confidence and trust that regulatory decisions are made with integrity. A high level of integrity improves outcomes of the regulatory decisions. Regulators should have provisions for preventing undue influence of their regulatory decision-making powers and maintaining trust in their competence and delivery<sup>1</sup>”*

4. Prescriptive-based regulation often imposes set requirements and standards that apply to all activities of a certain type being undertaken. This approach to regulation can have the effect of creating a 'lowest common denominator' approach to regulation and drive an industry culture of minimum effort to achieve compliance with set requirements. This also creates a situation where Government must be constantly revising legislation and standards to keep pace with emerging technologies in a highly innovative industry.

Conversely, objective based regulation is adaptable, flexible and scalable to the particular circumstances of individual activities and the environment in which the activity is occurring. One of the greatest strengths of the objective-based regime is that the regulator can challenge industry to do more than the commonly accepted standard. Companies must not only demonstrate that they are meeting minimum levels of acceptability but must also show they are doing everything that is reasonably practicable to reduce their safety and environmental impacts and risks. This approach to regulation drives companies to continuously improve safety and environmental outcomes and to implement effective technologies and procedures that are fit-for-purpose.

The key principle underpinning the objective-based regime is that responsibility for ensuring health and safety and the protection of the environment lies with those who create the risks. That is because these parties have the knowledge, decision-making authority, on the ground control and resources to ensure that the risks they create are appropriately managed.

The objective based approach to regulation is supported internationally by regulatory authorities, risk management professionals and academics as being the most appropriate regulatory framework for major hazard industries. For example, Emeritus Professor Andrew Hopkins describes the four basic features of a successful regulatory regime for oil and gas as being;

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<sup>1</sup> OECD (2014) *The Governance of Regulators, OECD Best Practice Principles for Regulatory Policy*.

- a risk management framework;
- a requirement to “make a case” to the regulator;
- a competent and independent regulator; and
- a general duty of care being placed on the duty holder.

With the overall objective of improving industry performance, NOPSEMA has a function to promote and advise on occupational health and safety, well integrity and environmental management matters. NOPSEMA proactively seeks to engage with stakeholders through liaison meetings, hosting workshops and information sessions, presentations and participating in industry conferences and forums. During 2016, for example, NOPSEMA conducted more than 700 liaison meetings with dutyholders and other stakeholders. NOPSEMA also publishes on its website a suite of industry performance data, policy and guidance material, latest news, reports and a quarterly newsletter to assist industry in meeting their obligations under OPGGS Act and relevant regulations.

5. NOPSEMA has a core staff of regulatory specialists across areas relevant to its regulatory functions, including occupational health and safety (OHS), integrity (including wells), and environmental management. The nature of the work at NOPSEMA provides a challenging and rewarding opportunity for specialists in these fields to play a key role in protecting offshore workers and marine environments through the independent and professional regulation of offshore oil and gas operations.

NOPSEMA is held in high regard and its teams have diverse professional backgrounds and talents. We recruit widely to find high calibre candidates who use their skills to influence risk management by industry across a range of petroleum activities. In order to attract and retain experts in relevant fields, NOPSEMA offers employment conditions that can extend beyond the standard public service arrangements, making them more commensurate to those offered in industry. Recruiting staff has not been a difficulty for any NOPSEMA positions since the industry downturn in 2014/15.

6. Investment in exploration is not a relevant consideration for NOPSEMA in terms of discharging its regulatory responsibilities. However, we appreciate the need to have a regulatory framework that is consistent, efficient and fit for purpose. We see that the establishment of NOPSEMA has achieved greater stability, certainty and improved safety and environmental outcomes within the offshore petroleum sector. These outcomes can be significant factors when companies make investment decisions.

In addition to regulating operations in Commonwealth offshore waters, NOPSEMA is able to regulate in coastal waters where a state or territory has conferred regulatory powers and functions. Victoria has conferred its OHS and well integrity functions onto NOPSEMA in its state waters. There is the ability for all states and the Northern Territory to confer powers onto NOPSEMA, which could see the creation of a single independent expert regulator for all offshore petroleum operations in Australia. Such a change would provide greater stability and certainty for the oil and gas industry by reducing regulatory burden and duplication within the offshore petroleum regulatory regime. This was a key reason for the industry and all of the states and territories supporting the establishment of NOPSEMA.

7.

- a) NOPSEMA understands that there have been 13 wells drilled in the Great Australian Bight.<sup>2</sup> The most recent well drilled in the Great Australian Bight was in 2003, which pre-dates NOPSEMA (established in 2012) and its predecessor organisation, NOPSA, which was established in 2005. NOPSEMA is not aware of any major incidents experienced during the drilling of these wells.

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<sup>2</sup> Submission to the Senate Inquiry into Oil or Gas Production in the Great Australian Bight, Department of Industry, Innovation and Science, March 2016

- b) Since the 1960s, several thousand offshore wells have been drilled in Australia. NOPSEMA is not the custodian of data regarding the exact number of wells. Such information may be held by Geoscience Australia.
- c) The 2015 Operational Review of NOPSEMA found that the severity and frequency of recordable injuries or fatalities has declined steadily since NOPSEMA's (NOPSA) commencement in 2005 from a total recordable case frequency of 13.07 in 2005 to 4.04 in 2014.

The National Offshore Petroleum Safety Authority (NOPSA) was established in 2005 to regulate occupational health and safety in Commonwealth waters. Prior to this time, the states and Northern Territory carried out day-to-day regulation of offshore oil and gas operations in Australia.

In 2010, the Commission of Inquiry into the 2009 Montara oil spill incident in the Timor Sea strongly recommended that a single regulatory body be responsible for safety, well integrity and environmental management.

In April 2011, the Commonwealth Government extended NOPSA's remit to include the regulation of well integrity. Shortly thereafter, on 1 January 2012, the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) was established to supersede NOPSA and reflect the added responsibility of regulating offshore environmental management.

Since NOPSEMA's establishment there have been a very small number of major incidents within the authority's jurisdiction. Specifically, in August 2012 there was a double fatality on the Stena Clyde drilling rig which was undertaking operations in the Bass Strait. NOPSEMA prosecuted the operator of the rig, Stena Drilling Australia Pty Ltd.

The combination of the regulation of safety, well integrity, and environmental management under a single independent regulator aims to standardise Australia's offshore petroleum regulation to a quality best practice model.

The Australian offshore oil and gas industry has outperformed other high-hazard industries and is among the better performers of jurisdictions internationally.