Offshore Petroleum Resource Management Review

Interim Report

NOVEMBER 2015
Broad stakeholder engagement in this review process is welcome. Submissions on the Interim Report can be provided to the Department of Industry, Innovation and Science by email to: OPRMReview@industry.gov.au. Please note that all submissions will be published unless marked confidential. Comments and submissions should be provided by no later than 28 February 2016.
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Executive summary

Since discovery of the first petroleum field offshore of Western Australia in 1963, Australia’s offshore petroleum resources and the underlying regulatory regime governing their management have been significant contributors to the Australian economy. In 2013-14 that contribution was $64 billion to industry gross value and employment of over 30,000 people.

Government and industry knowledge of our offshore resources has changed dramatically during this period, as has the technical and investment environment. Today Australia has a mix of both maturing and underexplored or frontier regions, and the industry applies a range of technologies to the extraction and production of petroleum. Australia is poised to be the only LNG-producing country with projects using three different production infrastructure types including conventional coal seam and shale gas, and floating LNG.

It is important that Australia’s offshore petroleum resource management regime remains leading practice, supports the adoption of advances in technology, and promotes cost reductions and productivity growth. This will ensure the Australian community continues to derive benefits from its offshore resources.

The Offshore Petroleum Resource Management Review (the Review) has examined the policy and regulatory framework which governs Australia’s offshore oil and gas resources across four phases of the petroleum lifecycle. It includes:

**PHASE I:** Exploring for petroleum resources

**PHASE II:** Developing the resources

**PHASE III:** Managing resource production

**PHASE IV:** Decommissioning

The Review focused primarily on Phases I-III, but also considered Phase IV. The type, scale and cost of activities undertaken by industry through each of the phases vary considerably. Similarly, the regulatory processes that apply at each phase are different. The Review considered the decision-making arrangements in the framework, noting their impacts across all phases.

The Review has proposed 20 Actions across the petroleum lifecycle that fine-tune the policy, regulatory and administrative framework governing offshore petroleum resource management in Australia. Implementation of the Actions will stimulate continued and new investment, and improve timeliness and efficiency across the entire exploration, development and production lifecycle. It will also better inform public debate and enhance the community’s confidence that the Australian Government is effectively managing its offshore petroleum resources.

These Actions target the following goals of:

- **Improving effectiveness and transparency in the management and operation of Australia’s offshore petroleum resources**
- **Providing greater flexibility and better alignment with technical and operational realities**
- **Reducing costs, including through improved administrative efficiency.**

Identified Actions include:

- Provision of a regular annual report on Australia’s offshore petroleum activities, which will identify emerging national and regional issues and associated focus areas for the management of Australia’s offshore petroleum resources.
- A clear focus on promoting investment in exploration:
  - including frontier and lightly explored offshore areas; and
  - consistency with the Australian Government’s exploration and investment strategy, including through its offshore petroleum acreage release program and processes.
- Engaging with industry to determine how precompetitive activities and data arrangements can be better integrated to support exploration in frontier and lightly explored areas, including:
  - identifying and harnessing complementary activities;
  - consideration of current versus new title arrangements; and
  - better alignment with industry efforts.

- Clear articulation of the regime’s purpose, objectives and operations for managing our known offshore petroleum resources at the retention lease phase, including commercial joint developments and/or use of shared upstream infrastructure, as well as third party submission considerations in title decisions.
- A holistic, rather than title-by-title approach, to development which includes providing a minimum (three years) to maximum (15 years) range for the period of a retention lease and subsequent renewals, and a “project development” approach to the administration of retention leases.
- Greater recognition of technology in identifying producible modest-sized resources through expanding the declaration of location policy and avenues to production.
- Establishing a clear policy framework for the decommissioning of offshore petroleum fields and associated infrastructure.
- A review of legislated data management and confidentiality provisions.
- Streamlining legislative and administrative arrangements including for the provision of Special Prospecting and Access Authorities, management of titles, and decision timeframes as well as providing indicative timeframes for title decisions across all phases of the exploitation and development lifecycle.

Successful implementation of the Actions will only be achieved through consultation and collaboration with industry and broader stakeholders. As such, the Australian Government has sought stakeholder submissions on the interim report to ensure recommendations have been fully informed by stakeholder views, and are both practical and achievable.
1. Introduction

The history of the Australian offshore petroleum industry is one of hard-won success in very challenging and sometimes harsh conditions. Emerging from the first offshore wells in Western Australia in the 1960s, it has now grown into a world-class industry that has attracted over $200 billion in investment in the last five years alone. Australia now ranks as one of the major global LNG suppliers. We host a diverse range of major petroleum hubs from the oil and gas fields in Bass Strait through to the North West Shelf and Pluto developments, the three coal seam gas (CSG) based projects in Queensland, as well as the world’s single largest LNG investment in the soon-to-be-commissioned Gorgon project. Other projects such as Ichthys and Prelude are well advanced, putting Australia on track for LNG production capacity of around 86.6 million tonnes by 2020.

Australia has proved itself a world leader in adopting new technologies and developing innovative approaches to oil and gas exploration. Uptake of floating LNG technology is one example of how Australia’s industry has embraced innovation to unlock development potential in offshore Australia. A key element of this success has been maintenance through time of an attractive, flexible and stable policy and regulatory regime for the offshore sector.

At the heart of this regime is a system built on mutual respect between governments and the private sector. This provides investors with predictability and clarity around their 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 petroleum resources through the application of good oilfield practice and the principles of safe and sustainable development.

Like the industry it regulates, the offshore petroleum regime must respond to a constantly changing environment. In recent times, these changes have brought new challenges to the way we find, develop and manage resources. Our major production provinces are now maturing, with a greater understanding of the economic and geological interconnectivity between fields and projects. A particular challenge in these areas lies in optimising overall resource recovery across multiple plays, and by utilising smaller finds and making full use of existing infrastructure.

At the same time, new projects are becoming more complex and costly, with developers needing to secure access to long-term supply sources in order to justify investments in the tens of billions of dollars. Addressing these considerations will increasingly require a systems-based, or project-based focus, rather than Australia’s title-by-title approach of the past.

Replacing today’s production over the longer term means we also need to make new discoveries. While there are exciting new prospects in areas such as the Great Australian Bight, overall exploration levels are falling and finds around mature areas are generally becoming smaller. This is pushing the search for major new fields into deeper, less explored areas which are challenging to work in. Advances in technology and cost pressures are also changing the way industry explores, including by placing a greater emphasis on data acquisition and analysis to improve the likelihood of successful drilling campaigns.

Ensuring Australia continues to attract its share of global exploration requires a regime that provides timely access to new prospective acreage, with sufficient precompetitive data to reduce exploration risks to levels that remain attractive to explorers.

Failure to respond to these challenges will put at risk Australia’s ability to capture the next wave of investment in an increasingly open and competitive global marketplace, where capital and effort shift rapidly.

For this reason, our resource management regulatory framework and implementing regime and institutions need to be modern, effective, robust and nimble.

1.1 Offshore petroleum resource management review

To address these concerns, in mid-2014 the Australian Government announced a review of Australia’s offshore petroleum resource management framework. The objective of the Review was to assess the framework governing oil and gas resource management in Commonwealth waters, and its application, to identify any actions necessary to ensure it can accommodate the changing economic and operating environment described above.

The Review has taken an integrated approach across the full span of the petroleum lifecycle. It reflects the fact that policy and regulatory settings for various activities often inform and incentivise efforts in earlier or subsequent stages. This ranges from acreage release through exploration and discovery, into development and production, and finally decommissioning. The indicative timeframes below show this requires a multi-decadal outlook.
In examining contemporary and emerging issues, the Review pursued the following goals:

- Improving effectiveness and transparency in the management of Australian petroleum resources.
- Enhancing the flexibility and alignment of the regime with modern strategic and operational realities.
- Reducing costs and improving administrative efficiency.

To ensure the Review was fully informed by the views of stakeholders, the Australian Government released a consultation paper for public comment on 26 November 2014. This was supported by targeted consultation with industry, including the formation of various expert and stakeholder working groups. Appendix 1 contains a list of actions identified. Appendix 2 contains the Review’s Terms of Reference, while Appendix 3 provides a summary of all issues raised in submissions.

1.2 Proposed areas for action

In considering both the contemporary and anticipated challenges facing governments and industry over the next decade, the Review has identified the following four strategic areas for action:

1. Managing Australia’s petroleum resources in a maturing and more complex environment.
2. Stimulating exploration.
3. Promoting timely and efficient development and production.
4. A clear framework for management and decommissioning.

For each area, key emerging issues and a set of proposed actions have been identified. Comment is being sought on both the scope of identified issues and the efficacy of proposed actions.

In a number of areas, the Review has proposed an action but has not selected a definitive implementation option. This is a deliberate recognition that changes to the framework can have profound impacts on industry and need to be fully worked through with those who might be impacted to minimise unintended consequences. It is therefore proposed that all actions flowing from the Review be taken forward in close consultation with industry and other stakeholders.

Consultations with stakeholders also raised a range of issues around broader policy settings in areas such as taxation, environmental regulation and fiscal incentives. These issues were outside the scope of the Review, although the issues raised have been noted.

In this context, the Australian Government has a range of initiatives underway to improve the competitiveness of business. This includes the establishment of two new Industry Growth Centers for Oil, Gas and Energy Services (OGER) and Mining Equipment Technology and Services (METS) alongside work to streamline environmental and other approvals processes, thereby reducing red tape and facilitating national reviews into taxation and workplace arrangements.

This Review was undertaken in parallel with the 2015 Operational Review of NOPTA, a statutory requirement under the Offshore Petroleum and Greenhouse Gas Storage Act 2006. The findings of that review are integrated into the actions proposed here.

Two further issues (overbidding for acreage and challenges in meeting annual work program commitments) have been addressed in the recent update of the Offshore Petroleum Exploration Guideline: work-bid which commenced operation on 1 June 2015. Further information can be obtained by contacting petroleum.exploration@industry.gov.au.
2. Managing Australia’s petroleum resources in a maturing and more complex environment

Responsible and transparent management of Australia’s offshore petroleum resources is essential to ensuring that the Australian public receives, over time, the best practical return on the exploitation of their in-situ natural assets. Although there are many aspects to resource management, for the purpose of this review it is defined broadly as:

*The regulatory processes undertaken to ensure the optimal, long-term and timely development of the Commonwealth’s petroleum resources/endowment, both discovered and undiscovered.*

Resource management also invokes the concept of stewardship or the *informed and responsible management of the nation’s petroleum inventory*, in the national interest.

The Australian Government’s role is ultimately to work within the concepts of resource management and stewardship to achieve an appropriate balance between the objectives of the owner of the petroleum resources (i.e. the Crown) and the developer of those resources (i.e. industry).

In this regard, resource management and stewardship are not exclusive to government. There must be a shared ownership of these concepts across all public and private interests in the sector.

2.1 The offshore regulatory framework


This legal framework is underpinned by four key principles:

1. Australia’s offshore petroleum resources are best exploited (and risks managed) through commercial development
2. Operations should be undertaken in accordance with good oil field practice, and be compatible with the optimal long-term recovery of petroleum
3. All associated risks to human health and safety, and the marine environment, are managed to be as low as reasonably practicable
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 petroleum lifecycle, provided activities comply with the OPGGS Act, supporting regulations, and title condition.

Implementation occurs through an interlocking set of institutional arrangements covering all aspects of the petroleum lifecycle. Ultimate responsibility and decision-making rests with the Offshore Petroleum Joint Authority (the responsible Commonwealth and State/Territory Ministers).

Ministers are supported in their roles by relevant Commonwealth and State and Territory Departments through their strategic policy advice, and the National Offshore Petroleum Titles Authority (NOPTA) through its management of titles and licences as well as through the provision of technical advice. Geoscience Australia also supports the regime through its precompetitive data and other survey and interpretation work. Day-to-day regulation of the health, safety and environmental performance of the industry is undertaken by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

*Emerging issues*

It is generally recognised that the current legislative and regulatory arrangements have provided a sound basis for the management and administration of Australia’s offshore resources. That said, the realities of modern development and technological advancement – particularly in mature producing provinces such as the Carnarvon and Gippsland – are changing the nature of resource management.

To date, the history of offshore development has been characterised by gradual in-fill of our known petroleum resources, often through major new infrastructure hubs such as the North West Shelf or Gorgon. In general, these have been relatively large but physically isolated projects or fields. As such, development considerations have been managed successfully on a title-by-title basis.

However, successfully optimising development across projects and resource pools with growing physical and economic interconnectivities requires a greater focus on system-based management, rather than an individual title or project perspective. Some of these more complex management issues include:
Competition for aquifer energy

Acceleration of discoveries since the mid-1990s has revealed that a number of our major basins comprise of an array of pools and fields. These can vary widely in composition and size and may overlie, overlap, or be directly connected with each other.

Where this occurs, there can be competition for reservoir “energy” (aquifer pressure) by the respective producing fields that share aquifers. This competition for aquifer pressure can be significant, and can increase as the development landscape becomes more crowded. Loss of aquifer pressure may result in a significant loss of resources from pools. If unchecked, it has the potential to substantially erode value at a basin-scale, with implications for optimal long-term commercial resource recovery for all of the pools, discovered and undiscovered.

The potential regional and sub-regional interactions between fields need to be understood and considered, through time, by regulators and industry. This will ensure that, where practical, optimal long-term economic recovery is achieved from all fields present within an area, through the entire development lifecycle of a basin.

Avoiding the stranding or sterilisation of smaller resources

As in-fill exploration and development matures, there are a growing number of smaller resource finds which are unlikely to prove economic for development in their own right.

In some instances, there may be challenges when relatively small oil discoveries are made within gas development catchments. In pools where the gas and oil legs are in direct pressure communication, it is important that development options are fully explored. This will enable the commercial development potential of the oil and gas to be better understood, given that the oil would be sterilised once gas production from that reservoir begins.

The flaring of produced gas can also have unwanted effects: it wastes resources, increases greenhouse gas production, and reduces reservoir energy. For these reasons, flaring remains a resource management concern.

Making the best use of existing infrastructure

Infrastructure forms the backbone supporting Australian resource development. The use of existing and planned infrastructure via tie-ins and infrastructure sharing provides opportunities for significant cost reductions, and enables a raft of potential efficiencies to be achieved. For example, the development of future but modest-sized discoveries can become possible because existing infrastructure removes the need to construct dedicated, standalone facilities that would not be economically viable for a small individual accumulation or group of accumulations.

Elements of the existing production infrastructure in offshore Australia are seeing increased prospects of ullage and/or premature decommissioning as existing resources deplete. For major investments, such as LNG facilities, this can potentially result in a major “hole” in the development capacity of an entire region. Long-term utilisation of key infrastructure has the potential to maximise benefits – for both industry and the nation – of initial development by reducing the overall cost of developing new resources. In many instances, these benefits extend well beyond the individual project which the infrastructure currently services.

While the issue of optimising infrastructure appropriately remains an economic consideration between commercial parties, consistent with the Government’s stewardship mandate, government should ensure that its policy and operational frameworks encourages industry to consider all viable options for optimal design and operation. This includes use of shared infrastructure in determining the appropriate development pathway. In a positive sign, anecdotal evidence suggests that the high cost of development is incentivising the market towards greater levels of cooperative development around mature infrastructure hubs such as the North West Shelf.

Timeliness of regulatory decisions

With intensifying global competition for investment, timely and transparent decisions by government will contribute to the attractiveness of Australia as an investment destination. There has been significant improvement in this aspect of the offshore petroleum framework through the transfer of roles from the then Designated Authorities to the Joint Authority and NOPTA in 2012. However, feedback from industry suggests that processes remain opaque and, in a relatively small number of instances, decisions experience delay without clear reason.
Areas for action

To meet these challenges, the Australian Government will implement actions in two areas:

1. Strengthening our offshore resource management capacity
2. Improving the timeliness of regulatory decision-making.

2.2 Strengthening our offshore resource management capacity

Australia’s offshore regulatory framework has, in most cases, sufficient depth and flexibility to adequately address the issues identified above. However, there is a need to improve transparency, our understanding of emerging concerns, and how our resources are being strategically managed. There is also a need to ensure the skills, capacities and information sets which underpin the regime support efficient and effective management of Australia’s offshore petroleum resources.

Improving understanding of emerging resource management issues

Management and oversight of these basin-wide issues could cause tension between the interests of government and individual developers. For this reason, progression to a more systems-based approach must be supported by a transparent indication of emerging issues. This will enable issues to be identified and addressed at an early stage, and in partnership with industry, rather than after the fact when it is too late or expensive to adjust the action already undertaken to bring the resource to development.

It is also important to build a better understanding across the industry and public, to ensure confidence in the regime and its ability to manage public resources appropriately and in the national interest. It is not uncommon for regulators and administrators to report on their activities. However, there are currently no public reports or information sets that provide a holistic assessment of the state of our national offshore petroleum assets. NOPTA and relevant Commonwealth, State and Territory agencies (including Geoscience Australia) should work with industry to develop a regular state-of-play report for major producing and prospective regions.

Issue

There is a need for regular public reporting which provides a high-level state-of-play for Australia’s offshore petroleum resources and associated infrastructure. This should identify current and emerging resource management concerns, and provide a transparent basis for engagement with industry to address identified issues. It should also provide the public with a transparent understanding of the management regime.

Action 2.1

NOPTA will work with the Joint Authorities and other relevant agencies to establish an annual public reporting framework which provides a high-level comprehensive picture of Australia’s offshore petroleum resource base and associated development/production infrastructure. This should be undertaken as a regional or basin state-of-play assessment, highlighting any resource management issues and how they might be addressed.

NOPTA should also work with industry to identify the data and information sets required to support development of this report, noting the Australian Government’s commitment not to increase the level of unnecessary reporting on industry.
Ensuring effective engagement

Given that the responsibility for finding and developing resources rests primarily with the private sector, early and effective engagement on resource management concerns is critical. This should occur at an early stage to support the development of cooperative solutions (where required) before irreversible or costly decision points are reached. For example, having published its annual report on issues relating to a particular basin or play, NOPTA should engage with project proponents well ahead of detailed design or project development.

The goal in doing so is to provide assurance that resources are being exploited and managed optimally. It is not to direct commercial decision-making or to position government as central planners of the national resource base.

Issue

Early engagement with industry on resource management issues can ensure they are addressed in a least-cost and non-disruptive way.

Action 2.2

NOPTA and other relevant agencies are to engage early with industry in relevant processes to ensure any resource management issues are identified and constructively addressed, i.e. a “no surprises” approach to title and resource management.

Building capacity

Having the appropriate skillsets and technical capacities to both administer and manage across the petroleum lifecycle is vital. This will ensure that advice and decision-making are both independent and well-founded. It also provides for more effective and efficient engagement.

The recent operational review of NOPTA found that, in some areas, NOPTA’s technical capacities could be improved – particularly in relation to its assessment and compliance functions.

Issue

There is a need to improve technical capacities and skillsets in NOPTA, to ensure effective and efficient advice is being provided to the Joint Authority and industry.

Action 2.3

NOPTA, working with relevant government agencies and industry, will assess its technical needs against identified resource management requirements and develop a medium-term plan to address any deficiencies or areas for new capacity.

2.3 Improving the timeliness and efficiency of regulatory decision-making

Timely and transparent decisions on titles and corresponding activities were highlighted by the industry as important in minimising development risks and costs. These are crucial considerations for companies across key investment decision points, all along the discovery-development lifecycle. Getting this right contributes immensely to the attractiveness of Australia as an investment destination.

Industry feedback suggests there are concerns about the processes and long decision-making timeframes within the regulatory framework. Of particular concern is the opacity of the Joint Authority decision-making process, including why there remains a need to have joint decision-making on matters that relate to Commonwealth waters.

These concerns were also raised in the 2015 Operational Review of NOPTA, through NOPTA’s annual stakeholder survey, and more directly to this Review through submissions.
Joint Authorities decision-making

Currently there are no prescribed statutory timeframes for decision-making by the Joint Authorities. However, a non-binding operating protocol – the Operating Protocol for Offshore Petroleum Joint Authorities and Supporting Institutions (the Protocol) – for the Joint Authorities, their delegates, and the Titles Administrator has been established. The Protocol provides broad guidance on how the decision-making regime under the OPGGS Act will operate and interact. It also outlines indicative timeframes for NOPTA assessment and Joint Authorities decision-making. The Protocol is not publicly available.

NOPTA has established the National Electronic Approvals Tracking System (NEATS) to provide access to publicly available information concerning offshore petroleum titles and applications. This incorporates a public portal with access to information held within the title register, including approvals-tracking at an aggregate level. NEATS also enables titleholder-specific (confidential) information to be viewed through an industry portal. The industry portal provides titleholders with a consolidated view of all their titles, and also allows titleholders to lodge selected applications and make payments online. This includes the titleholder’s application status, the number of days at that status, and where in the Joint Authority decision-making process their application sits. Indications suggest this function of NEATS could be more effectively utilised. Further communication and promotion of NEATS’ industry portal function should be undertaken by NOPTA with titleholders. NOPTA also provides a summary monthly performance report, the NOPTA Dashboard Report, which is available on NOPTA’s website: www.nopta.gov.au.

Issue

There are no legislative or publicly available expectations of decision times for consideration by the Offshore Petroleum Joint Authorities on title decisions, and the Operating Protocol for Offshore Petroleum Joint Authorities and supporting institutions is not publicly available. There would be value in the Joint Authorities making all indicative timeframes for title decisions public and clear. NEATS provides a confidential industry portal for titleholders to view their titles, including the status of an application made to the Joint Authorities. It appears this function is not being utilised effectively by titleholders at present.

Action 2.4

The Review recommends that the Offshore Petroleum Joint Authorities consider making public the Operating Protocol for Offshore Petroleum Joint Authorities and supporting institutions. At minimum, the Joint Authorities should make public the indicative timeframes for title decisions as identified in the Protocol. The industry portal element of NEATS should be promoted by NOPTA to support full and effective use of this function by titleholders.

Opportunities to streamline decision-making

Governance arrangements underpinning the regime have been carefully constructed to ensure independence of the decision-maker from the application process in relation to key decisions. This includes granting and renewal of exploration licences, retention leases and production licences. Effective resource management and stewardship relies on the fact that these decisions reside with the Joint Authorities, and are appropriately informed by NOPTA. Current arrangements, following abolition of the Designated Authority and the establishment of NOPTA, have progressed almost seamlessly, with considerable improvement in the performance of decision-making and administration. As NOPTA continues to mature, and as its governance and operational processes and practices become further ingrained in Australia’s offshore petroleum framework, the Joint Authorities could consider devolving non-strategic and administrative decisions it undertakes to the Title Administrator. Box 1 provides an example of where greater efficiency could be achieved in a Joint Authority approval processes for production to commence.
Box 1: Decision processes for production to commence

A number of documents are required to be approved by the Joint Authorities prior to production commencement. These are:

- Acceptance of the Field Development Plan (FDP)
- Granting of a Production Licence
- Approval of Equipment and Procedures Used to Determine Quantity and Composition of Petroleum
- Approval of the Rate of Recovery – note that before the Rate of Recovery application can be made, a production licence and approval of the Equipment and Procedures is required.

Each approval is made using the following process:

1. NOPTA undertakes a technical review of each document and submits a recommendation to the Joint Authorities for acceptance.
2. Consistent with the consensus principle for decisions, the State/Territory Joint Authorities provide their decision first, followed by the Commonwealth.
3. NOPTA advises the titleholder of the Joint Authorities’ decision when it has both decisions.

Approval of Equipment and Procedures and Rate of Recovery are not specified as a content requirement for an FDP in the Offshore Petroleum and Greenhouse Gas (Resource Administration) Regulations 2011. However, the Review understands they are identified in an FDP as part of the arrangements describing how production from the field(s) will be undertaken, but cannot be formally approved until the well has flowed.

There is opportunity for improved efficiency to be achieved at this point, noting that the FDP is the basis on which petroleum production is approved by the Joint Authority, through granting of a production licence.

The separate regulatory approvals for Rate of Recovery and Equipment and Procedures are technical in nature and are usually sought by the titleholder following appraisal drilling and testing of the well flow(s).

Recognising that the FDP can be approved prior to the well flow(s) being tested, and that the Regulations require the Rate of Recovery to be consistent with the accepted FDP, there is an opportunity for regulatory and administrative efficiencies to be enhanced through devolving these technical approvals to the Titles Administrator, where the FDP has been approved and a Production Licence has been granted by the Joint Authorities.

In addition, the Joint Authorities could consider vesting their power to the responsible Commonwealth Minister for the purpose of making decisions on work programs or activities that only occur in Commonwealth waters and do not intersect with the adjoining State or Territory regime.

**Issue**

There may be opportunities for the Joint Authorities to devolve non-contentious or strategic decisions to the Titles Administrator. For example, the declaration of a location is purely a technical assessment with no other considerations being required or relevant. This assessment is already made within NOPTA but requires the Joint Authorities to formally approve it, with similar issues arising in approvals for Rate of Recovery and Equipment and Procedures.

**Action 2.5**

The Joint Authorities should consider reviewing administrative decision points across the offshore petroleum regime. It might consider delegating and/or devolving some decisions to the Title Administrator, and even the responsible Commonwealth Minister where no intersection with State and Territory regimes is contemplated.
3. Stimulating exploration

Exploration is the generator of the petroleum industry’s project pipeline. Australia has few undeveloped large offshore oil reserves. In offshore gas, most of the known commercially viable reserves are linked to major development proposals. Additional world-class reserves need to be found to support continued industry growth and gas supplies to our export and domestic markets.

Offshore petroleum exploration is constantly evolving in response to new opportunities and risks. New technologies are helping to better target exploration efforts by enabling greater access to new and more complex areas. At the same time, there is increasing scrutiny on the efficiency of exploration spend.

From a national perspective, exploration activity over the medium term should result in discoveries that, at minimum, replace production over the same term. That said, there is no ‘ideal’ rate of exploration as this is determined by a complex set of market, business and other factors which are subject to almost constant change. For this reason, the focus of Government is on maintaining regulatory and policy settings which promote economically efficient and commercially attractive levels of activity. Emphasis is placed on delivering a robust stream of new discoveries through time, a proportion of which will be large enough to act as foundation or life-extending fields for major projects.

Offshore petroleum exploration is a high-risk, high-cost activity that takes place within a competitive and footloose international capital market. An essential underpinning of exploration activity is the supply of prospective acreage within a release program that allows capital and associated exploration efforts to be captured when available.

Australia’s policy and regulatory regime seeks to do this by:

- Advancing assessment and understanding of our offshore sedimentary basin resource potential.
- Reducing commercial risk and encouraging investment through the provision of precompetitive geoscientific data.
- Providing a sound regulatory framework for exploration in Commonwealth waters.

Emerging issues

The nature of offshore petroleum exploration in Australia has changed dramatically in the last decade. A range of factors are reshaping industry practices and testing the regulatory framework, including:

New exploration technologies

The ability to explore for sub-sea resources has significantly improved through advances in seismic surveying from 2D through to 3D and 4D, along with more sophisticated computer analysis. These enable a much better understanding of underlying geology, thereby significantly improving the efficiency of exploration and discovery rates from drilling activity.

Increased costs

Over the past decade the fierce global competition for rigs, skilled labour and capital – along with a move to deeper water exploration – has seen costs, notably well-drilling, escalate dramatically. As business conditions have tightened in recent times, risk appetites and work programs have adjusted accordingly. This has resulted in discretionary activity being harder to secure that is not closely tied to core corporate strategies.

Changing focus of effort

In more mature areas, exploration efforts have focused on finding in-fill resources for existing projects. At the same time, the search for new major resource finds has moved into deeper and less well-understood frontier areas such as the Great Australian Bight.

Data on offshore exploration expenditure and activity from the Australian Bureau of Statistics, as well as analysis by NOPTA and the Department of Industry, Innovation and Science on acreage uptake and well drilling rates, suggests that Australia’s overall offshore exploration effort has declined more or less continuously over the past three years.

Given broader global business conditions, including over-supplied oil and gas markets, this is not surprising. However, a longer term analysis of activity levels also suggests that exploration rates are volatile and can shift both quickly and unpredictably.
Nevertheless, a few key long-term trends are emerging in Australia, largely driven by these factors. They include:

• Fewer wells being drilled (rising costs and improved efficiency)
• Improved success rates for drilling (better ability to identify prospective plays)
• Hydrocarbon finds generally being smaller (location and resource exhaustion in maturing areas)
• Greater attention on mature areas rather than frontier (risk appetite and cost).

Although exploration is more efficient, generally less resources are being found – and new large petroleum deposits remain elusive.

In itself, this is not cause for undue alarm, particularly as a range of key cost and logistical pressures are beginning to ease in the sector. There are also exciting prospects in a range of frontier, or further outboard, petroleum provinces which could help replenish overall discovered volumes given production levels over time.

That said, it does frame some critical challenges for Government in terms of ensuring the regulatory and policy regime adequately reflects the realities of offshore exploration in the 21st century. At the heart of those challenges is the goal of attracting new exploration effort and maintaining a healthy project pipeline through a diversity of effort.

Providing better quality precompetitive knowledge and information will greatly assist de-risking exploration investment decisions for companies. Ensuring the effort is well aligned with industry’s needs will help support a greater uptake of exploration acreage and expenditure on exploration activities.

Exploring in deep water frontier areas poses unique challenges, particularly in terms of cost, timeframes and logistical complexity. Recent changes to the Offshore Petroleum Exploration Guidelines provide industry with greater flexibility in structuring work programs and will have a positive impact. However, further consideration should be given to how the exploration policy framework could better support exploration in green-field (frontier) and other lightly explored areas.

Furthermore, improving flexibility and efficiency in the Australian Government’s acreage release processes will ensure that exploration acreage is made available within timeframes that can capture available investment. Opportunities to shorten the overall timeframes for acreage awarding should be considered, as this could allow companies to begin exploration sooner than is currently possible.

**Areas for action**

To meet these challenges, the Australian Government will implement actions in three core areas:

1. De-risking exploration through better geoscience information
2. Providing greater operational flexibility in lightly explored areas

**3.1 De-risking exploration through better geoscience information**

Over the past decade, considerable effort has been made to improve the quality of Australia’s offshore geoscience data. While this has delivered a well-regarded information asset that is readily and freely accessible, further improvements would make it world-class.

The Review has identified two aspects in particular where improvements could be made:

a. Better targeting of precompetitive geoscience information in timeframes that support exploration.

b. Improving the management of geoscience data.

**Better targeting precompetitive geoscience information**

Australia’s precompetitive offshore geoscience work, undertaken by Geoscience Australia, is highly regarded and provides an essential information base which explorers and governments use to make decisions on exploration effort.

Geoscience Australia’s work includes regional integration and thematic studies. Those studies, which utilise data from producing areas, are beneficial to both Government and industry. They provide a geological control for interpretation in data-poor areas, informing industry exploration efforts as well as the acreage release process and management of offshore areas.

Feedback from submissions and stakeholder consultations have provided useful suggestions regarding how Geoscience Australia’s precompetitive work could be better aligned with acreage release and industry exploration strategies. There was also strong support for expanding the base of this work, including providing greater attention to frontier areas and increasing the speed with which this is done.
Geoscience Australia has a well-established framework for engaging with industry on its near-term precompetitive work program. However, expanding this to encompass a medium term (3-5 year) forward-looking rolling strategy could provide additional benefit by better informing industry of the types of activities and areas that are being targeted over coming years, and in assisting Geoscience Australia to better align its activity with industry’s strategic needs. A rolling strategy, where out-years act as a guide to future effort rather than a hardwired work program, would also provide flexibility for Geoscience Australia to respond to emerging information and opportunities.

Geoscience Australia and industry should explore opportunities for additional collaboration on geoscientific activities. These could include regional geological studies, provenance studies, tectonic framework studies, and geochemical studies. Such collaborations would be mutually beneficial to Government, industry partners, and the broader offshore petroleum industry. They could be built into the proposed medium-term precompetitive strategy, as part of Geoscience Australia’s forward work program. It will be important that collaborative activities are undertaken in ways consistent with Geoscience Australia’s mandate – i.e. impartial, equitable, and furthering the interests of the broader offshore petroleum industry.

**Issue**

Geoscience Australia’s precompetitive studies program is highly regarded and strongly supported by industry. However, there would be benefit in improving the understanding, prioritisation and alignment of planned precompetitive activity between the offshore industry and Geoscience Australia. There are opportunities for complementary activities between industry and Geoscience Australia to support the continued and new exploration of Australia’s offshore areas. They could include regional geological studies, provenance studies, tectonic framework studies, and geochemical studies.

**Action 3.6**

Geoscience Australia will develop a medium-term (3-5 years) rolling strategy for Australia’s precompetitive geoscience program, in consultation with the offshore petroleum industry and the Department of Industry, Innovation and Science. The offshore petroleum industry and Geoscience Australia are encouraged to engage on Geoscience Australia’s forward data and interpretation programs, to further identify and support complementary activities. Such work should be appropriate to Geoscience Australia’s overall mandate.

Consideration should also be given by Government and industry to opportunities for enhancing the overall level of precompetitive effort.

**Improving geoscience data management**

At present a wide range of data is collected by NOPTA, which is responsible for the receipt, management and release of submitted data upon expiration of the appropriate confidentiality period. NOPTA also manages legacy data holdings transferred from regimes prior to the establishment of NOPTA in 2012.

NOPTA has engaged Geoscience Australia to assist with data storage and quality control during the regulated confidentiality period. It will also provide ongoing access to industry and the general public once its release is authorised by NOPTA. To assist improved availability and provide a central access point for data and information, NOPTA and Geoscience Australia are developing the National Offshore Petroleum Information Management System (NOPIMS).

Whilst the initiative has been successful to date, its future success will depend on the quality of submitted digital data. Stakeholder feedback suggests that further work is needed to ensure consistent data quality standards are maintained across various holdings. It has also been suggested that differing confidentiality and release provisions relating to exclusive and non-exclusive data may be creating distortions in work program versus multi-client acquisition.

**Data quality, timeliness and accessibility**

Taken as a whole, the Commonwealth data collection varies in quality. It is through improving collection quality that significant gains can be achieved.

A distinction should be made between data submitted to NOPTA since 1 January 2012, and data previously submitted to the Designated Authorities. Since 2012, NOPTA has established a consistent data submission and compliance regime which ensures that data is submitted appropriately and to necessary standards – that is, it is fit for the purpose intended.

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2 [APPEA submission OPRM Consultation Paper (2015)]
Under NOPTA’s data quality assurance work program, the vast majority of post 1 January 2012 data has been checked and uploaded into the NOPIMS, and is becoming progressively available when authorised by NOPTA for release. There remains, however, an issue with the quality of legacy data due to the differing compliance standards across jurisdictions at the time such data was collected.

NOPTA and Geoscience Australia are currently addressing the issues of legacy data completeness and quality, and intend to make that data available through the NOPIMS. Although there may continue to be gaps in the historic collection due to changes in companies and the passage of time, the NOPIMS and data integration initiative should largely address these issues. The objective is to ensure the more “modern” data (i.e. the last 25 to 30 years, at the very least) is complete, compliant and available in a way which better supports timely access and provision to stakeholders.

**Issue**

The data presently available to explorers and other stakeholders is of inconsistent levels of completeness and quality. Although processes are in place to manage new submissions, data compliance remains an issue for pre-2012 legacy data.

Implementation of the project to transform legacy data and more extensively populate NOPIMS will address this matter to a large degree. However, continuing improvement to current and future data holdings will require NOPTA, Geoscience Australia and industry to continue working together to maintain data quality and availability to the required standard.

**Action 3.7**

NOPTA, Geoscience Australia and the petroleum industry will work together to ensure that all new data submissions and current data holdings are compliant to agreed standards.

#### Data confidentiality provisions

A key principle of the offshore petroleum framework is that all geoscience data should eventually be made publicly available as open file, to promote understanding and further exploration and development activity. However, the regime also recognises the need for a period of confidential or restricted access as being vital to incentivising private sector investment.

As noted above, data acquired by industry through different activities is subject to differing confidentiality provisions, some of which may be creating unintended outcomes.

Data acquired by titleholders as part of agreed work programs (also referred to as exclusive or ‘proprietary’) generally attracts shorter confidentiality provisions (2 or 3 to 5 years) while non-exclusive (also referred to as ‘multi-client’ or ‘speculative’) survey data attracts longer periods (15 years). Multi-client provisions were extended out from nine years in 2008-09 to incentivise the uptake of independent seismic activity. This has been very successful, supporting the development of a robust seismic survey industry in Australia.

However, stakeholder feedback suggests that titleholders are increasingly utilising multi-client surveys to meet work program commitments so as to secure a greater confidentiality period. In these instances, such surveys may not be truly “multi-client” as the area has already been secured and the data for that area is only of value to the titleholders. In addition, most ‘multi-client’ surveys are conducted under a Special Prospecting Authority (SPA) with associated Access Authorities (AAs). Many are being conducted over existing permit areas by a group of titleholders, in place of ‘exclusive’ surveys to meet work program commitments for which a considerably shorter period of confidentiality would otherwise apply.

This is of concern, as it is inconsistent with the policy intent of the data framework and could result in large amounts of data which would otherwise transition to open file being held for much longer periods.

There are other “gaps” in the RMA Regulations which may require review to better support exploration activities. They include the matter of reprocessed survey data – where composition, submission requirements and release provisions are unclear. There is additional ambiguity when the data reprocessed includes ‘non-exclusive’ data, as submissions may only be authorised for release once the confidentiality period for all contributing surveys has expired.
The Government is conscious that current provisions represent a balance of commercial and public interests, and that stability and predictability in the rules is therefore important. Before change is contemplated, it is important that the issues are fully reviewed within a transparent process of direct consultation. As such, there is merit in conducting a broader formal review of data management provisions. This must account for the various mechanisms and factors associated with attainment of offshore data in support of furthering Australia’s exploration potential, including SPAs and AAs. A formal review should aim to:

- Assess the clarity and appropriateness of current data arrangements, including those for prospecting and access authorities.
- Identify any barriers they may pose for supporting and promoting exploration, including frontier exploration.
- Examine whether confidentiality periods are appropriate and conducive to the operational requirements for exploration, including titleholder work program obligations.
- Recommend regulatory and administrative changes accordingly.

### Issue

The move to an extended (15-year) data confidentiality period has supported a strong survey services industry and a large increase in the proportion of non-exclusive (multi-client) survey activity. However, the lack of definition and differences in confidentiality provisions applying to surveys acquired under different commercial arrangements can in some circumstances create distortions or inconsistencies with the policy intent of promoting early open file access to data.

#### Action 3.8

The Australian Government will undertake a formal analysis of data management provisions in the OPGGS Act and the RMA Regulations. In particular, confidentiality provisions associated with resource management should be reviewed to identify any barriers, determine appropriate confidentiality periods, and recommend appropriate regulatory changes. This may include more precise definitions of terms, as well as consideration of confidentiality provisions for ‘non-exclusive’ surveys and data collected under SPAs and AAs.

### 3.2 Providing greater flexibility in lightly explored areas

Given the maturation of Australia’s major petroleum production regions, maintaining active exploration in our offshore petroleum frontiers is vital to generating a long-term series of major projects. This is increasingly being supported by new technologies, which make the previously impossible, possible. Nevertheless, exploration in frontier and lightly explored areas remains commercially high-risk, costly and logistically challenging.

Exploration in lightly explored or frontier areas can present unique challenges that potentially stretch the ability of operators to comply with current work program requirements. The new exploration paradigm, even in frontier regions, is to acquire very large 3D seismic surveys at the beginning of the permit’s term. Interpretation of the data allows prospective play elements in the basin to be progressively identified and ranked before more expensive well-drilled activity is undertaken.

The acquisition and processing of such data is a multi-year endeavour. Similarly, drilling in deep water – particularly in extreme weather environments – can be challenging. There are few suitable rigs available and, in some cases, rigs must be constructed. Sourcing appropriate rigs can take several years, and therefore extend beyond the current annual work program’s timeframes.

While the issue of fiscal or other direct incentives for frontier exploration is outside the scope of this Review, it did explore whether the current regulatory environment adequately reflects the realities of offshore exploration in the 21st century – particularly the challenges of operating in lightly explored or frontier areas.

This includes whether acreage release and titling arrangements for such areas are well-suited, and whether current instruments such as SPAs and AAs remain fit-for-purpose.

#### Promoting frontier exploration

Australia’s current approach to the award of acreage places considerable emphasis on drilling wells within a structured work program. This approach may not be realistic for frontier areas, for reasons outlined previously, and could be acting as an unintended barrier or disincentive to companies wishing to undertake more light-touch efforts in the initial phases.

The Offshore Petroleum Exploration Guideline: Work-bid, which commenced on 1 June 2015, will go some way to address that situation. It will do so by clarifying expectations around work bids and increasing flexibility in putting forward a three-year blocked primary term.
Stakeholder feedback suggests there is merit in further engagement around how the efficiency of arrangements for frontier areas could be enhanced. There were mixed views on the need for specific new title arrangements, or whether the existing framework could be adjusted to better recognise frontier activity. A clear “frontier” category (either through a new title category or existing framework) could help balance factors such as:

- Amounts of geoscientific information available in an area.
- Complexity of the area (for example, deep or ultra-deep exploration).
- Access and infrastructure requirements.

Acreage release arrangements currently provide for these considerations to be taken into account through work program bid assessments, although this may not be as clear and specific as many would like. Addressing this through a clearly identified frontier category with tailored guidance around common expectations for work programs in these areas could help frame bids and their assessment. There are several ways a frontier category could be provided for, including:

- **Permit size** - Larger blocks could be offered in designated areas (current maximum is 400 blocks).
- **Permit length** - An aggregated six-year primary term within a frontier title to provide additional flexibility (currently three-year primary term with a secondary term being three individual years).
- **Renewability** - An initial light-touch work program in frontier titles would have the same overall title terms (six years + five years + five years renewal periods).
- **Work program commitments** - e.g. minimal expectations of drilling a well in the first period would be clarified in the relevant title guidelines.

As noted, such arrangements could be given effect either through the creation of a new “frontier” category or by modifying existing arrangements – each with their own benefits and risks. Any contemplated changes would need to uphold the integrity of the competitive work bidding system, as well as be fair and equitable across the industry.

**Issue**

Current work bidding arrangements can be better attuned to attract new exploration to Australia’s offshore basins, including frontier areas and areas that are lightly explored. While increased flexibility and clarified expectations in the Offshore Petroleum Exploration Guideline will help acknowledge the diversity of Australia’s acreage, the titles framework may benefit from explicit recognition of the challenges associated with frontier and lightly explored areas.

**Action 3.9**

As a first step, the Australian Government will clearly identify areas that are considered frontier in future Offshore Petroleum Exploration Acreage Releases, along with providing revised guidance around work program bid expectations.

The Department of Industry, Innovation and Science will engage with industry to determine how precompetitive data arrangements and the exploration policy framework can be further integrated to support exploration in frontier and lightly explored areas. This includes the potential establishment of an exploration title structured for frontier areas.

The Review also notes that Geoscience Australia’s precompetitive data acquisition and regional geological studies could be better aligned with industry’s efforts to assess offshore frontier regions.

**Special Prospecting Authority (SPA) and Access Authority (AA)**

Submissions have indicated there is currently no suitable title or access arrangement that would enable companies to undertake high-level screening of frontier areas.

SPAs authorise exploration activities in vacant acreage for a statutory period no longer than 180 days, while AAs authorise an existing petroleum titleholder (including SPA holders) to undertake activity in acreage that is held under title. There is no statutory period for the duration of an AA. Neither authority authorises the holder to undertake any drilling activities.

More recently, SPAs have been used in maturing basins but not in lesser explored or frontier areas. While SPAs have been identified as possible tools for expanding and encouraging exploration in frontier areas, the following issues were identified as a barrier to their effective utilisation:

- The 180-day timeframe does not realistically allow sufficient time to undertake a basin-wide activity and, as a result, a company may need to apply for more than one SPA to complete activities.
- SPAs do not provide exclusivity rights to data being made open file at the conclusion of the SPA.
- Security and access to title are not guaranteed – if a company wishes to obtain an exploration permit as a result of an SPA, they would have to nominate the area as part of the acreage release process.
Furthermore, interaction between SPAs and AAs has been identified as a regulatory and administrative burden. Service providers are often required to submit both an SPA and an AA for one activity. In this scenario a provider who wishes to undertake a seismic survey over an existing title or titles must first apply, and then be approved, to hold an SPA to be eligible to apply for an AA. This means that some service providers have had to receive clearance from multiple authorities to complete an activity being undertaken. This is particularly relevant in cases where surveys are completed in two phases and, under current arrangements, the ability to extend an authority is only available for AAs and not SPAs. In those circumstances, the question becomes whether SPAs are still ‘fit for purpose’ and whether they can be better utilised to encourage and support increased exploration in frontier or lightly explored areas. There is clear benefit in aligning the maximum timeframe for SPAs with the operational timeframes required to undertake these activities, noting that there is also a need to ensure sufficient clarity around data confidentiality timing.

**Issue**

SPAs and AAs are existing tools available to explorers that can be used to encourage exploration activities and assessment, including in areas that are lightly explored. However, the short timeframe of 180 days (particularly for SPAs) and associated data confidentiality period do not provide sufficient incentive for use in such areas. There are some streamlining benefits to be gained through a smoother interaction between SPAs and AAs.

**Action 3.10**

Current arrangements for SPAs and AAs should be streamlined, and timeframes adjusted to better align with the operational requirements of industry. The Department of Industry, Innovation and Science, in conjunction with the offshore industry, will review the role of SPAs in attracting exploration, including in frontier areas.

### 3.3 Streamlining the acreage release process

Improving the nimbleness of current acreage release processes would better align with the needs of industry and capture a greater proportion of exploration investment when it was available. This is increasingly important in a globally competitive environment where conditions can change rapidly.

Australia’s acreage release cycle is currently based on a predictable schedule which can take up to three years from nomination of acreage for gazettal to the commencement of any field activity.

Under the regime the Australian Government, as part of its annual acreage release program, gazettes blocks that are released for work program bidding. The bidding period is either six months (in more mature areas where good data is available) or twelve months (in more poorly known or frontier areas).

From a practical perspective, the total length of time taken for any given cycle of release is dependent on a range of factors including:

- Amount and complexity of areas nominated.
- Number of bids received over each area.
- Quality of bids and the need to consult on, assess and, where necessary, clarify information contained in bids
- Joint Authorities’ consideration of the bid assessment.

The competitive bidding process (either through work program or cash bidding) is important in ensuring that the Australian public receives a fair return on acreage released for exploration. However, bid analysis shows that, on average, only one in four gazetted blocks is bid upon in a contested process (by more than one group) and only one in four blocks that are re-released receive any bidding interest at all.

Overall process length and a relative lack of transparency in awarding titles can create uncertainty for companies that have bid, which may not sit comfortably with commercial budgeting processes. Opportunities to improve the way acreage enters or re-enters the market include:

- Allowing for industry-nominated areas and smaller-sized blocks in the first bidding round.
- Moving to a twelve-month acreage release timeline, with all work program areas issued in a single round (rather than split across two rounds).
- Awarding titles immediately to sole bidders, subject to assessment that they are able to meet work program bid requirements – this could save significant time and would enable prompt commencement by successful bidders.
Another option is an “over the counter” (OTC) approach. This approach is currently available in some Australian jurisdictions, as well as overseas, for the release of particular classes of acreage. Typically that acreage is in areas which are poorly characterised (such as exploration frontiers) and/or areas that are perceived to have limited prospectivity. The acreage has usually received little or no recent interest from bidders through previous bidding programs (and may have been passed in if they had been gazetted).

While a key benefit of such an approach is that it can provide a pool of acreage readily available for exploration, careful consideration would need to be given as to how such a system would interact with the competitive bidding process which is at the heart of Australia’s regime. The potential impact and possible unintended consequences an OTC approach may have on the industry, particularly smaller companies, must be examined. While challenging, one way this might occur is that an OTC expression of interest in previously released acreage triggers a streamlined competitive process to ensure maximum value is obtained.

There may be other opportunities to streamline and improve current processes. While the Government is open to new approaches, ensuring the integrity of acreage release is paramount. Before changes are contemplated, there must be confidence that they do not undermine the goal of ensuring a fair and equitable process for industry, and that optimal value is being obtained for the release of public resources.

**Issue**

The length of time between nomination and award of acreage within the annual acreage release cycle can create uncertainty and misalignment in commercial planning. While the overall process and steps used in the cycle are necessary for fairness and equity, there are opportunities to improve the regime’s nimbleness.

**Action 3.11**

The Australian Government will ensure that approaches and processes used in its offshore petroleum acreage release program continue to align with its overall strategy of attracting new investment in existing and new petroleum acreage. That includes looking for opportunities to accelerate processes in acreage release programs (such as fast-tracking sole bid applications) and seeking ways to make acreage more readily available, so as to capture investment and effort in a timely manner.
4. Improving timeliness and efficiency of development and production

Success in the offshore petroleum sector can, in large part, be defined by our ability to secure sustained timely, efficient and safe commercialisation of our resources into global and domestic oil and gas markets.

Australia ranks as one of the most successful countries in the last 30 years, with over 10 LNG production facilities comprising 21 trains and 86.6 million tonnes of liquefaction capacity by 2020. While Australia’s oil production is expected to remain relatively flat through 2014-15, averaging 353 thousand barrels per day, it is expected to rise to 430 thousand barrels per day in 2017-18 due to increasing output from new projects.

Australia’s ability to attract the large-scale investment required to support offshore projects has been underpinned by a sound development and production regime which moves discoveries through the development process and into production. In particular, creation of the retention lease framework as an adjunct to production licencing has been of fundamental importance.

The framework, with its five-year timeframe and 15-year outlook, provides proponents that have found or acquired pre-commercial resources with surety of title (and thus protection of their investment) while they develop commercial pathways to a final investment decision and production. At the same time, its structure and application enable government to regularly test how companies are working to bring on development, and to manage the tensions that might arise between commercial and national interests.

The production framework, with its focus on field development plans, provides an avenue for the Joint Authorities to confirm Australia’s offshore resources are being exploited in an optimal and safe manner utilising good oil field practice.

Emerging issues

While Australia generally maintains a globally competitive legislative and regulatory regime, it must also keep pace with contemporary and emerging challenges as the nature of development and production in the offshore industry evolves. In doing so, it is important the regime continues to:

• Capture new investment, and drive timely and efficient resource commercialization.
• Maximise the efficient use of existing infrastructure.
• Promote efficient development of smaller and medium-sized discoveries, along with larger foundational finds.

With production facilities and infrastructure now costing many tens of billions of dollars, projects are increasingly complex both financially and technically, and typically harder to secure.

While standalone development is still possible, rising costs mean that many projects – particularly gas projects – require significant scale and/or access to existing infrastructure to be competitive.

For those reasons, the development landscape in maturing areas such as the Carnarvon is progressively switching to securing long-term (25 to 50 years) gas supplies for existing LNG production hubs. Investors are seeking to minimise economic risks and generate the return on, and return of, capital to justify the investments required in these projects. The magnitude of the investments in LNG projects today requires production at full capacity over a multi-decade lifespan.

Optimising long-term commercial resource recovery becomes critical in these circumstances. As our understanding of reservoir dynamics improves, optimisation of resource management in maturing fields and basins is gaining more focus – particularly how to minimise inadvertent stranding or sterilisation of smaller resources, including through retirement of “hub” infrastructure.

Furthermore, advances in technology for identifying petroleum need to be better accommodated in the regime. The advances, particularly in seismic technology, now allow the presence of petroleum to be detected and mapped reliably in many areas. For example, 3D seismic response can in some circumstances be calibrated on the basis of amplitude anomalies to such a degree in more mature exploration areas (such as the Carnarvon and outer Exmouth) that the probability of drilling success can be considered extremely high.

Modern commercial reality is that developers manage their assets strategically across a portfolio of resources and through time. It also takes time to build a robust understanding of the resource base in a region. Sufficient flexibility is needed in planning and regulatory approaches to allow development options to respond to improving knowledge and economic circumstances.
All of those factors can test the robustness of the current regulatory regime, which largely considers proposals based on a titles or individual project approach.

There is a strong case that the development and production framework be able to explicitly take a portfolio or even basin-wide perspective when considering optimal paths to commercialisation, particularly for resources set within a mature petroleum region or development hub. That issue becomes more compelling when considering how existing infrastructure can be extended as supply sources deplete.

While this might create tension where alternative and possibly faster commercialisation options for individual fields might be feasible, taking such an approach (where justified) is entirely consistent with the objective of optimising overall long-term returns from national assets.

While no submissions on that issue were received by the Review, there have been prior calls for a strongly enforced “use it or lose it” approach to be applied in the granting of retention leases and production licences.

Given infrastructure levels and other developmental challenges in many areas of offshore Australia, it would be counter-productive to compel development to move at a faster pace than the market will realistically bear. That would risk building an unstable regime, as well as eroding the confidence of investors who undertake significant expense and risk to find and develop resources over long timeframes. Our great success to date in commercialising offshore resources – with markedly few failures – suggests Australia has struck the right balance with its retention lease framework.

However, increased transparency – particularly in approvals processes and development pathways – would support a more informed market and improve confidence that resources are being managed in the national interest.

**Areas for action**

To continue attracting large-scale investment, the offshore regime’s development and production framework must align with and support contemporary commercial processes while also operating in the national interest.

Based on the challenges described above, the Review has identified three areas for action:

1. Assisting the development of smaller discoveries.
2. Moving to a more transparent, efficient and systems-based approach to development.

### 4.1 Assisting development of smaller discoveries

Efficient development of smaller discoveries is critical if Australia is to optimally exploit its resource base. This will become even more important as the number of modest and smaller finds increases, particularly in mature areas.

While technological advances are greatly improving our ability to locate resources, the high cost of drilling continues to make development options for medium- to smaller-sized discoveries challenging.

Modest-sized pools are usually too small for standalone development. Given their limited size, drilling an exploration well to demonstrate the recovery of hydrocarbon, followed by a development well for production, can be either uneconomic or drastically erode the value potentially derived from these pools. Under such circumstances, blocks in which the pools are located are more likely to revert back to vacant acreage.

Where such resources have been identified with a high degree of confidence, there are opportunities to reduce development costs. This can be done by allowing greater flexibility in the current framework to declare a location and for smaller pools to move directly into production, without the need to drill and prove a flow.

**Greater flexibility in declaring a Location**

To move a discovery into development and eventual production, it must first be declared as a Location. While a declared Location is not a title in itself, it enables the titleholder to set aside the block or blocks necessary to cover the discovery. At the point of a Location declaration, a statutory application period is triggered for the titleholder to lodge an application for either a retention lease or a production licence. The drilling of at least one exploration well is a pre-requisite in demonstrating a resource.

The declared location framework was first established nearly 50 years ago, at a time when offshore Australia was a rank exploration frontier and wells were drilled on the basis of poor-quality, regional 2D seismic data. Consequently, only the largest of traps were targeted for exploration drilling. This was an appropriate approach for the time, and is still appropriate for many exploration settings in the present day.

However, technology has since changed and improved significantly. The advent of sophisticated 3D seismic acquisition and processing, coupled with seismic inversion and AVO analysis, now allow the presence of petroleum to be detected and mapped much more reliably – and in more mature exploration areas; such as the Carnarvon and outer Exmouth. Consequently the probability of drilling success has increased significantly.
It would therefore seem appropriate to expand the policy underpinning Location declaration to include other modest-size pools, i.e. in the range between 100 trillion cubic feet (tcf) to less than 1 tcf. This would be based on similarity in play and seismic response, for pools that have not been drilled but for which there is strong confidence based on available evidence.

However, any expansion of the policy must maintain the fundamental principle of an exploration well having been drilled, and a demonstrated recovery of hydrocarbons from at least one of the related plays.

This can be achieved by expanding the policy for a Location declaration to encapsulate those modest traps within the title area that are of an identical “play-type”. This option should only be applicable to titles in areas with well-developed production infrastructure, where there is a logical development pathway for the pool or pools, and drilling of an exploration well on each would erode or destroy value.

There would also need to be high-quality 3D seismic data indicating a very high probability (90+%) that hydrocarbons are present in all of identified traps in the title area, and that they are producible.

This revision would see fewer small pools become stranded. Increased efficiencies and reduced costs would also be observed throughout the exploration and development cycle, by removing the need for unnecessary and expensive exploration wells and instead enabling pseudo-development wells to be drilled. It would also facilitate more timely tie-ins to existing and established production facilities and enable groups of smaller pools to be “clustered” and brought to development in a manner and timeframe that would not be possible under current arrangements.

**Issue**

Technological advances in the industry, such as 3D and 4D seismic modelling, enable identification and development of more resources than previously possible – potentially eliminating the need to drill in every case prior to production. The regime must keep pace with these advances while ensuring the fundamental principle of demonstrated hydrocarbon recovery is maintained, along with the need for titleholders to meet all permit conditions, including well commitments.

**Action 4.12**

The Department of Industry, Innovation and Science will work with stakeholders to develop criteria allowing the extension of an existing Location, with a demonstrated recovery of hydrocarbon, to other modest-sized pools in the title area, based on similarity in play and seismic response.

The arrangement should only be available in areas with high-quality 3D seismic data, and must be supported by a combination of drilling and seismic modeling for pools whose development would otherwise be economically challenged in mature basins.

**Identification and development of a petroleum pool without proven flow**

Advances in technology present an opportunity in mature producing areas to more easily move smaller discoveries – about which there is great confidence from an exploration permit – into the production licence without the need to prove a flow.

While this would have limited application across the industry, it could assist in minimising unintended non-development of modest petroleum pools. Exploration permit holders would need to demonstrate to the satisfaction of the Joint Authorities that:

- A producible petroleum pool exists in an exploration permit that is adjacent to an operating production licence.
- The titleholders across both the exploration permit and production licence are similar and/or a commercial arrangement for development has been entered into.
- There is no other development option available.

In such cases, it should be possible to excise the relevant block(s) into an adjoining production licence and incorporate the pool(s) into existing production schedules.

**Issue**

Given the trend towards discovery of modest- and smaller-sized petroleum resources, there is a need for further flexibility in the regime to support exploitation of these resources.

Titleholders should have the opportunity to bring forward development of these small pools from the exploration permit straight into a production licence.
Action 4.13

The Department of Industry, Innovation and Science will work with stakeholders to establish an administrative framework. This framework will enable exploration permit holders adjacent to an operating production licence to excise the blocks, which have been deemed to contain modest-sized pools, from the exploration permit into the adjacent production licence.

Titleholders must have satisfactorily proven to the Joint Authority that a hydrocarbon pool exists, without the need for a proven flow, and that the production licence is the only commercial pathway available for developing the pool(s).

4.2 A more transparent, efficient and systems-based approach to development and production

Development of Australia’s offshore petroleum resources is increasingly centered around foundation or hub projects in key producing regions. Both require resources and infrastructure to be managed in an integrated manner to secure the necessary long-term supply of feed gas and ensure project viability, and value for investors and the crown.

As producing basins mature and technologies evolve, we are gaining a better understanding of the resource base, as well as the associated physical and economic connectivities that exist around these projects. This in turn gives us a better understanding of potential development options, and an improved (but still not perfect) ability to optimise development on a basin or regional basis.

Currently the development and production framework is applied on a lease-by-lease or title-by-title basis. This remains appropriate as matched to the legal framework of the titleholders and regime.

However, there are opportunities to improve the framework’s overall flexibility and alignment with the realities of modern development. It should be adjusted away from a one-size-fits-all approach while also maintaining appropriate discipline on developers to pursue timely commercialisation. This can be done by:

• Better aligning retention lease terms to the circumstances of individual resources.
• Introducing a voluntary project development concept within the current retention and production lease framework.
• Making greater use of existing provisions in the framework to promote timely development.

While each of these actions is described below individually, they should be viewed as a package which will reduce costs for business while providing a more transparent and flexible decision-making framework. This will ensure that resources are being exploited optimally for the long term benefits of the project owner and the Australian community as the resource owner.

Within the framework, the Australian Government will continue encouraging developers to work cooperatively in the efficient utilisation of resources and infrastructure, recognising that ultimately these must remain commercial decisions.

Tailoring retention lease terms to the circumstances of individual resources

Retention leases are intended to provide titleholders with holding rights over a resource while timely commercial pathways under a production licence are identified. To grant a lease, the Joint Authority must be satisfied that the resource, while not currently commercial, is likely to become commercial within 15 years.

If this test is met, a five-year retention lease can be issued, with or without conditions as the Joint Authority deems appropriate. During this period, titleholders are expected to identify and address barriers to the timely and optimal commercial development of the resource. Following this, titleholders may either apply for a production licence or seek to renew the retention lease for a further five years, using the same test for commerciality (i.e. within the next 15 years).

While the retention lease framework effectively provides a rolling 15-year window for commerciality with no formal limit to the number of renewals, the majority (57%) of the active retention leases in Australia have been renewed three or less times.

Where the Joint Authority concludes a resource is commercial, or has no prospect of being commercial within a 15-year period, it may refuse the application. Where the Joint Authority JA refuses to grant or renew a retention lease, the title is either surrendered or the titleholder may apply for a production licence, within 12 months of the refusal.

In examining this framework’s efficacy, the Review has concluded that the 15-year period remains realistic and appropriate for testing overall commercial potential. However, there is a strong argument for allowing the Joint
Authority to issue leases for periods that are more realistically attuned to the economic and/or physical circumstances of resources.

There is inherent variability in the circumstances of individual resources. Critical factors that determine commerciality – such as volume, understanding, proximity and access to infrastructure – can differ significantly. Some resources might be relatively close to commerciality and require less than five years, while others may require considerably longer, such as sequenced production as part of a major long-lived gas project. This suggests the current one-size-fits-all approach could be made more efficient.

Where the anticipated period to commercialisation is around 10 years beyond the initial lease period, it effectively sets up a requirement for multiple applications over the development cycle where, in reality, it has been accepted that there is no prospect for early commercialisation.

Feedback from industry suggests that in some cases, applications can entail significant costs. Requiring multiple applications where commercial circumstances are unlikely to significantly change until well into the 15-year period erodes value for little apparent gain. It can also lead to (false) perceptions that resources are being “warehoused”.

In these circumstances, the primary benefit of a retention application – namely, to test commercial viability – can be similarly achieved through Annual Title Assessment Reports (ATARs) and/or conditions requiring specific milestone reporting (see section below).

Given this, the Review proposes introducing a minimum (three years) and maximum (15 years) term that titleholders could apply for in seeking a retention lease (or a renewal). Where a term has not been requested by the titleholder, the current five-year term would remain as a default position.

Determination of granted lease periods will remain the Joint Authority’s prerogative. To obtain consideration of a non-default period, titleholders would be expected to justify the claim against merit criteria.

Figure 2 provides a pictorial representation of how this change would work, including key principles for implementation.
Principles for implementation

1. The maximum timeframe that can be awarded by the Joint Authorities for a retention lease is the timeframe nominated by the applicant. For example if the applicant nominates 10 years, the Joint Authorities cannot grant a period greater than 10 years.

2. The Joint Authorities can offer a timeframe less than the timeframe requested by the applicant.

3. Retention leases issued with a timeframe greater than 5 years will be subject to increased scrutiny, and will be conditioned with commerciality reporting requirements that are appropriate and commensurate to the individual retention lease.

4. Retention lease titleholders can apply for a production licence at any time during the retention lease.

5. If, based on the outcomes of a commerciality re-evaluation, the Joint Authorities deem a retention lease is commercial during the term of the retention lease, it can revoke the lease and the titleholder would be required to apply for a production licence.
Issue

The current retention lease framework is based on a lease-by-lease consideration with a mandated five-year lease timeframe. Australia’s offshore petroleum resource holdings now exist across a range of regions with quite different commercial and geological circumstances, i.e. different levels of maturity and infrastructure. Retention lease renewals incur significant costs for industry and government, which can be hard to justify in circumstances where commercialisation is not evident within the next five-year window. This is particularly the case with remote resources, or where they may be optimally used as supply for long-lived production assets. Similarly, circumstances may exist where development is evidently closer than five years and a shorter timeframe is appropriate.

Any regime changes should promote certainty in decision-making, provide security for title tenure, and balance investor and national interests. Transparent testing of optimal commercial development is also important. Thus, where longer titles are contemplated, this should be accompanied by appropriate conditions to ensure regular testing of commerciality pathways.

Action 4.14

The Department of Industry, Innovation and Science will work with industry and other stakeholders to build a transparent decision-making framework. Criteria will be developed for the Joint Authorities to issue and renew retention leases for a minimum of three years to a maximum of 15 years, with the current five-year term to remain as a default position.

Introducing a project development focus

Discussion has highlighted a need for the framework to better align with modern commercial and physical realities of development and production in Australia’s offshore regions. This includes providing for a more project, or systems based focus in the management and administration of resources.

Current titling arrangements do not always adequately reflect the manner in which production in mature areas is actually managed. Rather, the number and naming of administrative titles relating to a given project – that is the production licences, retention leases and accumulations within the exploration permits – actually relate to the original exploration permits and subsequent discoveries made within those permits. For this reason, one production project is typically covered by multiple titles, with attendant inefficiencies in regulatory reporting and resource management. Moving progressively to the concept of portfolio management for larger production projects offers considerable benefits, and can be accomplished through introduction of a voluntary “project development” approach spanning multiple titles and pools.

Under this proposed approach there would be no change to the titling framework, which will remain the legal basis of the regime and titleholder rights. However, an opportunity would be available to voluntarily bundle – or more explicitly link, in a non-legal sense – titles or leases that are clearly economically or physically connected into a single project concept.

The benefits of such an approach are multiple. When taken together with proposed changes to retention lease periods, it could facilitate better alignment of timeframes for titles and leases. It would also help streamline reporting, and provide a more holistic basis for engagement around field management issues. Additionally it would provide for a more systematic and transparent approach where governments, proponents and other stakeholders can visibly understand proposed resource development pathways.

This concept provides a viable option for transitioning from an historical titling regime to a modern, streamlined project regime that relates to the producing assets themselves.

There may be challenges in developing the concept, as it will need to seamlessly align with current development and production frameworks and processes. It will also need to be robust and flexible enough to accommodate changing circumstances – e.g. ownership changes – and the emergence of alternative development options. It must also be dynamic, to ensure it does not foster a “set and forget” approach to resource development and management.

In this context, retaining the underlying legal framework would help ensure current flexibilities are maintained, while also avoiding introduction of unintended consequences.
Issue

There would be benefit in introducing a voluntary project development concept into the development and production framework. Not only would this enhance alignment with commercial realities, but it would better allow consideration of development pathways for the resource within a project or commercial hub concept. This could support more effective use of infrastructure, as well as provide a transparent strategy for national resource development.

Any regime changes should continue to support certainty in decision-making, and provide security for title tenure and discovered resources supporting a project. The concept, which should be at election of the titleholder, must be robust and flexible enough to embrace changing circumstances.

Action 4.15

The Department of Industry, Innovation and Science will work with industry and other stakeholders to develop transparent decision-making frameworks and criteria that provide for:

1. A “project development” concept to be established which enables the Joint Authorities to treat identified retention and production leases as a single project – thereby streamlining administration and encouraging a more holistic approach to resource development and management.

2. The framework only being available to titleholders who have demonstrated to the Joint Authorities that commercialisation of the identified resources held under retention leases through a single development concept is the most optimal and delivers the earliest commercial development for those resources.

Making greater use of existing framework provisions to promote timely development

Increasing flexibility in the retention lease framework to better reflect commercial and operational realities of offshore resource development should not be viewed as lessening the Australian Government’s ability to ensure the earliest economic development of Australia’s resources.

Australia’s offshore petroleum legal and supporting administrative regimes provide a range of mechanisms and triggers. They are intended to support and ensure the timely and optimal development of our offshore resources, and include:

- Work programs and title conditions.
- Monitoring and assessment by NOTPA to ensure titleholders meet these requirements.
- Rigorous assessment of commercial viability.
- Ability to seek a review at different points in time within a retention lease term.
- Decisions of the Joint Authorities regarding whether to grant, renew, refuse or revoke a retention lease.

The Joint Authorities will ensure that any flexibility provided in the retention lease framework is balanced by transparent and rigorous compliance and monitoring, particularly for long-dated leases. It will achieve this by utilising mechanisms such as:

- Conditions on title, to provide titleholders with clear and specific reporting requirements, including around commerciality.
- Annual Titles Assessment Reports (ATARs) to monitor progress by titleholder in commercialising and developing the resource.

Issue

Increasing flexibility in the retention lease framework to better reflect commercial and operational realities of offshore resource development might be viewed as a lessening of the Government’s responsibility for ensuring timely development of the Australian community’s offshore petroleum resources.

The OPGGS Act and supporting administrative regime provide a range of mechanisms and triggers that support and ensure the timely and optimal development of Australia’s oil and gas resources.

Action 4.16

The Joint Authorities will utilise the power and tools available under the OPGGS Act and associated regulations to provide an appropriate level of scrutiny that is commensurate with individual retention leases. This may include, but is not limited to, title conditions and clear reporting requirements, including around commerciality. Long-dated leases will be subject to regular reporting, to ensure appropriate efforts to commercialise resources are being maintained.
4.3 Streamlining processes and improving transparency

A number of the actions proposed above would introduce significant savings for industry, through improved administrative efficiency and reduced costs, as well as improving process transparency and proposed development pathways. There are several additional measures which can also provide such benefits.

Since 1 January 2012, NOPTA has reported 27 Locations declared, four of which have moved into a production licence, and 44 into retention. The process of moving from Location into the retention or production framework has a two-year application preparation timeframe. One two-year extension may be granted on request, in recognition that two years may be challenging for resources that are not well described.

For example, seismic survey acquisition and processing (essentially all 3D) can take up to two years. Interpretation times are also much longer, due to the data volumes associated with new acquisition technologies. Subsea and reservoir understanding and development planning is required. Resources located in isolated areas may require work to identify credible development infrastructure options, and marketing and investment activities will be required before key investment decisions can be made.

NOPTA has granted two-year extensions for 19 requested Location declarations. Today 14 Locations are under application for a retention lease. Of these, seven are already in their second term. This suggests that extensions are more the rule than the exception, and that moving to a straight four-year period with no extension would offer modest savings.

Issue

Current practice is a statutory two-year plus optional two-year extension application period for a retention lease or production licence, once a Location has been declared. This appears to impose minor but largely redundant administrative costs on industry, as most titleholders require the full four years.

Action 4.17

The Review recommends that the current application period for a retention lease or production licence be replaced with a flat four-year period, without an extension being available. This would more appropriately reflect the offshore petroleum industry’s commercial and operating practices.

Associated guidance and administration materials should be amended to provide greater clarity of intent and the Australian Government’s expectations around Location declarations.

Increased transparency and clarity for resources held in retention

At times, public debate around offshore resource development – and in particular, retention lease decisions – suggests the framework is not well understood by many outside the petroleum industry.

In determining a retention lease’s commercial viability, titleholders must undertake a commerciality review. This requires titleholders to consider a number of complex interrelated risks associated with the development of a resource, to determine the project’s commercial viability.

In general, while the commerciality test’s flexibility was supported, some submissions noted it was unclear if the Joint Authority considers issues such as: sustainability; political or sovereign risk; organisational or strategic capability; commercial viability (capital availability, joint venture or alliance success); economics (cost, return); and technical considerations. These represent the foundations for titleholders in making particular investment decisions that support the commercial development of a resource.

In addition, when assessing a retention lease renewal, the Joint Authority is required to regard information it already has before including consideration of third party submissions, where they have been made. Currently retention lease guidance is limited to a paragraph in Attachment A of the Guidelines which states:

> The Offshore Petroleum Joint Authorities will take note of third party claims that particular fields are commercially viable but the assumptions used by the third party will be tested in the same way that an applicant’s claim is tested. Claims and assumptions used by applicants or third parties will not be accepted if found to be unreasonable.

4 NOPTA (2012) Offshore petroleum guideline for grant and administration of a retention lease
Concern was raised that third party claims regarding the commerciality of a resource can potentially force retention lease applicants or holders to considerable time and expense in demonstrating why the claims or assumptions in the third party submission are not viable. Similarly, some third parties have argued that the process is opaque and information to assess commerciality is difficult to obtain.

The purpose of third party submissions is to provide an opportunity for non-resource holders to identify potential commercialisation options that titleholders could be asked to explore. It is not, and was never intended to be, an opportunity for external parties to establish a counter-bid for the resources. Such an approach would destroy the incentive for firms to take the risk to explore and begin development planning for resources.

Information provided in a retention lease application is in many cases proprietary, and highly commercially and market sensitive. This information should not be made public, particularly to potential competitors. However, it is appropriate to maintain an open-ended process whereby stakeholders can make submissions to NOPTA on any title at any time. This should not require an automatic assessment and response from the titleholder.

There is a need to provide greater clarity regarding the retention lease framework and how it operates. This includes decision-making considerations around resource commerciality and third party input to retention lease assessments.

**Issue**

There would be benefits in promoting a better understanding of the retention lease framework, its objectives, and key decision-making criteria (such as the commerciality test).

There appears to be widespread misunderstanding of the nature of the framework – particularly how it provides continuity of title for investors while also supporting, in a pragmatic manner, the timely and efficient commercialisation of petroleum resources.

**Action 4.18**

The Department of Industry, Innovation and Science will work with industry and other stakeholders to develop and publish:

- A publicly accessible fact sheet that articulates the purpose, objectives and operation of the retention lease framework, as a matter of priority.

- Guidance material associated with retention leases to provide:
  - clarity around the statutory commerciality test;
  - guidance on joint development and/or use of shared upstream infrastructure in determining the commerciality of retention leases; and
  - clarity and guidance on what is an acceptable third party submission to the Joint Authorities, in respect of its consideration of retention leases.

To promote transparency, the Joint Authority will also provide a public summary for the basis of its decisions, respecting commercially sensitive information.
Streamlining retention and production titling arrangements
The OPGGS Act requires that each retention lease and production licence be considered individually, even where a titleholder has more than one retention lease and/or production licence over the same petroleum field. This is due to the current titling requirements within the offshore petroleum regime.

There is merit in providing titleholders with an administrative ability to voluntarily combine retention leases and/or production licences where they have been made over the same petroleum field, for the purposes of reporting and compliance by the titleholder. This would remove unnecessary, potentially duplicative and costly reporting requirements on the development of the same hydrocarbon pool where there are two titles over the same pool.

The key criterion for this administrative arrangement would be that titleholders must demonstrate the retention lease and/or production licence(s) are both over a single petroleum pool.

The Review acknowledges that in establishing a voluntary administrative arrangement to enable combination of retention leases and/or production licences, or a retention lease into a production licence, careful consideration must be given to how the arrangements could be effected. Broader implications, such as tax, should be thoroughly understood. In this regard, the titleholder would be responsible for determining whether to combine the production licence(s) and/or retention lease(s).

Broader considerations of tax and taxation arrangements were outside the Review’s Terms of Reference.

Finding
Under the current titling regime, it is possible for more than one retention lease and production licence and/or a production licence and retention lease to be issued over the same petroleum pool to the same titleholder.

This can impose duplicative and costly reporting requirements.

Action 4.19
The Review recommends an administrative option be investigated that enables titleholders to voluntarily combine retention leases and/or production licences into a single lease or licence, where they have been made over the same petroleum field, for the purposes of reporting and compliance by the titleholder.
5. A clear framework for managing post-production decommissioning

Decisions about when and how to decommission offshore petroleum projects involve complex trade-offs between economic, environmental and political outcomes. These are overlaid upon a background of different perspectives of risk and stakeholder expectations.

As is the case with many complex public policy decisions, the most challenging aspects relate to uncertainty and values differences, particularly where these combine and make it difficult to identify options acceptable to all stakeholders.

Similarly, differing perceptions of risk – especially where these occur over different timeframes – make it challenging to quantitatively compare and choose among decommissioning options based upon, for example, predicted environmental impact. The removal, non-removal or partial removal of a facility may result in widely differing environmental outcomes. It is unlikely that a single decommissioning option will provide optimal outcomes in all scenarios, nor maximise social, environmental or economic outcomes. Decommissioning also includes exploration and appraisal activities, including dry wells.

**Emerging issues**

The Australian Government has a responsibility to ensure that present and future generations derive optimum benefit from the exploitation of our offshore petroleum resources. Australians must also be assured that offshore petroleum operations – including the decommissioning of facilities and other structures – are undertaken in ways that:

• Safeguard the health and safety of persons;
• Protect the environment; and
• Minimise disruption to other legitimate users and uses of the sea.

**Legacy considerations**

A number of possible uses for decommissioned offshore oil and gas platforms are currently being considered as alternatives to complete removal. These include artificial reefs, marine research facilities, renewable energy technologies, aquaculture, and tourism (i.e. diving).

It is important to note that, with the exception of artificial reef options, all alternative uses may not eliminate the need for a decision about platform removal. These options may merely postpone decisions on the basis that the alternative use is also limited by a finite structural life.

The decommissioning decision-making framework must have flexibility to adapt to changes in science, technology, stakeholder perceptions and other circumstances. For example, what is technologically feasible as well as environmentally and socially acceptable at the start of an operation may no longer be so at the end of production, some 25-plus years later. Decommissioning option choices will be strongly influenced by such factors as:

• Technical feasibility;
• Costs of alternative options; and
• Governmental exposure to liability under partial removal (i.e. rigs-to-reef).

**Cost of decommissioning**

While complete removal is an expensive and complex engineering process, there is little follow-up or involvement required by government (with the possible exception of shell mounds) once a facility and other structures are fully removed.

By contrast, partial removal and artificial reefing options trigger complex legal and regulatory processes that require decisions around ownership transfers and liability. For example, if the preferred approach was a partial removal option that transferred ownership of the platform as an artificial reef, the government would have a strong interest in minimising any liability or litigation costs stemming from accidents or damages associated with the structure.

On the other hand, titleholders may be reluctant to participate in artificial reefing programs if participation involves leaving a structure in place without some form of liability release.
The cost of removing and disposing of structures is strongly influenced by such factors as:
- Location and type
- Number of structures to be removed
- Water depth and weight associated with the structures
- Number and depth of wells and conductors
- Removal method used
- Transportation and disposal options (Lamanaco 2012).

Cost estimations vary. However, they consistently agree that decommissioning efforts will generally be in the order of millions of dollars. Depending on the option chosen, ensuring adequate funds to finance the decommissioning phase can be a major challenge.

**Areas for action**

When investing in offshore petroleum infrastructure, certainty around decommissioning requirements is desired. The scope and cost of removing retired equipment is a consideration for its selection, design and installation during pre-production planning. Lack of clarity around this stage causes operators to assume the most conservative position, namely costs for total site restoration. These are then incorporated into decisions for developing infrastructure.

This needs to be considered within the overarching framework of political and community expectations. The Review has examined some of the potential issues in relation to the decision-making framework for decommissioning.

Over the coming decades, a number of oil and gas production facilities operating in Australian Commonwealth waters will likely reach the end of their operating life and require some form of decommissioning. In light of this – and due to the complex interaction between national and international legislation and agreements around decommissioning – there is a need to clarify the Australian Government’s policy position and regulatory regime for decommissioning.

This will ensure Australia reflects leading practice and objectives-based regulation.

**Finding**

There is a lack of clarity around policy and regulatory requirements for decommissioning offshore petroleum facilities in Commonwealth waters.

**Action 5.20**

The Department of Industry, Innovation and Science will work with NOPSEMA, government agencies, industry and other stakeholders to develop a decommissioning policy framework. This framework will clearly articulate the Australian Government’s desired outcomes around decommissioning offshore petroleum and greenhouse gas storage facilities and infrastructure.

A necessary first step in this process will be to examine decommissioning frameworks in comparable regimes around the world, to identify what has and has not been successful and the reasons why.
Appendix 1 - Interim report actions

Chapter 2: Resource Management

Issue
There is a need for regular public reporting which provides a high-level state-of-play for Australia's offshore petroleum resources and associated infrastructure. This should identify current and emerging resource management concerns, and provide a transparent basis for engagement with industry to address identified issues. It should also provide the public with a transparent understanding of the management regime.

Action 2.1
NOPTA will work with the Joint Authorities and other relevant agencies to establish an annual public reporting framework which provides a high-level comprehensive picture of Australia's offshore petroleum resource base and associated development/production infrastructure. This should be undertaken as a regional or basin state-of-play assessment, highlighting any resource management issues and how they might be addressed.

NOPTA should also work with industry to identify the data and information sets required to support development of this report, noting the Australian Government's commitment not to increase the level of unnecessary reporting on industry.

Issue
Early engagement with industry on resource management issues can ensure they are addressed in a least-cost and non-disruptive way.

Action 2.2
NOPTA and other relevant agencies are to engage early with industry in relevant processes to ensure any resource management issues are identified and constructively addressed, i.e. a 'no surprises' approach to title and resource management.

Issue
There is a need to improve technical capacities and skillsets in NOPTA, to ensure effective and efficient advice is being provided to the Joint Authority and industry.

Action 2.3
NOPTA, working with relevant government agencies and industry, will assess its technical needs against identified resource management requirements and develop a medium-term plan to address any deficiencies or areas for new capacity.
Issue

There are no legislative or publicly available expectations of decision times for consideration by the Offshore Petroleum Joint Authorities on title decisions, and the Operating Protocol for Offshore Petroleum Joint Authorities and supporting institutions is not publicly available. There would be value in the Joint Authorities making all indicative timeframes for title decisions public and clear.

NEATS provides a confidential industry portal for titleholders to view all their titles, including the status of an application made to the Joint Authorities. It appears this function is not being utilised effectively by titleholders at present.

Action 2.4

The Review recommends that the Offshore Petroleum Joint Authorities consider making the Operating Protocol for Offshore Petroleum Joint Authorities and Supporting Institutions public. At minimum, the Joint Authorities should make public the indicative timeframes for title decisions as identified in the Protocol.

The industry portal element of NEATS will be promoted by NOPTA to support full and effective utilisation of this function by titleholders.

Issue

There may be opportunities for the Joint Authorities to devolve non-contentious or strategic decisions to the Titles Administrator. For example, the declaration of a location is purely a technical assessment with no other considerations being required or relevant. This assessment is already made within NOPTA but requires the Joint Authorities to formally approve it, with similar issues arising in approvals for Rate of Recovery and Equipment and Procedures.

Action 2.5

The Joint Authorities should consider reviewing administrative decision points across the offshore petroleum regime. It might consider delegating and/or devolving some decisions to the Title Administrator, and even the responsible Commonwealth Minister where no intersection with State and Territory regimes is contemplated.
Chapter 3: Stimulating exploration

Issue

Geoscience Australia’s precompetitive studies program is highly regarded and strongly supported by industry. However, there would be benefit in improving the understanding, prioritisation and alignment of planned precompetitive activity between the offshore industry and Geoscience Australia. There are opportunities for complementary activities between industry and Geoscience Australia to support the continued and new exploration of Australia’s offshore areas. They could include regional geological studies, provenance studies, tectonic framework studies, and geochemical studies.

Action 3.6

Geoscience Australia will develop a medium-term (3-5 years) rolling strategy for Australia’s precompetitive geoscience program, in consultation with the offshore petroleum industry and the Department of Industry, Innovation and Science. The offshore petroleum industry and Geoscience Australia are encouraged to engage on Geoscience Australia’s forward data and interpretation programs, to further identify and support complementary activities. Such work should be appropriate to Geoscience Australia’s overall mandate. Consideration should also be given by Government and industry to opportunities for enhancing the overall level of precompetitive effort.

Issue

The data presently available to explorers and other stakeholders is of inconsistent levels of completeness and quality. Although processes are in place to manage new submissions, data compliance remains an issue for pre-2012 legacy data. Implementation of the project to transform legacy data and more extensively populate NOPIMS will address this matter to a large degree. However, continuing improvement to current and future data holdings will require NOPTA, Geoscience Australia and industry to continue working together to maintain data quality and availability to the required standard.

Action 3.7

NOPTA, Geoscience Australia and the petroleum industry will work together to ensure that all new data submissions and current data holdings are compliant to agreed standards.

Issue

The move to an extended (15 year) data confidentiality period has supported a strong survey services industry and a large increase in the proportion of non-exclusive (multi-client) survey activity. However, the lack of definition and differences in confidentiality provisions applying to surveys acquired under different commercial arrangements can in some circumstances create distortions or inconsistencies with the policy intent of promoting early open file access to data.

Action 3.8

The Australian Government will undertake a formal analysis of data management provisions in the OPGGS Act and the RMA Regulations. In particular, confidentiality provisions associated with resource management should be reviewed with an aim to identify any barriers, determine appropriate confidentiality periods, and recommend appropriate regulatory changes. This may include more precise definitions of terms, as well as consideration of confidentiality provisions for ‘non-exclusive’ surveys and data collected under SPAs and AAs.
Issue

Current work bidding arrangements can be better attuned to attract new exploration to Australia’s offshore basins, including frontier areas and areas that are lightly explored. While increased flexibility and clarified expectations in the Offshore Petroleum Exploration Guideline will help acknowledge the diversity of Australia’s acreage, the titles framework may benefit from explicit recognition of the challenges associated with frontier and lightly explored areas.

Action 3.9

As a first step, the Australian Government will clearly identify areas that are considered frontier in future Offshore Petroleum Exploration Acreage Releases, along with providing revised guidance around work program bid expectations.

The Department of Industry, Innovation and Science will engage with industry to determine how precompetitive data arrangements and the exploration policy framework can be further integrated to support exploration in frontier and lightly explored areas. This includes the potential establishment of an exploration title structured for frontier areas.

The Review also notes that Geoscience Australia’s precompetitive data acquisition and regional geological studies could be better aligned with industry’s efforts to assess offshore frontier regions.

Issue

SPAs and AAs are existing tools available to explorers that can be used to encourage exploration activities and assessment, including in areas that are lightly explored. However, the short timeframe of 180 days (particularly for SPAs) and associated data confidentiality period do not provide sufficient incentive for use in such areas. There are some streamlining benefits to be gained through a smoother interaction between SPAs and AAs.

Action 3.10

Current arrangements for SPAs and AAs should be streamlined, and timeframes adjusted to better align with the operational requirements of industry.

The Department of Industry, Innovation and Science, in conjunction with the offshore industry, will review the role of SPAs in attracting exploration, including in frontier areas.

Issue

The length of time between nomination and award of acreage within the annual acreage release cycle can create uncertainty and misalignment in commercial planning. While the overall process and steps used in the cycle are necessary for fairness and equity, there are opportunities to improve the regime’s nimbleness.

Action 3.11

The Department of Industry, Innovation and Science will ensure that approaches and processes used in its offshore petroleum acreage release program continue to align with its overall strategy of attracting new investment in existing and new petroleum acreage.

This includes looking for opportunities to accelerate processes in acreage release programs (such as fast-tracking sole bid applications) and seeking ways to make acreage more readily available, so as to capture investment and effort in a timely manner.
Chapter: 4 Promoting timely and efficient development and production

Issue

Technological advances in the industry, such as 3D and 4D seismic modelling, enable identification and development of more resources than previously possible, potentially eliminating the need to drill in every case prior to production. The regime must keep pace with these advances while ensuring the fundamental principle of demonstrated hydrocarbon recovery is maintained, along with the need for titleholders to meet all permit conditions, including well commitments.

Action 4.12

The Department of Industry, Innovation and Science will work with stakeholders to develop criteria allowing the extension of an existing Location, with a demonstrated recovery of hydrocarbon, to other modest-sized pools in the title area, based on similarity in play and seismic response. The arrangement should only be available in areas with high-quality 3D seismic data, and must be supported by a combination of drilling and seismic modeling for pools whose development would otherwise be economically challenged in mature basins.

Issue

Given the trend towards discovery of modest- and smaller-sized petroleum resources, there is a need for further flexibility in the regime to support exploitation of these resources. Titleholders should have the opportunity to bring forward development of these small pools from the exploration permit straight into a production licence.

Action 4.13

The Department of Industry, Innovation and Science will work with stakeholders to establish an administrative framework. This framework will enable exploration permit holders adjacent to an operating production licence to excise the blocks, which have been deemed to contain modest-sized pools, from the exploration permit into the adjacent production licence. Titleholders must have satisfactorily proven to the Joint Authority that a hydrocarbon pool exists, without the need for a proven flow, and that the production licence is the only commercial pathway available for developing the pool(s).

Issue

The current retention lease framework is based on a lease-by-lease consideration with a mandated five-year lease timeframe. Australia’s offshore petroleum resource holdings now exist across a range of regions with quite different commercial and geological circumstances, i.e. different levels of maturity and infrastructure. Retention lease renewals incur significant costs for industry and government, which can be hard to justify in circumstances where commercialisation is not evident within the next five-year window. This is particularly the case with remote resources, or where they may be optimally used as supply for long-lived production assets. Similarly, circumstances may exist where development is evidently closer than five years and a shorter timeframe is appropriate.

Any regime changes should promote certainty in decision-making, provide security for title tenure, and balance investor and national interests. Transparent testing of optimal commercial development is also important. Thus, where longer titles are contemplated, this should be accompanied by appropriate conditions to ensure regular testing of commerciality pathways.

Action 4.14

The Department of Industry, Innovation and Science will work with industry and other stakeholders to build a transparent decision-making framework. Criteria will be developed for the Joint Authorities to issue and renew retention leases for a minimum of three years to a maximum of 15 years, with the current five-year term to remain as a default position.
Issue
There would be benefit in introducing a voluntary project development concept into the development and production framework. Not only would this enhance alignment with commercial realities, but it would better allow consideration of development pathways for the resource within a project or commercial hub concept. This could support more effective use of infrastructure, as well as provide a transparent strategy for national resource development.

Any regime changes should continue to support certainty in decision-making, and provide security for title tenure and discovered resources supporting a project. The concept, which should be at election of the titleholder, must be robust and flexible enough to embrace changing circumstances.

Action 4.15
The Department of Industry, Innovation and Science will work with industry and other stakeholders to develop transparent decision-making frameworks and criteria that provide for:

1. A “project development” concept to be established which enables the Joint Authorities to treat identified retention and production leases as a single project – thereby streamlining administration and encouraging a more holistic approach to resource development and management.
2. The framework only being available to titleholders who have demonstrated to the Joint Authorities that commercialisation of the identified retention leases through a single development concept is the most optimal, and delivers the earliest commercial development of the resources.

Issue
Increasing flexibility in the retention lease framework to better reflect commercial and operational realities of offshore resource development might be viewed as a lessening of the Government’s responsibility for ensuring timely development of the Australian community’s offshore petroleum resources.

The OPGGS Act and supporting administrative regime provide a range of mechanisms and triggers that support and ensure the timely and optimal development of Australia’s oil and gas resources.

Action 4.16
The Joint Authorities will utilise the power and tools available under the OPGGS Act and associated regulations to provide an appropriate level of scrutiny that is commensurate with individual retention leases. This may include, but is not limited to, title conditions and clear reporting requirements, including around commerciality. Long-dated leases will be subject to regular reporting, to ensure appropriate efforts to commercialise resources are being maintained.

Issue
Current practice is a statutory two-year plus optional two-year extension application period for a retention lease or production licence, once a Location has been declared. This appears to impose minor but largely redundant administrative costs on industry, as most titleholders require the full four years.

Action 4.17
The Review recommends that the current application period for a retention lease or production licence be replaced with a flat four-year period, without an extension being available. That would more appropriately reflect the offshore petroleum industry’s commercial and operating practices.

Associated guidance and administration materials should be amended to provide greater clarity of intent and the Australian Government’s expectations around Location declarations.

Issue

There would be benefits in promoting a better understanding of the retention lease framework, its objectives, and key decision-making criteria (such as the commerciality test).

There appears to be widespread misunderstanding of the nature of the framework, particularly how it provides continuity of title for investors while also supporting, in a pragmatic manner, the timely and efficient commercialisation of petroleum resources.

Action 4.18

The Department of Industry, Innovation and Science will work with industry and other stakeholders to develop and publish:

- A publicly accessible fact sheet that articulates the purpose, objectives and operation of the retention lease framework, as a matter of priority.
- Guidance material associated with retention leases to provide:
  - clarity around the statutory commerciality test;
  - guidance on joint development and/or use of shared upstream infrastructure in determining the commerciality of retention leases; and
  - clarity and guidance on what is an acceptable third party submission to the Joint Authorities, in respect of its consideration of retention leases.

To promote transparency, the Joint Authority will also provide a public summary for the basis of its decisions, respecting commercially sensitive information.

Issue

Under the current titling regime, it is possible for more than one retention lease and production licence and/or a production licence and retention lease to be issued over the same petroleum pool to the same titleholder. This can impose duplicative and costly reporting requirements.

Action 4.19

The Review recommends an administrative option be investigated that enables titleholders to voluntarily combine retention leases and/or production licences into a single lease or licence, where they have been made over the same petroleum field, for the purposes of reporting and compliance by the titleholder.
Chapter 5: A clear framework for the management of decommissioning

Issue
There is a lack of clarity around policy and regulatory requirements for decommissioning offshore petroleum facilities in Commonwealth waters.

Action 5.20
The Department of Industry, Innovation and Science will work with NOPSEMA, government agencies, industry and other stakeholders to develop a decommissioning policy framework. This framework will clearly articulate the Australian Government’s desired outcomes around decommissioning offshore petroleum and greenhouse gas storage facilities and infrastructure.
A necessary first step in this process will be to examine decommissioning frameworks in comparable regimes around the world, to identify what has and has not been successful and the reasons why.
Appendix 2 - Terms of Reference: Offshore Petroleum Resource Management Review

Background

Australia’s offshore resource management legal and operational framework aims to encourage timely and efficient and sustainable exploration and development of oil and gas resources in Commonwealth waters. The current regime has served Australia well to date, attracting substantial investment and supporting the development of an efficient, dynamic and internationally competitive offshore oil and gas industry. However, challenges from growing international competition and a changing offshore operating environment with risks and costs rising as fields mature and new frontier areas are explored and developed make it prudent to look at whether ongoing and timely development of Australia’s oil and gas resources are being appropriately supported into the future. New technologies and industry practices have and will continue to improve the offshore petroleum industry’s ability to access and exploit resources previously considered too difficult or uneconomic. These changes across the sector are testing the robustness of the policy, legal and regulatory framework governing Australia’s offshore resource management going forward. A framework that is flexible enough to keep pace with this evolving operating environment could help attract investment in the exploration and development of Australia’s offshore oil and gas resources.

During 2014-15, the Australian Government will undertake a high-level strategic review of the framework governing oil and gas resource management in Commonwealth waters. The Offshore Petroleum Resource Management Review will ensure that the framework is fine tuned to support timely and efficient commercial investment, exploration and development.

Objectives and scope

Consistent with the Government’s regulatory reform agenda, the Review will identify key strategic actions that could be implemented to improve the policy and regulatory framework governing offshore resource management in Commonwealth waters. Any proposed actions will seek to enhance the framework’s clarity and flexibility and reduce regulatory risks and costs, with the aim of supporting optimal commercial investment in the development of Australia’s offshore oil and gas resources. They will not be applied retrospectively to change existing property rights or contractual arrangements.

The Review will examine in an integrated manner the key sub-elements of the offshore resource management framework as they apply over the entire exploration and production lifecycle. This could range from how precompetitive data and information supports exploration activities in rank frontiers or underexplored regions to the assessment whether the current regime governing exploration, retention and production activities are providing the most effective commercial incentives and flexibility needed to retain and attract new investment in Australia’s offshore petroleum sector. The Review will also take into consideration changing technologies and industry practices in Australia and world-wide.

The Review will identify key emerging economic, commercial, geological and technical issues that are currently or have the future potential to affect offshore resource management across the exploration and production lifecycle. It will also review the policy and regulatory framework governing resource management to identify strategic opportunities to:

• Clarify and reinforce the policy objectives and principles underpinning the Government’s approach to resource management in Commonwealth waters

• Identify legal and regulatory gaps; and clarify, simplify and rationalise the legal and regulatory framework to help improve regulatory certainty and reduce related costs

• Improve the flexibility of the resource management framework so it can more effectively accommodate complex geological conditions, technological advances, evolving commercial practice and emerging operating challenges.

The Review will reflect strategic directions established in the Energy White Paper and related ongoing policy development being undertaken by the Australian Government. It will also provide an opportunity for external stakeholders to identify actions to remove undue impediments to business activity and to improve the attractiveness of the framework.

The Review will deliberately maintain a high level and strategic focus and as such it will not undertake a detailed assessment of all existing legal, regulatory and administrative arrangements governing resource management in Commonwealth waters. However, detailed examination of some arrangements may be required in the context of developing proposed key strategic actions.
There are a range of issues that indirectly affect resource management outcomes which are outside the scope of the Review. These include: health, safety and environmental regulation; taxation; labour relations and skills formation; developments in capital and commodity markets; and social licence to operate. Similarly, the resource management dimensions of rules pertaining to offshore carbon sequestration are considered outside the scope of this Review.

**Deliverables**

The Review will propose a clear set of strategic actions that could be readily implemented to improve the policy and regulatory framework governing offshore petroleum resource management in Commonwealth waters.

A consultation paper will be released in November 2014 to seek stakeholder views on key issues and strategic actions to enhance current arrangements. An interim report will be released for consultation in March 2015. The final report will be delivered to the Commonwealth Minister for Industry by 30 June 2015.

**Project management**

The Review will be undertaken by the Department of Industry, Innovation and Science in close consultation with key stakeholders. Representatives from industry, jurisdictions and various Commonwealth bodies will be invited to work alongside Departmental staff undertaking the Review. The Review will be supported by a Commonwealth-led working group including key industry, jurisdictional and institutional partners.
Appendix 3 – Summary of issues identified in all submissions made to the Offshore Petroleum Resource Management Review

The Offshore Petroleum Resource Management Review received a total of 11 submissions to the 26 November 2014 Consultation Paper. One responder submitted two applications, one of which was requested to be treated as ‘confidential’. In total, seven responders requested their submission be treated as confidential.

The submissions have been used by the Review Team in its consideration of key issues across the petroleum exploration and development lifecycle, and in the preparation of key outcomes.

Submissions noted that the offshore petroleum regulatory regime has served Australia extremely well over the past 60 years and does not require fundamental change. It was noted that the existing regime supports timely commercial development, as well as maintains necessary security of title for joint venture parties that have taken financial risks and discovered a resource. The regime also, through its retention lease framework, acknowledges the economic and technological barriers which some discoveries have, and provides titleholders with the opportunity to address them.

While submissions supported the key initiative of this Review – which was to ensure Australia’s offshore petroleum regime is fit for purpose – many noted that any changes to the regime must continue to provide certainty of tenure, fiscal stability and regulatory efficacy.

Consistent with the Review’s Terms of Reference, the Team has not considered issues relating to: health, safety and environmental regulation; taxation; labour market relations and skills; developments in capital and commodity markets; social licence to operate; and resource management dimensions pertaining to offshore sequestration.

Below is a summary of the submissions received.

### GENERAL

- The regime has provided a critical framework for exploration and development.
- The industry has contributed significantly to the economy through tax revenue and supply of energy.
- Any changes to the offshore petroleum regime must not undermine the current system’s operation.
- The offshore petroleum regime does not require fundamental reform.
- Support exists for policy to optimise long-term resource discovery and recovery while recognising practical constraints imposed by economic, technological, operational and geological factors.
- “Optimal long-term recovery” should remain the guiding philosophy underpinning the offshore petroleum framework. However, clarification of the meaning of optimum may be required – suggestion that “optimum” refers to the most valuable (rather than maximum volume), to ensure highest returns to the community.
- There is also ambiguity in the term ‘good oil field practice’ which may need to be clarified.
- Australia’s resource management framework should not undermine the Australian Government’s stewardship role over the resource.
- There is a need for well-managed policy change to avoid ‘sovereign risk’.
- There is also a need for confidence in the stability of property rights which underpin long-term investment assumptions to be maintained.
- Other government policy can impinge on security of property rights, and the regulator should consult other agencies on policy that could erode property rights.
- There is support for the principle that resources are best developed (and risks managed) through commercial development, and that key to this is the application of structured property rights which provide due recognition for the substantial investments and risks taken by businesses.
- Additional flexibility in application of the offshore petroleum framework may be necessary in an increasingly challenging global context, to incentivise activity in new areas and facilitate aggregation of smaller discoveries.
- New exploration can be incentivised through tax incentives.
- There is a need for transparency and timeliness in regulatory processes, to bolster confidence in those processes and facilitate industry planning and decision-making. This requires articulation of approval time periods, timeliness against those guidelines, and clarity in regulatory decision-making – also relevant to policy changes.
- There is scope for enhanced efficiency through the use of electronic media for reporting and approvals processes (rather than manual processes). Other lessons could be learned from CRINE/LOGIC in the UK for applicability in Australia.
- The role and basis for Joint Authorities decision-making on operations which are entirely within Commonwealth waters is unclear. Multi-regulator review appears burdensome, and can create draw-out approvals. There are also no published or agreed timeframes for Joint Authorities decision-making, and no avenue to enquire at the reasons for lengthy decision timeframes.
- A call for proper separation and delegation of power (legislature) has been made.
- There is a need for the Joint Authorities to have technical advice and assessment available to inform decision-making.
A more formal process to manage common water space (such as Marine Spatial Planning - MSP) should be adopted to balance objectives (i.e. environmental, fishing, shipping, petroleum) in a consultative and constructive manner, and better support collaboration between agencies. GA’s AMSIS should be used to support a MSP. AMSA’s data is freely available to industry.

There is merit in addressing issues associated with CCS, petroleum and cross-jurisdictional boundaries.

Australia should be proactive in promoting oil exploration, development and refining to ensure long-term energy independence and security.

PRECOMPETITIVE

Australia’s offshore precompetitive program is world class, and the benefits are evident in the uptake of areas through acreage release. Precompetitive geoscience makes acreage more attractive and exploration more efficient.

Longer-term planning for GA’s activities, including guaranteed government funding for longer periods, could be factored into the Government’s exploration strategy. This would provide industry with greater information around areas targeted and timing of data.

Geoscience Australia (GA) should maintain its own separate strategy for precompetitive work, developed in consultation with industry.

There is support for greater collaboration between government, industry and seismic companies in precompetitive programs.

Some preference has been expressed for a greater bias in any new research towards frontier areas to promote new regions for exploration.

Industry input to the GA work program could help build regional data sets.

Caution has been given around ensuring that precompetitive partnership programs do not undermine the competitive-neutrality of GA’s work. Any partnership would need clear parameters with equal opportunity across players (through tender process). Any competition and behavioural effects of participation would need to be mitigated upfront.

Suggestion has also been given that precompetitive geoscience in frontier areas could be funded through Good Standing Agreements.

ACREAGE RELEASE

General support exists for the diversification of areas included in acreage release, with calls for a “frontier” category.

There is some concern over the timeliness of acreage release, with suggestions for:
- Statutory timelines and guidelines for bid assessment
- Accelerated processes for small and industry-nominated blocks
- A study on the average time for areas to reach permits, to inform process improvements.

The offshore petroleum acreage release program is too long, tedious and costly – it should not require nominations and all unleased areas should be open for competitive bidding in every round.

Suggestions around the offshore petroleum acreage bidding and bid assessment include:
- Bidders should demonstrate their financial and technical ability to undertake the primary work program commitments (to avoid unachievable work programs) and ensure that those who are successful have the capacity to complete the work program
- Work program value should be based on assessment of an integrated exploration strategy
- Wells should not be ranked higher than seismic in bid assessment (should be based on the value of the activity)
- Clear criteria for work bid evaluation should be developed, with consideration of the relative weighting of activities.
- There is currently little transparency or disclosure about what constitutes an acceptable minimum work program, and greater transparency in decision-making on bids is also needed.

In recognition of safety and navigation issues, there is a need to formalise administrative arrangements for the vetting of petroleum releases, exploration drilling and seismic operations that encroach on a ship routing measure or shipping route.

Quality assurance of data packages offered with acreage release could be improved, as gaps in the data diminish its value.

Exploration strategy development and greater collaboration between Government and industry is called for. Industry should be provided with a longer-term understanding of areas subject to release in the medium term. This would also focus precompetitive efforts.

Small companies undertaking grassroots exploration are fast movers in frontier areas. However, Australia’s current regime makes no allowance for startup enterprises.

GEOSCIENCE DATA MANAGEMENT

There is a need to improve the data quality assurance process, especially where data is incomplete.

There should be a process for updating industry when new data becomes available.

There is a need for better access to open file data and support for NOPIMS.

Support is needed for timely online access to digital data.

GA should be properly resourced to undertake data management activities.

There is a need to streamline the process for submitting reports (i.e. online forms requesting critical information).
• Concerns have been expressed that the utility of MCS data is not optimal, with overlap of existing data but an inability to blend data.
• Calls have been made for a formal review of data confidentiality provisions, with some comments that:
  • Variance in the exclusive versus non-exclusive confidentiality period is not justified on an exploration outcomes basis
  • Work program commitment surveys should attract the same confidentiality period as proprietary surveys
  • Confidentiality periods should mirror extensions and suspensions
  • Data provisions for frontier areas should be commensurate with investment in the area.
• Data management sections of the legislation and regulations should be reviewed.

The reporting requirements for gas reserves can be improved to help with forecasting gas supplies.

EXPLORATION TITLES AND AUTHORITIES

• Support exists for the Exploration Guidelines update (currently underway).
• More timeline flexibility is needed to account for timeframes associated with new technologies, environmental permits, and seasonal windows.
• More flexible work program timing would promote greater cooperation between operators and result in efficiency gains (including savings in mobilisation and demobilisation costs).

• Suggestions include that:
  • Work program commitments commenced in one year and continued into subsequent years should be recognised as compliant
  • Elements of a work program should be undertaken by ‘term’ and not annual commitments
  • More flexible permits would alleviate issues with short work windows and environmental approval conditions.

• Support exists for joining work program permits into a larger permit to cover the play concept.
• More open recognition is needed that frontier exploration is higher risk and requires a different exploration strategy, with regional studies and de-risking activities undertaken first.
• Consideration should be given to mechanisms that facilitate frontier exploration including:
  • The Special Prospecting Authority (SPA), with amendments to timeframes and data confidentiality periods
  • A precompetitive partnership program
  • Revamp of work program bidding and administration that considers:
    - Larger permit sizes
    - Longer and more flexible tenure periods
    - Flexibility in work program commitments
    - Successive relinquishments of 10% rather than 50% or 25% in the first permit.
    - Recognition of infrastructure creation (in bidding and assessment).

• There is no suitable title or access arrangement that will allow high-level screening of an area.
• The SPA does not allow sufficient time to undertake exploration activities or provide data exclusivity. The Australian Government should consider altering the SPA or developing a new title for screening activities.

• Consider of tax incentives to encourage development in risky areas that have greater uncertainty and complex environments.

• Finer graticulation of titles that are more closely aligned with the geology of discovery has been suggested. Others argue the graticular block framework is a simple and common approach used world-wide, and accommodates uncertainties (particularly at depth) in the geology.

LOCATIONS

• Consideration should be given as to whether a location could be declared without drilling a well. For example, titleholders could be allowed to present a technically justified application for a location using well-calibrated 3D seismic modelling rather than drilling and flowing a well.
• The “declaration of a Location” requires review, and expired or revoked locations should return to the exploration permit.

• Statutory timeframes provided for in the Act should be changed to a single four-year term for locations to reflect the industry’s commercial realities and operating practices.

• A specific work program requirement should be established at the point of a location being declared.

• The Department of Industry and Science should consider how locations can best be nominated into a single Retention Lease.

RETENTION LEASES

• The retention lease system serves a critically important role in exploration and development. It currently provides for appropriate management, and regulators have sufficient powers to ensure resources are developed in a timely manner where it is commercial to do so.
• Support exists for continuation of principles that underpin the retention lease regime, as well as the framework that administers the retention lease system.
• The framework recognises the need for security of title – reflecting the risks and costs incurred in exploration and development. It balances the need to develop resources in a timely manner with the risks, technology and market factors that must be considered in commercial decisions. Without the security of tenure provided by the retention lease system, there would be less exploration.

• There is no clear definition of “commercial viability”, with the Guidelines providing minimal guidance.
• An exploration permit holder has the right to apply for and be granted a retention lease, including renewal(s). These rights should not be diluted.
• Retention lease assessment criteria should remain the means for Joint Authorities to engage the titleholder around barriers to commercialisation. This information should remain confidential.
• Joint Authorities have the flexibility and discretion to implement conditions specific to the retention lease at the time of renewal.

• Five-year retention lease renewal is reasonable. Some may warrant longer times, but five years allow the Joint Authorities to assess progress and alter conditions as appropriate.

• Enhanced transparency and access to information may alleviate concerns around the grant and renewal of retention leases. However, commercially sensitive material should not be released to the public or third parties. Some standardised grant and renewal information could be released.
• Third party input to the process should demonstrate the same bona fide credentials as the titleholder.
• Retention lease renewal information is highly confidential. It is up to the Joint Authorities to make an assessment based on its information.

• There is opportunity to increase flexibility in the retention lease grant and renewal system to provide long-term security for LNG developments involving multiple gas fields in a number of release areas.
• There is support for treating discoveries in different permits as a single project for the application of retention leases. This allows for coordinated assessment and reflects the interconnected nature of resources, as well as the need for satellite discoveries to improve resource viability.
• The terms of retention leases should be adjusted for fields that underpin major LNG projects.
• One option is to voluntarily merge retention leases into one petroleum field held by the titleholder.

• Consideration should be given to the removal of, or greater flexibility in, the commercial viability 15-year criteria. Others say 15 years is appropriate, and a consistent assessment.

• Consideration should be given to removing mid-term commerciality tests, which do not add discernible information for Government and add a significant administrative burden to the operator.
• Commerciality tests in low phases of the commodity price cycle, or high points in the cost cycle, can create doubt about investments. Longer cycles may be needed.
• Others suggest that commerciality tests need to be more rigorously applied to ensure fields are developed in the earliest possible time.

• Support exists for differentiated retention leases. A ‘one-size-fits-all’ approach can bias shorter development timeframes, and does not suit more complex projects that require certainty over longer periods. Longer timeframes can lead to better management and execution of complex developments (including multi-field developments) and more opportunities to collaborate (strategic alliance, aggregation and infrastructure-sharing), satisfying security of supply requirements.

• Published retention lease guidelines could offer transparency around decision-making, as well as timeframes on regulatory decisions, to give confidence in the process.

• The UK Fallow Field Initiative was raised in respect of retention leases, and that the application of the use-it-or-lose it approach for companies “hoarding” gas. Use-it-or-lose it needs to be considered in the context of a company’s portfolio and market considerations.

• There is a need for greater transparency and consistency in the treatment of retention leases.

PRODUCTION

• The process and assessment of production licences must avoid introducing uncertainty and non-market-based outcomes which erode confidence in decision-making and reduce the ability of proponents to make commercially-focussed decisions.

• Policy intervention to force collaboration would distort the market and add further complexity to negotiations.
• The primary role for government is to address impediments and constraints impacting project decisions and investors, such as financial impediments associated with permit or project realignment through licence fees or transfer duties.

• Under the Offshore Petroleum and Greenhouse Gas Storage Act 2006, the Joint Authorities can terminate a licence if no ‘petroleum recovery operations’ have been carried out during a continuous period of five years. There is a need for greater clarity around the definition of “petroleum recovery operations”.

• The Act should be amended to allow unitisation between any tenure holders, to avoid one title holder delaying the development of a field.
ACCESS TO SHARED INFRASTRUCTURE

- Commercial negotiation provides the least-cost and most effective method for third party access to upstream facilities.
- APPEA has developed high-level principles for commercial negotiations on third party access to upstream facilities.
- There is no evidence of failure of market forces to operate efficiently in processing third party gas.
- Access arrangements have been successfully negotiated. Recent announcements from Woodside and Hess demonstrate that third party access is being embraced.

- The Australian Government could play a greater role in identifying opportunities and synergies between titleholders.
- Joint Authorities approval of Field Development Plans (FDP) requires demonstration that infrastructure can be expanded to allow nearby discoveries to be developed. The Joint Authorities can use this process to determine whether it precludes third party stranded pools. The Joint Authorities could also direct that a joint development or use of third party infrastructure be assessed as a concept for an FDP.

DECOMMISSIONING

- Decommissioning and title cessation is an important area for Government review.

- UNCLOS states that any installations or structures that are abandoned or disused should be removed. Internationally the high cost of removing structures has led to a more flexible approach where, in waters deeper than 100 meters, the upper parts of the structure are removed to a 55-meter depth.
- Decommissioning in Australia should be on a case-by-case basis. Safety and navigation will be of paramount concern, and the Australian Maritime Safety Authority should be involved in the planning process.

- Consider renewing or extending production licences to enable companies to complete abandonment plans.
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