Review of the Australian Upstream Petroleum Sector

Submission to the Australian Productivity Commission

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Scope of the Submission

It is the intention of this submission to address the petroleum regulation review from an academic viewpoint. In particular, this submission will contain information and recommendations in four broad areas: relieving regulatory burden, general regulatory issues, enhancing economic performance and international competitiveness.

It is intended that the information and recommendations within this submission will be comprised of comparative reference to the Norwegian Licencing and Concession system (LCS). This outline of the Norwegian petroleum regulatory framework is in response to the request by the Productivity Commission in its Issues Paper for information on similar arrangements in other jurisdictions (p25).

The content and ideas of this submission are the original ideas of the author, and arise from the author's PhD thesis research.

About the Author

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Introduction

Petroleum exploration and production occurs within a complex regulatory framework comprising legal, fiscal and contractual regimes which exist to control, direct and manage the development of these resources.

The Australian government has been charged with the responsibility of developing a natural resource that has the capacity to provide great wealth, and have a wide ranging impact within the Australian economy. Yet that resource is also fragile since it is not renewable. Once the petroleum resources have been depleted there will be a huge impact on Australia. Not only will Australia lose revenue from the development of these resources, but will also be reliant upon other nations for its energy needs and security. Thus the development of petroleum resources in Australia has economic, social, political and international ramifications.

The development of petroleum resources requires the government to enter into a partnership with oil companies in order to develop the resources, since it is the oil companies which have the financial strength and capacity to explore the resources, are willing to assume the financial risk and possess the requisite technology and skills to develop the resources. Typically the parties have different goals and agendas. The government's primary focus in to develop the resources for the benefit and enhancement of the country, whilst the companies are interesting in developing the petroleum resources to generate profits for its share-holders. Thus there is a difficulty in reconciling the value-laden goals of the government with the profit oriented goals of the companies. Yet there is also a general consensus for the two parties, since each party is trying to maximise their return for the benefit of those they serve.

The Norwegian Petroleum Licencing and Concession System and its relevance to Australian Petroleum Development

This submission attempts to balance the need for the Australian State to maximise their return on a non-renewable resource for not only this generation, but also for future generations, with the requirement of oil companies to gain profitability and benefit from investing in the exploration of petroleum resources in Australia. It attempts to provide a framework which balances the needs of both government and company, providing options which may assist in the development of an appropriate regulatory framework for all participants.

This submission necessarily considers the development of Norwegian upstream petroleum industry since it is seen by a number of agencies as best practice in petroleum regulation. This is because it is acknowledged by a number of international bodies (including the World Bank and the International Energy Agency) that the Norwegian petroleum licencing and concession system is among the best in the world.[1] The Norwegian petroleum licencing system has been used as a model for petroleum development in a number of countries, most notably East Timor as well as currently being implemented in Madagascar. Furthermore, though its aid body NORAD,[2] the Norwegian government has provided assistance and advice to over 30 countries

with petroleum resources. That advice covers areas such as legal frameworks, administration and supervision mechanisms, licencing and tendering processes, organisation of public/private interfaces of petroleum governance, local content and industrial development, environmental challenges and revenue management issues, including taxation and petroleum funds.[3] As such, it may be a useful example which Australia can examine when attempting to reform upstream petroleum resource regulation.

Although Norway is a civil law jurisdiction, it has many similarities to Australia, making comparisons possible:

- It has a similar political system to Australia (democratic constitutional monarchy), although it has a unitary and not a federalist structure;
- Similar to Australia, Norway has a small population which predominantly hugs the coastal regions of a large landmass;
- Norway is a developed nation with a similar economy and economic performance; and
- Like Australia, Norway uses the licencing and concession system in the regulation of petroleum production.

Norway and Australia have both used the licencing and concession system in the exploitation of petroleum resources in each country. However, the economic and social outcomes have differed somewhat.

Prior to the discovery of oil, Norway enjoyed comparatively strong economic growth, full employment and a current account surplus.[4] Consequently, it was in no hurry to develop the petroleum resources discovered in the 1960's.[5] This comfortable economic situation formed the basis for a strong bargaining position in relation to the international oil industry, and enabled the Norwegian State to develop a rational, coherent petroleum policy that would meet the needs of all participants.

Petroleum exploitation in Norway is based on the licencing and concession system which assumes that the participating oil companies obtain a licence or a concession from the State, subject to certain terms and conditions, most of which are fixed by legislation and some of which are negotiated case by case between the state and the relevant oil companies.

The Norwegian licencing system is a discretionary licencing system, controlled by the Ministry of Petroleum and Energy (MPE). Similarly the Australian system is a licencing and concession system, although the implementation of the system differs to that of Norway, particularly in the award of licences, the types of licences required, and policy focus.

Use of Norwegian Petroleum and Licencing System in Other Jurisdictions

Norway's development of petroleum resources are seen as exemplary, as recognised by both the World Bank and the OECD.[6] Norway is one of the few nations that have accomplished

resource exploitation and avoided the resources curse, and have been hailed as a model for petroleum exploiting nations.

Norway has utilised it successful petroleum policies to assist a number of other petroleum endowed nations. In the ten years to 2005, Norway has provided assistance to the petroleum sector of over 20 countries and spent over 440 million NOK.[7] Of this assistance, 69% has been allocated to Africa, with Mozambique being by far the largest recipient.[8] The assistance provided to petroleum-endowed developing nations primarily consists of establishing and supporting good governance and transparency, as Norway sees the principles of good governance as an important basis for assistance to developing countries.[9]

Assistance provided by the Norwegian Government varies, but includes assistance with exploration policy, development of a regulatory policy and framework.[10] A leading example of the use of Norwegian policies in other jurisdictions has been as part of the support for the Norwegian development support to Timor Leste's Public Petroleum Sector.[11]

Petroleum Policy in Australia and Norway and its Role in Regulatory Reform

The regulatory regime which governs the exploitation of Australian and Norwegian petroleum resources is the same. Both countries have implemented the Licencing and Concession System, and the policies reflect such a system. Similarly, both countries have implemented a policy framework which seeks to capture the economic rent attributable to petroleum exploitation. Additionally, both countries also enjoy strong legal systems, demonstrated by an independent judiciary, separation of powers and an observance of the rule of law. However, what differs vastly between the two nations is the policies governing the development of petroleum resources and the effects those resources have had on the individual states.

This section examines the petroleum policies of Norway and Australia, as well as a comparison of the regulatory framework of both nations. By understanding the impact of policies and regulatory framework of Norway, it is possible to apply the Norwegian regulatory system to some of the issues confronting the Australian upstream petroleum industry as it sits at the crossroads of reform.

A policy statement is essential for the planning and controlled development of petroleum resources. A clear and comprehensive strategy ensures the petroleum industry can use their strengths and energy and ingenuity to sustain and enhance their competitiveness while meeting community expectations in all operational aspects.[12] In addition, a clear policy statement assists the industry to realise sustained and confident competitiveness by being able to make decisions within a clear and cohesive framework of objectives and principles.[13]

An appropriate petroleum policy is crucial for the successful development of petroleum resources. Successful, adaptive polices seek to recognise the non-renewable nature of

petroleum resources.[14] Therefore any government should seek to develop polices which achieve good governance and transparency in the management of the petroleum resources, to enhance their contribution to national development. Good policy fundamentals, combined with strong institutions allow the transformation of non-renewable petroleum resource assets into high growth rather than destructive rent seeking assets.[15]

Petroleum policy in Norway

Norwegian petroleum policy is underpinned by a decision by the Norwegian government not to accept the traditional pattern of relationship between oil companies and the government in the development of petroleum resources.[16] Since inception, Norwegian petroleum policy has been characterised by clarity, consistency and continuity, containing a degree of boldness in relation to international oil companies.[17] This continuity in Norwegian policy may be partly attributable to Norway's strong tradition of economic planning.[18]

The overarching goal of Norwegian Petroleum policy is maximum value creation within a framework of responsible environmental and resource management policies. Petroleum policies are based on the goal of coexistence between the petroleum sector, other industries, environmental considerations, and other factors.[19]

Initially, the Norwegian policy was dominated by an exploration and production 'go slow' policy,[20] where the rate of depletion was slowed through a policy of award of exploration and/or production licences in licencing rounds only.[21] This policy continues, although there are now additional awards for production licences in predefined areas (APA) licencing rounds in line with the newly developed Norwegian policy of rapid development of mature area reserves to utilise existing infrastructure prior to the end of the life of the infrastructure.[22]

Phases of Norwegian Petroleum Policy Development

Norwegian petroleum polices have been through a number of distinct phases. Initially, from the mid 1960's until the early 1980's, petroleum policy in the infant Norwegian petroleum industry was characterised by nationalist and protectionist policies. The objective of this nationalist strategy was to nurture and encourage Norwegian petroleum companies through information exchange, technology transfer and skilling, to build the capacity for Norwegian companies to develop the petroleum resources.[23] While these multinational firms were also intended to play an important long-term role, the goal of building up a Norwegian oil community was defined in the early stages of petroleum policy.[24] Protectionist policies in the form of a favourable procurement regime existed to assist in the development of domestic industries.[25]

Realising that government policies in the development of petroleum resources is a dynamic process, the overall petroleum policy objective in Norway is to secure a pattern of licencing which effectively promotes the best possible resource management of Norwegian petroleum resources, thereby laying the basis for creating the highest possible value and government

revenues.[26] Since the early 1970's key Norwegian oil and gas policies have been the national management and control of their resources. Initially, there was reliance upon oil companies to develop petroleum resources.

Today there is a policy of internationalization, spearheaded by Statoil as operator and participant in international fields. The reasoning for this is was primarily to capitalise on Norwegian competence and technology. Other reasons included exploiting the potential of emerging markets, to even out fluctuations in the activity level of the Norwegian continental Shelf, and to acquire new technology and know-how.[27] This policy is pursued to ensure long-term value creation and employment, particularly after the depletion of the Norwegian petroleum resources.

Policy today

Essentially there are two key elements in Norwegian oil and gas policy.

First, the Norwegian oil and gas resources are part of the national wealth. Thus, the whole population should benefit from the depletion of these resources, implying that petroleum revenues must be managed with the view of improving the welfare of present and future citizens of Norway. A Petroleum Fund has been established to this effect.

In order to meet this first element of Norwegian petroleum policy, the second element of Norwegian policy is to attract the best of international expertise and competence, and to promote co-operation between domestic and international players. This is viewed by the Norwegian government as essential for resource development, since the combination of domestic and international knowledge and skills ensures maximisation of the value of petroleum resources. [28]

This policy position of the Norwegian Government is reflected in the principle regulatory tool, the *Petroleum Activities Act 1996* (Norway):

> 'Resource management of petroleum resources shall be carried out in the long-term perspective for the benefit of Norwegian society as a whole. In this regard, the resource management shall provide revenues to the country and shall contribute to ensuring welfare, employment and an improved environment, as well as to the strengthening of Norwegian trade and industry and industrial development, and at the same time take due regard to regional and local policy considerations and activities.'[29]

As a consequence of this 'whole of society' view of petroleum resources in Norway, there are five main areas of petroleum policy in Norway. These were initially developed in the 1960's and have been refined to meet of industry, the State, and international requirements and needs.

The main elements of Norwegian Petroleum policy include:[30]

1. The rights to subsea petroleum deposits in vested in the state, and therefore the State has the right to decide what means shall be used to exploit the resources. This includes inviting MOC's to develop the resources in conjunction with national oil companies
2. Maintain national control of, and benefits from, the petroleum industry by establishing frameworks aimed at giving national companies incentives to develop skills and technical competence;
3. The petroleum resources shall be managed for the benefit of the Norwegian Society as a whole;
4. Nurture, develop and encourage a skilled and competitive oil company and supply industry;
5. Establish and maintain a Norwegian 'future' fund for today's and future generations;
6. Focus and attention on the environment to ensure environmental sustainability for present and future generations.

Under the Norwegian regulatory framework, the Norwegian State reserves the right and exercises control over the rate of exploration and production of petroleum on the Norwegian Continental Shelf, thereby controlling the rate of depletion of petroleum resources. This rate of depletion is part of an overall policy of conserving the petroleum resources for future generations, and to develop the necessary regulatory framework for the exploitation of resources.

The licencing framework is based upon predictability and transparency,[31] to ensure that important social considerations are safeguarded and the value created by petroleum benefits the Norwegian society as a whole. [32]

Australian Petroleum Policy

Similar to Norway, offshore petroleum resources were discovered in Australia in 1965, with petroleum production commencing in 1969.[33] When oil was discovered in Australia in the 1960's Australia was also a developed nation in a strong economic position, with a high reliance on primary production, especially agricultural commodities.

Australia has also used the licencing and concession system in petroleum exploitation, however resource exploitation has occurred against a backdrop of shifting policy emphasis, in response to changes in government, and market forces.

Fundamental to Australia's government energy policy since inception has been a minimalist role in petroleum resource development. Since the commencement of production in 1969, policy has placed an emphasis on attracting international oil companies to undertake petroleum exploration and production.[34] Current Australian petroleum policy focuses on the promotion of an efficient and competitive petroleum exploration and production industry.[35] To that end, the Government's goal has been to maximise the contribution the petroleum industry

makes to the well-being of Australia[36] accomplished by "*an efficient and competitive exploration industry which can fully assess Australia's petroleum resources.*"[37]

The policy focus of the last ten years has seen Australia's upstream petroleum sector focus on attracting and retaining investment from domestic and international oil companies to explore and exploit Australian petroleum resources.[38] There has been some attention to upstream issues through the Commonwealth's provision of funding for pre-competitive geoscience data in offshore Australia.[39] Interestingly, the petroleum policy developed in 1998 focuses solely on the attraction of business and investment into the upstream petroleum industry, and does not appear to consider the development of industry, creation or the concurrent development of business and industry.[40]

The Australian approach to an upstream regulatory framework has been influenced by the complex interaction of presiding government policy, oil strikes over the last 40 years, and the Australian approach to public/private interaction. The last major petroleum policy review in Australia was at a time when oil prices were US$15 barrel. At that time, policy and taxation focus emphasised the attraction of investment into the petroleum exploration and production sector, and an emphasis on taxation and investment policies to enhance Australia's competitiveness in attracting investments.[41]

Arguably, as a consequence of this policy background, Australia has is yet to establish a regulatory framework that maximises wealth and economic sustainability for the host State and the community. One major reason for this may be the abundance of other natural resources in Australia. Unlike Norway, whose primary natural resource is petroleum. Australia has a plethora of natural resources, ranking within the top five globally for Coal, Iron Ore and Uranium reserves.[42] Conversely, Australia's petroleum reserves are relatively insignificant, both globally and nationally. Petroleum contributes 3% to the Australian GDP, compared to 25% of Norwegian GDP.[43]

As part of Australia's major offshore petroleum policy review in 1998,[44] Australia's policy has been focused toward attracting investors in exploration. To that end, there has been a major emphasis on promoting an efficient and competitive petroleum exploration and production industry.[45]

The Australian Government's approach in developing the nation's energy resources was, and remains guided by, the following broad principles:

- Private decision makers should be allowed to manage risk in a regulatory framework that is predictable, transparent, equitable and timely.
- Energy resource developments should be required to comply with standards of environmental performance which are commensurate with those imposed on other sectors of the economy.

- Commercial decisions should determine the nature and timing of energy resource developments, with government interventions being transparent and allowing commercial interests to seek least-cost solutions to government objectives (e.g. environment, safety or good resource management objectives).
- Government objectives should generally be driven by sector-wide policy mechanisms rather than impose inconsistent requirements on individual projects/private investors.[46]

Today, Australia's policy for petroleum exploration is one of aggressive seeking of participants, predicated on the notion that the only way that Australia can have a satisfactory petroleum exploration and production policy is by attracting foreign investors and interests.

Central to this vision is a policy framework (supported by a legislative framework) which supports five key objectives:

- Offer high levels of certainty to investors and other stakeholders about their rights and responsibilities and the process of decision-making;
- Provide a highly competitive operating environment, in an economic sense;
    - Support the industry's efforts to achieved sustained wealth generation through growth, innovation and enhancement of the value of its output before export, including the role of the government in collecting and disseminating pre-competitive geoscientific data to assist in attracting investment;
- Ensure good stewardship of the environment and community interests; and
- Allow industry to respond confidently to international challenges and seize international trade and investment opportunities.[47]

Although the Australian policy framework addresses exploration and commercial aspects of Australian offshore petroleum exploration and production, it fails to address a number of crucial policy issues and questions. What is missing from this policy framework is a consideration of:

- Economic Prosperity. Although the petroleum policy seeks to ensure good stewardship of community interests as part of their petroleum policy objectives, the policy and resulting legislation fails to maximise the benefit to the Australian Community from our petroleum resources;
- Industry development and therefore economic sustainability beyond resource depletion through economic diversification.

The application of Norwegian Petroleum policy to the Australian Regulatory Framework

By examining the Norwegian petroleum regulatory framework, and comparing this system to the Australian licencing and procurement processes, it may be possible to accurately assess the

ability of the current Australian petroleum regulatory system to generate maximum wealth and long term economic sustainability, for the benefit of the Australian Community, from the exploitation of Australian petroleum resources.

Generally, Norwegian policies tend to be principle-based and ideological, with an explicit trade off between values and interests and explicit value references.[48] This is partly attributable to the Norwegian administrative tradition where business is expected to conform to public policies and regulations of their own volition, with little supervision.[49]

Norway's petroleum policy and framework is recognised as 'a potent example of the successful development of the petroleum sector and surrounding industry',[50] since it successfully combined the development of State owned oil company with the utilisation of the skills and resources of international oil companies as it sought to develop petroleum resources whilst transforming the economy and creating an industry.[51] There are fundamental differences in the policies of Norway and Australia in relation to the exploitation of the petroleum resources of the respective countries. Norwegian policies expressly establish and fiscal and regulatory relationships between the parties within the oily trinity – the Host State, the MOC and the Host Community. In contrast, Australian policy is geared to delegation of responsibility to the companies who exploit the petroleum resources.

Both Australia and Norway are politically stable, being representative democracies with the parliament voted by the people. Additionally, both countries are constitutional monarchies, with a king or his representative as its figure head. As such, there are many similarities between Australian and Norwegian petro policy. However, there are also a number of features that differ starkly between the two States.

An analysis of Norwegian and Australian petroleum highlights the difference in policy planning in the two nations. Norway's fundamental policies were largely developed in the 1970's, at a time when the Norwegian left governed for most of the decade,[52] and prior to large scale development of Norwegian petroleum resources. The Norwegian Left favoured State control of resources, slow rates of depletion of petroleum resource, and the application of resource revenue to an expanded welfare state.[53] Conversely, the Norwegian Right unenthusiastically supported the creation of a State oil company in Statoil. Instead they favoured a greater degree of national control of offshore petroleum exploitation through private Norwegian companies (and Norsk Hydro In particular),[54] that would then invest their profits in the Norwegian economy.

The petroleum policy of Norway was thus largely attributable to the government in power at the time the Norwegian petroleum resources were discovered on the Norwegian continental shelf. The Bratteli government that gained power in September 1973 continued to the major policy review begun under the Norwegian right after Bratteli resigned in 1972 after a loss regarding Norway joining the EU in 1972.[55] This policy process laid down a number of

fundamental principles, which aligned with the fundamental beliefs of the Norwegian Left of the day, especially strong government intervention, a leading role of a national oil company, and return of petroleum wealth to the Norwegian people.

Although there have been many reviews of petroleum Norwegian petroleum policy, including some fine-tuning and tweaking, essentially Norwegian policy has remained constant for the last forty years.

Norwegian petroleum policy as a whole, and particularly the role of Statoil, demonstrates how

> ..'one can structure the petroleum policy in a manner that serves the economy as a whole rather than the interests of a limited number of individuals in the economy'.[56]

Success of the Norwegian petroleum industry can be attributable to the comprehensive policy framework established by the Norwegian government.[57] Moreover, with suitable adaption, these policy choices can be applied to Australia.

Australian Policy Review

The Australian policy framework, incorporating political, regulatory, and fiscal policies has undergone a number of fundamental alterations.

Whilst Australian policy has been through a number of shifts, it essentially has left the development of the petroleum resources of Australia to the Australian Petroleum industry, with the Liberal-National coalition government committed to *'a thriving competitive upstream petroleum industry []that is working in close cooperation with the private sector'*.[58]

The vision of the Australian government was of

> '…an aggressively competitive, innovative and growing minerals and petroleum sector which contributes strongly to rising national prosperity, employment and regional development'.[59]

At the APPEA conference in 1998, Senator Parer, Minister for Minerals and Resources noted that the challenge for the government is to put in place a legislative and policy framework that allows industry to efficiently develop the resources to create sustained increases in wealth.[60]

This development under the direction of industry and a government regulatory framework has not occurred. Rather, today, that same industry, under its peak body APPEA, is calling for an increased role of the Australian Government in the exploration for petroleum provinces:

> ...'whilst there is no substitute for a frontier discovery to stimulate exploration there is an important role for the Australian governments in facilitating exploration of these frontier areas by undertaking pre-competitive geoscience work required to demonstrate their petroleum potential.'[61]

> … 'It must be further be developed by [governments of] all jurisdictions if the opportunity to discover new oil provinces, and thereby sustain Australia's oil industry, is to be maximised.'[62]

Australia's last petroleum policy was reviewed in the late 1990's, at a time when at a time when Australia was a little fish playing in the big pond of international oil companies and when oil was not in short supply due to geophysical prospectivity or geopolitical prospectivity. At this time, Australia's attractiveness as an exploration destination was second only to the United Kingdom.[63] How things have changed in ten short years. Today, whilst we are still a little minnow playing in the petroleum pond, we are no longer attractive in prospective terms. In the ten year period to 2002, 154 companies commenced or recommenced exploration operations in Australia, whilst 168 companies left Australia's petroleum provinces in the same period.[64] It would appear that current aggressive petroleum policies which mandate commercial investment and strong industry control are not successful. Australia needs to rethink its petroleum policies.

With the election of a new Labor government in Australia in late 2007, there is an opportunity for the Australian government to revisit its petroleum policies.

The *Australian Institute of Energy* notes that Australian petroleum policy should have a coordinated strategic energy policy, a national strategic framework within which the oil and gas industries operate.[65] The objectives of national energy policy should be to ensure:

- a commercially viable, indigenous energy sector based as far as possible on the effective utilisation of Australia's energy resources and expertise; and
- the service of community needs through the provision of a reliable supply of energy, produced at internationally competitive prices and under world's best practice safety and environmental management regimes.[66]

As part of this national energy policy, the Institute of Energy sees it essential for the energy policy to address:

- the projected decline in Australia's domestically produced supplies of crude oil and condensate;
- the need to ensure that gas plays a greater role in the fuel mix, and that the gas required can be found, produced and delivered; and
- the fiscal and other issues impacting on the competitiveness of Australia's current and potential gas exports.[67]

A New Australian Policy Framework

Whilst the Australian petroleum policy is presently flawed, Australia's present framework has a number of positive attributes:

- Australia enjoys comparatively strong economic growth, full employment and a current account surplus therefore should not be in any hurry to develop its petroleum resources, similar to Norway prior to its development of resources in the 1970's.
- Australia has a comfortable economic situation, therefore it places Australia in a bargaining position, since we are in no hurry to develop our resources
- The likely arrival of Peak Oil means that Australian frontier acreage will be more highly prized valued in the international market

As such, Australia's petroleum political policies, fiscal policies and regulatory policies are in need of re-evaluation. A suitable policy framework to use as a comparison is the Norwegian Framework, since Australia has many similarities and requirements to Norway in terms of creating wealth, as well as similar political, economic and social framework. In addition, both nations also utilise the licencing and concession system for the regulation of petroleum resources.

In order for Australia to create wealth and economic sustainability, there needs to be a fundamental shift in policy from commercial focus to a focus on the host State and community. Compared to Norwegian petroleum policy, present Australian policy disproportionately favours international oil companies at the expense of the State. Given that there is a labor government in Australia at present, it is timely for a major review of Australian petroleum policy especially since the Labor Party has as its platform a commitment to a fairer distribution of political and economic power, greater equality in the distribution of income, wealth and opportunity, and more democratic control, ownership and participation in Australian industry.[68]

The fundamental change that Australia requires in its petroleum policy is greater state participation in the exploitation of Australia's petroleum resources. The present Australian position is that of attracting commercial investment, whilst failing to view Australia's petroleum resources as collective national wealth, owned by the host community of the present and future generations.

The current minimalist 'referee only' policy taken by the previous Australian government has failed the Australian petroleum industry. Targets set 10 years ago, in relation to achievements for the Australian industry, have gone largely unfulfilled. Production is decreasing, exploration is down and Australia is less attractive as a petroleum exploration province. Furthermore, by its own admission, the petroleum industry is requesting more government intervention, especially in the area of pre-competitive data to encourage exploration, especially in frontier areas.[69]

Australian petroleum policy needs to encompass greater state control in the exploitation of petroleum resources. Rather than embracing a policy predicated on commercial investment, there needs to be a focus on the exploitation of the resources by MOC's for the benefit of the host state and host community. Any policies embraced by Australia need to be based on the

concept of Australia's petroleum resources belong to the Australian people, and should be exploited in a manner that is beneficial to present and future generations. This is a fundamental policy shift for Australia, with a focus on the people and the state rather than partnership with Oil Companies for the exploitation of resources.

Recommendations

Recommendation 1: *Australian Petroleum policy focus on the development of petroleum resources for the benefit of current and future generations. To that end, petroleum policy should focus on maximising wealth and creating enduring value, rather than attracting commercial investment.*

Recommendation 2*: The Australian State should exercise greater control of the development of Australian petroleum resources, through greater regulation and participation.*

Petroleum Regulatory Framework – General Regulatory Issues

When developing petroleum licencing conditions, contracts, terms or agreements, many nations tend to focus on themselves, usually in isolation, drawing up a must-have list of terms and conditions for the development of resources without considering the competitive situation in which they lie.[70] For successful resource exploitation, States need to look at themselves in relation to their neighbours and other existing geographical, economic and social environments. It is only by determining and instituting objective terms and conditions that effective petroleum exploitation can occur.

For good licencing to exist, a nation ought to consider principles when developing its policies, which will be reflected in the rules constructed by the parliament. The regulatory framework that can be applied to a nation can be either principle based or rule-based regulation. Principle-based regulation moves away from a reliance on detailed, prescriptive rules, instead relying on broadly stated principles to set the standards by which regulated firms can conduct their business.[71] Principles can be used to refer to general rules, expressing fundamental obligations that all participants should observe.[72] There are a number of features of principles-based regulation:

- Drafted at a high level of generality, intending to be overarching requirements rather than rigid rules;
- Broad application to a wide range of circumstances; and
- They are purposive, expressing the reason behind the rule.[73]

This view of principle-based regulation is supported by the World Bank, noting that the cornerstone of effective petroleum legislative framework for petroleum exploitation is short, thorough, broad, generic petroleum legislation complemented by enabling regulations and a

Model Contract.[74] Furthermore, principle-based frameworks are seen as advantageous since they provide both the Host State and the oil companies with a clear legal and contractual context within which to negotiate mutually advantageous instruments,[75] rather than strict contractual conditions that are difficult or impossible to alter in response to market fluctuations.[76]

Benefits of using principle based regulation are that they provide flexibility, are more likely to produce behaviour which fulfils the regulatory objectives, and are easier to comply with.[77]

Rules-based regulation can lead to inconsistencies and rigidity, and are prone to creative compliance in order to adjust to new situations. Principle-based regulation leads to a greater degree of 'future-proofing' where the regime can respond to new issues as they arise without having to create new rules every time a new situation arises.[78]

The rationale for brief, thorough petroleum legislation is that the legislation should cover all of essential concepts required, whilst at the same time not setting them 'in concrete' through over detail.[79] Rather, the detail should be reserved for subsidiary instruments such as regulations.[80]

The Norwegian Regulatory Framework

The use of principle-based regulation, rather than detailed and prescriptive rules, has been a feature of Norwegian Petroleum Regulation since early on. Today, this principle based regulatory approach is reflected in the *Petroleum Activities Act 1996* (Norway). Licencing policy is clarified through the discretionary award of petroleum licences by the *Norwegian Petroleum Directorate,* approving field development plans and approving or rejecting transfers in ownership and operatorship.

The cornerstone principle of the Norwegian petroleum resource management system is to provide the industry with framework conditions that formulate acceptable commercial incentives. Investors in oil and gas face huge uncertainties in the natural environment. Therefore the legal and contractual environment should offer stability and surety of terms.

There are a number of key principles of the Norwegian Petroleum system:

- A stable, predictable, framework where the conditions of exploitation establish acceptable commercial incentives. The Norwegian State is aware of the fact that investors in the oil and gas business face prospectivity uncertainty (geology, price of petroleum in the world market. and technology). Uncertainty about terms and contractual stability should be minimized, whilst still maintaining a framework that is flexible and responsive to change;
- Incentive-based management that is facilitated and not hampered by administrative decisions. The basic philosophy is "letting a responsible industry do what they do best" for mutual benefit of both the State and the industry:

- The State sees transparent and predictable processes and decisions as the heart of petroleum policy, as transparency plays a key role in the working relationship between the government and the industry;

- Clarity and transparency concerning the roles of the State. This is a fundamental element of the Norwegian petroleum policy, since the Norwegian government sees that it is only through clarity of roles that efficient and effective resource management can occur;
- Through the licencing policy and contractual framework ,the Norwegian State aims to pool resources, capital, competence, research, plurality of ideas and internal checks and balances between the licencees and their relationship with the State;
- The state as resource owner acts as the administrative governmental body establishing policies, framework conditions and decisions relating to petroleum activities; and
- As the resource owner the State participates directly in petroleum activities through Statoil (state oil company); State Direct Financial Investment in major fields and plays.[81]

The legal basis and regulatory framework for petroleum activities in Norway is conferred by the *Petroleum Activities Act 1996* and the associated *Petroleum Activities Regulations 1997.* The Norwegian State controls petroleum activities, and no activity is permitted without the licences, approvals, consents and the Joint Operating Agreement which are required pursuant to the *Petroleum Activities Act 1996.*

The award of licences for petroleum exploration and production in undertaken in discrete licencing rounds and all follow the same process, as outlined in figure 1 below.

Figure 1: Process for granting of licences for exploration and production in Norway

Exploration Licences

Exploration licences are conferred according the *Petroleum Activities Act 1996,*[82] upon payment of an annual fee.[83] They are granted for an initial period of three years, unless otherwise stipulate.[84] The Exploration Licence authorises non-exclusive rights for geological, geophysical, geochemical and geotechnical activities,[85] the results of which are required to be submitted to the relevant government body.[86]

Production Licence

Production licences are normally awarded only through licencing rounds, where the Norwegian State invites applications for a certain number of blocks (acreage).[87] When acreage is announced and released in licencing rounds, companies can apply individually or in groups. The announcement specifies the terms and criteria which will determine the award of a licence. Petroleum licences are usually awarded for a period of ten years,[88] with the ability to extend up to thirty years if work commitments have been fulfilled.[89]

The production licence is granted on condition by the King, who has the discretion to stipulate conditions for the granting of production licences.[90] In addition, the King has the discretion to determine if, and at what level, the Norwegian State will participate in petroleum activities.[91]

All production licences attract areas fees, which are paid annually after the expiry period. This fee is designed to encourage relinquishment of acreage that companies are not exploiting. This returns unused acreage to the general pool, and allows another licencee to use the area, assuming the acreage is still able to be utilised for production.

Mandatory Field Development Plan

The grant of a production licence confers the right to exclusive exploration activities, including the drilling of test well. It does not automatically confer the right for production. Rather, production rests upon the approval of a *Plan for Development and Operations* (PDO).[92] When a new deposit is to be developed, the oil company must submit a PDO for approval. An important part of the development plan is an environmental impact assessment which interested parties are given the opportunity to comment upon in a hearing round. The impact assessment describes the development's expected impact on the environment, any trans-boundary environmental effects, and affect on natural resources, fisheries and society in general.[93] The governmental consideration of this assessment and development plan ensures a prudent project in terms of resources, as well as acceptable consequences for other matters of public interest.

Petroleum production must be conducted in accordance with prudent production technologies and sound economic principles, to ensure that petroleum resources are not wasted,[94] and the production is for the benefit of the Norwegian people. To that end, the plan must contain an account of the economic, resource, technical, commercial and environmental aspects of the production, as well as decommissioning and disposal of the installation once production has ceased.[95] Where production is planned in two or more stages, the plan must, as far as possible, comprise a total development plan rather than a stage development plan.[96] Production cannot commence until the plan has been approved by the minister,[97] and where there has been significant deviation from the original production plan, the Ministry may require a new or amended plan to be submitted and approved.[98]

The Ministry also has to approve the expected production schedule, which is only able to be altered if warranted by resource management or other significant social considerations.[99] The ministry will stipulate for periods of time, the quantity of petroleum which may be produced, injected or cold vented at any time, and stipulates that burning of petroleum is not allowed without Ministry approval.[100] On all other production matters, the Ministry has discretion regarding preparation, commencement, and continuation of production,[101] and the use of production facilities by others, where deemed necessary for efficient operation or for the benefit of society.[102]

The King also has a discretion to requisition petroleum for national requirements, deciding to whom the petroleum shall be delivered to, with the price calculated in accordance with the formula used to calculate the production fee, plus transportation cost.[103] In the event of war, or such threat, the King may nominate that a licencee place their production at the disposal of Norwegian authorities, at a price determined and fixed by the King.[104]

The Australian Petroleum Regulatory System

All mineral and petroleum resources in Australia are owned by the State (at either federal or state level) in accordance with sovereignty that is accorded under UN Resolution 3281. The Australian governments assign property rights to the private sector for exploration, development and production activities.[105]

Australia's legislative framework for the petroleum licencing system is a rule based legislative system. It is a combination of painstaking detail and grand scale delegation, attributable to a need to secure offshore petroleum development without addressing the ongoing dispute between the Commonwealth and state over jurisdiction in offshore areas.[106] This is accomplished by granting States the legislative capacity to grant dual titles to Oil Companies under State authority and Delegated Authority from the commonwealth.[107] Consequently, there are numerous petroleum jurisdictions in Australia. The Commonwealth is responsible for

all mineral resources on commonwealth land and all resources in the seabed seaward from 3 nautical miles. These legislative competency arrangements created out of necessity the need for detailed legislative provisions.[108]

As the control of petroleum resources in Australia is shared between state and Commonwealth governments, a joint authority for each state or territory has been established under the *Offshore Petroleum Act.*[109] A Joint Authority is constituted by the responsible state minister and the responsible commonwealth minister,[110] with the commonwealth minister having superior decision-making powers where the ministers disagree.[111] In the event of a disagreement in the Joint Authority, the Commonwealth view prevails.[112]

Similarly, there is a Designated Authority for each state and territory offshore area, with the responsible minister of the state or territory being the Designated Authority for that offshore area.[113]

Petroleum licencing, regulation and safety is covered by the Offshore Petroleum Act. The OPA does not regulate all environmental aspects of petroleum exploitation in Australia. Rather, there is a raft of additional and separate Commonwealth environmental protection legislation, including, but not confined to:

- *Environment Protection (Impact of Proposals) Act 1974;*
- *Australian Heritage Commission Act 1975;*
- *National Parks and Wildlife Conservation Act 1975*
- *Endangered Species Protection Act 1992*
- *Environment Protection and Biodiversity Conservation Act 1999*

Of these statutes, it is the *Environment Protection and Biodiversity Conservation Act 1999* that is one of the most of most relevance to offshore petroleum activities.

In addition, where field development also includes the establishment of onshore facilities (such as pipelines, processing, etc), the field will also be subject to relevant State legislation. This complex arrangement regarding environmental legislation for the development of a field can lead to unnecessary regulatory burden for the participants, and is addressed below.

Titles for petroleum development are granted under the *Offshore Petroleum Act*, which provides for the grant of the following titles:

1. E*xploration Title,* authorizing the permittee to explore for petroleum in the permit area;[114]
2. *Retention Lease,* which may be applied for after the declaration of a location of block to which the petroleum pool extends, and is granted if the recovery of petroleum is not currently commercially viable, but likely to do so within 15 years;[115]

3. *A Production Licence,* which authorizes the licencee to carry out petroleum recovery operations in the licence area;[116]
4. *An Infrastructure Licence,* authorizing the licencee to construct and operate the infrastructure facility in the licence area;[117]
5. *A Pipeline Licence,* which authorizes the licencee to construct and operate a pipeline;[118]
6. *A Special Prospecting Authority,* which authorizes the holder to carry on petroleum exploration operations in the authority area (but not to make a well); [119]

Licences in Australia are currently awarded on the basis of work program bidding, in the process described in figure 2 below.

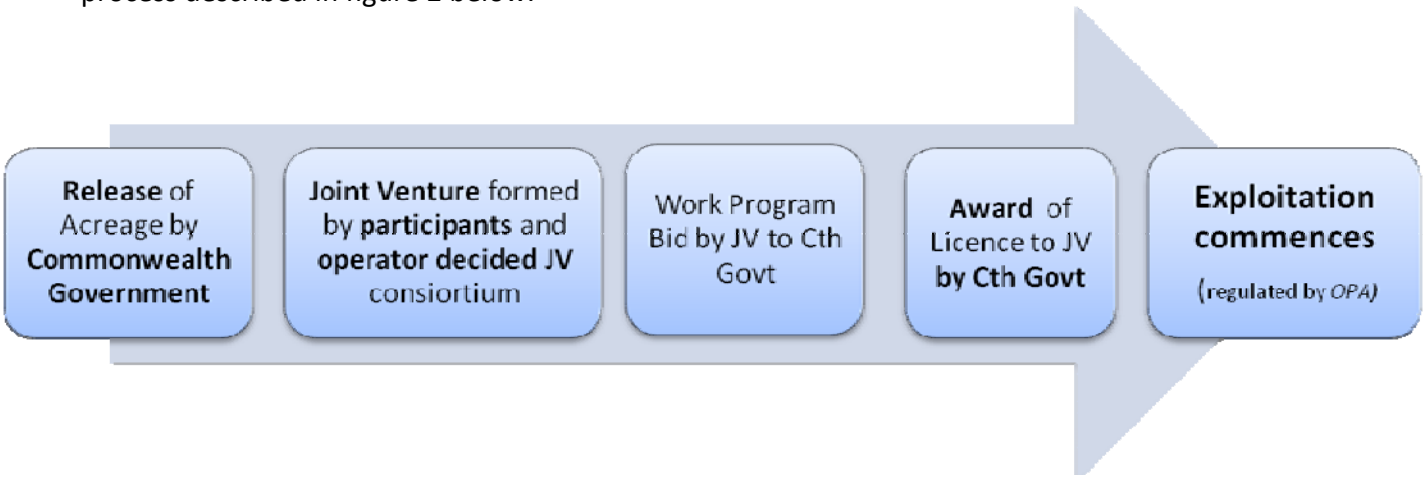

Figure 2: Process for granting of licences for exploration and production in Australia

Exploration titles

An exploration title/licence is required for exploration activities, and is awarded under the annual acreage rounds. Applications for acreage areas in the annual release are invited under the work program bidding system in accordance with the *Offshore Petroleum Act*. Exploration permits awarded for an initial term of six years.[120] When bidding, the bidder must include the minimum guaranteed exploration work to be accomplished within the first three years of the licence, as well as a secondary work program for years 4-6, especially substantial operational activities that will significantly advance the exploration of the area.[121] Upon lifting, title to the petroleum passes to the oil company.

Retention Titles

Under Part 2.3 of the OPA, retention titles are granted over blocks in offshore areas where the block contains petroleum, and the recovery of petroleum is not currently viable, but is likely to become commercially viable within 15 years.[122] A retention lease authorizes the lessee to explore for petroleum and recover petroleum for appraisal purposes in the lease area and can be granted to an exploration permit holder or the holder of a life-of-field production licence over the block.[123]

Retention leases remain in force for 5 years,[124] and upon the granting of a retention lease an exploration permit ceases to be in force to the extent to which it relates to the blocks.[125] These titles are presently under review by the Australian government, with an indication that the criteria for the granting of retention licences is li[126]

Production Licences

Production licences are required in order for petroleum to be removed from the acreage for commercial sale.[127] Part 2.4 of the OPA provides for the grant of production licences over blocks in an offshore area. A production licence is only granted subject to general conditions, requiring the licencee to explore the licence area with a view to determining the additional recoverability of petroleum in the licence area, and recover the petroleum if it is commercially viable to do so.[128]

There may also be specific conditions attached to the granting of a production licence, as deemed necessary by the Joint Authority.[129]

There are three ways in which a production licence can be granted. Firstly, a production licence can be granted as a result of an application made by an exploration permit holder or a retention lessee.[130] Secondly a production licence may be granted over a surrendered block or a similar block, and thirdly a production licence can be granted over an individual block in exchange for another licence that was in force over the same block.[131]

Infrastructure Licences

An infrastructure licence is required to construct or operate infrastructure for the exploration or production of petroleum in the Commonwealth offshore zone in accordance with part 2.5 of the OPA.[132] The infrastructure licence does not include pipelines, which require a separate licence.

An infrastructure licence is granted upon a written application through an offer document.[133] Once granted, an infrastructure licence continues indefinitely,[134] and confers rights to the licencee to construct and operate infrastructure facilities in the licence area.[135] The infrastructure licence terminated if there has been no operation for five years.[136]

Pipeline Licences

A pipeline is often constructed to transport petroleum from the offshore platform to a suitable storage facility, onto shore, or for loading petroleum onto ships. Under Part 2.6 of the OPA, a licence is required to construct or operate a pipeline in an offshore area.[137] The Joint Authority may direct a pipeline licencee to be a common carrier of petroleum in relation to a pipeline, and a pipeline licencee must not cease to operate the pipeline without the consent of the Joint Authority.[138]

The application for a pipeline licence must be made to the Designated Authority for a grant by the Joint Authority,[139] with the application including detailed design and construction plans, pipeline size and capacity, financing of the construction and operation, and accompanied by appropriate plans.[140] If there has been no construction or use of the pipeline within 5 years from the grant of the licence, the pipeline licence will be terminated.[141]

Regulatory Policies and the Current Australian Petroleum Regulatory Framework

Exploration and production in Norway and Australia is surprisingly similar. In both states, exploration policy is designed to increase the attractiveness of the continental shelf and to bring new and existing players in to invest in petroleum exploration. The release of acreage for exploration by both States contains a mix of mature and frontier regions. This is in line with each State's policy of development of the resources, although the reasons for development differ: a commercial focus for Australia's policy, and a participatory wealth creation policy approach by the Norwegian State.

At present, the Australian government, by its own admission, merely plays referee to the petroleum industry,[142] within the licencing and concession system which regulates the petroleum industry. Australia's policy focus does not create a clear, transparent contractual framework. Australian petroleum regulatory policies need to increasing economic prosperity through controlled development of the resources by developing a policy framework considers a 'whole of system' approach rather than a focus on attracting foreign investment.

Recommendations:

Recommendation 1: *Petroleum policy that incorporates a strong regulatory framework and licencing system that is transparent and accountable but also incorporates discretion to ensure petroleum regulation can be adjusted to suit economic conditions whilst still provide clear direction and guidelines.*

Recommendation 2: *Sound regulatory body that coordinates petroleum resource development between government agencies and industry.*

Recommendation 3: *Retention licences are reviewed, with a view to restricting the application or abolishing these licences.*

Rates of depletion of Petroleum resources

Depletion policy, the rate at which a finite resource is extracted, is a fundamental element of a successful oil policy, since it heavily influences the bargaining position of the government in relation to international oil companies.[143] It is essentially determined by three factors: the expected rate of return on the petroleum, price changes over time, and cost variation depending upon different rates of production.[144] Where the government chooses a high depletion rate, they are likely to be exposed to the demands and needs of an oil company that controls the relevant technology, compared to a government opting for a low rate of extraction. Essentially the more optimal the rate to non-renewable resource extraction, the more likely that genuine savings will occur.

Timing of the exploitation of resources is essential for the generation of wealth. By a controlled, analytical approach to petroleum exploitation, it is possible to gain maximum wealth from the exploitation of resources under Hotelling's Rule of exploitation. Appropriate policies can consider the rate of depletions and factor this into the regulatory framework to control the rate of depletion of petroleum resources

Petroleum Production and Depletion in Norway

One of the most crucial aspects of petroleum policy, recognised very early on by the Norwegian government, is the rate of depletion of petroleum resources. The rate of depletion affects, either directly or indirectly, a plethora of economic activity, including employment, government revenue, company profits and inflation.[145] Whilst the rate of depletion is often determined by the oil companies exploiting the oil, such as in Australia, the Norwegian government has controlled the rate of depletion since the early period of oil production in Norway.[146]

As part of the management of the petroleum resources for today's and the future generations, the Norwegian State has a depletion policy aimed at maximising the benefit of the resources for present and future generation. This intergenerational management of petroleum resources focuses on planning for the development and operation of petroleum fields (including the rate of depletion) to the Ministry for approval.[147] Approval of the resource development plan is dependent upon that plan meeting the policy requirements of efficient resource development and installation removal post production. This policy is reflected in section 4-1 of the Petroleum Activities Act:

> *"Production of petroleum shall take place in such a manner that as much as possible of the petroleum in place in each individual petroleum deposit, or in several deposits in combination, will be produced. The production shall take place in accordance with prudent technical and sound economic principles and in such a manner that waste of petroleum or reservoir energy is avoided. The licencee shall carry out continuous evaluation of production strategy and*

> *technical solutions and shall take the necessary measures in order to achieve this."*

Part of the Norwegian approach has been to regulate the pace of petroleum development particularly through the evolution of a 'go-slow' policy. This policy evolved in the 1970's as the dimensions of the NCS resources became known and the price of crude escalated, as noted by a report to the Norwegian Stortinget states:

> …'first and foremost the scope of the operations on the continental shelf must be controlled by regulating exploration activities. Once a discovery is made [] reasons will tend to require that the resources be exploited as rapidly as possible.'[148]

Reasoning for the 'go-slow' policy included:[149]

- Norway has a small population and workforce, with relatively large resources (compared to the united kingdom, with ten times the population and only 2-3 times the resources);
- The impact of the necessary adjustment on the sectorial and geographic distribution of employment.[150] Essentially there was a large labour force move into petroleum sector jobs concentrated on the west coast of Norway. This shift had the potential to lead to
    - cost-push inflation
    - social disorganization
    - destruction of the Norwegian style of life;
- a need to develop jobs and sectors in situ rather than through international labour force migration.[151]

The impact of the 'go-slow' policy has been the strict control of production through the restriction of licencing rounds for exploration. The policy has reflected a policy of developing the large, relatively more profitable fields first, rather than more marginal fields.[152] In addition, it provided a framework to provide industries with incentives to fulfil the states objective and meet company's goals.

Control on rates of depletion is achieved through a policy of indirect control through the rate of exploration, since the level of production is a function of the number and size of commercial fields and development of those fields.[153]

The Norwegian approach to the depletion of its natural resources has been unique. Since initial petroleum exploration and production, the Norwegian Government has sought to promote the correct level of petroleum activity through the control of licencing rounds.[154] Rather than controlling levels of production, the Norwegian government seeks to exert indirect control over petroleum production levels through the limiting of exploration activity.[155] Today, the Petroleum Activities Act prudent production in accordance with sound economic principles to avoid waste of petroleum resources[156] Production quantities, and techniques for production

are stipulated by the Ministry, based on the production schedule or other weighty social reasons.[157]

Petroleum Production and Depletion in Australia

Similar to Norway The depletion of Australian petroleum reserves is governed by Australia's acreage release policy, which defines and limits the release of petroleum acreage for exploration. Acreage release for exploration is made annually at the Petroleum industry annual conference, on the advice of Australia's peak petroleum body, APPEA, who also accumulates and publishes information and data related to petroleum exploration and production in Australia.[158] This role of industry reflects the Australian government policy of minimal government involvement in the Australian petroleum industry, and a policy of commercial and investment focus.

Recommendations

Recommendation 1: *Regulation of the rate of depletion of petroleum resources through exploration and production policies.*

Role of government in the development of petroleum resources

The role of the host State in petroleum exploration and production is critical. Without a strong State to develop suitable regulatory regimes for the exploitation of oil, there is a danger that the host State will lose control over the resources, production and revenue, becoming beholden to the petroleum companies that develop petroleum resources.

The purpose of State participation is threefold:

- G
  overnment to secure the highest possible share of the earnings through taxes, royalties, etc;
- T
  o assure more direct control of the petroleum operations than is possible through licencing alone; and
- T
  o learn as much as possible about the oil industry through active cooperation with private oil companies.[159]

The role of the State should be three-fold:

- as owner of the resources for the people, to develop the resources to maximize the economic, and social benefits for the host State and its citizens, whilst ensuring the least possible environmental harm;

- to establish, maintain and enforce a suitable regulatory system for the exploitation of oil resources, ensuring adequate control over petroleum production, producers and the environment
- to manage the fiscal growth associated with petroleum exploitation in a responsible manner that benefits the country and its citizens.[160]

There are three policy options for levels of State participation in the exploitation of petroleum resources: *minimal intervention, regulatory intervention* and *participatory intervention:*[161]

- With *minimal intervention* the State assumes the role of the referee in the exploitation of the resources. The State primarily engages in the enforcement of laws and regulations protecting workers and the environment, as well as regulating the distribution of offshore provinces to oil companies.[162] The company is left to exert control over field development plans. Equipment purchases, production levels and profits.[163] In this level of intervention, the State remains content to allow the industry to regulate itself, so long as conflict among the companies is minimal and competition is fair.[164]
- *Regulatory intervention* comprises the role of the State as the overseer of petroleum activities.[165] With such level of intervention, the State is not content to merely referee from the petroleum sidelines. In this type of intervention, the State is deeply involved in the day-today operations on the continental shelf without it actually engaging in it. In this form of regulation, the State intervenes in four ways:
  - Writing and monitoring strict regulations;
  - Scrutinising and approving almost every action taken by the oil companies;
  - Regulating (either directly or indirectly) the rate of petroleum depletion; and
  - Developing a special taxation system to bring increased revenue to the state and provide incentives that shape company behaviour.

Participator intervention involves the State entering into petroleum industry as a shareholder and active participant.[166] In adopting a policy of participatory intervention, the State maintains all of its duties as a regulator, but also assumes the role in the petroleum industry as an entrepreneur. By entering the industry, the State acquires greater control of the petroleum activities, gaining expertise and inside information, exerts influence on offshore activities from both inside and out, and adds to taxation revenues by realising a profit.[167]

Government Participation in Petroleum Production in Norway

Of utmost importance in the management of petroleum is the of the States' various roles in the petroleum sector. In Norway, these roles are sixfold:

- the State as a *regulator* of offshore activities, including the development of legal and regulatory frameworks;

- the State as the *resource owner*, thus deciding how and when to exploit the natural resources of the Norwegian State (depletion policy);
- State as the *beneficiary* of resource development by direct participation in the development of petroleum resources through the State Direct Financial Interest (SDFI) ;
- the State as *owner* of national oil companies Statoil and Norsk Hydro, both of which are listed on the New York and Oslo Stock Exchanges
- the State as a *corporate developer*, attracting companies with international competence and experience, and cooperating with these companies to develop national companies within a long-term perspective;
- the State as a s*ustainable entity* pursuing a sustainable development policy, focusing on the environment, health and safety for present and future generations.[168]

The State alone is responsible for conducting petroleum activities, including licencing, approvals and consent.[169] When major development projects of great public importance arise, approval for the project must be discussed and approved by the Norwegian Parliament.[170]

Minority provision for state participation commenced when licences were awarded in 1969 (2nd round), and after 1972 the system of State participation on a carried-interest basis was mandatory.[171]

The Norwegian State has a number of roles in the exploration and exploitation of petroleum resources, both as a regulator and a participant.

State as the Resource Owner

The State is the owner of all the natural resources, able to exert sovereignty over these natural resources in accordance with United Nations Resolution No. 3281, where 'every State has, and shall freely exercise, full permanent sovereignty, including possession, use and disposal, over its wealth, natural resources and economic activities'. As such, the Norwegian State, as resource owner, is committed to managing the Norwegian petroleum resources in a long-term perspective for the benefit of the Norwegian society as a whole including developing industry, trade and development, as well as generating revenues for the country.[172]

State as Regulator – Licencing and concessions

The Norwegian State regulates all of the licencing and concession arrangements through the Ministry of Petroleum and Energy, and the Norwegian Petroleum Directorate. The standard rights and obligations of a licencee is defined in the *Petroleum Activities Act 1996* (Norway) and the *Petroleum Activities Regulations 1997* (Norway), as well as other specific legislation concerning marine safety and pollution control. Conditions that are regulated under the licencing regime include:[173]

1. Area covered by the licence;
2. Duration of the licence, and surrender of portion of the licence area (voluntary and mandatory);
3. Work obligations
4. Rights regarding facilities and pipelines
5. Conditions of Production, including production planning and development for deposits, work program and production time line, prudent production, production schedule,
6. Joint petroleum activities with other participants, including use of facilities, landing of petroleum, sharing of production, etc
7. Compensation to Norwegian fishermen for petroleum activities [174]

The document regulating the licence is the Joint Operating Agreement (JOA). This document has a number of functions:

- serves as a contractual document between the participant and the State;
- provides a regulatory framework for petroleum activities for the licencees;
- defines the roles and responsibilities of the Operator; and
- serves as a Joint Venture agreement between the parties.

State as Regulator – Industry Development and Competence

Norwegian national competence in the oil and gas industry is a direct result of cooperation and competition, with the interaction between the companies, government and research institutions driving and directing national competence in the oil and gas industry. The cornerstone of this development has been attracting the best of international expertise, and the promotion of cooperation between international and national oil companies. The transfer of expertise and technology from international oil companies through contractual conditions and obligations has been the key to the development of the Norwegian petroleum industry and national industry competence.[175] Utilising the licencing framework, the Norwegian State established technology transfer agreements with international oil companies, ensuring technology and knowledge was transferred to Norway.

International oil companies were utilised for staff training through staff exchanges, and integrated project teams assisted in developing national competency in petroleum technology and knowledge. The State also implemented targeted research and development through Petromaks to assist in overcoming the technical barriers encountered in natural resource exploitation.[176]

Through its legislative framework, the Norwegian government procurement policy encouraged the development of an indigenous petroleum industry. Prior to the 1960's, Norway had no oil industry, but with the North Sea petroleum finds there was a consensus that industry needed to be created. The Norwegian Petroleum Directorate (NPD) was created as the administrative branch of Statoil and the caretaker of commercial interests.[177] Simultaneously a Goods and Service Office was established to control Oil Company contracting and procurement activities.

The third licencing round saw the introduction of mandatory technical competence transfer, with the fourth licencing round in 1979 introducing provisions for technology development between foreign oil companies and Norwegian research institutions.[178] In addition, cooperation agreements made the oil companies contribute to funding, insight and expertise, contributing to the development of technology in Norway.[179] During the awarding of supply contracts, the Operator was required to inform the Ministry of its recommended supplier and Norwegian content, and the Ministry ensured that the Norwegian bidder was awarded the contract.[180] This Norwegian focus was essential for all oil companies, resulting in Norwegian contracting and supply ranging from 50-70% during this period.

The result of this sustained State role in developing the petroleum industry has been the development of a world class petroleum cluster, consisting of national oil companies, strong supply industry, industry leader in drilling and subsea technologies, strong research institutions, world renowned shipping, and strong banking and finance institutions.[181] This is demonstrated by international sales of the supply industry, which have tripled since 1995,[182] a remarkable feat given the anti-discrimination provisions in a 1994 EEA Directives[183] effectively ended this procurement policy. Today Norwegian goods and service account for approximately 50% of the Norwegian petroleum sector.[184]

State as owner of National Oil Companies and Participant through national Oil Companies

As the owner of the natural resources, and custodian of these resources for the Norwegian people, the Norwegian State has successfully directly participated in the development of the petroleum resources of Norway. This participation has been accomplished in three ways. Firstly, Norway sought to participate through the establishment and development of state-owned oil and gas companies (Statoil and Norsk Hydro). Statoil was established as a state-owned company in 1972. It's primary objective was stipulated in the first section of the Articles of Association, state that the 'object' of Statoil was (and continues to be) to engage in the exploration, production, transport, refining and marketing of petroleum.[185, 186] By 1973 it had

become the Norwegian governments chosen instrument for participation in the petroleum sector.[187]Although wholly state owned initially, Statoil has never been part of the Government administration, and the company was established with a separate, independent board and administration,[188] with the intention of being a fully integrated oil company from inception.[189]

There were a number of reasons for the establishment of Statoil, including:[190]

- to exert direct control over the Norwegian economy relating to petroleum matters;
- to participate directly in oil and gas exploration and production;
- gain expertise in the oil and gas industry;
- control the rate of production and the price of petroleum;
- to further strengthen the governments bargaining position in the petroleum industry, and to prevent majors from attempting to take advantage of Norwegian inexperience.

Although international oil companies were utilised to dominate initial exploration, and developed the first Norwegian oil fields, it was always the intention for the Norwegian State to directly participate in the oil industry.[191] Whilst oil majors had and continue to have a role in Norway's oil development, the Norwegian State defined the goal of developing a fully competitive domestic oil industry at an early stage.[192] This was accomplished primarily through the establishment of Statoil. In the early years there was also close cooperation with established international oil companies in partnership with international supplier industry, and frequent forced marriages between small Norwegian companies and huge international companies.[193]

The role of Statoil was to not only participate in exploration and production of oil, but to dominate in participation, and has accomplished this – today Statoil is operator for 24 oil and gas fields on the Norwegian continental shelf and accounts for 60% of all Norwegian petroleum production.[194] It is also the operator for 23 seabed facilities, and is a leader in subsea production.

Statoil is a public company, after a decision in 2001 was made to partially privatize Statoil by the sale of up to one third of its shares, and stock market listing where it was listed on the Oslo and New Your Stock Exchange.[195] [196] Its principle shareholder is the Norwegian Government, which held 76.3% of the Company after a share sell-down in July 2004.[197] After further share sales in 2004 and 2005, the Norwegian State held 70.9% of the shares in Statoil.[198] A merger between Statoil and the gas division of Norsk Hydro has created a new entity *Statoil Hydro* (although this will be renamed by June 2009), of which the Norwegian government owns 62%.

It is important to note that both Statoil Hydro participates in licences on equal terms and conditions as all other participants.[199] No favours or special dispensations are granted to either participant. This is a stark contrast to the policy of the 19270's and early 1980's where Statoil was provided with preferential treatment when bidding for a production licence was

conditional upon acceptance of a minimum of 50% State participation, usually through Statoil.[200] The applicant was required to state what participating interest it offered to Statoil for each of the production intervals stipulated. In addition, participants were required to indicate whether they were prepared to act as a technical advisor to Statoil during development and production.[201]

State as Participant – SDFI and Petoro

Another form of direct participation which stemmed from Statoil's early involvement with oil exploration and production was the establishment of the *State Direct Financial Interest* (SDFI) in 1985.[202] In this arrangement, the State paid its share of all investments and operating costs in petroleum production projects which correspond to its direct financial interest.[203] Typically this direct financial interest is 5%, but often as high as 30%, such as in *Statfjord Ost* and *Statfjord Nord*.[204] On the same terms as other participants, the Norwegian State then receives a matching share of revenue from the sale of the oil produced and other income sources.

Today this SDFI portfolio of production licences and infrastructure is managed by Petoro, a 100% Norwegian State owned Management Company, [205] whose object is

> …'on behalf of the state and at the expense and risk of the state, to hold the responsibility for and to attend to the commercial aspects related to the state's direct involvement in petroleum activities on the Norwegian continental shelf, and business associated herewith.'[206]

Petoro was established in 2001, and is operations are regulated under chapter 11 of the *Petroleum Activities Act*.[207] Prior to 2001, Statoil managed the SDFI, however the partial privatisation of Statoil necessitated the establishment of a management company to care for State interests. It should be noted that Petoro is not responsible for the sale of oil and gas.[208] Nor does it own the SDFI assets: these are retained by the State. Rather, Petoro is merely a management company which acts as a licencee in production licences and infrastructure on behalf of the Norwegian Government.[209]

Government Participation in Petroleum Production in Australia

Australia acknowledges and accepts the principle of State sovereignty over mineral and petroleum resources, and invokes this principle when asserting its right to the EEZ and Continental Shelf under the United National convention of the Law of the Sea (UNCLOS). Under Australian law, petroleum rights are owned by the government but assigned to the private sector for exploration and development.

Australia is extremely reticent to participate in petroleum exploration and production. At present it adopts a minimalist intervention approach to the development of petroleum resources, with the Australia governments neither undertaking petroleum projects nor engaging in commercial exploitation and development. Nationalisation of the development of natural resources has not been a major feature of Australian history. It is only huge

infrastructure projects, such as the Snowy Mountains Scheme, which have traditionally been coordinated by the state or federal governments. Rather, in resource development, the Australian government has four main roles in relation to the petroleum sector:

- It establishes the macroeconomic environment (broad economic policy).
- It provides a regulatory framework for exploration, development, project approval processes, safety, environmental assessment and revenue collection.
- It reduces commercial risk in minerals and petroleum exploration, by collecting and disseminating geoscientific information.
- It looks for ways to remove impediments to improve the industry's competitiveness.[210]

In addition, both the commonwealth government and the State/Territory governments have important roles affecting petroleum exploration and development:

- the Australian Government is responsible for broad economic policy and international matters, including personal and company income tax, interest rates, the overall level of government spending, foreign investment guidelines, trade and customs, commercial corporations and international agreements;
- onshore and in coastal waters (effectively the first three nautical miles from the coastline), the States and Territories own and allocate petroleum rights, administer petroleum operations, including occupational health and safety, and collect royalties on petroleum produced; and
- beyond the coastal waters (seaward of the first three nautical miles of the territorial sea) to the outer limits of Australia's continental shelf, petroleum rights are held by the Australian Government, but day-to-day administration is carried out jointly with the relevant adjacent State or Territory.[211]

Is government participation required?

Government participation has many advantages:

- The capacity to secure government control of the petroleum industry, and ensure that resources are deplete at a rate commensurate with the wishes of the State;
- encourages transparency and competition in the allocation of licences, particularly when using the discretion system for the allocation of licences;

- secure a growth potential for minnow companies with smaller resources;
- encourage exploration in less attractive areas. This is particularly advantageous for the Australia government given the large area of unexplored continental shelf recently acquired by Australia after the recognition of Australia's submission to the *United Nations Commission on the Limits of the Continental Shelf*;
- development of associated industries through economic diversification; and
- allows greater economic control over resource through participation in resource development using state oil company (SOC).

In spite of its success, State participation in petroleum production through state oil companies is questioned.[212] It is argued that the State could secure the additional economic rent just as well through taxation without having SOC, control of oil companies could be just as great through legislation and competition.[213] There is also criticism that State participation is a cumbersome way for the State to organise its fiscal and legal functions, and indicates a lack of confidence in fiscal and legal tools.[214] Furthermore it could also be argued that State companies do not have the same incentives for efficiencies that private oil companies have, a criticism levelled at Norwegian state oil company Statoil in the 1980's. This view of Statoil has been ameliorated through the partial privatisation of Statoil, floating of Statoil on the New York and Oslo Stock Exchange, and an international focus on Statoil operations and acquisitions.

Major commentaries within the Australian Petroleum industry are calling for greater intervention by the Australian government in the development of petroleum resources. Professor Barry Jones, academic and former government minister, notes that What Australia needs is for governments to start with a vision of our energy future and then ask what policies are needed to get us there.[215] He is not alone. Most recently, Australia's peak petroleum body, APPEA, released *the Petroleum Resources Report 2008*,[216] by eminent geologist Trevor Powell. In this report, there is a vigorous call for a greater government role in petroleum exploration policy, including greater government intervention in the provision of pre-competitive geo-science data. [217]

Recommendations

Recommendation 1: the Australian government revisits its role in the management and development of Australian petroleum resources.

***Recommendation 2*:** the Australian government takes a greater control in the development of petroleum resources, opting for a more regulatory intervention approach, where there is a

control over field development plans, control over petroleum activities and rate of depletion, and greater involvement the regulation of petroleum operations without engaging in offshore activities

Award of Licences

When awarding a licence for the exploration of production of petroleum resources, there are two primary ways in which a contract can be awarded: the Discretionary system and the bid or Auction system.

Discretion in the Award of Petroleum Licences

The discretionary system has been widely used around the world whilst the bid system has been used in a few jurisdictions.[218] It is a flexible system of awarding exploration and production acreage on the basis of a committed work program set either by the oil company upon application for acreage,[219] or by the State developing the resources. Licences are allocated by government officials according to administratively or politically derived criteria.[220]

This system vests the discretionary power in the petroleum management body and tender evaluators, who consider various financial, technical and managerial aspects of the applicant oil company, in fulfilling the work obligations proposed or required.[221] The host State shares the exploration risk with oil companies, since the State will only gain a reward when and if a discovery is made.[222]

Discretion System in Norway

Production licences are normally awarded through discrete licencing round, either biannual for frontier areas, or annual Awards for Predefined Areas (APA) rounds in mature provinces.[223] The government announces a certain number of blocks for which an application for a production licence may be made. Applicants may apply individually or in groups. Production licences are awarded on the basis of impartial, objective, non-discriminatory and published criteria.[224] On the basis of applications received, the Ministry of Petroleum and Energy puts together a group of companies for each licence or can make adjustments to a group which has submitted a joint application. The Ministry of Petroleum and Energy appoints an operator for this partnership, who is responsible for carrying out the day-to-day activities under the terms of the licence.[225]

The production licence is granted on condition by the King, who has the discretion to stipulate conditions for the granting of production licences.[226] The King is not obliged to grant of a licence based on the criteria stipulated,[227] and may grant licences without announcement (although rarely does). In addition the King is able to regulate matters relating to a production licencee, including the content of an application for production, and application fees.[228] In addition, the King has the discretion to determine if, and at what level, the Norwegian State will participate in petroleum activities.[229] It is also possible for the Ministry to grant exploration rights in part of a production area, at the discretion of the Ministry.[230]

The goal for the authorities is that all awarded acreage is explored in the best possible way by allowing the government to control the work program of oil companies and determine the composition of the oil companies within the licence

One concern with the use of the discretionary systems in Norway is that it was not always seen to be open and transparent.[231] This lack of transparency changed with 1994 EC Directive[232] which required open, transparent and non-discriminatory criteria, as well as open advertising for formal licencing.[233]

Bid System in the Award of Petroleum Licences

The bid or auction system is the converse of the discretionary system. In this system, a licence is awarded to the applicant that is the highest bidder for a defined acreage area.[234] The award is made following strict economic criteria, where the true market value of the acreage is the price it fetches in a competitive marketplace.[235] This award system shifts the exploration risk from the Host State to the Multinational Oil Companies, and ensures that the host citizens receive fair market value for their petroleum prospective acreage.[236] This form of award system tends to encourage the formation of partnerships between small oil companies.[237] It is administratively streamlined, since it does not require a large bureaucracy to evaluate bids or to monitor work programs.[238]

Bid System in Australia

Since 1992, Australian acreage is allocated using the work program bidding system, with exploration permits awarded for an initial term of six years.[239] When bidding the bidder must include the minimum guaranteed exploration work to be accomplished within the first three years of the licence, as well as a secondary work program for years 4-6, especially substantial operational activities that will significantly advance the exploration of the area.[240] Upon lifting, title to the petroleum passes to the oil company.[241]

The basic objective in awarding exploration permit under the bid system in Australia is to select the work program bid most likely to achieve the fullest assessment of the petroleum potential within the permit area in the minimum guaranteed period, recognising the essential role of wells in the discovery of petroleum.[242] Work programs proposed in bids must significantly advance the exploration status of the area. Work program bids are assessed taking account of the criteria listed below:

- the number and timing of exploration wells to be drilled, provided there is an adequate
- supporting program of geological and geophysical work;
- the amount, type and timing of seismic surveying to be carried out;

- other new surveying, data acquisition and reprocessing to be carried out;
- the amount, type and timing of any purchasing or licencing of existing data:
- pre-purchase of existing non-exclusive data cannot form part of the work program but any interpretation of that data will be taken into account in assessing the relative merits of the work program proposed;
- significant appraisal work over any previous petroleum discoveries within the area; and
- Extent to which the applicant's technical assessment supports the amount of seismic surveying and the number and conceptual targets of wells proposed.[243]

Analysis of Bid Versus Discretion System

The primary advantage of the discretionary system in the allocation of licences is that the system is often seen as favouring the interests of the host government, since it induces, through a mandatory work program, a rate of exploration than might have otherwise been realised under conventional market forces.[244] The discretion system has been seen to be valuable for a Host State where there is prospective acreage of limited or unknown prospectivity, where there are few applicants for acreage, or when an oil company's budget is limited. It allows governments to award the licences based upon a set of open, transparent criteria, including technical competence and geological understanding as well as the quality of the work proposed. Discretionary allocation of licences is particularly valuable as governments can link exploration licences for mature areas with frontier acreage, stipulating a minimum work program as part of the award of the licence. This occurs in Norway, ensuring that the government gains acreage from frontier or little explored regions.

Under a work program bidding system, oil companies compete with each other for exploration titles by increasing the exploration work program in order to win the bid. This may be seen to increase exploration costs than would otherwise occur.[245] In addition, it can also prevent minnow companies from bidding for acreage. Indeed, the Norwegian government utilises the discretionary method as part of its overall petroleum policy, to encourage small and middle size companies to apply for acreage.[246]

Whatever method is used for the allocation of exploration and production licences, it is essential to choose a primary lease allocation system that directly addresses the public policy and economic objectives of the petroleum activities.[247]

Factor	Discretionary Method	Bidding Method
Advantages for Governments	Provides govt with the power to influence licence operations after award	Promotes efficiency in exploration and exploitation of resources
	Promotes participation by small companies, especially domestic companies	Secures a large part of the economic rent for the government
	Encourages efficiency when it involves a work program	
	Encourages competition after the award is made	
Disadvantages for Governments	Transfers a large part of the economic rent to the companies	Gives governments little control after the award is made
	Relies upon bureaucratic judgment	Favours companies with large technical and financial resources at the expense of smaller companies
	May discourage efficiency among companies	Unable to secure large share of the rent in highly volatile market conditions
		May defer exploration of marginal areas

Table 1: Comparison of the merits and drawbacks of the discretionary and bid methods for the award of petroleum acreage

Recommendations

***Recommendation 1**: Consider shift to discretionary award of licences rather that bid system since the discretionary system allows the government to set the work program rather than oil companies, and allows the government to meet changing economic, social and environmental requirements and ensures exploration in frontier areas*

Decommissioning – integrating into field development

Decommissioning in Norway

Decommissioning in Norway is governed by both international and Domestic Law. As signatory to both OPSAR and MARPOL, Norway has international obligations when decommissioning old and disused petroleum structures. These obligations have been incorporated into domestic legislation.[248]

Initially, the licencee is required to submit a decommissioning plan to the Ministry as part of the mandatory Plan for Development and Operations, in order to gain approval for the commencement of petroleum production. The licencee is also required to submit a decommissioning plan to the NPD at least five years prior to the decommissioning of a structure, which must include proposals for alternative use, complete or partial removal, or abandonment in situ, and reasons for the proposal.[249] The final decision related to the decommissioning of a structure is solely the responsibility of the Ministry.

Where cessation of activities is to occur, the operator of a licence must submit a proposal to the management committee to prepare an abandonment plan in accordance with the *Petroleum Activities Act*. This plan shall specify proposals for continued use of the facilities, shutdown and disposal of the facilities including removal.[250] It is deemed to have been adopted by the management committee unless discussed within three months of the proposal of the plan by the operator.[251] In addition the licencee is liable for all wilful or negligent damage or inconvenience caused in connection with the disposal of a petroleum structure.[252] Should the structure be abandoned, the licencee is responsible for any damage or inconvenience caused by the abandoned structure, unless the MPD decides to assume responsibility and liability for the structure.[253] If the State requires the removal of the facility or acquires the facility, then all liens, charges and encumbrances are deemed to have lapsed upon acquisition.[254]

The Norwegian State also has the legislative right to assume ownership of a licencee's facility where a licence expires, has been surrendered or revoked, or if the use of the facility has been permanently terminated.[255] If any compensation is to be paid to the licencee, the State shall determine the amount of compensation.[256]

Decommissioning in Australia

Guidelines for the Decommissioning of Offshore Petroleum Facilities in Australia were drafted in 2002 by the Commonwealth Department of Industry, Tourism and Resources on behalf of the Cth-State/NT Joint authorities.[257] These guidelines stipulate the process for the decommissioning of petroleum facilities, including the relevant international conventions, domestic legislation. Offshore decommissioning activities are primarily subject to the following legislative provisions and conventions:

- *Offshore Petroleum Act 2006* (Cth), and their Regulations;
- the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), and their Regulations;
- the *Environment Protection (Sea Dumping) Act 1981* (Cth), and their Regulations;
- the UN Convention on the Law of the Sea (UNCLOS); and
- the Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matters (the London Convention) (MARPOL).

The decommissioning process of oil facilities in Australia is primarily regulated by s303 of the *Offshore Petroleum Act 2006* (Cth), subject to a210 of UNCLOS, which requires a state to adopt laws and regulations to prevent, reduce and control pollution of the marine environment.[258] In addition, a60.3 of UNCLOS states that any disused or abandoned installations or structures on the continental Shelf shall be removed as necessary to ensure safety of navigation.[259] Such removal of structures will have due regard to fishing, protection of the environment and rights and duties of other States.[260]

The titleholder must remove all structures and structures from the title area that are neither used for will not be used in connection with the operations which the titleholder is or will be engaged in and are authorised by the permit, lease or licence.[261] The Designated Authority has the right to give remedial directions to former or current titleholders regarding the removal of property, the plugging or closing off of wells, the conservation and protection of natural resources; or remediation of damaged seabed or sub-sea areas.[262] If there is a breach of a remediation direction, the Designated Authority may do anything required to effect the direction.[263]

Under s23 of the EPBC Act, the titleholder must not take an action that has, or is likely to have, significant impact on the environment, without the approval of the Minister or delegate under Part 9 of the EPBC Act.[264] The *Sea Dumping Act 1981* (Cth) required the titleholder who proposes to dispose of an offshore platform or vessel in situ or in Australian waters to apply for a grant of permit from the Environment Minister, which will be considered within the context of ss18-19 of the *Sea Dumping Act 1981* (Cth).[265]

Standards and guidelines for the removal of offshore installations were adopted by the International Maritime Organisation in 1989, to ensure safety of navigation. These guidelines state that disposal needs to take into account a number of safety, environmental and cost-risk factors, including the commissioning of the structures for other uses.[266]

Reducing Regulatory Burden in Australia - Embracing elements of the Norwegian Licencing system

Single Contractual Framework for the Development of Petroleum Resources

Norway

The Joint Operating Agreement

The award of a production licence in Norway is conditional upon makes the award of the conditional upon the parties concluding a Joint Operating Agreement (JOA) under Section 3-3 of the *Petroleum Activities Act 1996* (Norway).[267] The JOA regulates the relationship between the partners of the JOA, and the partners' relationship with the Norwegian State, as well as providing details of the organisation of the Operation.[268]

The JOA is a contract between the Norwegian State and the participants in a licence, and is mandatory. Without the JOA, petroleum exploitation cannot commence. The JOA forms the core regulatory document for petroleum production under the licence and regulates:

- The structure and arrangement of the JOA, including parties, the State appointed operator, voting rules and allocations, and how to change the operator should the need arise;
- Financial arrangements, including how joint assets are arranged, liabilities and payments, accounting procedures, and process where default occurs;
- Actual work activities, especially work programs, budget of the project, rules relating to purchasing, and insurance coverage for participants;
- Field development proposal;
- Procedure and information relating to sole risk operations;
- The disposal and distribution of petroleum produced, including ownership of resources; and
- Issues relating to assignment of participating interest, cessation of operations, especially duties and obligations relating to cessation, and abandonment of facilities (planning and actual).[269]

Essentially, the JOA forms the basis for the day to day operations of the licence, as well as the allocation of earnings.[270]

Australia

The development of petroleum in Australia takes place under the contractual arrangement of the joint venture The JV in Australia is a wholly private agreement between the JV parties. As such the joint venturers are able to put as many or as few provisions into the contracts as they require. There is no government regulation of the JVA, however, they do have to gain government statutory approval for the project being conducted by the JVA, and are subject to statutory obligations including the *Trade Practices Act 1974* (Cth), *Offshore Petroleum Act 2006* (Cth), and fiduciary duties.[271]

There is no express contractual arrangement between the government and the petroleum licencee in the exploitation of petroleum resources in Australia. All contractual arrangements are formed between the participating parties. The contractual arrangements for the exploitation of Australian petroleum resources are governed by the Joint Venture agreement. A joint venture is established so the venturers can share in the produce of the venture. It is the discretion of the participants of a joint venture agreement as to what conditions they require and stipulate within their JV agreement.

Once the joint venture has been established for a particular venture, an, an operator is appointed and the JV applies for a licence for certain acreage. The licence is then awarded to the successful joint venture bid. Once the licence is awarded, it is the responsibility for the Joint Venture operator to ensure that the petroleum resources are exploited according to the legislative framework in place under the *Offshore Petroleum Act*.

Generally, all Australian joint venture agreements in the petroleum industry are unincorporated joint ventures. In this commercial arrangement, the members of the joint venture associate themselves for the particular acreage exploration or production venture and share the production from the venture, rather than the profits from the company. In this legal relationship, the participants enter into a contractual relationship to pursue the particular venture, without forming a separate legal entity.[272]

The key feature of the Australian unincorporated joint venture is the participating interest, which defines what the participant owns. The Participating Interest in a joint venture confers both property and contractual rights on the participants, and comprises:

- an obligation to contribute a specified proportion of joint venture capital and operating costs;
- the right as tenant in common to take a specified proportion of joint venture production, separately and for its own account;
- beneficial ownership as tenant in common in a specified share of each item of joint venture property; and
- other rights benefits and obligations arising under the joint venture agreement.

The structure of the unincorporated joint venture and the relationship between the participants means that there are a number of critical issues that must be addressed when forming a JV for the exploitation of petroleum resources. These issues include:

- t he scope purpose and duration of the joint venture;
- t he obligations and rights of the participants;
- t he structure of the JV for the operation, management and control of the JV, each participant is entitled to representation on the Operation Committee, and votes on work programs, budgets, authorisations;
- i dentification of assets committed to the joint venture , including the taking of security over a joint venture participant's interests;
- p articipating interests of the participants, which sets out the proportionate shares or interests of the JV held by each participant;

- t
  he assignment of the separate participating interests of the participant in a JV. This transfer of proprietary interests;
- d
  efault by participants; and
- i
  nter-participant relations and the external liability of participants.

Although there are no compulsory contractual provisions between the government and the participant in the Australian petroleum regulatory regime, there are provisions for government ratification of contracts through the non-compulsory State Agreements.[273] These agreements are generally negotiated between the government and the resource developer, outlining the entitlements and obligations for the respective parties.[274] These agreements are for significant development projects in Western Australia, and having been used for more than forty years.[275] They are ratified by an Act of the State Parliament,[276] and amendments by Parliament are virtually impossible, as these require the approval of both parties to the Agreement.

The state agreements differ from other primary approvals in the petroleum production process in that they are only a facilitating mechanism for development of specific long-term projects through a negotiated agreement to ensure long term certainty, land tenure and complex approvals. It must be noted that these agreements are only applied through statute, and are not compulsory. However, once ratified, these agreements can only be altered through mutual consent, thereby providing greater certainty to the project, security of tenure, and reducing sovereign risk for investors.[277]

These state agreements specify:

> 'the rights, obligations, terms and conditions for development of the project, and establish a framework for ongoing relations and cooperation between of the State and project proponent.'[278]

When entering into a State Agreement, the broad objectives of the state are to:

- Facilitate the efficient and effective development of the State's natural resources;
- Manage the development by ensuring it is consistent with State policies on issues such as land use, conservation, competition, infrastructure sharing, secondary processing development and maximising local content; and
- Ensure that development provides economic and social benefits for the Western Australian community.[279]

State Agreements have not generally been entered into for a specific term, but have been designed to operate throughout the life of the project. To this end, provisions are included in

Agreement Acts dealing with matters such as assignment, variation of contract and force majeure. Provision has also been included in recent State Agreements for the submission of additional proposals under the proposals mechanism if the developer wishes to modify, expand or vary a project.

In many ways, the State Agreement in Western Australia is very similar to the mandatory Plan for Development and Operations (PDO) as required under section 4-2 of the *Petroleum Activities Act* (Norway) and s20 of the *Petroleum Regulations* (Norway). The primary difference in these two regimes is that the Norwegian JOA is mandatory, without which petroleum production cannot commence or continue. In Australia, the State Agreement is optional, and generally only used for big projects in Western Australia.

There are two major reasons for the use of JOA's in Norway. The first relates to control of the development of a petroleum field. In Norway government control is maintained through the JOA, as it is part of the regulatory framework as defined in *the Petroleum Activities Act* and the *Petroleum Regulations*. In Australia petroleum development and operations are generally developed by the company.

The second reason for JOA's in Norway is related to transparency. By utilising a standard JOA for all participants in petroleum production, there is transparency and certainty for all parties. This differs to Australia, where individual JV agreements fall under commercial in confidence, and are unavailable to anyone but participants. There is no standard JV contract, although AIPN has a model *International Operating Agreement*. There is no contractual relationship between the developers and the government, rather the development is governed by statutory obligations.

Uniform Contracts for Australia

Although there is no uniform contractual arrangement in Australia such as that which exists in Norway, there is some indication that a standard agreement is required for large projects in Australia. This is indicated by the take-up rate of Western Australian State Agreements. Even though these agreements are not mandatory, they have been used for the last 40 years, and are currently utilised in over 70% of major development projects in WA. Furthermore, these projects reduce a large amount of regulatory burden for oil companies, since project approvals at state and federal level are fast tracked, as well as brought together under a single umbrella. Furthermore, once a State Agreement has been ratified by parliament, it is the only regulatory compliance document required by the project. This considerably reduces compliance burden and costs for oil companies.

Furthermore, there is considerable regulatory burden for companies when forming a Joint Venture, since they are required to create a new joint venture agreement. Unlike the *Model*

Exploration JV Agreement that has been created by the Australian Mining and Petroleum Law Association (AMPLA), a model JV agreement for Petroleum does not exist in Australia. There is a Model JV agreement available from the Association of International Petroleum Negotiators (AIPN), it is universal in character, rather than being tailored to the Australian petroleum JV environment. Considerable regulatory burden in the formation of JV arrangements may be reduced by the implementation of a universal or uniform JV agreement, and the Norwegian JOA may be used as a basis for the formulation of that agreement.

Recommendations

Recommendation 1*: that a uniform contractual arrangement be applied to all petroleum projects, to reduce compliance costs and streamline the project process.*

Recommendation 2*: a uniform JV agreement is established to assist in reducing regulatory burden and compliance costs for companies when establishing JV agreements*

Reducing regulatory duplication

Single regulatory system

Regulatory overlap creates a burden on participants since it increases approval time and requires the participants to interact with a number of legislative rules and governments. Experience in the Norwegian system demonstrates that the regulation of all petroleum activities by a single body, the Norwegian Petroleum Directorate, provides a seamless, cohesive regulatory body for petroleum development.

At present the regulation of Petroleum in Australia is government by state, territory and the commonwealth governments, as a consequence of constitutional issues and the Offshore Constitutional Settlement. Consequently, there is overlap in the regulation of petroleum production. The regulation of petroleum production and exploration in offshore areas is governed by commonwealth legislation, whereas the onshore facilities are often governed by state legislation. In essence, it is not unusual to have a project subject to numerous government legislative requirements. Western Australia has simplified this issue somewhat with the use of the State Agreements. However, as discussed above, these are confined to WA, and are generally only used for large projects. Moreover, since these are not mandatory, they only apply when a JV decides to utilise the agreement for the life of the project.

As such, there is a duplication of regulatory framework in the current Australian regulatory system. Similar duplication occurred in the regulation of safety in offshore petroleum operations. This duplication of petroleum safety was alleviated by the creation of the National Offshore Petroleum Safety Authority (NOPSA) in 2002, at the agreement of the states, territories and Commonwealth. NOPSA only regulates offshore petroleum (from the 3nm limit as set out in the Offshore Constitutional Settlement).[280]

A single regulatory body for offshore petroleum regulation is also possible, and warranted for the regulation of offshore petroleum production in Australia. The Commonwealth has the constitutional capacity to establish and maintain a single regulatory body under the Corporations Power (ss51 (xx) of the Australian Constitution), or the Trade and Commerce Power (s51(i) of the Australian Constitution).

Whilst there may be the constitutional capacity to establish a single regulatory body, there is also the issue of political will in establishing a single regulatory body. A single regulatory body is practical, since it removes a number of regulatory processes for participants in petroleum production, and would increase Australia's attractiveness as a province for petroleum production and exploration. Whether a single Australian Petroleum Authority would attain consensus by relevant state, territory and commonwealth governments remains to be seen.

Should a single Australian Petroleum Authority be established, its establishment process and structure could be modelled on the establishment of NOPSA. One suggested structure of such an authority is outlined in figure 3 below.

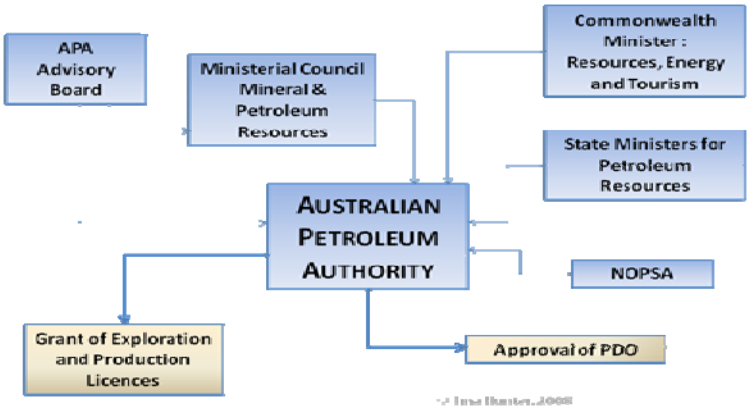

Figure 3: Suggested Structure for a Single Australian Petroleum Authority, modelled on NOPSA.

Recommendation

Recommendation 1: *That there be the establishment of a single regulatory authority (the Australian Petroleum Authority), to reduce the regulatory burden associated with the present federalist system of petroleum regulation.*

Reducing licencing burden – Streamlining the System by using a Field Development Plan

Aside from the regulatory burden arising from multiple regulatory bodies a participant must satisfy, there are also a number of administrative burdens with which participants must contend with.

Firstly, there is a requirement for companies to apply for a number of titles under the OPA, including pipeline and infrastructure titles. In additions there are environmental, Native title and infrastructure development issues which must be addressed. The result is a complicated, time-consuming regulatory approvals process involving many applications to numerous government departments and bodies.

Norwegian petroleum production avoids this regulatory bottleneck by requiring the licencee to submit a PDO to the Ministry for approval prior to the production of petroleum in the licence area. This plan must contain an account of the economic, resource, technical, commercial and environmental aspects of the production, as well as decommissioning and disposal of the installation once production has ceased.[281] Where production is planned in two or more stages, the plan must, as far as possible, comprise a total development plan rather than a stage development plan.[282] Production cannot commence until the plan has been approved by the minister,[283] and where there has been significant deviation from the original production plan, the Ministry may require a new or amended plan to be submitted and approved.[284]

The Ministry also has to approve the expected production schedule, which is only able to be altered if warranted by resource management or other significant social considerations.[285] The ministry will stipulate for periods of time, the quantity of petroleum which may be produced, injected or cold vented at any time, and stipulates that burning of petroleum is not allowed without Ministry approval.[286] On all other production matters, the Ministry has discretion regarding preparation, commencement, and continuation of production,[287] and the use of production facilities by others, where deemed necessary for efficient operation or for the benefit of society.[288]

The Norwegian requirement for a PDO would be of use in the development of petroleum resources in Australia. It could streamline the regulatory system by concentrating all the regulatory requirements into a single application for production. This single PDO would address requisite regulatory, environmental, Native Title, decommissioning and competition law requirements in a single plan, as outlined in figure 4 below.

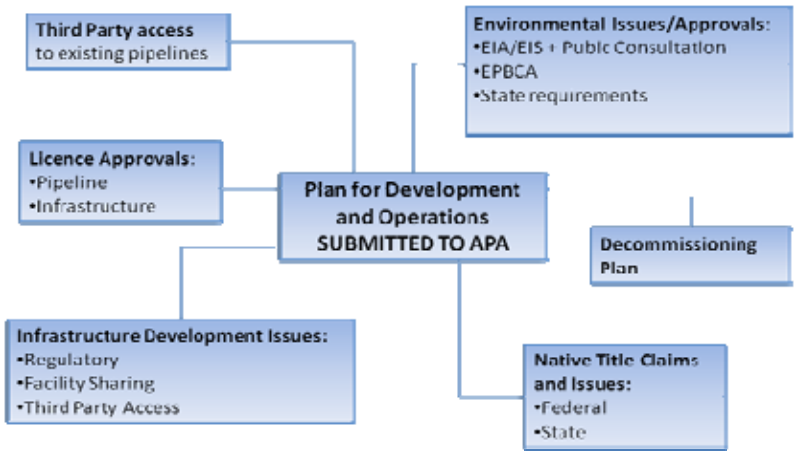

Figure 4: Suggested components for a single Plan for Development and Operations for all new offshore petroleum projects

Fortunately, the State Agreements that are in existence in Western Australia comprise many similar components and requirements as PDO's, and are utilised by many companies for petroleum projects. Thus it is likely that a move to mandatory PDO requirements for field development would be welcomed, since many companies already utilise singe agreements for development of a project. Furthermore, mandatory PDO prior to field development would significantly reduce regulatory burden for many participants.

Should a single regulatory body be established for the regulation of petroleum activities in Australia, part of its function would be the approval of a PDO for each project as illustrated in Figure 3 above.

Recommendations

Recommendation 1: that a single regulatory body be established by the Commonwealth for the regulation of offshore petroleum activities. This regulatory body could be modelled on the NOPSA structure.

Recommendation 2: that all participants in petroleum resource development are required to submit a Plan for Development and Operations to the regulatory body for approval. The PDO will necessarily address regulatory, environmental, Native Title and competition law requirements in a single plan. It is recommended that PDO requirements be modelled on existing State agreements as these are well received by industry.

Recommendation 3: to reduce regulatory burden, infrastructure and pipeline titles are removed and integrate into the PDO, further reducing regulatory compliance hurdles for participants

Economic Prosperity

Principles of petroleum revenue

One of the most important considerations in the taxation of petroleum revenue is striking a balance between attracting petroleum investment and securing national benefit. This can be

extremely difficult because you have this constant struggle between the oil company who wants to benefit its shareholders, and the state, whose aim is to maximise the return to the people from the natural resource that is being exploited. The taxation framework should be designed to balance these competing interests, remaining competitive enough to attract investment, whilst still returning real profit to the state who owns the resources.

Governments have an important role in creating and maintaining an environment that is conducive to investment, since experience demonstrates that investment and capital flows into sectors and countries that have established sound and predictable systems of corporate governance.[289]

Desire to attract foreign investors and the increased willingness to modify the fiscal terms to accomplish this has resulted in a high degree of competition between host States to reduce the tax burden on investors.[290] You only have to look at the contractor take in Australia compared to Indonesia or Malaysia. The fiscal terms are so favourable in Australia that the contractor take from a 25-30Mbbl discovery in Australia is equivalent to the take from an 80Mbbl discovery in Indonesia or Malaysia.[291]

Whilst this section considers Australian and Norwegian petroleum revenue, and makes observations on improving revenue generation, it is primarily focussed on illustrating the Norwegian system of petroleum revenue generation. Recommendations for petroleum revenue are outside the scope of this submission, and will be addressed if and when there is a review of the upstream Petroleum Taxation system.

Generating petroleum revenue

Both Australia and Norway capture the economic rent from their petroleum resources through fiscal policies which address the issue of resource rent. Whilst it is arguable that the level of resource rent is adequate in the Australian setting, the Australian policy framework certainly addresses the issue of resource rent in a similar policy framework to the Norwegian State.

Similarly, both Australia and Norway periodically revisits the fiscal policies addressing the rate of taxation of petroleum resource revenues. However, the force that motivates the reconsideration of policy differs. In Australia, it is generally at the insistence of the Australian petroleum industry representing the companies which exploit the petroleum resources that the issue of fiscal policy is re-addressed.[292] This differs to Norway, where policy is generally revisited when either domestic or international markets dictate, and policy decisions are always made with the focus of the development of the petroleum resources for the Norwegian people of current and future generations firmly in focus. It is this reasoning behind the reconsideration of taxation policy that differs considerably between Australia and Norway.

Norwegian Petroleum Policy

Essentially, Norwegian petroleum policy has been an ongoing strategy to develop the resources in a responsible controlled manner for the benefit of Norwegian society as a whole. This benefit has not only included the development of policies for the extraction of petroleum, but also policies for the management of revenue. In addition, from the beginning, the Norwegian State has focused on the concomitant development of the supply industry within the domestic and international petroleum business arena. The combination of these policies has seen Norway flourish under a management system that implements the overriding principle of petroleum development in Norway: the development of the natural resources carried out in the long-term perspective for the benefit of Norwegian society as a whole.

The objective of Norwegian petroleum policy is to secure high and stable revenues from petroleum operations for present and future generations.[293] Since the beginning in 1965, the system has been adapted and improved to meet the challenges of an evolving industry. This policy was developed in the first half of the 1970's, with the Norwegian State wanting to secure a larger share of the increased value of the petroleum resources for the State of Norway as the Resource Owner, on behalf of the people of Norway.[294] The basic policy comprises a special petroleum taxation system, introduced in 1975, and state direct financial interest.[295]

Petroleum Taxation

Tax rules for upstream petroleum production are based on the ordinary Norwegian corporation tax system, with some special deviations and features, and the addition of a special tax for upstream activities.[296] Both the corporation tax and the special tax are based on the net profits which the petroleum companies derive from the relevant petroleum activities. Even though the Norwegian petroleum tax system is applied with a relatively high marginal tax rate, it has a number of favourable features.[297]

Companies engaged in petroleum activities are subject to the *General Tax Act (199)9* as well as special regulations outlined in the *Petroleum Taxation Act 1975,* and relevant regulations. Petroleum taxation is paid on net petroleum income, and based upon Norwegian corporation tax rules. Downstream (land-based activities) are taxed at the ordinary rate of 28 percent. Upstream activities, including offshore exploration, development, processing, production and pipeline transportation of petroleum attract a special tax rate of 50%, as a consequence of the high profitability associated with the production of Norwegian petroleum resources.[298]

Gross income of petroleum companies is governed by the Norwegian government-determined norm price.[299] The principle behind the norm price is that it should correspond to the price that the petroleum could have been traded for between independent parties on the free market.[300] The price is set by the Norm Price Board, and based on an evaluation of the market valuation of Norwegian crude after considering all relevant market information.[301] Generally the prices are set monthly, based on information from and meetings with operating companies prior to the stipulation of the final norm price.[302]

The calculation of taxable income for both rates of taxation considers linear depreciation of capital investments over six years from the date was made. Companies are also able to deduct all relevant expenses, including exploration, research and development, net financial, operating, and decommissioning expenses.[303] Since the norm price is supposed to reflect the value of crude at a defined norm price point, no tax deductions are allowed for costs above the norm price point.[304]

State Ownership of Petroleum Fields

State Direct Financial Interest (SDFI) is an arrangement in which the State (through the State owned management company Petoro) owns a percentage interest in a number of oil and gas fields, pipelines, and onshore facilities.[305] The principle behind the SDFI is that the State, when awarding acreage, can determine exactly how much of the value creation in the field will devolve to the State.[306] The percentage of the State's interests is determined during the awarding of licences, and depends upon the likely profitability of the petroleum field. Generally, the more likely a field is going to be profitable, the greater the State Direct Financial Interest.[307]

Petoro, a wholly State-owned management company was established in 2001 when Statoil was partially privatized and listed on the Oslo and New York Stock Exchange. As such, the State, through Petoro is responsible for its share of costs, investments and taxation, and conversely receives its share of income.[308] This forms and important part of the Norwegian State's revenue, comprising approximately 40% of the total revenue in 2006.

Statoil Dividends

The Norwegian State established Statoil in 1972, with the objective of becoming a fully integrate oil company, and rapidly became the chosen instrument for State participation in petroleum activities.[309] Partial sale of Statoil has resulted in the Norwegian State retaining majority ownership of the company. As such, the State receives Statoil dividends, like all other shareholders. The State's value of Statoil dividends in 2005 was 8.1 billion NOK, and comprised approximately 3% of the State's total petroleum revenue.[310]

Australian Petroleum Policy

Initially, Australia's petroleum policy has been directed toward the collection of royalty taxation. This was altered in 1990-1 to an economic rent based fiscal policy. Today Australian Petroleum production is subject to the Petroleum Resource Rent Tax (PRRT), which is a profit-based tax levied on a petroleum project.[311] The principle of PRRT is to ensure that the Australian community receives and appropriate share of the large returns that can follow the development of Australia's rich petroleum deposits.[312] At the same time, PRRT endeavours to provide companies with adequate rewards for the risks they accept and undertake in exploring for petroleum in Australia's offshore petroleum provinces.[313]

The PRRT taxation rate of PRRT is 40% of profit,[314] and this taxation is deductible for the calculation of company tax. effectively reducing the PRRT to 28% of profits.

The PRRT applies to offshore areas under the jurisdiction of the Australian Government, with the exception of the North West Shelf (NWS) permit area and the Joint Petroleum Development Area (JPDA) in the Timor Sea. Revenue from the JPDA is considered under Production Sharing Contracts, and is outside the scope of this study.

The taxation of the North West Shelf differs from other offshore areas, and is based on an *ad valorem* royalty payment that existed prior to a shift to PRRT based taxation in the 1990-91 fiscal year. This payment consists of a 10-12% royalty rate applied to the wellhead value of the petroleum lifted. The revenues are shared between the Commonwealth and Western Australian governments at a rate of roughly 40/60.[315] As a general policy, ad valorem royalties are usually applied to high volume or high value minerals.[316]

Additionally, Australia has adopted an exploration taxation policy favourable to companies exploring Australia's petroleum provinces.[317] The offshore petroleum exploration incentive allows an immediate uplift to 150% on PRRT deductions for exploration expenditure in designated offshore frontier petroleum areas.[318]

Utilising petroleum revenue

Norway

There is the potential for 'Dutch Disease' to also affect developed nations with newly located mineral resources, such as Norway in the 1970's. To ensure economic stability and counter the effects of the flow of huge amounts of oil money into the Norwegian economy, the Norwegian State implemented fiscal policies and regulatory systems to manage the inevitable structural changes in the economy resulting from resource development. At the core of this fiscal reform was the recognition of the importance of the labour force as the most important asset.[319] To assist in achieving economic balance based on the labour force, sustainable macroeconomic policies have been developed alongside a pension and tax system that encourages the labour force to continue working. [320]

Fundamental to Norway avoiding the 'resource curse' has been prudent polices (particularly a management and tax regime for the extraction of oil and gas), transparency and accountability of government processes, and, most importantly, financial saving through the mandatory *Government Pension Fund – Global* (formerly the Petroleum Fund).[321]

The considerable revenue that the State receives from petroleum resource exploitation is considered quite differently in the two nations. Related to the Norwegian policy of intergenerational equity and resource development for the people, the Norwegian State has a policy of revenue investment in a State Petroleum Fund, for the assistance of future generations. The investment policy implemented by the State serves two distinct purposes.

Firstly, it serves as a savings fund. It is designed to ensure that the petroleum revenue is used not only by the current generation also by future generations.[322] Secondly the policy objective of the fund is to serve as an economic buffer between the petroleum revenue accumulated, and the use of that revenue within the Norwegian economy.[323]

The Norwegian Government established the Petroleum Fund in 1990,[324] to invest the large surplus generated by the Norwegian petroleum sector.[325] It was established to counter the effects of a forthcoming decline in income, to smooth out the disruptive effects of highly fluctuating oil prices,[326] and to generally prevent petroleum revenue from impacting negatively on the Norwegian economy.[327] It was renamed the Government Pension Fund – Global in 2005.[328] The Fund's income consists of the central government's net cash flow from petroleum activities and the return on the Fund's capital

Australia

In reviewing Australia's fiscal policies, attention needs to be focused on an appropriate level of economic/resources rent. Interestingly, some commentators say the rate of rent is too low, industry notes that it is too high. What is apparent is that the Australia's latest review of resource rent policy occurred at a time when petroleum was selling for less than $15/bbl. At present the price of petroleum is hovering around $100/bbl, making a rethink of fiscal policies inevitable. Whatever the fiscal policies that Australia embraces, they need to consider balancing the fiscal double edged sword: attracting interest in exploiting Australia's petroleum resources, and gaining adequate economic rent for those resources.

In developing a suitable fiscal policy which adequately captures resource rent, the State accumulates income on behalf of the people. It is also the responsibility of the State to develop suitable policies which adequately manage the resources revenue for the benefit of the Host Community. At present Australian fiscal policy does not address the revenue generated from petroleum resource rent. In order for future generations to benefit from the exploitation of Australia's non-renewable petroleum resources, Australia needs to adequately invest the revenue for future generations. Present fiscal policy is inadequate. Australia's policy framework needs to develop adequate policies which accumulates resource revenue, outside of the normal budgetary process, and then invests the revenue wisely to ensure that as petroleum resources are depleted, the revenue is available for future generations, and provides benefits to those generations. This intergenerational equity needs to be established when the resources are being exploited.

In addition, in order for the Australian economy to be immunized against the influences of petroleum resource revenue skewing the economy, Norwegian experience has demonstrated it is necessary to largely remove the revenue from the national economy. A future fund has the added benefit of removing the petroleum revenue from the economy and ensuring that there is no adverse effect from the resource rent revenue in the national economy.

In Australia, there is no specific fiscal policy which addresses the issue of petroleum revenue in the economy. Presently, all revenue from the exploitation of petroleum resources, as well as other non-renewable resources, is incorporated into the government coffers annually, and used as part of the budgetary process.

Australian fiscal or petroleum policy does not consider the investment of petroleum revenue in a separate petroleum fund for either current or future generations. There is a 'future fund' in Australia,[329] which exists to pay commonwealth superannuation liabilities.[330] However there appears to be no policy which directs petroleum revenue to this fund for the economic sustainability of future generations and to assist in the management of resource wealth in the economy to lessen the effects of 'resources curse'.[331] A newly created Higher Education Endowment Fund (HEEF) provides funding to Australian higher education institutions for capital expenditure and research facilities.

Recommendations

Recommendation 1: *Development of appropriate fiscal policy which balances an appropriate level of resource rent with the need to attract investment from MOC's.*

Recommendation 2 there be a general review of petroleum policy and taxation in Australia, with a particular focus on petroleum revenue generation and utilisation in Australia

Recommendation 3: The expansion of the Australian Futures Fund, where revenue from petroleum taxation is paid into the Fund, and the Fund is for the benefit of all Australians

Recommendation 4: that Australia investigate, with a view to adopting, a controlled spending strategy as utilised by the Norwegian government.

International Competitiveness

The Australian petroleum industry could be characterised as is still in its initial phases, similar to Norway in the 1970's and 1980's. It is characterised by vast frontier areas,[332] a need to accumulate geotechnical data,[333] petroleum policy largely driven by economic needs,[334] little concurrent development of industry and infrastructure, and little consideration for enhancing Australia's current and future economic prosperity.[335] In comparison, Norway has been through the development phase of its petroleum industry, consolidating the industry to a point where all participants of Norway's upstream petroleum sector (the State, the Oil Companies and the Society in general) benefit from the regulatory framework developed.

Pre-Competitive Data

The 1998 *Australian Offshore Petroleum Strategy* aimed to provide a suitable framework for the efficient exploration of Australia's continental shelf for the next ten years. By encouraging and attracting international investment and investors, it sought to utilise market forces and

economics to drive petroleum exploration and interests. It also sought to increase certainty in the acreage release process, and give industry more lead time in considering areas for future leases. It too has failed. In 2008, it was noted that the petroleum market as it is failing, and that a vibrant and competitive exploration industry needs to be established. In addition, the petroleum industry itself has identified the need for the Australian government to take a lead role in the exploration of Australia's vast continental shelf, noting that

> …'it is therefore in the governments' interest to mitigate this market failure tu providing information on the basic geology of as area, including information from past exploration. Companies can then make informed decisions as to potential within their own risk and reward framework.'[336]

Australia's petroleum policy of the conservative Howard government during its period in government 1996 – 2007 created a commercial, non-interventionist petroleum policy. This policy has been dominated by a commercial focus, and punctuated by a commitment to minimal government intervention. Until recently, this has suited the petroleum industry, and was perhaps even driven by the Australian petroleum industry. However, a recent industry request for greater government role in the provision of pre-release geoscientific data illustrates the industry's growing recognition of the need for some government participation, and guidance. How much will depend on the policy position of the new Rudd government in relation to the exploitation of Australia's petroleum resources.

Given Australia's vast petroleum frontier regions and recent increase in the size of the continental shelf, it is logical that the Australian State is responsible for the collection, cataloguing and dissemination of geoscience data through Geoscience Australia. This Government organisation researches and advises government and industry on Australian petroleum prospects, reserves and potential.[337] The data accumulated is used by the Australian commonwealth government to attract international petroleum investment.[338] Under offshore petroleum legislation, explorers are required to provide the government with a copy of their exploration results,[339] including cores and cuttings, survey results, fluid samples and geophysical/geochemical data.

Industry, thorough its peak body APPEA, has identified a key policy issue for Australia - whether its crude oil has been largely discovered or whether substantial new resources await discovery in relatively unexplored sedimentary basins. These basins are considered by many explorers to be high cost and relatively high risk investment destination for petroleum expenditure.[340]

In order to enhance the attractiveness of Australia as a exploration region, the government needs to continue to provide ready access to pre-competitive geoscience information and other exploration data. Investors use publicly-available information provided by governments to select prospective areas.[341] This data is vital for the early exploration of an area, providing the basic framework for bidding for exploration rights, assessment of farm-in opportunities.

APPEA notes that explorers must have easy access to precompetitive geoscientific data sets in a timely and cost effective manner if they are to be convinced to invest in exploration in Australian provinces.

Norwegian explorers have a requirement to contribute data under s16 of the petroleum regulations. In addition, the Norwegian Petroleum directorate has undertaken petroleum exploration in the Barents Sea through a contractor, in order to enlarge and enhance the seismic data for the region. In these frontier areas, at the discretion of the Ministry, there is often a requirement for the acquisition of data by the Norwegian Petroleum Directorate (NPD). This has occurred in Norway in the summer of 2008, with the NPD spending 140 million NOK on seismic data acquisition in the area.[342]

Recommendation

***Recommendation 1**: The Australian government readdress its policy position regarding precompetitive data and acquisition of data, in conjunction with industry, to encourage exploration of Australian acreage, particularly in frontier areas.*

Conclusion

This submission has focussed in the Norwegian petroleum regulatory framework, and how some elements of the Norwegian system may be adapted or utilised in order to address several identified deficiencies of the austrlian Regulatory Framework. It is by no means a complete study on the area. Rather, it aims to provide an overview in selected areas how the Australian upstream petroleum regulatory framework may benefit from the consideration and integration of elements of the Norwegian petroleum framework, adapted to meet the requirements and nuances of Australia. It is expected that a full consideration of this area will be available at the conclusion of the author's doctorate, due for completion in April 2009.

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