LEGISLATIVE ASSEMBLY OF THE NORTHERN TERRITORY

12th Assembly

Committee on the Northern Territory's Energy Future

RECORD OF MEETINGS

9.30 am – 3.45 pm, Thursday, 7 November 2013

Members	Mr Gary Higgins, MLA, Chair, Member for Daly Mr Kon Vatskalis, MLA, Deputy Chair, Member for Casuarina Ms Larisa Lee, MLA, Member for Arnhem Mr Francis Kurrupuwu, MLA, Member for Arafura Mr Gerry McCarthy, MLA, Member for Barkly Mr Gerry Wood, MLA, Member for Nelson
Advent Energy	Mr David Breeze: Executive Director Mr Toby Foster: Corporate Development Manager
School of Business – University of Western Australia	Professor Peter Hartley: BHP Billiton Chair Economics
Australian Petroleum Production and Exploration Association	Mr Steadman Ellis: Chief Operating Officer – Western Region Mr Andrew Taylor: Senior Policy Adviser – Western Region Mr Adam Welch: Senior Policy Adviser – Western Region Mr Damian Dwyer: Director – Economics (via teleconference) Ms Larissa Wood: Economist (via teleconference)
In Attendance	Ms Julia Knight: Committee Secretary

Advent Energy Ltd

9.30 am – 10.45 am

1. Impact of cultural, economic, environmental, geographic, regulatory or other factors on:
a) the exploration, development and production of energy producing resources; and
b) availability of developed resources for the domestic energy market.

Economic and Geographic Factors

- Weaber Gas Field in RL1 on the Northern Territory side of the Bonaparte Basin contains a 3C contingent resource[1] of 45.8 BCF (.0458 TCF) of conventional gas. The Bonaparte Basin also incorporates significant levels of unconventional (shale) gas. However, extraction is more difficult and more expensive than conventional gas. A major initial cost associated with fracking is access to the water required – approximately 15 mega litres per fracture well. Whilst gas is more prevalent Advent has also identified significant amounts of oil (ascertained to be in the order of 56 million barrels) in its Bonaparte Basin acreage.
- Development of onshore gas resources in the Bonaparte Basin has been constrained by its remoteness and associated lack of infrastructure. Lack of all-weather access in many areas means development and production of onshore resources is limited to 8 months of the year. However, recent developments in transportable plants represent a viable option for remote areas and those that are seasonally inaccessible.
- The recent Federal and State Government investment in the Kununurra/East Kimberley region will bring infrastructure within 20km of the Vienta gas discovery significantly increasing the viability of developing this resource. Expansion of the Ord Scheme into the Northern Territory has the potential to further enhance the feasibility of developing the production capacity of the Weaber Gas Field.

Gas for the Domestic Market

- As one of the smaller companies, Advent is primarily concerned with supplying to the domestic WA and NT markets.
- Linking the WA and NT gas fields via a pipeline may be an option for the future but would be contingent on being able to identify a large enough customer to warrant the investment required. Similarly, there is future potential for a pipeline between the Weaber gas field and Blacktip to assist gas supply to PWC.
- In addition to electricity generation, it was noted that the transport industry represents a significant market for gas producers, albeit a difficult sector to enter into for smaller companies.

Regulatory Environment

- No particular concerns raised over introduction of the *'Use it or Lose it'* policy. It was noted that WA has something similar in place.

[1] 3C contingent resources = high estimate of contingent resources as compared to 1C = low estimate of contingent resources, or 2C = best estimate of contingent resources. Contingent resources refers to those quantities of gas which are estimated, on a given date, to be potentially recoverable from known accumulations, but which are not currently considered to be commercially recoverable due to, for example, lack of infrastructure or a viable and readily accessible market.

- Overlap of regulatory frameworks and excessive red and green tape was noted as an issue when exploration acreage crossed state or territory boundaries. It was also noted that there is a significant degree of duplication regarding State/Territory and Federal approval requirements – moves towards delegation of assessment process from the Federal level to accredited States/Territories seen as a positive move. The time and costs associated with regulatory compliance should not be underestimated. Whilst it may take six months to get plant in place, it is not unusual for it to take up to two years or more to achieve regulatory compliance.

Cultural Factors

- The compliance process is further complicated where exploration involves obtaining access to land that comes under the *Native Title Act* and/or the *Aboriginal Land Rights (NT) Act*. Exploration permits are also subject to *the NT Aboriginal Sacred Sites Act*, the *Heritage Act* (NT) and associated regulations. With regards to the latter it was noted that unlike WA, the NT legislation incorporates a requirement for heritage sites to be reassessed every five years which is expensive, time consuming and of some concern when it comes to being assured on-going tenure over exploration acreage.[2]

2. Demand and supply-side management strategies and incentive initiatives to improve productivity, cost effectiveness, energy efficiency, consumer and supplier participation in the energy market.

- Supplier participation in the energy market, particularly where installation of infrastructure such as pipelines and LNG or CNG processing facilities is concerned, is necessarily contingent on being able to identify a customer base that has a demand capacity sufficient to warrant the investment required.
- Technological developments in the area of transportable micro LNG/CNG processing plants, virtual pipeline systems and micro gas generators increase potential for increased consumer and supplier participation in a cleaner, more cost effective energy market.
- On the basis of initial assessments, Advent has identified 12 potential customers within a 500km diameter of its Bonaparte Basin resources that it could potentially supply with CNG via micro technology solutions including six Northern Territory remote communities (Bulla, Manyallaluk, Amanbidji, Timber Creek, Yarralin and Pigeon Hole) currently reliant on diesel.

3. Off-grid power generation alternatives for commercial and remote applications, including funding and investment options for the development of emergent and enabling technologies, infrastructure and commercial scale demonstration projects.

- Transportable micro gas generators coupled with virtual pipeline systems have the capacity to greatly reduce reliance on diesel power generators in remote communities – would also be applicable to remotely located mining operations and pastoral properties.

[2] It is noted that pursuant to Division 6 of the *Heritage Act* (NT), reassessment is only required where the Minister makes a *provisional* declaration that a place or object is *likely* to be of heritage significance as against making a *permanent* declaration that a place or object is deemed to be of heritage significance.

Professor Peter Hartley: BHP Billiton Chair Economics

University of Western Australia

11 am – 12.15 pm

1. Impact of cultural, economic, environmental, geographic, regulatory or other factors on:
a) the exploration, development and production of energy producing resources; and
b) availability of developed resources for the domestic energy market.

Economic Factors of Securing Resources for the Domestic Market

- Australia has a relatively large natural gas endowment and, especially given the size of its population, a high export potential. However its lack of pipeline connectivity to the rest of the world necessitates development of gas liquefaction plants to facilitate export which have become increasingly expensive in recent years.
- Whilst gas reservation policies have the capacity to ensure access to gas for domestic use they are a form of trade restriction or export control and as such diminish the value that Australia can obtain from its resource endowment. Restrictions also essentially equate to subsidising the domestic gas using industry and encourage other industries to develop based on that subsidy. This makes them hard to remove at a later date. Although good for the end consumer, lower prices achieved through reservation policies discourage exploration and can ultimately lead to limited competition and supply constraints.
- Where there are artificial restrictions on price there is also less incentive to develop resources in areas that may be more expensive to extract from – for example unconventional onshore gas reserves. A transparent market is far more preferable when it comes to attracting investment.
- The gas industry in Australia is keen to develop the market at a national level and ensure people pay a fair and competitive price. As a small customer, developing the infrastructure necessary to connect the NT to the eastern market in Australia would be particularly advantageous as it would allow the NT to enter the competitive market and tie NT pricing to those prevailing in the much larger and more liquid eastern Australian market.

Geographic and Environmental Factors associated with Unconventional Gas

- Development of unconventional gas resources in Central Australia is likely to deemphasise current focus on coal seam gas which is often more expensive to develop given how it may impact on agricultural land.
- Issues associated with the volume of water required for fracking will be a significant factor in the development of the NT's unconventional gas resources. Whilst much of the water used can be cleaned and reused in the fracking process, accessing the not inconsiderable amount of water required for fracking will be an issue in many parts of the NT. Disposing of the treated, but still contaminated water, will be another issue and will require suitable underground sites; it is noted that it would generally be inadvisable to dispose of remaining contaminated water through surface streams etc. even if flooding is not an issue. The potential to deplete available water supplies is also a very real concern when it comes to fracking in the NT.

- A primary issue for the NT Government will be to ensure it has very rigorous regulations and standards in place regarding all aspects of the fracking process. The capacity to inspect fracking projects to ensure compliance with regulations and standards was noted as particularly essential if problems were to be avoided.

2. Demand and supply-side management strategies and incentive initiatives to improve productivity, cost effectiveness, energy efficiency, consumer and supplier participation in the energy market.

- Given the high costs associated with installing pipelines, transporting CNG from the main pipeline via trucks is a supply side management strategy widely employed in South America to provide gas for electricity generation in small towns which is a more cost effective, cleaner option than diesel.
- The capacity to use transportable processing plants and virtual pipeline technology to move gas from onshore exploration sites that are not necessarily within reach of an existing pipeline to remote communities and pastoral properties has the potential to encourage greater supplier participation in the energy market.

3. Off-grid power generation alternatives for commercial and remote applications, including funding and investment options for the development of emergent and enabling technologies, infrastructure and commercial scale demonstration projects.

- Recent developments in mini and micro gas plant technology provide a significantly cheaper and cleaner alternative to diesel for power generation in remote locations.

Australian Petroleum Production and Exploration Association

2.00 pm – 3.40 pm

1. Impact of cultural, economic, environmental, geographic, regulatory or other factors on:
a) the exploration, development and production of energy producing resources; and
b) availability of developed resources for the domestic energy market.

Economic Factors

- There are enormous economic and employment opportunities for the NT given its onshore gas reserves (Beetaloo, Georgina, Bonaparte, McArthur and Amadeus basins), its capacity to process offshore reserves, and proximity to Asian markets who are tipped to be very significant users of natural gas.
- Whilst some offshore and onshore gas fields have the capacity to provide liquid fuels there is little activity at present that is specifically targeting oil in and around the NT as gas is more prevalent. The cost of refining oil is an issue for Australia as it can't compete with the mega refineries in Singapore and China. Although Australia has the capacity to refine for certain types of oil it lacks the capacity to cater for the range of oils we require. Consequently, Australia's oil industry consists primarily of exporting crude oil then importing it back as refined oil. Increasing industry demand means that Australia has a declining self-sufficiency in relation to oil.
- Fiscal stability was noted as a critical factor in attracting investment. The absence of a domestic gas reservation policy was seen as a positive, however the NT, and Australia's ability to compete internationally was noted as becoming increasingly challenging given the high costs associated with labour and development of the infrastructure required by LNG energy projects.
- Globally there is currently a high number of large scale gas exploration and production projects and a very strong level of demand. However, supply opportunities at present outweigh demand which makes for a very competitive global scenario when it comes to investment. If Australia can maintain its competitiveness it is expected to be one of the world's largest exporters of LNG by 2025.
- It was suggested that the NT look at the potential for implementing concessions by way of royalty relief, similar to the Magnetite royalty rebate program currently operating in WA[3] , as a means of encouraging exploration that could potentially supply the local market.

Access to Labour

- The availability of suitably qualified local labour was highlighted as an issue for the development of projects. However, it was noted that the recent establishment of the CDU Gas School should improve the situation for future projects.

[3] see http://www.dmp.wa.gov.au/11857.aspx

Socio-Cultural Factors associated with development of unconventional gas reserves

- There are significant challenges, for new companies in particular, associated with onshore exploration and production of unconventional gas resources when it comes to developing the necessary relationships with Land Councils, cattlemen and Traditional owners, and working through the requirements of the *Native Title Act*, *Heritage Act* (NT), *Aboriginal Land Rights (Northern Territory) Act* and *NT Aboriginal Sacred Sites Act* in order to gain access to land.
- Countering negative attitudes towards and misinformation about fracking was acknowledged as an issue that mining companies need to deal with. It was noted that, to date, industry efforts to engage with the community regarding the fracking process have not been particularly successful. Whilst APPEA's *The Natural Gas Revolution* publication was seen as a step in the right direction for the more literate members of the community, it was suggested that there was a need for APPEA and/or individual companies to develop presentations and materials that were more accessible; especially when it came to engaging with Indigenous communities.
- APPEA is currently working with the Cattlemen's Association on the development of land access agreements, regulations and safety standards that complement regulatory frameworks with a view to developing a national industry code of practice to include fracking and community consultation.
- Recent community concerns regarding potential exploration activity in NT coastal waters was noted as an example of the community's lack of understanding of the regulatory process. Although a company may have tenure over an area and can then conduct aerial surveys, for example, there is still a requirement that they apply for an exploration licence prior to commencing any work which necessarily incorporates consultation with Traditional Owners and compliance with relevant legislation.
- Ensuring that key stakeholders (industry, land councils, cattlemen and the wider community) had confidence in the regulatory framework governing development of unconventional gas reserves was acknowledged as particularly important. It was suggested that the NT could learn a lot from Qld's experience in this regard and noted that the introduction of the Qld Gas Fields Commission had proven to be very worthwhile.[4] An independent statutory body the commission's objective is to manage and improve sustainable coexistence of landholders, regional communities and the onshore gas industry.

Regulatory Factors

- Inconsistencies between the states/territories and commonwealth regarding regulatory frameworks is an issue of concern for industry; especially where projects cross jurisdictional boundaries. Development of national guidelines would greatly facilitate project development; it was noted that the Commonwealth is moving in this direction. It was suggested that the NT has an opportunity to look at WA and SA when it comes to regulation of onshore exploration – achieving greater consistency would be particularly advantageous when it came to attracting investment and exploration by the smaller companies in particular.

[4] see http://www.gasfieldscommissionqld.org.au/gasfields

- With regards to the notion of implementing a system of royalty relief it was noted that this was not as viable in the NT as it is in WA given the NT's profit based royalty regime which, it was suggested, was open to corruption. In WA royalties are imposed as soon as companies begin production. Whilst it was acknowledged that the WA system was more of a burden for companies, it was considered to be a far more effective scheme and provided more scope for using royalty relief as a means of encouraging project development.
- Although it was noted that it was still too early to judge, there were no particular concerns raised about the introduction of the '*Use it or Lose it Policy'.* It was seen as a positive as far the larger companies were concerned as it prevents land banking.