

## APPEA Darwin June 2009

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### 1. Observations from the APPEA Conference

- a. Hydrocarbon pricing will be volatile over the next 2 to 4 years as the industry has reduced global exploitation expenditure by 21%. This will limit additional capacity coming on stream to meet rising demand. Price volatility will impact on GDP growth recovery, consequential impact on government receipts and their ability to fund expenditure and deficit reduction programs. Forex drain will have the potential to reduce living standards.
- b. The focus is on exploitation of existing hydrocarbon resources with limited focus on exploration. The industry needs a sustained \$US 75/bbl (2009) to restart major exploration programs.
- c. The upstream oil and gas exploitation industry (“Industry”) is transitioning rapidly to a gas focussed Industry as it uses technology advances to commercialise and develop reserves to service the growing LNG markets in APAC region. The industry is embracing the gas focus as a means to deal with climate change issues. Coal Seam Gas (“CSG”) is the real winner as a major new source for LNG markets in Asia Pacific region (“APAC”).
- d. The global recession is likely to last a further 1-2 more years with modest global growth of 0.5% p.a. at that time. This demand will be driven from the transportation and chemical sectors.
- e. The difficulty for the Industry is that important investment decisions will need to be made in 2009/2010 related to increased supply over then next 5 to 10 years and the uncertain current pricing signals, including the uncertainty of carbon pricing, will likely cause significant delays in Final Investment Decisions (“FIDS”) for nationally important projects. This economic equation is exacerbated as whilst oil prices have fallen from their high around US\$150/bbl, the industry cost base has not reduced by any substantial amount and it is unlikely to do so for up to 2 years for such key cost components as offshore drilling and completion costs.
- f. The downturn will provide M&A opportunities to arise- need US\$60/bbl to meet cash requirements to pay down debt and dividends let alone higher exploitation expenditure—targets will arise!
- g. It is not clear the Government understands the issues and consequences of declining Australian self sufficiency and the impact on balance of payments. This situation will be aggravated by the difficulty of Australian companies needing to compete with rising national protectionism. The national governments through bilateral arrangements use their respective NOCs, to tie-up exploitation acreage; acquire

existing hydrocarbon resources including refined product and production and distribution systems to meet their domestic needs as a priority. Obtaining access to resources on the open market without bilateral agreements will impact on our GDP growth and living standards. The Australian Federal Government is not pursuing these bilateral types of policies.

## **2. Global -Supply and Demand- Pricing**

- a. Global demand is expected to grow by 35% to 45% for the period ending in 2030 at an average annual rate of 1.6% pa although in the short term the current global recession will reduce demand figures. Of this growth, 1/3 of the demand growth will come from coal which can only be sustained with technology advances and agreements between the global players on an effective ETS scheme. This will undoubtedly increase the focus back on OPEC as a major source of new hydrocarbon resources to satiate increasing energy demand. It is anticipated the oil demand will rise by 45 MBPOD to 2030 (more than 50% increase from current production levels) which is equivalent to 7 times the current Saudi Arabian current capacity. This is a huge challenge which is made all the more difficult when coupled with the growing protectionist powers of National Oil Companies (“NOCs”) who seek to control the resource base and infrastructure to deliver petroleum and refined products to their domestic markets as a priority.

China is set to be the key driver of oil and condensate demand. Growth in oil demand will be around 0.9 million barrels per day to 2020; 43% China and 23% from India and 34% from Asia and Middle East. Asian production is falling and the focus remains on the Persian Gulf for supply.

Additional exploitation capacity is being deferred as global exploitation expenditure has declined by 21% in 2009. Currently the supply / demand equation will tighten with trending higher prices in 2012-2014 as spare oil production capacity is expected to be reduced below 3 MBOPD as the consequences of natural reservoir declines and the current global exploitation expenditure reductions. This, coupled with demand as it grows post the global recession particularly in the China market, will put upwards pressure on oil pricing.

The Industry needs a sustained oil price of US \$ 75/ bbl (\$2009) to reactivate exploitation expenditure. Commitments to large projects with long lead times such as LNG plants with pricing based on oil equivalents, are in essence a leap of faith as the oil price and equivalent LNG gas prices will vary significantly in the short term. These investment decisions will not yield projects that have positive cash flow and economics anywhere from 5 to 10 years from FID.

The difficulty is that over the next 12- 18 months (when FIDs are being made), there are industry views that the short term excess oil supply will send the oil price below US\$20/bbl. In these environs, it is difficult to get correct pricing signals for major investment decisions.

These factors will lead to price volatility in 3 to 4 years as the demand/supply imbalance becomes more pronounced. Consumers be forewarned!

- b. In Australia, oil self sufficiency is still declining, and will continue to do so, from its peak in 2000 without the discovery of another “Bass Strait”. Now in 2009, Australia is a net importer of all petroleum products with the estimated cost to the economy of over \$18 billion. Overtime, increased imports of all petroleum products will dramatically strain the foreign exchange capacity of the economy to pay for increased hydrocarbon liquids demand as the deficit gets worse in the absence of major new oil discoveries—another way to think about this is that downward pressure on the exchange rate will lift import costs and inflation with increased risks from external energy costs which will impact negatively on economic performance and standards of living.

It has the potential to significantly hinder the repayment of a potential \$300 billion of Federal Government national debt through slower GDP growth and higher interest rates.

The offset to this increased energy bill from declining self sufficiency for the community is through the growth LNG export earnings which will start to materialise initially in the period 2015 to 2020s.

### **3. CSG and LNG**

The growth of the importance of the CSG resource to fuel the expanding LNG markets in APAC region is breathtaking. From just over 4 years ago, there was peripheral recognition of the CSG resource as a gas source for the east coast Australian market. Now in the 1<sup>st</sup> quarter 2009, there is an estimated 17 TCF 2P reserves in the east coast and accounts for 21% of 2008 east coast production of 145 PJ. The balance of the reserves will be focussed on the APAC region for Asian LNG.

The significant of this growth in CSG resource over this time is illustrated now with the resource base in eastern Australia estimated to be 260 TCF compared to the offshore WA of 240 TCF. Commercial jockeying has started to get all the projects through FID. There will need to be common commercial sense on sharing downstream facilities and permitting third party toll arrangements so that the projects proceed, the environmental footprint is reduced and the owner of these resources, i.e., the Australian taxpayer, gets the best return for the exploitation of these resources. It is likely that both the Federal and State Government’s will play a hand in “encouraging” the use of common facilities.

LNG into Asia is projected to grow at 7% p.a. from 2009- 172 mtpa to 390 mtpa by 2030.

This will underpin the demand for LNG from Australia.

Australia is 4<sup>th</sup> in current capacity behind Qatar, Nigeria and Malaysia. It is 3<sup>rd</sup> in gas reserves. If all of the 5 projects currently scoped materialise in Australia into the mid 2015s, there is the potential for industry leadership role in global LNG. This together with PNG LNG (recent announcements on contracts and engineering work commencements) and with production estimated to commence in 2014, add to the importance of this region as hub for LNG production.

The LNG potential is focused on the APAC market where gas pricing is based on oil price equivalents as the key determinate of gas value. The longer term outlook for substantial oil price rises (point 2a above) provides a basis for sustained higher LNG gas prices from the mid 2015s. In comparison, the USA gas market price is substantially based on the Henry Hub gas price which shows both seasonal/cyclical volatility which is not necessarily tied to oil price equivalents and not necessarily an appropriate price signal marker for investment decisions. The APAC oil price determinants provide a more rational basis for pricing signals when assessing long lead time projects such as LNG.

The LNG industry has significant risks as projects viability will be tested to determine if these matters have been addressed as the respective projects' approvals processes approach FID:

- a. The need for common use of downstream processing and export facilities. Is there scope for sharing facilities?
- b. Environmental footprint and handling of production by-products. Communities will not permit large scale evaporation projects as a means for handling large water production. Technology is the driver of these new markets for water use from CSG water production such as tree plantations, osmosis and desalination treatment for agri-business. What are the specific programs to meet environmental issues?
- c. Escalating cost curve which has increased from US\$2 to US\$5 million MTPA over the last 2 years. How are the costs being controlled to underpin project economics?
- d. Carbon pricing & ETS (impact on export opportunities in comparison to Malaysia, Qatar and India).
- e. Government stability at both state and federal levels.
- f. Development of stakeholder policies that promote sound commercial relationships- equitable allocation of profits between all stakeholders, resource depletion policy- export versus domestic markets and
- g. The development of LNG spot markets gas sales as the LNG contracts move from bilateral arrangements to accommodate trading options.

A key issue is that with these pricing and commercial risks, even with due diligence (commercial, technical assessments economics), there is an element of a "leap of faith" approach to commit to these long term projects. It is a dynamic market from exploration, FID, development to exports and the key for companies is not to over reach their resources and capacity.

#### **4. Industry and Government Policy**

Federal Government policies given currency at APPEA were

- a. The issue of third party access for LNG Processing facilities. Minister Ferguson clearly signalled the need to find commercial solutions to rationalising facilities for common use. The owners of the resources, the Australian tax payer, want to ensure they receive the maximum return within a small environmental footprint. The Minister also wants the resources to be commercially developed and not "sat-on" for other corporate purposes under a retention lease system. He has issued a discussion paper ( mainly aimed at gas) with the intention of tightening up the

system for ensuring that Australia's resources are developed first or the potential of loosing the resource to other companies for development.

- b. Carbon Pollution Reduction Scheme ("CPRS") and the impact on LNG viability. Industry has a positive view of the Minister Resources, Mr Martin Ferguson but he does not have the cabinet clout to present the key issues on ETS to ensure that the industry views on carbon pricing are presented to get right investment signals- otherwise lost or deferred projects to our export competitors to sate the Asian LNG market.
- c. Renewables have a definite role and focus but they need higher sustained energy prices to be commercially justified. However, the over whelming issue to at least 2030, the world energy market will rely on fossil to fund its economic growth from recession of which coal will maintain an important part.

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**Disclaimer:**

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