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21 August 2013

Geographic Labour Mobility Study
Productivity Commission
LB2 Collins Street East
MELBOURNE VIC 8003

(via e-mail to: labour.mobility@pc.gov.au)

RE: GEOGRAPHIC LABOUR MOBILITY STUDY: SUBMISSION FROM THE AUSTRALIAN PETROLEUM PRODUCTION & EXPLORATION ASSOCIATION

Please find attached a submission from the Australian Petroleum Production & Exploration Association (APPEA) in relation to the Productivity Commission's Geographic Labour Mobility Study.

Australia's oil and gas industry is a major contributor to Australia's economic prosperity. It is currently experiencing unprecedented growth, with almost $200 billion being invested in Australia in seven LNG projects. This investment has already made a significant contribution to Australia's economic and employment growth, and there is an additional $180 billion of investment in the planning stage, providing potential scope for considerably more benefits, including a GDP increase of 1.5 per cent and a further 150,000 jobs created.

The LNG industry is a major local success story for Australia, but genuine threats are now emerging to its plans for further investment and development. Economic history shows that Australia has prospered when government policies have encouraged an open, competitive economy, and living standards have declined when governments have pursued inefficient regulation, protectionism and other forms of intervention in business. There are increasing signs that Australia is backsliding in this respect. In the case of Australia's labour market there are serious weaknesses that are making it difficult to develop the much needed skilled, flexible and mobile workforce or support industries' supply capacity.

If Australia is to attract another wave of substantial oil and gas investment and realise the next phase of development of resources, governments must work with industry to identify the best and flexible labour market solutions.

APPEA would be pleased to further expand on any of the issues raised in the submission. For further information please contact Larissa Wood, on 02 6267 0923 or lwood@appea.com.au.

Yours sincerely

David Byers
Chief Executive

appea the voice of australia's oil and gas industry

Submission
August 2013

Geographic Labour Mobility: Productivity Commission Issues paper, July 2013

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1. INTRODUCTION

The Australian Petroleum Production & Exploration Association (APPEA) is the peak national body representing Australia's oil and gas exploration and production industry. APPEA has more than 85 full member companies exploring for and producing Australia's oil and gas resources. These companies currently account for around 98 per cent of Australia's total oil and gas production and the vast majority of exploration. APPEA also represents over 240 associate member companies providing a wide range of goods and services to the industry.

APPEA welcomes the opportunity to provide comments on the Productivity Commission's *Geographic Labour Mobility Issues Paper*. APPEA understands that a number of our members will provide their own submissions to this consultation process. APPEA's submission should be considered in conjunction with those of our members.

Australia's oil and gas industry is a major contributor to Australia's economic prosperity. It is currently experiencing unprecedented growth with almost $200 billion currently being invested in Australia in seven LNG projects. Deloitte Access Economics[1] estimated in 2012 that this investment will increase Australian GDP by up to 2.2 per cent a year and require a construction workforce peaking at over 100,000 full-time equivalent jobs. By 2025, the construction and operation of these projects will add more than $260 billion (in net present value [NPV] terms) to Australian GDP and contribute between $6.3 billion and $7 billion a year in taxation revenue. Nearly $150 billion in taxes have been paid by the industry since the mid-1970s.

As an integral part of the Australian economy, the oil and gas industry:

- supplies reliable and competitively priced energy;
- invests hundreds of billions of dollars of capital;
- directs payment of billions of dollars in taxes to governments;
- employs tens of thousands of Australians;
- supports regional investment; and
- generates vast amounts of export income.

Currently seven LNG projects are at various stages of construction around Australia. These projects could boost Australia's LNG export capacity to over 80 million tonnes per year[2] and deliver significant benefits to the nation. The petroleum sector currently represents approximately two per cent of national gross domestic product, with project planned accounting for 35.4 per cent of all business investment in Australia.

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[1] Deloitte Access Economics, (2012), *Advancing Australia: Harnessing our comparative energy advantage*, June (available at www.appea.com.au/wp-content/uploads/2013/04/120625_DAEreportAPPEAfinal.pdf) and Deloitte Access Economics (2012), *Advancing Australia: Harnessing our comparative energy advantage: Supplementary analysis*, November (available at www.appea.com.au/wp-content/uploads/2013/04/DAE-supplementary-analysis-report-november2012.pdf).

[2] Bureau of Resources and Energy Economics (2013), *Resources and energy major projects*, April (available at www.bree.gov.au/publications/remp.html).

There is also $180 billion of investment in the planning stage, and bringing this investment to operational fruition would benefit the entire nation: GDP would increase by 1.5 per cent and approximately 150,000 jobs would be created[3].

The current wave of investment is nearing completion of its construction phase, which has involved heavy demands on construction-specific skill sets. Unlike the permanent, long-term and highly skilled operational careers provided by the industry, the construction roles are predominately short-term and transient, involving movement of semi-skilled and skilled construction workers from project to project. While the construction phase of current projects is winding down, the next generation of investments – as well as potential extensions to existing and committed projects – may see the demand for labour mobility increase again.

APPEA supports public policy that address the need for providing a skilled workforce for Australian energy developments through training and continuing access to overseas labour markets.

2. WHAT IS GEOGRAPHIC LABOUR MOBILITY?

Geographic labour mobility in its simplest form is the occupational movement of workers to a specific location. The need to physically travel to operational or other distant work locations can be offset to some degree by advances in technology – for example, emailing, teleconferencing, skype or video calls – that allow some workers virtual access to other locations from an office or other work environment. However, this is not the case for the majority of operational occupations in the oil and gas industry, which demand a physical presence and often in remote locations, to fulfill their employment functions. The oil and gas industry's reliance on a large temporary workforce, particularly during the capital expenditure (capex) phase places greater onus on labour mobility and flexibility to enable highly skilled, hands-on operators to be deployed in their most productive capacity.

The global demand for energy and continued breakthroughs in technology has seen the petroleum industry rapidly expand. Australia's LNG production capacity will increase to over 80 million tonnes per annum by 2017 according to current construction schedules. Much of the growth in Australia's gas industry over the last five years has been driven by strong demand in the Asia Pacific region, the quantity of Australia's conventional and coal seam gas resources, the application of innovation and technology and the right economic conditions to support the size and scale of greenfields projects.

Sustained growth in China and continued strong demand in Japan and Korea have supported world energy markets, including gas demand and gas prices. These factors have enabled the Australian gas industry to expand much more rapidly than was envisaged five years ago. What was considered to be an optimistic growth scenario at that time now looks conservative.

[3] McKinsey & Co (2013), *Extending the LNG boom: Improving Australian LNG productivity and competitiveness*, May (available at www.mckinsey.com/locations/australia/knowledge/pdf/extending_lng_boom.pdf).

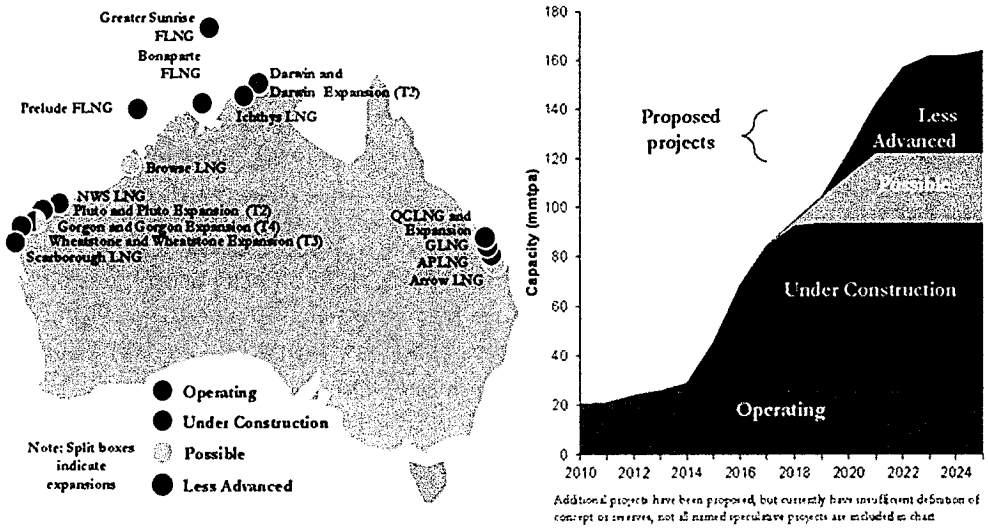
Australia needs viable labour markets that are appropriately skilled, mobile, flexible and productive. Developing the skilled workforce and the local industry supply capability needed to build and operate the oil and gas projects now under construction is a major challenge.

3. PATTERNS OF GEOGRAPHIC LABOUR MOBILITY

Australia's oil and gas reserves are located in basins that are both onshore and offshore. They are dispersed across multiple jurisdictions across the country. Over time, the location of industry production has changed, reflecting the discovery of new reserves across Australia. For instance, earlier oil and gas discoveries in the Cooper, Eromanga and Gippsland Basins have declined in their production profile, while the contribution of discoveries as market opportunities occur in the Bonaparte, Browse and Carnarvon Basins and in onshore locations in eastern Australia (in both Queensland, New South Wales and Victoria) to industry revenue has grown substantially. Importantly, these basins are yet to be fully exploited and represent a key source of future capacity for the sector.

While most oil and gas reserves are located in remote locations, most of Australia's population (and therefore its skills base) is located in capital cities and other major centres that are, in a number of instances, distant from oil and gas facilities.

Figure 1. Australian LNG Projects – By Liquefaction Status



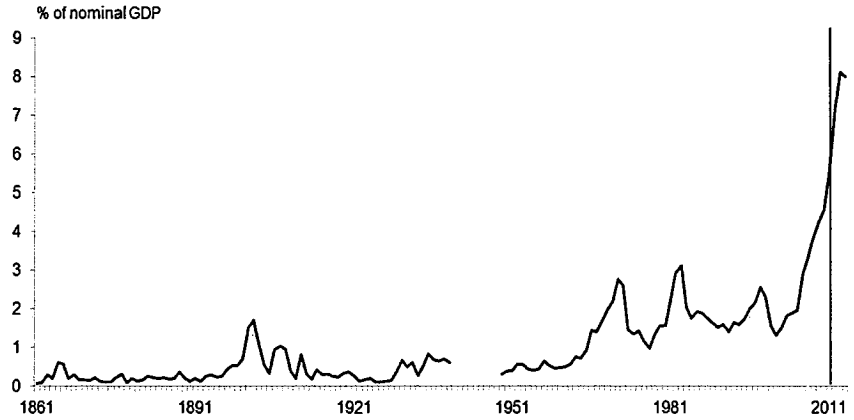
Source: Wood Mackenzie LNG Tool, August 2012

The Australian LNG industry is in a major growth phase. There are seven projects under construction as highlighted in Figure 1 above. Queensland is building three world first LNG projects using natural gas from coal seams as the fuel source and impressively, seven of thirteen global LNG projects underway are in Australia.

Never before has a single country attempted the concurrent development of fourteen LNG trains and associated plant and gas production infrastructure. In addition, other parts of the resources sector, particularly the coal and iron ore industries, are expanding rapidly through large capital investment programs. With each LNG project requiring around 5,000 construction workers and

creating many more jobs for suppliers and service providers, the demand on Australia's skilled labour workforce is far exceeding supply.

Figure 2. The Resources investment "boom"



Source: RBA 1861-2009; Maximising growth in a mining boom, (2011); Ed Shann, 2009-2014

Given the rapid expansion of the resources sector there is a strong demand for labour, in particular highly skilled labour. Combined this with the geographic dispersion of the industry, geographic labour mobility is of particular interest to the oil and gas sector.

4. EFFECTS OF GEOGRAPHIC LABOUR MOBILITY

A shortage of appropriately skilled labour is regularly identified as a key impediment to the growth of Australia's resources sector. Given the number of variables that will affect the future growth of the industry, including Australia's investment competitiveness, the economic climate and international demand for Australian resources, it is impossible to forecast the industry's skill and labour needs into the future with a high degree of accuracy[4]. Planning for uncertainty underscores the importance of a strong partnership between the industry and government, both of whom have very significant, though different, roles to play.

As noted above, Australia's oil and gas reserves are located in basins that are both onshore and offshore, and generally require employees/contractors to commute or relocate to perform their work. Increasing capacity within the labour force and building it among contractors and suppliers is therefore a major priority.

Developing the skilled workforce and the local industry supply capability needed to build and operate the oil and gas projects now under construction remains a major challenge to the

[4] The biennial Bureau of Resources and Energy Economics *Resources and energy major projects* report lists the pipeline of investment and the varying stages that may assist with predicting needs in various labour markets.

industry. For example, the Queensland Curtis LNG project currently under construction in Gladstone has created 15 jobs a day for the past six months and will require on average 5,000 workers during its construction period. This is just one of Australia's vital LNG projects, but it demonstrates that the industry needs access to viable labour markets that are mobile, flexible and productive.

Local resident populations are generally unable to meet all the necessary skills required for the constructions and operation of oil and gas projects. The different stages of capital-intensive oil and gas developments necessarily require workforces of varying sizes. During the project capex phase there is a far greater labour requirement as large-scale civil works and facility development occurs. However, once operational, projects typically require fewer but usually more specialist technicians to manage the operation and maintenance of production facilities.

The fact that there are very different labour requirements over the life of the project creates additional issues for the industry in matching workforce supply and demand. The nature of the large project construction means that there are a significant number of jobs available in the shorter-term. To some extent, this may impact on the relative attractiveness of the jobs on offer because construction jobs are not provided in an ongoing nature, in spite of being well rewarded. While there is scope for career progression from the high-end construction to operational roles, this is generally limited and may deter some potential employees who are looking for longer-term, permanent employment in the industry.

Operating companies typically have a head office located one of the large cities rather than close to the regional operational sites. Head office functions generally include setting production targets, corporate standards, strategic planning, safety, human resources, administration, marketing and sales, along with corporate compliance and reporting. It is usually the head office that will develop and drive the graduate and leadership programs across the sites.

Site personnel focus on production and maintenance with the overall goal of meeting production and quality targets and shipment dates set by head office. Sites are typically responsible for the training of control room operators, process operators, production technicians, emergency response and maintenance personnel.

5. IMPLICATIONS OF TECHNOLOGICAL, STRUCTURAL AND DEMOGRAPHIC DEVELOPMENTS

Technology has always played a pivotal role in facilitating the efficient extraction and production of hydrocarbons. These technologies serve to make hydrocarbon exploration and extraction more efficient, safe and environmentally friendly. Technology continues to play a crucial role by allowing the industry to extend exploration and production to new formations, such as shale and coal seams, in order to respond to higher resource prices and the depletion of existing reserves. As the search for hydrocarbons expands, resources are typically located in remote locations or in difficult terrain, increasing the complexity of the corresponding extraction and production techniques.

To demonstrate the technological nature of the industry, there are currently four prospective LNG projects in development in Australia based on the modern extraction of natural gas from coal seams. In addition, remote offshore fields are now being accessed in new and innovative ways. The Shell operated Prelude project will be world's first floating LNG (FLNG) facility and will access previously stranded gas fields via pipeline. As a result of continued advances in technology it is likely that the geographic diversity of the industry will increase over time as more mature sites

reach capacity and the search for untapped resources in other regions is initiated. This will add to current demands on geographic labour mobility.

6. FLY IN FLY OUT (FIFO) – A MOBILE WORKFORCE

FIFO arrangements are an essential aspect of Australia's labour market, given Australia's vast geography, changing family and life style demographics and the structure of resource projects. However, there are some challenges and costs associated with FIFO, and areas where industry and government can collaborate to alleviate areas of concern such as providing support to FIFO workers and their families, both at the workplace and also at home.

For example, many regions experiencing rapid resource development have faced an increase in rental prices as temporary workers compete for limited accommodation. Housing shortages may also be faced by locals as companies lock up accommodation for their workers. While those directly associated with the accommodation industry benefit from higher prices, other segments of the community can experience additional pressures as living costs are forced upwards.

Existing businesses in the region may also face a higher cost of labour, and difficulties retaining labour, given the relatively higher salaries paid to resources sector workers. Similarly, from an oil and gas operator's perspective, the need to transport workers to and from remote areas and feed and accommodate them can drive up development costs.

Additional demand for goods and services also drives up the prices of necessities as more highly-paid FIFO workers have the capacity to pay elevated prices. In particular, there has been some criticism of the pressure that FIFO places on regional health services, which are already thinly spread.

There are also criticisms that FIFO workers do not spend their money in regional areas. This can make their temporary presence appear 'one-sided' — in effect, driving up local prices for essential goods and services but not sufficiently contributing to regional development and the local economy.

The findings of a recent KPMG report however, debunk a number of these myths and anecdotal claims about the impact of the resources sectors on regional Australia. Mining activities (defined broadly by KPMG to include oil and gas) is not hollowing out the regions in which they operate – rather, they are impacting positively by boosting incomes, attracting families and reducing unemployment[5].

The KPMG demographic profile of Australia's mining regions compiled key standard-of-living measures such as income, home ownership, educational attainment and employment; and basic demographic profiles of Australia's nine main mining regions. These regions are: the Pilbara, Central-West (WA), Surat Basin, North West QLD, the Hunter Valley, Kalgoorlie-Boulder, Central SA, the Galilee Basin and the Bowen Basin. Overall, incomes and educational attainment are

[5] KPMG (2013), *Analysis of the Changing Demographic Profile of Australia's Mining Communities*, February (available at www.appea.com.au/wp-content/uploads/2013/04/130204_APPEA-MCA-demographics-report.pdf).

higher and unemployment is lower in mining regions compared to regional Australia more generally. There are more families and working aged people in mining regions than regional Australia generally, but fewer people own their residences.

Similarly, the number of permanent residents in mining regions is increasing at a faster rate than non-mining regions. Workers are not just flying in and flying out, they are moving to the mining regions as well, contrary to claims by opponents of the long-distance commuting workforce.

Interestingly, the report also shows that of the Long Distance Commuters, only a quarter are employed in the mining sector. This highlights that the dependence of FIFO workers is not limited to the mining sector, or just the oil and gas industry. In fact, the study shows that more people commute to Australia's capital cities than to work in Australia's nine mining regions[6].

7. "UP-SKILLING" THE WORKFORCE

Many producers are already taking active steps to address shortages in skilled workers. For example, direct company-sponsored training and fast-track programs and apprenticeships are being rolled out to meet the demands of various LNG producers in Queensland, the Northern Territory and Western Australia. These training programs are welcomed and will play a major role in improving the broader skills base of the economy, imparting a positive legacy impact especially given the massive pipeline of energy investments focused on surging demand from Asian customers.

The Australian oil and gas industry invests heavily in up-skilling local workforces to allow them to benefit from the employment opportunities provided. For example, Arrow Energy, Australia Pacific LNG, GLNG and QGC have committed funding to Education Queensland Industry Partnerships (EQIP) for workplace learning opportunities and programs for indigenous students in Year 10 and students studying directly relevant courses (such as a Certificate II in Process Plant Technology) to assist local workforces to get employment in the industry.

Other innovative approaches adopted by the industry to addressing the skills shortage include employing mature workers and exploring alternative working arrangements for people who require greater flexibility, rather than a one-size-fits-all model of employment.

Improving the productivity of existing workers is also being explored, through innovation, technological advances, reducing labour requirements, or improving efficiency through a restructure of the methods used in the organisation. Some of these approaches are likely to present viable alternatives for the industry as part of a multi-pronged strategy.

8. WHAT ROLE FOR GOVERNMENTS?

Australia needs viable labour markets that are appropriately skilled, mobile, flexible and productive. Developing the skilled workforce and the local industry supply capability needed to

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[6] KPMG (2013), *Analysis of the Long Distance Commuter Workforce Across Australia*, March (available at www.minerals.org.au/file_upload/files/reports/MCA-13-LDCWorkforceStudy0308-MYR_%282%29.pdf).

build and operate the oil and gas projects now under construction is a major challenge. APPEA supports public policy that address the need for providing a skilled workforce for Australian energy developments through training, and continuing access to overseas labour markets for short-term and highly specialized workers to supplement the local labour pool when necessary.

Given the rapid expansion trajectory and largely concurrent project scheduling, there are significant demands on industry to source and place workers to ensure that the pace of development can be sustained. These challenges are compounded by relatively low levels of unemployment and the labour demand deriving from buoyant activity across the wider resources sector.

Workforce pressures are extending beyond traditional trades and key regional centres heavily exposed to new mining and gas investment activity. While investment in the industry is strong, workforce issues require greater policy attention to address development needs.

During the project capex/construction phase, there is a far greater labour requirement as large-scale civil works and facility development occurs. Project operations typically require fewer but highly specialised workers to manage the operation and maintenance of production facilities. Using temporary workers to bolster the local workforce during the peak construction phase makes good sense when local labour forces are unable to meet all the required demand of the projects.

This is especially the case with the regional nature of oil and gas production, where there are smaller, localised labour pools which are unlikely to be able to meet demand for highly specialised trade, technical and construction fields. Labour markets in regional and remote areas tend not to be in as great a state of flux as in metropolitan areas, with generally less job movement and people seeking alternate employment, partly as a result of limited opportunities. As a result of this, a local labour market may not always be able to contribute to the required oil and gas workforce.

Increasing the size of the local workforce through regional development has been tabled as a possible option in some cases – particularly addressing the long term operational requirements. This phase also provides considerable opportunities for local and indigenous businesses and for skills development in both oil and gas and also supporting services such as environmental monitoring.

The oil and gas industry is a global industry, and its people move across these global projects taking their experiences and skill with them. This is good for Australia. It provides us with a market where our workforce are able to gain international experience in a high technology industry, and also the industry brings these skilled people to Australia to mentor and up skill the local workforce. Targeted skilled migration programs must be part of the solution, particularly for short-term or highly specialised roles and for periods of high employment such as Australia is currently experiencing. Industry needs efficient and timely access to temporary skilled migrants for these situations to ensure that skill shortages do not create constraints to major projects and jeopardise economic growth and thereby broader Australian jobs.

Recent changes to Australia's skilled migration program have seen the system become complex, onerous and time consuming. Employers need to be able to access critical project skills through skilled migration in an efficient and timely way. For example, recently adopted requirements for employers to demonstrate labour market testing for roles that are included on Government skills shortage lists, are arduous and make light of genuine workforce planning. They also have the potential to restrict intra-company transfers and skills development for international companies,

beyond those for senior management positions. These transfers across countries but within companies have great potential to skill up Australians but are being threatened for the bulk of participants because they are not degree qualified or in a senior managerial role, excluding technical and tradespeople from the benefits of international experience.

Many large resource projects might be substantially delayed if they are unable to secure an adequate supply of workers. These projects, as demonstrated by the analysis in this submission, yield an economic return and further employment spillovers which are enjoyed by all Australians.