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Ian Blayney MLA  
Chairman, Economics & Industry Standing Committee  
Western Australian Legislative Assembly  
Parliament House  
Perth WA 6000

22 August 2013

Dear Mr Blayney

**Committee inquiry into the economic implications of floating liquefied natural gas operations**

Thank you for your letter of 22 July 2013 inviting a submission to the Inquiry by 31 August 2013.

The Western Australian Energy Research Alliance (WA:ERA) comprises the CSIRO, Curtin University and the University of Western Australia and was established on 18 September 2003 as a collaborative unincorporated joint venture (UJV). In the five years from 2005 the Western Australian Government provided \$20m to assist WA:ERA to build its oil and gas research and development and education capability. The \$20m has been leveraged several fold with cash and in-kind contributions from the WA:ERA UJV and our major industry partners, Woodside and Chevron. This includes establishment and ongoing industry funding of professorial chairs in Gas Process Engineering (Eric May UWA), Petroleum Geoscience (David Lumley UWA) and Corrosion (Rolf Gubner Curtin).

In the last 12 months, Shell has funded a chair in Offshore Engineering (David White), Woodside has funded a Curtin chair in LNG Construction Productivity (Xianggu Wang) and agreed to fund a chair in Computational Geoscience (UWA), Chevron has agreed to fund a chair in Petroleum Geology (Curtin) and Chevron and Woodside have agreed to jointly fund a UWA chair in Palynology.

A study by RMDSTEM in September 2010 on the benefits from the WA:ERA UJV found that a conservative risk-adjusted present value impact for Western Australian industry attributed to a subset of WA:ERA research was \$354m to \$623m over the next 25 years based on reducing the capital intensity of LNG infrastructure, production efficiencies and unlocking new gas reserves. The existence of WA:ERA was a major factor in Chevron's 2007 decision to establish a Global Technology Centre in Perth. In January 2012 DMP published a major WA:ERA study it had funded on unconventional gas in Western Australia utilising the analogue case of Whicher Range.

On 27 September 2012 the Hon Chris Evans announced a Commonwealth investment of \$48.4m in capital funds to establish a National Geosequestration Laboratory (NGL) to be operated by WA:ERA. First priority for NGL research is the South West Hub Carbon Capture and Storage Flagship project announced by Ministers Ferguson and Moore in June 2011 and supported by the Department of Mines and Petroleum and an industry consortium. The NGL will also be able to support geosequestration associated with the Gorgon project.



Curtin University



THE UNIVERSITY OF  
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The increasing scale of the petroleum industry in Western Australia and the presence of a growing number of international operators provides an opportunity to further build Perth as a centre for innovative science and engineering learning from other global centres such as Aberdeen and Stavanger. Doing so would leverage increased value from a depletable resource through capability building and associated research and education to increase production levels, profitability and returns to the State. WA:ERA partners already have world class strengths in geology, petroleum engineering, geophysics, geochemistry, offshore structures, corrosion science, gas processing, LNG construction productivity and a range of associated disciplines that can be built upon. FLNG presents a further opportunity.

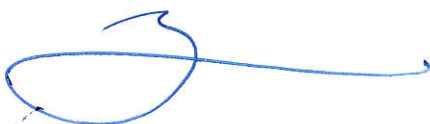
The Committee has heard evidence from APPEA (Dwyer) that Shell is considering establishment of a Perth-based FLNG centre of technical excellence. Like Chevron's Global Technology Centre, this deserves strong encouragement for its benefit to the State. The WA:ERA partners have started planning to establish a National Floating Systems Research Centre (NFSRC) based in Perth that could link closely with relevant operators and build longer term R&D capability and value from Australia's first mover advantage in FLNG. Proposed Commonwealth and co-investment funding for this and a Woodside-led Oil and Gas Industry Innovation Partnership (OGIIP) was announced by the Prime Minister on 15 and 16 August 2013 with broader partner linkages and some elements stated to be already provided for in the Federal Budget. WA:ERA is the core research partner for the OGIIP.

While Australia and the world need LNG as a relatively clean bridge fuel to meet greenhouse gas and energy targets (eg see various IEA reports), Australia is relatively high cost and there is increasing competition from proposed developments in North America and East Africa. FLNG is a partial solution where gas (and condensate) is a long way offshore and/or with a location and scale that does not link readily to existing onshore infrastructure. It is also potentially cost effective more generally. There are clearly issues between the Commonwealth and State (and local government) with respect to infrastructure and other costs, royalty streams and tax arrangements linked to leases that can distort what is in the national and State interest. In my view, these should be addressed in a broader context of a new federalism that seeks to reduce duplication and inefficiency across levels of government.

Increasing productivity and taking advantage of the current window of opportunity to foster the next wave of LNG projects should include FLNG where this makes economic sense and the resource may not otherwise be developed. Royalty arrangements should be considered accordingly. One economic benefit to the State from FLNG with both immediate and longer term potential is to encourage Shell and other relevant operators to support a centre for the technology and associated R&D and education based in Perth.

I would be pleased to elaborate on the foregoing should the Committee wish.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Kym Bills', with a stylized flourish extending to the right.

Kym Bills  
CEO