



GE Oil & Gas Australia Pty Ltd

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Economics and Industry Standing Committee
Legislative Assembly
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WEST PERTH WA 6005

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RE: Inquiry into the Economic Implications of Floating Liquefied Natural Gas Operations

General Electric (GE) welcomes the opportunity to contribute to the Inquiry into the Economic Implications of Floating Liquefied Natural Gas (LNG) Operations being undertaken by the Economics and Industry Standing Committee of the Western Australia Legislative Assembly.

GE has an established and growing commitment to the development of the region's gas reserves. GE Oil & Gas has been awarded contracts for the supply, service and maintenance of equipment and technology for offshore and onshore gas developments in Australia. GE is currently contracted to work on 100% of the LNG projects under development in Australia and has been active in the Western Australian oil and gas industry dating back to the 1980s, when the first LNG train was installed at Karratha as part of the North West Shelf development.

This continued involvement has been the catalyst for GE's decision to establish dedicated services and maintenance facilities, as well as administration and skills development centres at Jandakot, near Perth.

In terms of employment, GE Oil & Gas has increased its in-country staffing complement almost seven-fold from 64 staff in 2010 to more than 500 this year. We anticipate to have engaged a total workforce of almost 600 staff by the year's end and forecast up to 1000 employees as the projects transcend into operation/maintenance cycles.

In addition to localising its services, maintenance, skills development and recruitment in Australia, GE Oil & Gas is working with customers and their engineering, procurement and construction (EPC) partners to maximise opportunities for local suppliers and labour. A key element of this has been pre-qualifying local suppliers to provide materials and works, such as for the installation and operation of GE technologies, including hosting information sessions with existing and prospective local suppliers. To date, GE Oil & Gas has prequalified almost 200 local vendors and continues to engage with them to identify upcoming opportunities.

GE is providing global skills and equipment in support of local operations. The custom-built GE Skills Development Centre, opened in late 2012, has been primarily established to help GE's customers in the region provide essential training to increase the productivity of their workforces through



customised training programs that otherwise would have been available only offshore. This means that GE's employees and its customers' employees are gaining transferrable skills that will follow them wherever they work. The importance of this investment is emphasized by the fact that around half of the engineers currently employed across the oil and gas industry globally are expected to be eligible for retirement by 2015. This is continuing the demand for the growth and development of a highly skilled workforce to support the current and prospective projects.

GE is also a core partner of the Oil and Gas Industry Innovation Precinct proposal put to the Australian Government as part of its Australian Jobs Plan in July this year. The Government has since announced its support for this proposal as well as the National Floating Systems Research Centre, led by CSIRO and the Australian Institute of Marine Science, from Perth. GE has a partnership with CSIRO across a range of industry sectors, where GE agreed to co-invest \$20 million for joint research opportunities, including into oil and gas research and development. GE invests globally in ~6% of its industrial revenues into on-going research and development, the outcomes of which benefit Australian industry.

GE's investment in Western Australia and its commitment to partner locally and globally to deliver projects in Western Australia is consistent with the Committee's terms of reference to consider:

- engineering and design;
- fabrication and manufacturing;
- construction and ancillary services; and
- domestic gas supply and industrial gas users.

While the Committee's inquiry is to focus on floating liquefied natural gas (FLNG) technologies, it is important to recognise that the technology, local capabilities and network GE has developed is deployable for LNG projects across the region, whether developed onshore or as FLNG.

GE does not intend to refer to any specific project or development concept, but we do note when Australian Government announced a variation of conditions on five Browse retention leases on August 2, 2013, Minister for Resources and Energy The Honourable Gary Gray MP said the decision reflected *"the view that companies, not governments, are best placed to determine which developments are commercially viable, subject of course to environmental and regulatory requirements"*.

The Western Australian and Australian governments have provided substantial support to facilitate the development of the LNG projects and encourage the investment in associated services and jobs. Governments, industry and the wider community have a shared desire for the sustainable development of planned and future projects.

In line with this, GE supports the Australian Government's 2012 Energy White Paper conclusion that: *"Policy success will be based on Australia's ability to maintain a continuous stream of new and committed energy resource projects moving through the project pipeline, from exploration to production, ..."*

The development of new projects is of obvious interest to GE. It is important that Governments at all levels continue to demonstrate support for proposed projects and in turn do all they can to assist in them coming to fruition. How these projects are best developed can however only be determined by



the company that is making the investment. In making these investment decisions, government has an important role in supporting companies to utilize best available technology.

In regard to GE's offering to the proponents of projects off the Western Australian coast, the required offshore activities, in particular the subsea infrastructure requirements remain substantially the same regardless of the selected liquefaction option. To this end, GE is actively involved in the provision and ongoing enhancement of the major subsea infrastructure utilised across the industry.

The differences in liquefaction infrastructure between onshore and floating facilities are where the greatest differences lie. GE is already actively involved in both on-shore and floating LNG projects and continues to develop its technologies to provide higher capacities on a smaller footprint, to the benefit of both onshore and floating operations. Notwithstanding that, either onshore or offshore, GE benefits from 30 to 40 years of services contracts to support the projects. These commitments led GE to the establishment of its ANZ Regional Hub at Jandakot, 16 kilometres south of the Perth CBD, from where services are provided to customers across the country.

As known commodity reserves become more remote, options such as FLNG technologies can be expected to play a greater role in overcoming the increasing distances and subsequent costs of transporting gas ashore and the development of onshore facilities. This tyranny of distance and the escalating cost of onshore development can potentially be minimized by FLNG technologies. This also opens the potential for a FLNG processing barge to be utilised on multiple fields over its operational life, helping to unlock further reserves.

Regardless of the type of technology engaged, it is vital that governments work to assist in the minimization of the cost of doing business across the Australian resources sector. Globally, Australia is regarded as a comparatively expensive place to do business and any additional government burden, be it actual or perceived, can negatively impact the ultimate viability of a project.

Only the development of the resource will generate revenue for government, jobs and other opportunities along local supply chains.

GE would urge the Committee and the wider industry to recognise the significant local capacity, particularly for services, maintenance and other ancillary functions, that now exists and will continue to develop in Western Australia. This investment, not only by GE, is transferrable across the array of development concepts for LNG projects.

For further information or clarification, please contact GE Government Affairs, Finance and Policy Director Mr Kirby Anderson on (07) 3001 4339 or kirby.anderson@ge.com.

Kind regards,

A handwritten signature in blue ink, appearing to read 'David Leslie'.

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