



The Future of Australian LNG Exports:
**Will domestic challenges limit the development of future LNG
export capacity?**

Executive Summary
David Ledesma, James Henderson & Nyrie Palmer

The Australian domestic gas market is in fact comprised of three geographically disconnected markets, although each is now starting to face similar challenges. The dramatic expansion of the country's LNG capacity through the construction of 7 new projects virtually simultaneously has resulted in cost inflation and project delays due to labour shortages and operational constraints. In addition, the prospect of the sale of so much LNG to the export market has caused concerns over gas shortages and rising prices. The combination of all these issues has raised questions about whether the growth in Australian LNG exports can continue beyond the 62mtpa of capacity which is currently under construction and which will make the country the largest LNG capacity holder in the world by 2018.

The Western Australia and Northern Territory markets are very much export-driven as the size and cost of the projects being developed are both too large to find sufficient demand locally and too expensive to be economic at currently prevailing low domestic prices. As a result they have been conceived as LNG export projects for the Asian market, with some gas reserved by law for domestic customers in Western Australia. However, this gas reservation policy has only been marginally successful in keeping prices down, and as a harbinger of the issues soon to be faced in the east the domestic gas price has been rising towards export netback levels. The new LNG schemes in Northern Territory and Western Australia have also been experiencing problems of their own, with cost overruns and project delays undermining the economics of the projects and calling into question the future expansion of the industry. It seems likely that only brownfield expansions, or floating liquefaction, will be seriously considered in the near future, with new greenfield land-based projects likely to be delayed until the future of the global LNG market becomes clearer.

In contrast the gas market in the East has historically been based upon supply to domestic consumers. However, it has been transformed into a more globally-linked market by the imminent completion of three new LNG export projects at Gladstone, with the situation being further complicated by the fact these projects are based on Coal Seam Gas reserves, the development of which is still subject to timing uncertainty. While the reserves in place appear to be generally sufficient, some projects currently lack the resources to meet their export contracts and are contracting for gas that might otherwise have gone to domestic customers.

The progress being made at all seven LNG projects under construction would suggest that they will successfully come onstream in the period 2014-2018 as planned, leading to a total of 61.8 mtpa of new LNG export capacity being added to Australia's LNG industry. A more difficult question concerns



the potential for further new LNG capacity in Australia. Australian LNG will face considerable competition from other LNG supply countries, both on a cost and reputation basis, but Australia's existing LNG production track record, and relative closeness to market leads the authors to believe that new LNG projects will be developed in Australia. These new projects will be developed as expansions to existing facilities or FLNG projects, with a realistic estimate being that 20-25 mtpa of new LNG capacity could take FID by 2020.

It would appear that despite the problems that have been encountered across Australia's LNG industry over the past few years, the country will become the largest LNG exporter in the world by 2018. Future plans beyond the current projects under construction are more uncertain, but the economics of brownfield developments in Australia would appear to be attractive relative to global competitors in East Africa, Russia, Canada and even the US, and as a result some additional expansions are likely to occur. However, in the west and north these may depend upon the industry's ability to maintain cost control and manage contractors more effectively, while in the east the establishment of sufficient CSG reserves and productive capacity remains a challenge both for existing projects and future expansions. The environmental and political issues involved with extensive CSG development may prove difficult to manage, but it seems to be increasingly clear that all the State governments will probably have to be prepared to accept that gas prices need to respond to market forces and rise towards export netback levels, even though this could have an impact on energy supply costs to domestic industry and the overall economy.

About the Authors

James Henderson is a Senior Research Fellow at OIES who specializes in the Russia and CIS oil and gas industry and the global energy themes that influence this region. As a result, he has recently co-edited the OIES (2014) publication "The Russian Gas Matrix: How Markets Are Driving Change" but has also written papers on issues such as North American LNG exports and the Indian gas market. James has worked in the oil and gas industry as a commercial manager, consultant and investment analyst for the past 25 years, and is also the author of "International Partnership in Russia" (Palgrave Macmillan, 2014).

David Ledesma is an independent energy and strategy consultant specializing in LNG and gas. In his 30 years of experience in the energy and utility sector in Shell and other companies David has worked on the development of complex integrated projects, negotiations at a government level, and in the management of joint ventures. David is a Research Fellow at the OIES and has recently co-authored the Institute's books the "Price of Internationally Traded Gas" (2012), "Natural Gas Markets in the Middle East and North Africa" (2011) and "Gas in Asia" (2008). David has also authored papers "The Changing relationship between NOCs and IOCs in the LNG chain" and "East Africa - Potential for Export" for the OIES.

Nyrie Palmer is a Senior Regulatory Officer in New South Wales (NSW), Australia, at NSW Resources and Energy. For over six years, Nyrie has provided specialist advice to the NSW Minister for Resources and Energy on the performance of gas markets and gas pipeline networks, and is currently redeveloping the regulatory regime for the coal seam gas and petroleum industry in NSW. In her role, Nyrie combines knowledge and experience from degrees in Business from the University of Oxford, Public Policy and International Affairs from Princeton University for which she held a Fulbright Scholarship, and Engineering from the University of New South Wales.