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Oil, Gas & Energy Law Intelligence

Maintaining Momentum in Northern Australia's LNG Projects faces Formidable CSR Challenges by D.T.B. Leather and D.A. Wood

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Maintaining Momentum in Northern Australia's LNG Projects faces Formidable CSR Challenges

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Abstract

Several multi-billion dollar Australian gas liquefaction development projects located in the Northern Territory, Queensland and Western Australia are to be the focus of global investment in the natural gas industry for the next five years or so. The operators of these projects are not only grappling with rising costs and labor shortages leading to potential project delays but also are confronted by a host of corporate social responsibility (CSR) challenges.

This article addresses the measures being taken by operators, government on state/federal levels and contractors to tackle and manage the CSR challenges. It specifically addresses various staffing issues (managing migrant and multi-cultural work forces, re-skilling the indigenous workforce etc.), community opposition due to perceived negative impacts on other industries (farming, fisheries etc.), water and land use, and the potential atmospheric, marine, land-based and sub-surface (water) environmental impacts.

The objectives of the CSR initiatives are to deliver long-term, sustainable benefits to the local communities including a large, high-skilled permanently-resident work force in secure employment, high standards of environmental stewardship, as well as economic growth and improved living standards. This article addresses how this might be achieved and highlights some CSR implications for the global oil and gas industry.

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Introduction

The world's LNG industry is presently experiencing a period of further expansion and diversification driven particularly by growing Asian demand for natural gas from secure sources of supply. Several factors are influencing this demand growth for gas: population growth, economic development, modernization, effort's to improve energy efficiency and reduce energy intensity for economic and environmental reasons. Non-OECD countries from Asia and beyond are forecast by many analysts to continue this trend towards a "golden age for gas" in coming decades (e.g. BP 2012; IEA, 2011) as the energy-intensive aspirations of their growing middle class make their impact felt on global energy demand.

Australia is well endowed with recoverable resources of conventional gas, some 3.2 trillion metric tonnes (mt), coal bed methane (CBM) or coal seam gas as it is referred to there (some 214 billion mt), and vast shale gas resources only just being delineated (e.g. EIA, 2011, estimated Australia's technically recoverable shale gas resources at 7.85 trillion mt). Potential unconventional gas resources (CBM plus shale gas) could easily be an order of magnitude higher than the figures just quoted. However, the remote locations of all this gas within and offshore Australia, and of Australia position itself, relative to the thirsty Asian markets means that large LNG export projects are required to unlock its value.

This article explores some of the corporate social responsibility (CSR) challenges facing Australia's rapidly expanding LNG sector. We will assess the staffing, cost and delay challenges for the following major LNG export projects. To place such analysis in context it is necessary to initially review the status of Australia's LNG industry, how it has evolved and its major projects.

Impressive growth of Australia's LNG industry is in progress

Australia presently has around \$200 billion of LNG export projects on the drawing board, as the industry is eyeing a production goal of 60 Million metric tonnes per annum (mtpa) by 2020. That quantity is triple the 2012 production levels of around

20 mtpa (some two-thirds shipped to Japan and the remainder mainly to China and South Korea), which establishes Australia as the fourth-largest LNG exporter globally behind Indonesia and Malaysia, but well behind Qatar (e.g. BP, 2011). Instability in the Middle East, Qatar's strategy to slow down its pace of LNG development, and Asian buyers' enthusiasm for gas sourced from outside the political influence of the Gas Exporting Countries Forum (GECF) have all influenced Australia's success in recent years in securing multi-billion-dollar capital investments in new LNG projects from major international gas companies and from state-controlled energy companies of the main consuming nations.

Table 1 summarizes the numerous LNG projects currently in development or planning, with their locations shown in Figure 1.

Australia's Pending Gas Liquefaction Projects				
Project Name	Expected		Capacity	
	Start Date	Operator	(mtpa)	Status
North West Shelf /Timor Sea				
Pluto Train 1	2012	Woodside Energy	4.8	Under construction
Gorgon (3 trains)	2014	Chevron	15.0	Under construction
Pluto Train 2	2015	Woodside Energy	4.8	FID
Darwin LNG Phase 2 (2 trains)	2016?	ConocoPhillips	8.6	Early Planning
Greater Sunrise FLNG?	2016?	Woodside Energy	4.3	Planning / negotiation
Ichthys LNG (1 train Darwin)	2016	Inpex	8.4	Under construction
Prelude FLNG	2017	Shell	3.6	Under construction
Wheatstone LNG (2 trains)	2016	Chevron	8.9	FID
Cash Maple FLNG	2016	PTTEP	2.0	Planning (FID 2012)
Gorgon Phase 2 (train 4)	2017	Chevron	5.0	Planning
Scarborough FLNG?	2017	ExxonMobil	6.0	Planning
Browse LNG (2 trains)	2018	Woodside Energy	12.0	Planning (FID 2012)
Bonaparte FLNG	2018	GdFSuez/Santos	2.0	Planning (FID 2014)
Pluto Train 3	2018	Woodside Energy	4.8	Planning (FID 2014)
Sub-Total Planned Capacity:			90.2	
Queensland CSG				
QCLNG Curtis LNG (2 Trains)	2014	BG Group	8.5	Under construction
GLNG Gladstone LNG (1 train)	2015	Santos	10.0	Under construction
APLNG Australia Pacific LNG (2 trains)	2014	Origin Energy/ ConocoPhillips	9.0	Under construction
Arrow Energy (2 trains)	2017	Shell / CNOOC	9.2	FEED
QCLNG Curtis LNG Phase 2 (train 3)	2018	BG Group	8.0	Planning (FID 2014)
Arrow Energy Phase 2 (2 trains)	20??	Shell / CNOOC	9.2	Planning
Sub-Total Planned Capacity:			53.9	
Total Planned Capacity:			144.1	
<i>Sources: Press Releases</i>			<i>David Wood & Associates</i>	

Table 1. Specific Australian gas liquefaction projects in development and planning in 2012.

Australia entered the gas export market in 1989, shipping LNG produced from fields offshore Western Australia's north west shelf (NWS) to Japan, which has subsequently expanded adding additional trains and also now supplies LNG to China. In 2006, a second LNG export project started from Darwin in the Northern Territory, sourcing gas from the Timor Sea. Although there are many more conventional gas resources out there to develop, these are not without their technical challenges (e.g. remoteness, variable quantities of inert gas and carbon dioxide, small quantities of valuable natural gas liquids and condensates) and competition from other regions,

e.g., LNG export projects from US and Canada securing Asian buyers (e.g. Bloomberg, 2012) and large new gas discoveries offshore East Africa poised to compete with Australia on cost of LNG supply. In spite of such challenges Australia has sanctioned several new large scale LNG export projects in the past couple of years; some to be fed with conventional gas others, in Queensland, to be fed by coal seam gas. There are several others awaiting final investment decision.

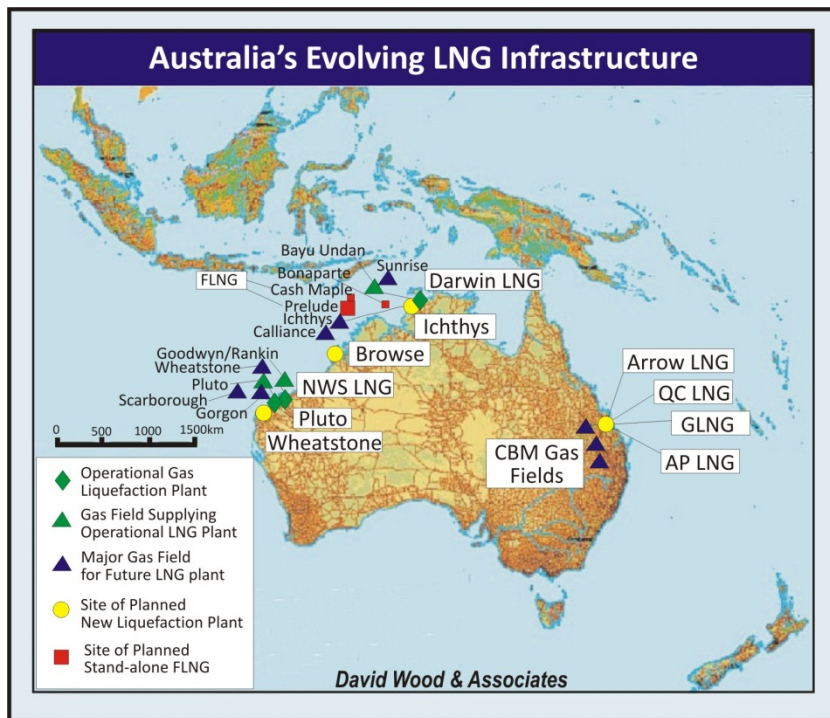


Figure 1. Map showing Australia’s major LNG projects in production, development and planning.

Transient labour is unavoidable but has significant community impacts

Australia’s conventional gas projects are mainly situated in remote locations where limited infrastructure exists. This results in high labour costs, with ongoing cost escalation fuelled by numerous competing gas and other mineral resource projects. The LNG and general resource boom has created significant competition for a limited pool of skilled construction personnel, enabling such skilled staff to command wages at levels reaching more than double those available in major cities. The majority of the work force is employed on a fly-in-fly-out (FIFO) or drive-in-drive-out (DIDO) basis, working unequal “on” to “off”. This poses social issues for the local economies similar to those experienced in Northern Alberta oil sands developments in Canada. There is reluctance at the state-government level to invest in anything other than the most basic permanent infrastructure, public services (e.g. schools, hospitals, higher education etc.) and community projects, on the contention that it may all become redundant in the medium term. Once major construction is completed it is unlikely that local communities will consist of more than a small team of plant operating staff and the services required to support them.

The present CBM projects are more favorably located: they will pipe gas from inland coal basins to LNG facilities near the town of Gladstone in Queensland, closer to Australia's major east coast labour markets. However, given that each project is expected to employ some 5000-construction workers, a work force of some 15000 to 20,000 will be needed to construct the projects planned for development over the next few years. Gladstone has a local population of only 50 000, leading to major inflationary pressures and need for additional imported skilled labour.

Australia's federal and state governments are key supporters of the massive sanctioned investments in LNG. The 30,000 or so "local" jobs and the flow on effect of billions of dollars of investment and their associated tax revenues (Foster, 2012) are the main appeal to government. Such developments should undoubtedly also involve positive multiplier effects to the local economy, due to the increased disposable income of those employed on the projects and indirect expenditures with local support, service and supply sectors. How this is to be translated into cohesive and integrated local community development programmes is less clear given the transient nature of much of the work force involved.

Controlling cost of gas supply is proving difficult for LNG developers

Large conventional gas liquefaction projects, such as Gorgon, based on Barrow Island in Western Australia and designed to produce around 14.2 mtpa with a capital investment of some \$40 billion, will be the backbone of Australian supply in a few years. Estimated costs of supply for LNG delivered to Asia from such projects range from \$6/ million Btu to \$8/million Btu (Wang, 2011) which although competitive in the current market may come under competitive pressure over the life of the projects.

Australia has two separate major gas markets on its western and eastern seaboard, both providing in the past some of the lowest local gas prices in the world. The sanctioned development of high-cost LNG exports projects has had negative impacts on the local economy, by increasing gas supply costs. Local gas prices have tripled in Western Australia, and doubled on the East Coast in recent years (Goh, 2012). Higher energy costs have negatively impacted the Australian manufacturing sector and its associate jobs. Gas and other resource exports have driven the Australian dollar to record highs in the global currency markets, which in turn has eroded manufacturing sector exports and threatened some of its one million or so jobs.

Energy Quest (2012) report that the average price for Australian LNG exports in third quarter 2011 was A\$11.37/gigajoule (in February 2012 1A\$/GJ converted to 1.0115 US\$/ million Btu), with Woodside achieving an average price of A\$11.68/GJ. Woodside's return from export LNG was nearly three times its average domestic gas price in Western Australia for the quarter of A\$3.87/GJ. But such cheap gas is no longer available for new long-term domestic contracts in the west, which is having its inflationary impact on the community. Local west coast prices in early 2012 had risen some A\$7/GJ to A\$8+/GJ and being indexed to oil prices (Energy Quest, 2012).

In the eastern part of Australia, wholesale gas prices remain mainly in the range A\$3/GJ to A\$4/GJ. However, gas producer expectations for new contracts are in the

A\$6/GJ to A\$9/GJ influenced by expected LNG export net backs (Energy Quest, 2012). The target level has repeatedly been cited over recent years by Santos, a major east coast producer, which is aiming for oil-linked international price parity. Santos says a doubling in the domestic price is a necessity for the gas to be developed, and can easily be absorbed by the big local consumers like miners BHP Billiton, Rio Tinto and Xstrata, which have enjoyed ten-fold increases in prices for their own export commodities over the past decade. Santos also claims that household customers can absorb what would be a phased 20% increase in prices from around \$21/GJ to about A\$25/GJ at the stovetop (Forster, 2012).

Some favor broadening Western Australia's approach, which requires 15% of the local gas resources developed for export LNG projects to be put aside for use in the state (Goh, 2012). The Federal Government's draft Energy White Paper (Dec, 2011) does not share that view stating: "*current market conditions are particularly challenging for some large gas users.... but [the Australian government] believes that policy intervention at the present time to force domestic gas outcomes is unwarranted.*" Although a change in government energy policy may ultimately be required to resolve this problem, it cannot be denied that higher energy costs for local industry and households, plus the inflationary pressures they cause, are a negative community consequence blamed squarely on the LNG sector.

Rising cost trends have fiscal consequences

Some analysts estimate that Australia's mega-LNG projects, on average, have been 32% more expensive than when their final investment budgets were approved and have been completed eight months later than expected (Chambers, 2011). This trend is worrying if it persists with the planned projects. Woodside, Santos, Oil Search and Origin had a combined \$64bn of potential capital expenditure programme planned through to 2017, compared with a combined market value of just \$68bn. If all of those planned projects were delivered 32% over budget, an additional \$20bn of capital investment would be needed.

If Queensland's coal-seam gas sourced LNG projects become liable to the Petroleum Resource Rent Tax (PRRT), as the government have intimated in recent years that would bring those projects fiscally in line with the conventional offshore oil and gas projects. However, under PRRT regulations rising capital costs could provide tax shelters for the operating companies, meaning that the government forgoes some of its fiscal revenue in order to cushion the impact of higher cost experienced by the investors. If this indeed turns out to be the case rising costs could impose an additional burden on funds available to the government to spend on communities shouldering the burden of the projects (Chambers, 2011).

Population distribution and concentrations highlights regional labour challenges

Table 2 provides population details for the main administrative regions of Australia. It highlights the concentration of the population in the regional capital cities,

particularly in the more sparsely populated states of Northern territory and Western Australia. At first glance it might seem that the sparse population in areas where onshore facilities associated with the LNG projects in development are located is a good thing, i.e. low community numbers impacted by environmental and social upheavals. However, in reality it means that those small isolated communities require careful attention and structured development planning to avoid being totally overwhelmed in every sense by the plant construction phase.

Land Area and Population of Australia by States and Territories				
Region	Area (square kilometres)	Estimated Resident Population (millions)	State / Territory Regional Capital City	Estimated Resident Population in Regional Capital City (millions)
New South Wales	800,642	6.89	Sydney	4.34
Victoria	227,416	5.21	Melbourne	3.81
Queensland	1,730,648	4.18	Brisbane	1.86
Western Australia	2,529,875	2.11	Perth	1.56
South Australia	983,482	1.58	Adelaide	1.16
Tasmania	68,401	0.49	Hobart	0.21
Australian Capital Territory	2,358	0.34	Canberra	0.34
Northern Territory	1,349,129	0.21	Darwin	0.12
Australia	7,691,951	21.01		13.4

Source: Australian Bureau of Statistics (June, 2007)

Table 2. Population distribution by Australian region

A review of specific LNG projects and their CSR issues

1. Ichthys LNG project

The Ichthys project (8.4 mtpa) recently passed the key milestone of a positive final investment decision (i.e. January 2012). It represents the second largest Australian infrastructure project of any kind in terms of capital investment and is to be operated by Inpex of Japan (a company that has not operated large-scale liquefaction facilities previously and is owned 18% by the Japanese Government) and its more experienced partner Total (holding 24% of the project). It was only after strong competition with Western Australia dating back to 2005, and lengthy FEED studies, that Northern Territory government managed to convince the project investors that it should be located in Darwin and involve a costly 850km pipeline rather than to an identified location only 400km to the Western Australian coast (Adam, 2012).

The Ichthys project is now expected to supply around 10% of Japan's LNG imports with additional sales to Taiwan already contracted. Resource estimates have grown to 12.8 tcf of gas and 527 million barrels of condensate. The high value of those liquids at current oil prices was a key positive factor in the final investment decision to pursue the investment.



Present view of site where the Ichthys LNG facility will be built. Access to Blaydin Point is presently via a rough track, used by recreational fishermen.

The area has been surveyed in readiness for clearing and foundation construction, which is expected to start during the 2012 dry season.

Blaydin Point (above)

Looking Northwest towards the East Arm Wharf, with the Darwin skyline in the background.

This is the location where the LNG shipping berth is to be built. It is currently used by locals for fishing.



Figure 2. Photographs taken in February 2012 on Blaydin Point, Northern Territory. The area identified for the Ichthys INPEX LNG Facility.

The Northern Territory (NT) despite its large area, over 1,349,129 square km (520,902 sq mi), making it the third largest Australian federal division, it is sparsely populated. A USD\$35 billion project for the least populated region of Australia (Table 2) has some challenges yet to resolve. The Ichthys project is expected to add 20% to the NT GDP, and has aroused the aspirations of the local population to expect an economic boom. That was not how it worked out when Darwin, completed its first liquefaction plant in 2006 (ConocoPhillips, Darwin LNG). Then the city was hit by inflation a shortage of skills available for other sectors and inefficiency due to building activities focused on the liquefaction plant. In effect since the initial flurry of activity, many members of the Darwin public would most likely forgotten that Darwin LNG exists, such is it's small workforce footprint, and the tailing off some of the original, and keenly received CSR initiatives.

Inpex had some community bridges to build before it commenced operations in NT relating to Japan's World War II bombing of Darwin (70th anniversary commemorated on 18th Feb 2012), associated with much loss of life. In fact the strong existing economic ties between Australia and Japan forged over several decades through resource and agricultural exports and automotive imports have made it relatively easy for both Australia and Japan to move on at the national level from their painful experiences of World War II, but some scepticism remains at community levels (Mills, 2012).

Inpex have made efforts to ensure CSR is a core of business activities conducted for the duration of the Ichthys project, with aspirations of supporting the sustainable development of the NT host community, by identifying partners and causes. An A\$91 million social and environmental package is being carried out by INPEX and Ichthys Project joint venture Total, to assist with facilitation and maintaining community good will (INPEX, 2012).

Native title requirements

32.5% of the NT population are identified as being Aboriginal or of Aboriginal decent (i.e. of indigenous ethnic origin). Australian law recognizes that “*native title*” exists where Aboriginal people have maintained a traditional connection to their land and waters, since sovereignty, and where acts of government have not removed it. Honoring and respecting such title is one of the community challenges the project has to focus upon.

The High Court of Australia first recognized native title in 1992 with the Mabo decision, which overturned the idea of 'terra nullius' that the Australian continent did not belong to anyone at the time of Europeans' arrival. It recognized for the first time that indigenous Australians might continue to hold native title and to be uniquely connected to the land. Aboriginal and Torres Strait Islander people can apply to the courts to have their native title rights recognized under Australian law. Native titleholders have the right to be compensated if governments acquire their land or waters for future developments. Native title can co-exist with other forms of land title (such as pastoral leases) but is extinguished by others (such as freehold).

The native title of a particular group will depend on the traditional laws and customs of those people. The way native title is recognized and practiced may vary from group to group, depending on what is claimed and what is negotiated between all of the people and organizations with an interest in a specific land area. Handling native title with respect to Ichthys project's community impacts will require careful negotiations to achieve sustainable and beneficial outcomes for all stakeholders (e.g. Gallagher, 2008).

This had to be factored into subsequent investigations and ongoing sensitivities for a concrete proposal of the viable options, of which can be read in one of the abandoned though award winning reports for a Maret Island Proposal (Gallagher, 2008). It is only with clear communications, identifying joint advantages, accompanying mutual benefits for both the Northern Territory and INPEX, that all contributing stakeholders can achieve beneficial outcomes. The NT government is aggressively supporting the Ichthys project investment primarily to grow and diversify what is presently a service-based economy, subsidized to a large extent by the Australian Federal Government. The goal of self-sufficiency seems within reach, but some communities are likely to come under pressure to compromise their aspirations in achieving that goal.

2. Shell's Prelude project - world's first FLNG project

The final investment decision for the world-first floating gas liquefaction project was taken by Shell last year after decades of planning (Burrell, 2011). The Prelude project is scheduled to begin production in 2016, with production of 3.6 mtpa of LNG, with associated condensate and LPG. It has the potential to create over a thousand jobs and add \$45 billion to the Australian economy. The jobs will be of a high skilled type not readily available in Australia. The FLNG vessel is designed to be 488m long, the largest floating structure ever built, 6 times the size of the world's largest aircraft carrier, while being built to withstand a category 5 Cyclone. It will be moored approximately 200km from the coast for an estimated 25 year production cycle with an upfront capital investment of between \$10-12 billion. There are several other FLNG projects, using other novel vessel designs in the planning stage for Timor Sea assets.

The Prelude FLNG project, to be located over the horizon (i.e. out of sight, out of mind, and away from public scrutiny some would contend) has so far circumvented native title claims and environmental objections. Nevertheless the size of this facility, bristling with new and untried technologies in such locations poses significant safety and environmental risks that some contend require more careful scrutiny and detailed monitoring by parties independent of the project. Shell will be expected to demonstrate its corporate statements regarding high global CSR commitments in bringing tangible benefits to local communities from this high profile project.

Not all communities and regional governments are enthralled with the FLNG concept. For example, the presently stalled Sunrise project in the Timor Sea, which is, mired in dispute between the Australian and East Timor (Timor-Leste) governments. Timor-Leste is striving for a liquefaction plant to be built on its shores for the purposes of underpinning economic growth and development. However, the gas holding companies argue that transit costs across a submarine trench to Timor-Leste would add an additional \$5 billion to the project's developments budget (Alford, 2011).

3. Queensland CSG to LNG Projects

A series of groundbreaking projects that will use coal seam gas (CSG) as a feed for liquefaction plants in and around the port of Gladstone is moving forward. Three separate gas liquefaction projects are under construction on Curtis Island, in the Queensland City of Gladstone:

Gladstone Liquid Natural Gas (GLNG) (www.glng.com.au) - A partnership between Santos, PETRONAS (Malaysia) and Total and KOGAS. The project has a design capacity of 7.8 mtpa with a potential for that to increase to 10 mtpa. The first cargoes are expected to load in 2015.

Queensland Curtis LNG (QCLNG) Project (www.qgc.com.au) - Sponsored by BG Group through its subsidiary Queensland Gas Company this project has an 8.5 mtpa initial design capacity.

Australia Pacific LNG V (APLNG) (www.aplng.com.au) - a joint venture between Origin Energy, ConocoPhillips & China's Sinopec with 9 mtpa initial design capacity.

In addition **Arrow Energy** (www.arrowenergy.com.au) - jointly owned by Shell and CNOOC has a 9.2 mtpa CSG to LNG project undergoing its FEED study (see Table 1).

GLNG is a groundbreaking project that will use coal seam gas (CSG) as a feed for a liquefaction plant in the port of Gladstone. The Queensland government anticipates that GLNG and other CSG to LNG projects will create employment for 18,000, increase state GDP by 1% and generate some \$1 billion per annum in state revenue. Project's is expected to have a 30-year lifespan.

Fracking and water contamination concerns

These projects are collectively destined to stimulate substantial indirect business development and employment opportunities in the Gladstone and Roma regions (Central and East Coast Queensland) through increased demand for goods and services. However, the supply chain upstream of the liquefaction plants has a much larger environmental footprint for these unconventional gas projects than for the offshore conventional projects. They require the drilling and hydraulic fracturing of thousands of wells, long distance gas gathering systems, large ponds of produced saline water, and they occupy large tracts of land. The projects also pose potential threats of sub-surface water contamination (through fracking chemicals) to the Great Artesian basin.

The haste to develop these CSG to LNG projects on such a large scale has, rather belatedly, stimulated members of the Council of Australian Governments (COAG) to request (ABC TV News, Jan 2012a) an independent scientific investigation into CSG, coal mining and shale gas activities. Coal mining is also in the frame because of ground water studies suggesting a link with fragile lakes. (ABC TV News, Jan 2012b). It will be hard for such an investigation, to be conducted so late in the process, not to be politicized. The resulting scientific report will need to demonstrate its impartiality and be conclusive in establishing whether these activities are likely to have a negative impact on surface water and aquifers, or not.

The GLNG project launched in October 2011 an Australian-first initiative to make all the company's Surat and Bowen Basin water testing results available for the community to view (GLNG 2011, Santos Media release October 2011). That statement used wording such as: "a strong commitment to openness", "accountability", "environmental excellence" and "sustainable development", standards by which that project will no doubt ultimately be judged. GLNG states that it is sure that results will demonstrate that its activities are not adversely impacting the aquifers from where farmers draw their water and are having no impact on the viability of the Great Artesian Basin.

Persisting with such strong and open CSR initiatives, backed up by independently collected and interpreted data will be required, particularly by the foreign company sponsors of the CSG to LNG projects, if the communities are brought on side and aligned with the state and corporate objectives.

Potential Great Barrier Reef impacts cause community concern

The Gladstone Port facility is in close proximity to the Great Barrier Reef World Heritage Area and any disturbance of the marine ecology there risk far reaching consequences for the fragile reef environment. Incidents of fish poisoning and bans on recreational fishing in the area, as well as claims for compensation by class action by 60 Gladstone fishermen for alleged fish poisoning within the harbor (Fraser, 2012) have not reassured the public. The Queensland Government has offered to pay compensation, though this is a desire for certainty, to clearly identify if the incident is related to dredging operations, associated with the LNG facilities, or alternatively due to the influx of freshwater fish that were washed down waterways during the flooding events of January 2011. Gladstone Ports Corporation (Jan, 2012) issued a statement confirming that they were not dredging in the harbor.



Curtis Island, dredging operations adjacent to one of the LNG Facility construction sites.

Estimations of up to 200 vessel movements each day within the Gladstone port area during construction alone.

Due to the lack of road access to the Curtis Island construction sites, all equipment, labour and vehicles transit across from the mainland by barge.

As yet, there is no agreement in place to build a bridge from the mainland out to Curtis Island. For the duration of construction, and possibly into future operations, it is expected that the connections will be maintained by Ferry & Barges



Figure 3. Photographs of activity on Curtis Island, in the Gladstone harbor vicinity taken in January 2012 and November 2011, respectively.

The Great Barrier Reef and by default it's coastal and shore catchment regions is of international importance to Australian tourism. It also supports recreational fishing, commercial fishing and fish processing, which all provide local employment). The reef draws in some 1 to 2 million tourists a year, 50% of all tourists who visit Queensland, valuing the industry it supports at \$5.5 billion annually (Rolfe, 2009).

The considerable increase in shipping traffic transiting the reefs when the LNG projects come on-stream estimates of 400 vessels per annum (APLNG, 2010), in addition to the expected increase in bulk resource shipping (estimates of 700 vessels per annum) of the Gladstone harbor (Bauxite, Aluminum, coal and agricultural) and heighten the risk of marine accidents impacting the reef (e.g. the United Nations has

raised concerns, Lloyd, 2012). A delegation from UNESCO, who have already rebuked the federal government (ABC Four Corners TV, 2011) are scheduled to visit Australia in 2012 for briefings from the federal and Queensland governments on what is being done to safeguard the reef's heritage values, including monitoring of shipping and the suitability of passage routes in the light of the anticipated increase of traffic. Again the foreign operating companies will be expected by the local communities to take a lead in offshore preservation initiatives.

4. Western Australia: Gorgon, Pluto and Wheatstone LNG Project's

Western Australia is a mature LNG producing province with Woodside's existing North West Gas Shelf Joint Venture producing some 16.3 mtpa. However, it is currently undergoing an expansive LNG construction phase.

Gorgon Project – is the largest single LNG project at 15 mtpa design capacity, a \$37-billion project, scheduled to export LNG by 2014. That project is the largest LNG development project in Australia. Contractors working on the project have warned of delays to the project, but Chevron, the operator, has repeatedly said the project is on time and on budget. This remains to be seen.

Wheatstone Project – has 8.9 mtpa design capacity and also incorporates a domestic gas plant, as Western Australia has negotiated a 15% local supply clause, which should lead to substantial benefits for the state and its communities. Chevron holds the rest 71.77% in the project and is operator. Apache Corporation 13%, Kuwait Foreign Petroleum Exploration Company (KUFPEC) 7%, Royal Dutch Shell 6.4%, and Kyushu Electric 1.83% are all equity participants in the project that have joined it over the past year or so.

Australia's federal government attached more than 70 conditions to the approval of Wheatstone project to limit the impact on the environment in the area. In doing so it considered the social and economic implications of this project, but focused on managing any potential environmental impacts (Kebede, 2011).

Although they will be some of the largest, Wheatstone and Gorgon are just two of many Western Australian LNG projects in the pipeline. Wheatstone will likely face stiff competition from other LNG projects for labor and resources, a situation, which analysts warn could cause project delays and cost blowouts across the industry.

Woodside's Pluto Project – is a 4.3 mtpa project reaching the end of its somewhat painful development phase (i.e. it is due on-stream in 2012). By June 2011 the Pluto project was about \$1 billion over budget and considerably behind scheduled and had been dogged by labor disputes.

5. Browse / James Price Point LNG Project

Woodside the operator, together with joint partners Chevron, BP, BHP and Shell, holds the Browse LNG project. Woodside up to 2012 has been keen to build an LNG downstream processing centre at James Price Point in the Kimberley. Feed by gas to be brought on-shore from the Browse gas field, some 200 km to the North East. However, in early 2012 Woodside extended the FID to mid-2012, implying first LNG

was possibly moving back from 2018 to 2019. Some of the Browse partners seem not to want to pursue the development of another gas hub (Woodside Investors Website 2012). Woodside seems to be losing the support of its long-term shareholder Shell and has become vulnerable to takeover with BHP Billiton mentioned as a potential suitor (Burrell, 2012). Shell has intimated that an asset-for-shares swap with Woodside, rather than selling its shares to a third-party investor fits with its strategy to grow its Australian gas asset base. Indeed, Woodside itself is looking to substantially dilute its 46% interest in the Browse project (Bennett, 2012). Potential further delays to Browse as costs rise could make the option of a long and expensive pipeline to existing Burrup facilities on the North West Shelf a more attractive alternative than a new hub at James Price Point.

The West Australian Government's attempt to compulsorily acquire 7000 hectares of land for a gas hub, at James Price Point failed (ABC Rural News, 2011). A long-running legal dispute continues. According to the Government some land was acquired through negotiations with Aboriginal representatives according to Native Title Act. This was portrayed as the biggest act of self-determination for Aboriginal people in Australian history, generating jobs and training and \$1.5 billion in community benefits over the life of project. However, some indigenous groups (e.g. Goolarabooloo) do oppose the liquefied natural gas plant being built at James Price Point, citing it as an important sacred area and crossing point of song lines. In contrast, other traditional owners (APP, 2011) see the issue as a real opportunity and commitment towards closing the gap between community and industry (Bergmann, 2009).



“Don't Trash Prices Point”.

Wheelie Rubbish Bin stickers, serving as a barometer of public consensus.

James Price Point is the preferred location identified by Woodside for the Browse LNG facility, approximately 60 Kilometers north of Broome

Website link of the bin.

<http://handsoffcountry.blogspot.com.au/>

Figure 4. Photograph taken in February 2012, of Broome activism stickers on a member of public's rubbish bin.

The Northern Territory Government, on the back of their recent INPEX agreement, announced plans to make a presentation to Woodside in February 2012, in regard to “stealing” the proposed Western Australian James Price LNG facility, by proposing a long-distance pipeline link and a liquefaction facility located near Darwin instead. Such an alternative may appeal to the future majority investors, presently stalled upon points of protest and litigation (O’Keefe, S. ABC 2011). Competition between Western Australia and Northern Territory at the state level to secure the lucrative investments offered by new liquefaction projects remains intense.

Competition for Skilled Workers: Integrating Local and International Initiatives

Presently there is tight competition for attracting and maintaining construction labor in a highly competitive Australian market. There are some 96 mineral resource, infrastructure and oil and gas projects underway, with a combined value of some \$213 billion. Oil & gas projects represent some 62% of identified projects under development (Spence, 2011 sourced from ABARES 2011).

As a result of significant, industry-wide talent gaps and fierce competition for skilled workers, salaries in the industry are booming. But today's empowered entrants into the workplace want more than just high-paying jobs; they want sustainable careers with room for advancement. To be successful in the future, the operating companies must embrace talent management strategies for attracting, hiring and developing employees from around the globe (Spence, 2011).

The oil and gas industry is known globally for its camelback workforce (Deloitte, 2011), comprised of a majority of employees over the age of 50, a lack of workers in the 30 to 50-age range, and a slow but steady buildup of younger workers. The gap in the middle is partially the result of historically low crude oil prices in the late 1990s that made industry jobs seem unstable and undesirable and, thus, helped to spur the "lost generation" of mid-career workers. (Vorhauser-Smith, 2012). With increasing industry-wide demand for a new generation of talent, companies will have to set themselves apart by showcasing the unique advancement opportunities for promising new employees.

The present oil and gas construction workforce requirements are projected to peak during 2014 at least some 40,000. Three main areas in Australia requiring an expanding skilled workforce are the Pilbara, Gladstone and Darwin (Spence, 2011). For the initial civil and construction phase's skills are required over the coming 2 to 3 years. Following on from that will be an instrumentation workforce requirement, which should peak in 2015 to 17. This requirement points to a present need to start training and increase apprenticeship participation.

These workforces will need to be mobile, across projects between the States and Northern Territory, which will require the use of FIFO work forces, and the use of temporary construction camp facilities, as building permanent facilities would not be practically possible in the time frame or cost effective. Such high numbers of FIFO workers can stretch the capabilities of existing public services and affect the social standing, good will and productivity of the small remote and /or indigenous communities.

Rapid workforce expansion also heightens the risk of increasing potential incidents and accidents, due to inexperienced quality and project management. Promotion to supervisory roles in project teams requires careful consideration and needs for safety and efficiency reasons to be on the grounds of an individual's merit and tangible industry experience. Mentoring, developing, supporting and maintaining existing personnel should be a key goal of the operating companies and contractors, avoiding the need, where possible, to "parachuting" those with limited experience of the project or cultural environment into position of responsibility on what can be a demanding frontier with limited backup.

Nevertheless, a clear and concerted effort to offer opportunities to the local indigenous and non-indigenous workforce, factoring in their skill-sets and experience must be a high-profile component of employers' CSR recruitment policies. This is seen as vital to ensure visible, smooth and efficient transitions within the local economy. Without such initiative local communities will perceive that they are being dispossessed of opportunity within their own region. Placing value on what local employees can bring to projects assists in overcoming some of the preconceived notions that individuals from local communities work at a slower pace than is acceptable in the wider world. Disparaging, but still quite widely used references, such as the "Darwin Factor" or "Broome Time!" perpetuate perceptions of low work ethic, and imply that being a long way from the rest of urban Australia that nothing is ever urgent or likely to be rectified immediately. This further hinders community relations and reinforces the local perceptions of not being taken seriously by the industry.

There is often mention by employers of a serious shortage of skills, though those same employers seek to fill jobs preferentially only with individuals having some specific period of oil and gas industry experience. Such a blinkered approach fails to recognize that some of the operational skill sets required (e.g. maintenance) are easily transferable from other industries. This frustrates local applicants with essentially the right skills that are turned away from the industry, particularly when they see other less-able candidates through personal connections being accepted. This is not a problem impacting just the oil and gas sector (Guest, 2012). A broader clearly communicated strategy from employers, focusing on retraining and seeking complementary skills from other industries, needs to be adopted to better utilize available skills and better motivate local workforce. Such locally focused employment strategies also need to be coordinated with state government through their departments of employment and training. The local community then knows that clear pathways exist for individuals to enter the industry and individuals are not turned away "at the plant gate" with negative perceptions as they seek employment.

Despite skills shortages there remain many motivated individuals seeking work in these communities that require retraining. Indeed some individuals are prepared to fund and undertake their own training and skills upgrade. However, without well-communicated pathways and support from employers for opportunities some individuals are not motivated to take the necessary steps. Employers need to develop meaningful CSR initiatives (not just public relations exercises) that promote such pathways, and welcome transfer of skills from other industries, by creating functional portals to distribute accurate advice and support relevant training

programs (e.g. recent initiatives in the UK, OPITO, 2012). This is not yet happening on the scale that is required to engender widespread community support for the LNG projects. Over recent years the oil and gas industry is responsible for creating some of its own problems and perceived barriers to utilizing local skills. Casting the net wider by recruiting more internationally, an approach widely used over many decades by the global industry, is not the only option. Retraining skilled employees from other shrinking industries (e.g. Australia's automobile and manufacturing sectors) also has its merits. Such policies can go a long way to improving public perception of the industry.

The potential exists for operations in Australia to use a 457-visa system, for part of its skilled work force. Australia's 457 visa is the most commonly used program for Australian or overseas employers to sponsor skilled overseas workers to work in Australia temporarily. The full title of this subclass of visa is "*Temporary Business (Long Stay) - Standard Business Sponsorship (Subclass 457)*". This approach also has its challenges, both bureaucratic and practical, but needs to be closely monitored to verify the capabilities, qualifications and retraining needs of the applicants. It needs to be carefully coordinated with local hiring initiatives from a CSR perspective.

Government and private industry investments in education and training

Oil and gas operations are less resource intensive than mining, and require different numbers of specific skill-sets when operational, e.g. process operators may constitute 50% of an LNG plant's operation workforce. The number of existing trained process operators in the global industry is not accurately known (Spence, 2011). It can take up to 18 months to train a new process operator, and the industry has sufficient time, though the concern for would-be candidates is the lack of current work placement opportunities.

Australia only has two operational facilities, accounting for around 500 staff with LNG experience. Estimates suggest that the operational workforce for new LNG projects needs to grow some 6-fold (600%) within the next 3 to 5 years (Spence, 2011). Such job opportunities will exist for the next 20-30 years. They therefore represent a clear opportunity to harness local content with a vested interest and desire to stay local and further develop the local communities. This contrasts with limited CSR benefits of filling such longer-term positions with a transient workforce.

The training of future staff requirements will need industry pre-investment well in advance of operational start up. Graduating operators may be competent, but will lack sufficient experience to be truly effective, so additional experience, perhaps from overseas, will be needed, at least initially. The industry as a whole is likely to benefit from a collaborative approach, to ensure that one company is not taking a proactive step to train, only to see companies not investing in such initiatives "poaching" their newly trained operators. The poaching approach invariably leads to wage inflation and a reduction in education and training budgets from those losing staff.

Strategies for the workforce have been identified for development under APPEA leadership. APPEA is the Australian Petroleum Production & Exploration Association -

an industry-wide representative body. Those strategies involve company collaboration between operators suppliers and contractors rather than competition designed to create a holistic picture of the industry, identifying clear gaps and tailored solutions for the purpose off cost and time efficiency (Spence, 2011). A strategy of “virtual” education has been identified, due to the remote locations of the facilities, giving training for existing operators and new workers by a mix if E-Learning and practical learning facilities at the Australian Center for Energy Process Training Facility (ACEPT, 2012), Henderson (near Perth), Western Australia.

The ACEPT Facility is unique in the Southern hemisphere with, among other facilities, a working oil and gas processing system. It has been created by a joint public and private partnership with industry players, which include: Woodside, Apache Energy, Chevron, Honeywell, Vermillion, BP, Aker Solutions, Clough, AMEC and APPEA. The facility is being used to train LNG staff from Australia and Papua New Guinea (PNG).

The Charles Darwin University, Northern Australian Center for Oil & Gas (<http://www.cdu.edu.au/engit/oilandgas/index.html>) was created by government investment with industry consultation, recognizing the scale and expected long life of planned and proposed developments (CDU, 2012). The distance of Darwin from the research, education and training facilities in southern capitals has highlighted the need for a local industry training capability. The Centre intends to benefit the oil and gas industry and the Darwin community through improved training and education outcomes. It aims to foster expansion of the locally based workforce (in both the construction and operational phases), whilst also offering solutions-oriented research and consultancy plus long-term strategic research. Inpex and Ichthys joint venture partner Total have already donated A\$3 Million (INPEX, 2012). The center will also have tailored programs, aimed to assist with sustainable development for indigenous communities and Timor Leste participants. It clearly has the potential to play a key CSR role for the Ichthys project.

There have been recent announcements by Gladstone LNG (GLNG) concerning cooperation by the Queensland government towards committing investment for the long term, recognizing that both stakeholders share significant roles in ensuring they can staff the regions projects.

GLNG has stated *“through the Energy Skills Queensland CSG to LNG Skills Taskforce, GLNG is working closely with the other LNG proponents to identify and train workers whose skills may be applicable to the gas industry”*. Santos has also developed training and skills development programs, including programs to cross-skill its existing workforce, in conjunction with Queensland TAFE (Trades & Further Education, an Australian wide vocational education system) and other training agencies (Gas Today, 2011). GLNG is encouraging its contractors to have plans in place to foster their own workforces, in order to avoid placing undue pressure on other industries. The Queensland Government’s workforce plan emphasizes a retention strategy focused on all industries not just CSG to LNG. With respect to training it states that its policies do support the development of apprentices and trainees and promote the employment of women, mature age workers and Indigenous workers.

Other investments that the Queensland government is making in the workforce development of CSG to LNG industry are (Gas Today, 2011) the CSG to LNG industry hotline and website, which provide advice on training opportunities; \$375,000 in funding allocated to deliver CSG to LNG training at the Central Queensland Institute of TAFE in Gladstone; \$240,000 in funding allocated for a “Skills Formation Strategy” for the CSG to LNG industry; and, the establishment of the Queensland Minerals and Energy Academy, which now includes seven Gateway Schools in the Surat Basin that teach skills specific to the CSG to LNG industry.

Some are expressing concern that training duplication may result from so many initiatives with some existing training bodies disadvantaged by outside competition – victims of the global “LNG Training Game” (Moran, K. 2010). The government-backed training initiatives will involve partnerships with Job Service Australia providers, Group Training Australia, registered training organizations, industry associations, community organization, the Gladstone Chambers of Commerce and local industries. Energy Skills Queensland will receive A\$985,000 in funding from the Bligh Government’s Skilling Queenslanders for Work initiative and A\$425,000 from the Department of Education and Training to assist 210 people over two years through the project. However, local training provider GAGAL considers this a potential waste of resources that there is a limited supply appropriately skilled trainers and introducing “training brokers” just adds to the administrative overhead.

Investments, agreements and engagement with indigenous communities

Significant gaps between indigenous and non-indigenous Australians remain and political maneuvering is not always focused on closing these gaps. The Australian continent is a vast area covered by hundreds of separate tribal groups, clan groups, skin groups etc., whom possess tradition and languages of their own (a useful online interactive map for details <http://www.abc.net.au/indigenous/map/>)

Language barriers and self-imposed cultural isolation make some communities difficult for the oil and gas industry to engage on a meaningful basis. The Australian Bureau of Statistics (ABS 2002) survey statistics on indigenous 15 to 24 year olds, provided evidence that customary systems of law are enduring and strong (Calma, T 2006).

“62% of indigenous young people recognise their homelands/traditional country: 47% reported that they identified with a clan, tribal or language group: and 66 percent has attended a cultural event in the last 12 months. For each of these measures of cultural attachment, higher rates were reported in remote areas.

Similarly, Indigenous languages were more commonly used in remote areas. Overall, one-half of the Indigenous young people in remote areas spoke an indigenous language, compared with 6% in non-remote areas. The portion for whom and Indigenous language was the main language spoke at home was 37 percent in remote and 2% in non-remote areas” (Calma, 2006).

This helps to perpetuate suspicion concerning who has the right to speak for a respective community or region and the agenda that any “spokesperson” might be pursuing. Both sides of government are view by indigenous groups to have an

assimilationist agenda, as bilingual education has been progressively dismantled and homeland funding has been cut so they are forced to move to hub towns. Both of these policies serve to destroy a connection to land that is culturally valuable to most indigenous communities (Brull, 2012). Tensions clearly exist, as evidenced by Australia Day celebrations of the 26th of January 2012 being impacted by the “Tent Embassy Protest” and the confrontational discussions that followed it.

A recent precedent has been set, Instead of battling on in court, the South West Aboriginal Land and Sea Council and the Western Australian Barnett government agreed to talks that have led to a preliminary offer to resolve six combined native title claims, including the claim over metropolitan Perth (Taylor, 2012). The deal, to be put to Noongar claim group members at meetings across the state in coming months, includes small parcels of land in Perth and some towns, but no part of Perth's Swan River, the ocean or the popular holiday destination of Rottnest Island, used as an Aboriginal jail between 1838 and 1931 (Taylor, 2012).

The Liberal-Nationals state government is offering to pay about \$600m over 10 years into an investment trust fund that cannot be touched for 10 years. The government will also transfer parcels of freehold land and reserves thought to be worth \$400m. It is obvious that Governments would rather facilitate such investments in exchange for resource and land use agreements with resource extraction industries (Taylor, 2012).

The Noongar people, account for almost half the state’s indigenous population. The settlement includes a promise to introduce legislation acknowledging the Noongars as the indigenous people of the southwest, with a continuing culture and connection to the land. The deal includes a promise of joint management of national parks. In exchange, the claimants will withdraw all their claims. WA Premier Colin Barnett said the deal was a "full and final" settlement of native title in the part of the state where 85% of the population lived (Taylor, 2012).

Poor health, education, crime rates highlight the “gap” for indigenous communities

There are issues of some of the lowest life expectancy and highest infant mortality rates in the world for indigenous Australians. Issues of poor diet and related high-risk health factors, such as kidney disease and diabetes, are common. Trachoma (affects 25% of remote children) and tuberculosis, once eradicated, is again prevalent in the Northern Territory (Katherine Region) due to the lack of indigenous participation with inoculation programs. The lead author of this articles own mother (non-indigenous) who has worked in Aboriginal education has been recovering over the past few years, after a TB infection, which took a long period to identify, as non remote area doctors just are not aware that they should be testing for it.

Insufficient education, issues with attendance, family violence and child abuse in communities to date can be attributed to the failure of the non-indigenous legal system to effectively support communities requiring intervention. Alcohol and drug use, though banned in most remote communities still pose major issues, as members of the communities will simply decamp and travel to other regional centers where consumption is legal. Abandoning and disengaging from there own

responsibilities for family, fueling the ongoing detrimental consequences, putting stress on the remaining community. All takeaway alcohol purchases in the NT require ID, to ensure that the purchaser is not on the banned drinkers list register. Alcohol associated violence is a major concern for northern regional Australia.

Petrol sniffing is also a major problem in Aboriginal communities across four Australian states. In 2005 there were some 700 petrol sniffers across central Australia, with the addiction linked to as many as 60 Aboriginal deaths in the NT between 2000 and 2006, and 121 deaths between 1980 and 1987. The age range of users is from 10-19 years with a mean of 12-15 years, but use by children younger than 10 is not uncommon. It has severe consequences of brain damage and impairment (ABC Health & Wellbeing, 2005; NT Government Health, 1993) and highlights the disengagement of young adults in some indigenous communities.

The consequences of crime and imprisonment, where according to ABS, there were 5,662 Indigenous people in jails in Australia in the December 2005. This constituted an imprisonment rate of 2,024 per 100,000 of the Adult indigenous population. By Comparison the average daily imprisonment rate for all Australians is 155 per 100,000. 22% of all Australian prisoners are Indigenous (Calma, T 2006). Many of the remote area communities don't have a policing presence, or the nearest might be a few hours drive away. The Law council of Australia outlines the context for considering custom in sentencing.

"In the context of an Indigenous offender, it is relevant to consider whether the offender observes a traditional lifestyle and lives according to the customary laws of his or her community. In some cases, evidence of the customary background of the offender may mitigate the severity of the offence, and corresponding punishment. It may in some circumstances also be a relevant consideration that the offender has undergone traditional punishment in accordance with customary law.

Evidence may also be admitted concerning whether the offender had consented to, or received, 'payback' or other traditional punishment" (Calma, T 2006).

LNG companies over the past few decades have had to engage with traditional landowners. In many case those companies have community engagement experiences, both good (e.g. Bintulu, Malaysia) and bad (Nigeria, delta regions), around the world. However, the situation in Australia poses unique issues specifically concerning the long time frames needed for negotiation and the lack of transparency of the legal frameworks prevailing within indigenous communities. The tried, tested and failed approach used for decades by many international companies of "throwing" money at influential individuals or institutions within various communities around the world (i.e., keeping a selected few happy), is not going to provide sustainable solutions to the existing problems of indigenous communities in Australia. Numerous Australian governments have tried to impose solutions from a far, without positive outcomes and in some cases negative consequences. There are continual calls for measures of self-determination, often associated with proclamations of "Native Title".

To date, Australia's resource development has largely bypassed the indigenous communities providing them with few tangible long-term benefits to Indigenous peoples. Those communities rightly remain reluctant to negotiate away their,

culture, values and pristine lands without gaining in exchange significant and permanent benefits for aboriginal communities to close the gap with the rest of Australia over the life of the projects (Bergmann, 2009). Becoming respected participants and “partners” in these projects should help to provide those communities with a level of self-respect, dignity and positive engagement towards mutually beneficial developments (Calma, 2006).

Black versus green conflicts

The latest hindrance to the process is the growing conflict between indigenous “black” and environmental “green” groups, as highlighted by very public disputes over the Wild Rivers legislation in Queensland and the proposed James Price Point WA proposal (O’Faircheallaigh, 2011).

Aboriginal leaders in Kimberley and Cape York say green groups have a determination to maintain “wilderness” areas distant from the comfortable suburbs in which most of their supporters live. By doing so they are depriving indigenous people of the economic opportunities they need to end poverty and social marginalization (Barras & Taylor, 2011). In response some green groups have accused Aboriginal people supportive of major resource projects of selling out their culture and the environment for short-term financial gains. The Kimberley Land Council (KLC) defended the vote that approved its deal with Woodside in which fewer than 300 Goolarabooloo Jabirr Jabirr people voted and 168 said yes. A point of contention was that some voters were under 18, though the National Native Title Tribunal under the rules of the Native Title Act monitored the ballot and should have excluded such voters.



Figure 5. Photographs taken in February 2012, of Broome environmental activism, with a display of disagreement between protesters.

This conflict resulted in a confrontation in September 2011, when opponents of the LNG Precinct circulated a newsletter containing racially emotive attacks on Kimberley Aboriginal leaders who supported the Precinct. A consequence was the resignation of one of those attacked: Australia's first and only female indigenous member of parliament, Carol Martin, set to stand down from the West Australian parliament at the March 2013 election after being vilified as a "toxic coconut"(APP 2012). The resignation came after Ms Martin, MP for Kimberley, was targeted for supporting the rights of the Goolarabooloo Jabirr Jabirr people to strike a deal with energy firm Woodside over the proposed \$30 billion gas hub near Broome. An anonymously written local newsletter recently described her and other supporters of the Woodside plan as "brown on the outside and full of the milk of the white man's money"(APP 2012).

In typical blunt fashion, Australia's first female indigenous MP has labeled some of the environmentalists fighting Woodside Petroleum's \$30 billion gas hub in the Kimberley "a lazy mob of bludgers and liars" (Barras & Taylor, 2011). More informatively she contended that the vast majority of Australians concerned about the environment would be appalled by the behavior of some anti-gas campaigners who had "bullied, lied and abused" indigenous people in a bid to stop the project at James Price Point (60 km north of Broome). She also criticized Woodside's refusal to release a video showing indigenous workers being mocked and racially abused by protesters at the James Price Point picket line which involved a substantial policing operation and cost. Woodside acknowledges that its staff, contractors and traditional owners who are regularly harassed, threatened, which led to the filming of protesters at the James Price Point site. The indigenous community leaders also claim that green groups reneged on a deal to respect the decision of local Aborigines if the Browse Basin gas hub was confined to a single site on the Kimberley coast (Barras & Taylor, 2011). The dispute has become rife with misinformation and bad feeling that is likely to lead to further alienation of the indigenous community.

For decades there has been a widespread assumption in Australia that black and green groups are natural allies. It was assumed they share a commitment to looking after the environment, and in particular to stopping development in areas of high environmental and cultural significance (O'Faircheallaigh, 2011). The deepening rift Australia's resource-rich regions, highlights that such an alliance no longer holds in relation to development in

This discussion suggests two quite different scenarios in terms of future relations between Australia's green and black groups. If green groups accept ultimate indigenous control, it is easy to envisage them working with indigenous groups to ensure that development will only occur if it is subject to stringent management of environmental and cultural values. If green groups instead align with much of the mining industry and many state governments in refusing to accept the right of indigenous people to make the final decision about development on their lands, the conflict over Queensland's Wild Rivers and the LNG Precinct are likely to be just a taste of more confrontational disputes to come (O'Faircheallaigh, 2011).

This division does nothing to promote empowerment and self-determination for Indigenous Australians; it only serves to create further internal clashes, and barriers towards overcoming difficulties, by reasonable efforts of negotiation by either government or potential LNG Investors. So the question remains, what are the steps forward to maintain investment while incorporating mutual benefits for all stakeholders (i.e., a “both-ways” philosophy, Batchelor Institute, 2007), which can aid projects which involve indigenous researchers and participants at all stages of the discussion, validating their new knowledge and learning with their elders?

The Batchelor Institute (2007) suggested incorporating traditional ethics and values, of spirit and integrity, reciprocity, respect, equality, survival protection and responsibility via culturally appropriate methodologies, Indigenous knowledge systems and local recognition of culturally sensitive areas.

The concepts of “Songlines” which serve as a route for trading, for the purpose of obtaining effects for the purpose of ceremony, highlights the issue. There were no maps defining Songlines, so a system was devised whereby songs served to record the direction and features of the route to be traversed. Such Songlines are of importance to indigenous peoples and are a means of transferring the traditional ideas and ways of learning (Chatwin, 1987). Some custodians of the land would prefer that these routes are not tampered with, though sadly with the advent of white settlement, roads etc, most have already been affected, though to what extent remains debatable.

Companies involved in the LNG projects need to come to terms with Aboriginal and Islander requirements for real involvement, negotiation and consultation regarding the community and environmental impacts that provide sustainable and beneficial outcomes for Aboriginal and Torres Strait Islanders and their communities. The challenges are clear, but so are the opportunities for CSR initiatives to make a real difference. The companies can do much to improve health, education and living standards of these communities, in a similar manner to employers choosing to assist the working populations in over coming serious endemic illnesses, or prolonging their skilled working life while living with AIDS in Africa (ILO, 2004).

Triple bottom line approach could help to find integrated CSR solutions

We have identified several CSR issues in this article, which are summarized in Figure 6, many of which could pose serious potential problems for ongoing LNG project development in Australia unless addressed in a prompt and coordinated manner. Considering these CSR issues in the context of triple bottom line (3BL) analysis techniques (i.e., profit, people and planet as originally proposed by Elkington, 1997) could aid integrated solutions being identified and progressed.

The TBL approach can help gas companies and governments integrate the three key components of sustainable development (i.e. economic benefits –“profit”, community development – “people”, environmental protection- “planet”) into the heart of the project business plans and thereby progress from grappling with

individual CSR issues from a short-term perspective to seeking long-term practical and sustainable solutions using 3BL concepts.

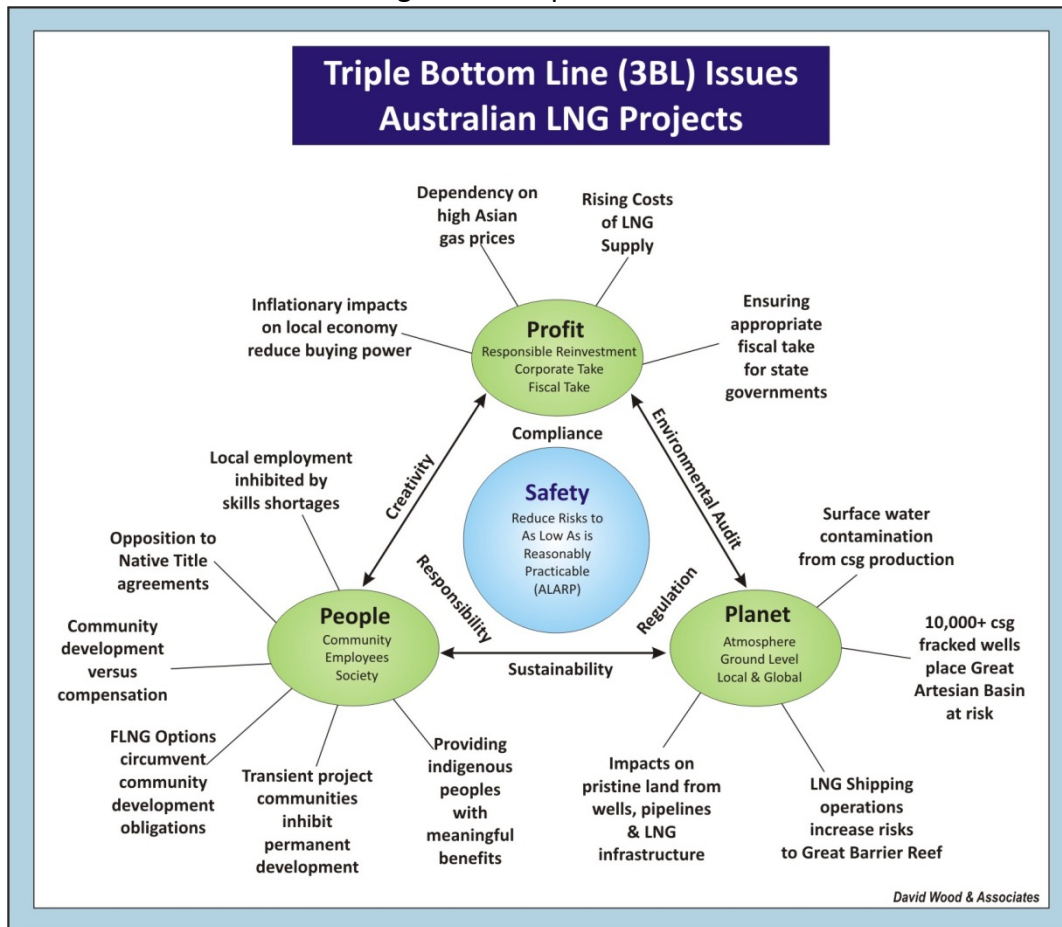


Figure 6. Australia’s LNG project CSR issues identified with a triple bottom line (3BL) framework from Wood (2011).

Conclusions

The oil and gas industry has a wealth of global corporate social responsibility experience, which it will need to harness to the full, in conjunction with state governments, if it is to achieve successful outcomes to all the CSR challenges confronting Australia’s LNG rapidly expanding LNG industry. Despite the sanctioning of large financial commitments Australia’s LNG industry is encountering CSR difficulties on several fronts.

Australia, with its track record of stability, good governance and transparency should be able to build on that to achieve mutually beneficial and lasting solutions to these problems with positive outcomes for the projects, the communities and the environment. Some tough decisions lie ahead for the state / federal level of government, companies and communities if such outcomes are to be achieved.

Some regions around the world are proud to be aligned with industries, which have become successful and globally acclaimed through joint community and corporate initiatives (e.g. France with wine, Bavaria with Mittelstand). Australia has the potential to do this with LNG and become a world leader in the industry. To do so it

will need all the stakeholders to fully engage to resolve its CSR issues in an integrated manner and enable communities to be proudly aligned with its achievements. This requires avoiding undue simplification of the issues, but focusing rather on clearly defined outcomes that progress towards mutually acceptable solutions and compromises. This means going far beyond considering CSR as a series of superficial public relations exercises involving merely ticking of boxes.

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