Tangguh LNG project

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When the then-independent exploration company ARCO gave the name Tangguh - Bahasa Indonesian for 'resilience' - to the rich gas finds off the west coast of Papua in the 1990s, they could have hardly chosen a better epithet for a project that has overcome many obstacles.

Set in a remote location in Bintuni Bay in Irian Jaya - the Indonesian half of the island of New Guinea - and initially accessible only by helicopter, the project has represented a massive engineering task.

The project has also successfully taken on Chinese oil interests at the negotiating table, countered some sharp environmental criticism and, at a time when other Indonesian projects have been falling by the wayside, looks set to restore the country's LNG fortunes.

In financing terms, the deal has attracted funding from seven MLAs and is also set to support the largest unsecured tranche signed to date by a consortium of Chinese banks.

And with the capacity for several expansions to supply the Asian and US markets, the US$5 billion first stage will only be a launch pad for a project with much larger importance.

The project

In the mid 1990s drilling by Los Angeles-based exploration company ARCO uncovered two super-giant gas fields (Wiriagar Deep and Vorwata) and four smaller fields (Roabiba, Ofaweri, Wos and Ubadari) off the coast of West Papua holding a proved 14.5 trillion cubic feet of gas.

In 1999 BP purchased ARCO and with it an embyonic LNG project proposal then partnered by companies including Pertamina - the Indonesian state oil company.

The project soon attracted interest from the nascent Chinese LNG industry with Chinese major CNOOC acquiring a 12.5 per cent stake in 2003.The final consortium line up was:

- BP (37.2 per cent)
- CNOOC (17.0 per cent)
- MI Berau (Mitsubishi/ INPEX - 16.3 per cent)
- Nippon Oil (12.2 per cent)
- KG Companies (Japan National Oil/Kanematsu/Overseas Petroleum - 10.0 per cent)
- LNG Japan (Sojitz/Sumitomo - 7.3 per cent)

After a series of studies the project was granted environmental clearance by the Indonesian government in October 2002 and in 2003 the EPC contract was awarded to an engineering consortium called KJP consisting of Kellogg Brown and Root (KBR) JGC Corporation and PT Pertafenikki Engineering.

Completion of the 7.6 million tonnes per year (7.6mtpa) two train LNG liquefaction plant was slated for year end 2008, a tight schedule for a hugely challenging project.

David Nicholas, a spokesperson for BP, describes the project as 'probably the most remote project in BP's international portfolio'.

Indeed, when the project was first launched the only access to the access to the area was by helicopter to a landing strip built by the Japanese army.

'One of the first tasks for the project team was to remove unexploded bombs dropped by the Allies in the Second World War,' Nicholas adds, stressing the difficulty of preparing the site.

Supply contracts

The initial negotiations for Tangguh's supply coincided with the entry of a new customer to the LNG market - China.

The Tangguh Project signed its first export contract in September 2002 - a 25-year deal to supply CNOOC's Fujian LNG terminal with 2.6 mtpa.

In July 2003, BP signed deals to supply South Korean steel maker POSCO with 0.55mtpa and power utility K Power with 0.6-0.8 mtpa for its 1740MW Gwangyang power plant on a 20-year basis from 2006. Prior to 2008 BP will satisfy both of these contracts via its existing portfolio.

In 2004 the consortium negotiated the final contract for its first-stage capacity to American utility Sempra Energy's Ensenada terminal in the Baja California in Mexico.

The 20-year 3.7mtpa deal was another groundbreaking contract - the first deal to send Asia-Pacific LNG to the North American west coast market.

However the inflexibly priced Fujian contract soon proved a sticking point as gas prices skyrocketed between 2003 and 2006.

In March 2006, Tangguh LNG renegotiated the upper limit of its oil-linked cap-and-floor contract from US$25 per barrel of oil equivalent to US$38 to better reflect this.

BP's Nicholas says, 'We are working to make the Fujian contract effective.'

Environmental factors

A key element of the deal was the environmental sensitivity of building in an area of dense mangrove forests and on a site already inhabited by the Tanah Merah community.

With BP keen to demonstrate the project could be an environmental showpiece the consortium undertook several measures overlooked by an environmental steering committee headed by US senator George Mitchell.

The steps included rehousing 127 families in the project area using imported wood rather than logging locally and reducing the project's initial footprint from 800 to less than 650 hectares.

The consortium has also housed workers away from local residents, avoided building any roads to the area to discourage immigration and brought in workers and equipment by plane or boat.

A spokesperson said: 'Essentially we have treated Tangguh in the same way as an offshore project.'

For the banks the project proved a good test of the revised Equator Principles.

A source close to the deal states, 'Tangguh is fully compliant with Equator Principles. This has been determined further to extensive due diligence by the commercial banks, ADB and JBIC, and verified by ERM, the lenders' environmental consultant.'

'A long term EP-compliant environmental monitoring plan has been agreed, and is referenced in the loan documentation,' the source adds.

Financing

To fund the giant project, financial adviser Société Générale launched a tender for international banks to fund a commercial tranche in November 2005.

After choosing from a field of an estimated 20 banks the consortium selected seven banks to underwrite the US$1.065 billion commercial debt. These were:

- BNP Paribas
- BoTM
- Mizuho
- SMBC
- Standard Chartered
- ING
- Fortis

Each bank will underwrite US$152m, however not - as initially planned - on a limited recourse basis. Instead the commercial loan will be guaranteed by BP against revenues from the 20-year Sempra deal.

A spokesperson for BP said, 'If we decided to go through limited recourse financing it would have added an extra stage to the project including extra due diligence. We decided to guarantee the financing in order to speed up the project timeline.'

The balance of the US$2.615 billion debt financing will be provided by a secured US$1.2 billion JBIC loan and a US$350 million ADB loan also secured by BP.

However the 'Fujian tranche' - the US$900million debt financing to back CNOOC's Fujian deal which will sign later this year, is expected to make the deal one of the most significant project financings in the region.

The tranche - which will be unsecured post-construction - will be financed by five Chinese banks and will be the largest tranche signed to date by a consortium of banks from the country.

Pricing on this loan is expected to be LIBOR plus a figure in the low 200s.

Conclusion

With 14.5 trillion feet of reserves and oil price projections at record highs Tangguh is unlikely to remain a two train facility for long and in the Asia-Pacific it has plenty of options.

Nicholas of BP says: 'We are looking at further trains to supply demand domestically in Indonesia as well as continuing to talk to Japanese customers.'

The deal also represents a number of lessons learnt from the 1970s and 1980s when the Bontang and Arun III plants were built in more densely populated regions. Both have suffered from political intervention and popular protest.

But for Indonesian LNG as a whole, the Tangguh project could mark more of a last gasp rather than a resurgence.

Tangguh belongs more properly to anew breed of LNG projects securely built on isolated islands and offshore rigs in the Timor and Arafura Seas, including Gorgon, Darwin and Greater Sunrise.

These new plants have access to a genuine sellers' market with potential clients stretching from India to the US west coast.

Most portentously Tangguh is set to demonstrate the huge potential of the Chinese market both to consume and finance LNG imports. Expect to see China's involvement in global project finance growing on the back of it.

The project at a glance

Project Name	Tangguh LNG liquefaction project
Location	West Papua, Indonesia
Description	A project to design, finance and construct a 7.6 MTPA LNG train supplied from the Muturi, Berau and Wiriagar fields discovered in the mid 1990s
Sponsors	BP (37.2%) CNOOC (17.0%) MI Berau (Mitsubishi/ INPEX - 16.3%) Nippon Oil (12.2%) KG Companies (Japan National Oil/Kanematsu/Overseas Petroleum - 10.0%) LNG Japan (Sojitz/Sumitomo - 7.3%)
Operator	Tangguh LNG
EPC Contractor	Kellogg Brown Root, JGC and PT Pertafenikki Engineering (PFN)
Construction Stage	2003 to 2008
Total Project Value	US$5bn
Total equity	Estimated at around US$1.5bn
Equity Breakdown	see Sponsors
Total senior debt	US$2.615 has been committed to date comprising of: • A commercial tranche US$1.065bn with a 15-year tenor • A JBIC tranche of US$1.2bn • An ADB tranche of US$350m • An estimated US$900m unsecured tranche is expected to be supplied at a later date by Agricultural Bank of China, China Construction Bank, Industrial and Commercial Bank of China, China Development Bank and Export-Import Bank of China. Pricing on the loan is expected to be the equivalent LIBOR plus a figure in the low 200s.
Senior debt breakdown	BNP Paribas, BoTM, Mizuho, SMBC, Standard Chartered, ING and Fortis each underwrote US$152 million
Senior debt pricing	Pricing is estimated in LIBOR plus 25-30bps under the BP/ JBIC guarantee period
Debt:equity ratio	Prior to anticipated Chinese banks loan: 64:36 With Chinese bank loan estimated 70:30
Political/commercial risk guarantees	The commercial and ADB loans are guaranteed by BP
Export credit agency support	JBIC is providing a US$1.2bn guaranteed loan
Agency loans	US$350m ADB loan
Mandated lead arrangers	BNP Paribas BoTM Mizuho SMBC Standard Chartered ING Fortis Mizuho is the facility agent, and Standard Chartered is Documentation Bank.
Legal Adviser to sponsor	White & Case; Widyawan and Partners (Indonesian law)
Financial Adviser to sponsor	Societe Generale
Legal adviser to banks	Allen & Overy
Legal adviser to government	Latham & Watkins; Soemadipraya & Taher (Indonesian law)
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