Thinking big by starting small

PRELUDE, now moored off the coast of Western Australia, will not be Australia's only floating LNG development for long if a small Perth-based concern founded by a former Tokyo Gas and Chevron Corporation has its way.

Haydn Black (/author/profile/888c32d3-3646-4857-be37-825277f70940/haydn-black)
13 September 2017 06:49 News

Transborders LNG vessel.

Transborders Energy is hoping to use emerging but proven technologies and stranded gas resources to carve a niche in global energy markets.

It plans to select an undeveloped field this year, with a final investment decision by 2021 and first gas by the mid-2020s.

Transborders' founder Daein Cha used to manage the LNG trading and procurement division and upstream business development arm of Tokyo Gas.

He moved to Australia in 2010 to manage the Japanese firm's minority interest in the massive Gorgon LNG project on Barrow Island.

Cha subsequently moved across to help Chevron with since-shelved plans for the Gorgon Train 4 development, and later the Gorgon Stage 2 and Janzs-Io compression projects.

He told Energy News he had wanted to be more directly involved in gas resource development, which led to the establishment of Transborders.

The company is adapting Shell's former "design one, build many" FLNG strategy, albeit using a smaller-scale facility suited to support development of gas fields its says may be too small to attract the majors.

With a board including Cha, ex-Texaco and CompactGTL development director Chris Hopper; and former Mitsui & Co and Rio Tinto executive Jack Sato, Transborders has raised around $1 million in seed funding so far.

"We are not an exploration company, we are an exploitation company," Cha told Energy News.

"Instead of starting from the resource, and optimising the facilities to monetise that resource, we have developed a low-cost 1MMtpa facility, and based on that we are looking at resources that fit that concept.

"We are looking in Australia, because it is the regime where we have the best understanding, both for project approval and regulatory management, and we decided to target stranded offshore gas resources between 500Bcf and 4 trillion cubic feet.

"Those are not big enough for the bigger companies to think they are material, but they are able to support an LNG project using the design template we have developed."

It is working with Add Energy, TechnipFMC and Modec to develop a low-cost FLNG development concept, and it is now trying to match that with an initial resource that can be developed with a EPC budget of around $1000 per tonne of liquefaction capacity.

Add is on board as the EPC contractor, and can bring its experience to operate the subsea wells, while TechnipFMC will lend a hand in developing the tieback and the FLNG vessel.

FPSO leasing and operating firm Modec recently signed an MOU to act as technical advisor for the hull, mooring and LNG maintenance scopes, and it may also take a wider role in the future.

Transborders has identified around 16 appraised assets containing around 20Tcf in total it believes could support a development within the Bonaparte, Browse and Carnarvon basins, and

it is about to open formal negotiations to secure at least a 50% operated position among its shortlisted assets.

With the market near the bottom, it is an ideal time to pick up assets, and some testing of the market in Singapore was "surprisingly positive" in terms of assets and financial backing.

The move to FID by 2021 is ambitious, but Cha said the schedule was accelerated by up-front concept selection rather than finding a resource and trying to develop a production solution based on that.

The company has set a breakeven point of US$6.5MMbtu for LNG sold free-on-board, in the middle of the second quartile for competitiveness globally, and following a scouting trip to Singapore in January believes there are gas buyers interesting in backing the concept, because he sees the age of the LNG megaproject is most likely over.

"Things have become so big that the Ichthys, Gorgons and Wheatstones are just not easy to manage for one team. Each just grows and grows, and it becomes a beast," Cha said.

"Big projects are not able to take FID, and while that is hampering the growth in supply demand continues to grow.

"Rather than go big and chase the fantasy of efficiencies of scale, our thought is to go small, lean and controllable."

It will base its development on the more conservative P90 resource, not the usual P50 numbers, leaving plenty of upside in its economics.

It should lead to a more bankable project, and Transborders could offer its technical partners an opportunity to help with the engineering, procurement and contracting costs in return for a lease or a production sharing type mechanism.

"It is unconventional, but it is part of our financing strategy," Cha said.

Critical to developing the costs are water depth, metocean conditions, hydrocarbon specifications and, most importantly, well deliverability.

Drilling costs are expected to be around 40-60% of any development, so the fewer wells required the lower the cost of development.

"How many wells do we need to extract the resource we need to underpin the project? Based on that we will have to look at the hydrocarbon specs to see what capex we need to process the gas," he said.

"While our reference case can handle gas and liquids, we need to carefully assess per asset the capex implications for adding in processing equipment to cater to each product."

When using its base case design, other key variables are the impact on design of the turret mooring system, which is between 5-15% of the total costs.

"That's the crux of our due diligence," he explained.

"People usually only look at resource size, but we look at things like hydrocarbon specs and water depth, and we provide that to TechnipFMC and Add Energy for them to conduct enough feasibility engineering to develop a cost estimate and a schedule with our targets.

"We then plug that information into our lifecycle economics assessment to see if we have a doable project that can stay resilient and profitable even at a breakeven point of US$6.5MMbtu for LNG sold free-on-board."

Cha said the company hopes to lock off an MOU with LNG buyers by the end of the year.

"We intend to conduct pre-FEED and secure a heads of agreement with LNG buyers in 2018, complete FEED, LNG sales purchase negotiation and the Offshore Project Proposal process between 2019 and 2020 to have first gas by 2025," he said.

Cha will be introducing the world to Transborders at the Hyatt Regency Hotel, Perth, as part of the RIU Good Oil Conference tomorrow.