



Tritech carves niche in underground caves even as it raises funds for water business

BY SHANNEN WONG

Cai Jun Gang, executive director of Tritech Group, is confident the company will win more public-sector projects involving underground caverns this year even as it continues to raise capital to develop its wastewater-treatment division.

"We plan to bid for jobs involving underground warehouses and logistics caverns later this year. We expect the government to call for tender for more underground projects that will draw on our very niche expertise in creating underground space," says Cai, 46.

Tritech's core business is providing geotechnical engineering services, including those of design, consultancy and construction for underground structures such as storage facilities, MRT stations and tunnels, and sewage systems, as well as the supply and installation of geotechnical instruments to monitor ground movements.

Last year, projects relating to underground rock caverns contributed about \$2 million to Tritech's revenue. This year, Cai expects such projects to contribute a greater percentage to revenue. Underground rock cavern-related projects have a higher average gross profit margin of at least 40%, whereas that of ground and structural services projects is 30%.

Subterranean specialists

In 2006, Tritech secured its first Jurong Rock Cavern (JRC) project, valued at \$9.2 million, when JTC Corp appointed it as project manager and Hyundai Engineering was put in charge of constructing a 9.5 million-barrel storage facility. The ongoing project involves Tritech's providing technical advice and carrying out reviews.

The aim of the JRC project — an initiative of JTC, the statutory board in charge of national infrastructure development — is to increase under-

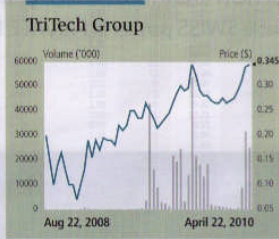
ground oil-storage capacity on Jurong Island, Singapore's petrochemical industrial hub. The plan is to build an oil-storage complex beneath the seabed of Banyan Basin. Upon completion, the underground caverns will be able to store almost three million cu m of liquid hydrocarbons like crude oil, condensates and diesel oil.

In 2008, Tritech, acting as lead consultant in a consortium with SINTEF Bygghorsk AS and Multiconsult AS, was awarded a \$1.78 million consultancy contract by JTC to conduct a feasibility study on underground rock cavern usage in Singapore. Tritech has been working closely with the Public Utilities Board, Energy Market Authority and Civil Aviation Authority of Singapore, among others, in the study.

Last year, the Economic Strategies Committee, the high-level committee tasked by the government to draw up plans to transform Singapore's economy over the next decade, laid out its masterplan for the possible uses of underground space for industrial facilities such as the housing of power stations, data centres, water-reclamation plants as well as airport logistics centres.

"In February, we clinched our third government-related project, which is worth \$2 million and involves the geological investigation and assessment of rock condition on the island," says Cai, adding that revenue from projects is derived from progress billing based on percentage of work completed. "Working with the authorities has given us a huge advantage over other bidders for these types of projects. Our company is capable of delivering jobs from both ends of the spectrum: construction as well as consultancy."

"As government underground



projects are often divided into phases, it is unlikely a single company will get all the jobs. Everyone will play a part, but the more established ones are bound to take on more projects."

Cai, who arrived in Singapore in 1994 under a Nanyang Technological University scholarship, obtained his Masters in Engineering and PhD and then worked as Research Fellow for the university from 1994 to 2001 before joining Tritech in 2003. He has also published more than 100 technical books, scientific papers and conference proceedings.

Cai says government jobs are stable, "less risky" and have higher profit margins, compared with those from private construction firms. Thus, the bulk of Tritech's revenue came from government projects. As at last November, the group's order book was \$59 million, of which 90%, or \$53 million, came from public projects. Cai says the orders will keep the group busy for the next three years. Last year, Tritech secured \$37 million in new contracts, including a \$5.86 million contract from the Public Utilities Board to extend the sewer systems in the Marina Reservoir catchment and Changi coastal areas as well as a \$13.74 million contract from the Land Transport Authority of Singapore to provide consultancy services for the design and construction of MRT stations and tunnels at Rochor and Little India along Downtown Line Stage 2.

If the construction of Downtown Line Stage 3 and underground cave projects starts this year, Cai says he is confident Tritech will win some orders as there are less than 10 players specialising in geotechnical engineering in Singapore. That would mean Tritech's staff of more than 200 — including seven engineers who hold PhDs — will have their job cut out for them.

For 1HFY2010 ended Sept 30, 2009, 67% of the group's revenue was derived from specialist engineering services and the rest was from ground and structural engineering services. For that period, the group posted a net profit of \$3.6 million on the back of \$20.6 million in revenue.

Tritech's water focus

Even as it entrenches itself in the geotechnical engineering industry, Tritech is going all out to raise funds and win contracts with its other growth engine: the wastewater treatment division. Last



Tritech engineering staff hard at work at the Marina Bay Financial Centre

Tuesday, Tritech's subsidiary SysEng (S) Pte Ltd won a \$3.36-million contract to provide water-quality-monitoring services and maintain existing water-quality stations and equipment in Singapore's water-catchment areas and reservoirs.

Last month, Tritech did a rights issue of 59.1 million warrants priced at one cent each to fund the expansion of its water division, raising \$491,457. If all the warrants are exercised, the net proceeds will amount to \$14.8 million.

In October last year, Tritech issued up to 35 million new shares at 20 cents each to raise up to \$7 million for its water business. Cai says \$6.7 million will go to Tritech's subsidiary Beijing Wisetec, which is setting up a membranes manufacturing facility in the Chinese capital. It plans to acquire a factory and equipment to manufacture reverse osmosis (RO) membranes. Last November, Tritech also made a deposit payment of RM85 million (\$1 million) for the proposed acquisition of a plot of land in Qingdao measuring 73,370 sq m, which it intends to use to set up a production facility for its RO membranes. Management says it could take up to two years for the plant to be fully operational.

Currently, China's demand for desalinated water is a million tonnes a day and is set to triple over the next 10 years.

Yeak Chee Keong, an analyst from NRA Capital, who initiated coverage of the stock on Jan 15, says companies already in the water-related business generate gross margins of about 25%. With proprietary products and patents, he believes Tritech could command a higher margin of as much as 30% in the initial stages.

But, Yeak warns, "Although Tritech

has been working on water-treatment research since 2003, it has yet to prove itself in the execution of manufacturing and production. We do believe that rewards could be sizeable, but the risk is present. Commercial viability has also not been proven. Furthermore, competition in the water industry is intense, with several big-name companies such as Hylux, Keppel Corp and Sembcorp Industries, which already have a strong foothold in the industry. Having said that, many of these players are plant builders and suppliers, and may not have their own technologies.

"[However,] we see opportunities for Tritech to be a supplier of technologies to these players while also competing for plant design and building projects."

While Cai admits it would take another two to three years before Tritech's water business starts contributing to the bottom line, he insists the diversification would be good for the company in the long run.

"We need to expand vertically and diversify our business, owing to the economic cycles of our core business. We need a totally different market and end users for our products but at the same time tap the technology and knowledge that we have," says Cai.

Yeak says: "Although it is a Catalyst-listed company with a market capitalisation of only \$77 million [as at Jan 15], we see potential for the company to grow significantly over the next three years. The growth will come from its water business, which it is developing now."

Last Thursday, Tritech shares surged to a 52-week high of 36 cents before closing at 34.5 cents, a 72.5% increase from its IPO price of 20 cents in 2008.