Bangkok Post Business

Published on 15/02/2016

Power play

Thailand's biggest private electricity producer teams up with Chinese giant to gain experience in nuclear plant construction and operation.

China General Nuclear Power Corporation (CGN) is steadily making inroads into Southeast Asia's high-potential clean energy market, partly through its recently formed partnership with Thailand's largest private power producer Ratchaburi Electricity Generating Holding Plc (RATCH).

State-owned CGN, China's largest nuclear power reactor operator, in November signed a US$2.3-billion agreement to acquire the power assets of the struggling Malaysian state investment company 1Malaysia Development Bhd. The assets held by Edra Global Energy Bhd include 13 projects in Malaysia, Bangladesh, Pakistan, the United Arab Emirates and Egypt.

The group's geographical reach also aligns it with the Chinese government's "One Belt, One Road" programme, which aims to spread Chinese investment and export Chinese technological expertise throughout Asia.

One month later, CGN announced a joint venture with SET-listed Ratchaburi and Guangxi Investment Group Co Ltd (GIG) to establish Guangxi Fangchenggang Nuclear Power (II) Co. The venture, which requires capital of 7.5 billion baht from Ratchaburi out of a total of 200 billion baht (40 billion yuan), will develop two units at the Fangchenggang power plant in Guangxi province with a capacity of 1,180 megawatts each.

"CGN is eying clean energy projects in Asean including Laos where Ratchaburi already has projects in operation," said Ratchaburi executive director Kriengrit Jiajanpong.

CGN also aims to supply innovative Chinese-made Hualong-1 or HRP1000 nuclear reactors, which will be installed at Fangchenggang Phase II, to Asean after exporting the technology to England and France through its partnership with the French utility giant EDF.

"Hong Kong-listed CGN is very big actually, but mainly in China and it wants to have partners in Asean where Ratchaburi is one of the major players in this business," said Mr Kriengrit, who was involved in the negotiations to form the joint venture as chief of business development for the Thai power producer before he retired in December 2015.

The third unit of Fangchenggang officially began the construction last December with completion expected in 2021. The plant is divided into three phases with a combined capacity of 6,000 MW.

Currently, CGN has 16 nuclear plants in operation with a capacity of 17.08 gigawatts, accounting for 60% of China's installed nuclear power. It also has 11 units under construction with a capacity of 13.46 GW, or 50% of all new nuclear projects in the mainland.

CGN also owns 307,700 tonnes of uranium resources that could meet the refuelling requirements of 30 million-kilowatt units for 30 years, according to the company's website. As of November 2015, the company also had 8.1 GW of installed wind power capacity, 1.1 GW of solar energy, 5.26 GW of hydropower, and 8.66 GW of natural gas-fired capacity.

Outside China, CGN has signed a memorandum of understanding for the construction, operation and decommissioning of two nuclear reactors in Romania, and a similar agreement with the Kenya Nuclear Electricity Electricity Board. In Namibia, CGN operates one of Africa's largest uranium mines.

During President Xi Jinping's state visit to the UK last October, CGN and EDF signed a strategic investment agreement to develop three nuclear power projects in the UK -- Hinkley Point C, Sizewell C and Bradwell B (BRB). The BRB project, in which CGN owns 66.5%, plans to utilise third-generation technology developed by the Chinese nuclear company.

Shah Nawaz Ahmad, the London-based senior adviser to the World Nuclear Association (WNA), said the joint venture with Ratchaburi would help China to promote its Hualong nuclear technology in Asean.

"And if costs remain low, it can provide serious competition to current vendors (in the region)," he told Asia Focus in an email.

Ratchaburi holds 10% ownership in Guangxi Fangchenggang Nuclear Power (II) Co through a wholly owned subsidiary, Ratch China Power, registered in Hong Kong. CGN holds 51% and GIG 39%. The new company will be involved in all stages of developing, constructing and operating the Fangchenggang plant and the Hualong-1 reactors.

"Ratchaburi will gain experience in the full range of technological and financial aspects of nuclear power plant work," Mr Ahmad said.

Thailand has listed nuclear power as one of its future energy options. Under the 20-year Power Development Plan (PDP) 2015, two nuclear plants with a capacity of 1,000 MW, would start operating in 2035 and 2036, accounting for 5% of the country's energy mix by then.

"As Thailand has already added Hualong to its technology shortlist and with the experience gained by Ratchaburi, the introduction of nuclear power in Thailand can be accelerated. Ratchaburi personnel can form the core of the Thai nuclear plant industry," added Mr Ahmad.

Joseph Jacobelli, a senior analyst for Asian utilities and infrastructure with Bloomberg Intelligence, said Ratchaburi was only the second non-Chinese investor in the Chinese nuclear power industry after Hong Kong-listed CLP Holdings.

"Chinese nuclear power operators are keen to develop nuclear power plants overseas. They have strong support from the Chinese government and Chinese financial institutions," Mr Jacobelli told Asia Focus in an email from Hong Kong.

These operators have built experience in China where nuclear capacity has almost reached 30,000 MW and should hit or surpass 56,000 MW by 2020.

"They are definitely interested in participating in nuclear investments in Thailand, Malaysia and other countries. They compete with companies from South Korea, Japan and Russia who are also keen to develop to develop abroad," he added.

By partnering with CGN, Ratchaburi is ready to pursue more potential investments in clean energy projects in Thailand and Asean.

"Once the criteria and return on investments are suitable, we are ready to invest in those projects," Ratchaburi CEO Rum Herabat said, adding that the company was looking for opportunities in countries such as Indonesia, Vietnam, the Philippines and China.

"It is an opportunity for Thai technical personnel to develop and enhance their skills and experience by sharing nuclear-related knowledge and techniques with CGN, who have more than 30 years of expertise in this field," he said.

"The achievements and experience of CGN in low-carbon environmental management are another area for learning because it is an important for curbing climate change."

Mr Rum stressed, however, that the partnership with CGN did not necessarily commit Thailand to nuclear power. Ever since the Fukushima disaster in Japan in 2011, many countries have been taking a second look at their nuclear power plans in light of heightened safety concerns.

"We are not indicating that nuclear power must be used in Thailand," he said. "It depends on the government and the Thai people to decide whether we are ready to go for nuclear. But once they decide to have nuclear power, Ratchaburi must be ready for that."

Mr Rum said the company might consider increasing its ownership in Fangchenggang Phase II or join with CGN in the phase III development.

"The current 10% is just fine for our first nuclear investment," he said. "Once we have done an evaluation and are satisfied with the results, we can step up later in phase two and consider going for phase three”.

The venture with CGN brings Ratchaburi's total generating capacity to 6,841.12 MW including 720.79 MW of clean energy from hydro, wind, solar and nuclear plants. The company has earmarked nearly $3 billion to invest over the next eight years, aiming to lift its capacity to 9,700 MW in 2023.

MDA Consulting
South East Asia