

# Business Standard

## Punj Lloyd-Thorium JV to pump in \$1 bn

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Infrastructure player Punj Llyod and US-based Thorium Power, which signed an MoU last month to form a 50:50 joint venture company for exploring commercial nuclear power opportunities, are targeting an investment of up to \$1 billion in the venture.

"We are looking at an investment of several million dollars or up to a billion in the coming years, depending on how India's government allows commercialization of nuclear power sector," Dennis Hays, vice-president of Thorium Power, told Business Standard.

"We finalise the framework for our joint venture with Punj Lloyd by March," he said. The investments and areas of operation can be in various technologies, manpower training, fuel processing, and operation & maintenance of power plants in the nuclear sector, he added.

Nuclear Suppliers Group, an international organisation representing companies that supply nuclear products, had lifted its 30-year nuclear trade embargo on India in August last year. In October, the US Congress allowed American companies to participate in India's civil nuclear energy programme.

A month ago, Punj Lloyd and Thorium Power had signed an agreement to float an equal joint venture, mainly to provide thorium fuel technology for light water reactors (LWR) coming up in India.

While India has only 0.8 per cent of the world's uranium reserves, it has about 32 per cent of the world's total reserves of thorium.

The JV also plans to offer advisory services for nuclear power plants and establishing a nuclear technology investment fund in India.

Punj Lloyd, one of the leading engineering and construction companies in India, has expertise in 'Balance of Plant' of nuclear reactors while Thorium Power is specialised in various technologies and processes related to nuclear reactors. The JV will also explore training of untrained engineers and technicians in India to specialise in nuclear technologies. "Their expertise can be used in various parts of the world as setting up of a nuclear facility requires huge manpower and years of construction," he said.

The JV can also explore operation and maintenance of facilities and even re-location of certain critical parts of nuclear reactors, to save time and cost in setting up reactor facilities, said Dennis Hays.

The US-based company also provides advisory services for emerging nuclear programmes. The company is currently advising the UAE government on one of the largest nuclear programmes for power generation of close to 16,000 MW, involving several hundred million dollars investment. Thorium Power is not operating in defence and nuclear weapons programmes, he said.

India is estimated to have the largest reserves of thorium in the world, next to Australia.

Under the three-stage nuclear power programme, India has committed to develop a thorium fuel cycle for its planned 12 indigenously-developed nuclear reactors. The three-stage cycle first involves processing of plutonium in pressurized heavy water reactors, through which uranium-233 is produced. This uranium is then put into fast breeder reactors, which then produces thorium. Thorium is then used to produce nuclear power. India is developing a proto-type fast breeder reactor at Kalpakkam.

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