

Jindal Power

Sets up first mega merchant power plant

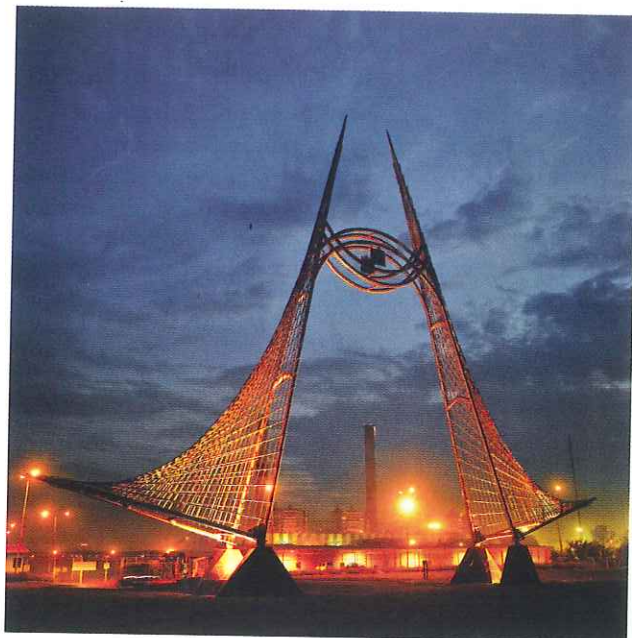
Jindal Power Limited (JPL) looks set to redefine the standard model of power plant construction and operation in the country. Its 1,000 MW power plant in Raigarh, Chhattisgarh, is operating on a completely merchant basis, and is the first plant of this magnitude to be constructed on a non-engineering, procurement and construction (EPC) format. "We have set new standards for the industry by setting up the first mega power plant on a non-EPC basis," says Sushil Maroo, deputy managing director, Jindal Power.

The company, a wholly owned subsidiary of steel major Jindal Steel and Power Limited (JSPL), was incorporated on January 13, 1995. In line with its mission – "endeavouring to make India a power-surplus country" – the company has chalked out ambitious growth plans. Aside from the 1,000 MW Raigarh plant, it has signed memorandums of understanding with the governments of Chhattisgarh and Jharkhand for 2,520 MW and 2,640 MW projects respectively. It also plans to foray into hydro and renewable energy development.

Existing plant

JPL became the first private sector mega power generation company, and the second largest private power generating company after Tata Power, when the last unit of the 1,000 MW O.P. Jindal Super Thermal Power Station at Raigarh went online in September 2008.

The project achieved financial closure in 2003. Built at a cost of around Rs 45 billion, the plant was constructed on a debt-equity ratio of 80:20, though equity was initially projected to be 30 per cent of the total project cost. The equity por-



tion was financed entirely through the internal accruals of the parent company, JSPL. JPL commissioned its first 250 MW unit in December 2007 and completed the last 250 MW unit in September 2008, taking the total capacity to 1,000 MW.

The boiler, turbine and generator (BTG) equipment was supplied by Bharat Heavy Electricals Limited (BHEL). After some teething problems in the initial days following commissioning, the plant managed to achieve 88 per cent plant load factor (PLF) in the quarter ended December 2008. The company plans to increase the PLF to above 90 per cent by the end of this year.

Coal for the plant comes from the company's captive coal mine, located 8 km from the plant. In fact, JPL operates the largest coal mine in the Indian private sector and is the only private company that does not procure coal from Coal India Limited. The company has a 6 million tonne capacity coal washery. It has also constructed a 6.95 km cross-country pipe conveyor for coal transportation,

with a transportation capacity of 1,500 tonnes per hour. This is the longest pipe conveyor in the country.

For the water requirements of the plant, JPL has constructed a dam at Rabo on the Kurket river in Chhattisgarh, with a storage capacity of 35.68 million cubic metres. It has 10 gates and the length of its spillway is 145 metres. The height of the dam is 18.5 metres. It has also constructed a 24.7 km long pipeline with a pump capacity of 12,000 cubic metres per hour.

To evacuate power from the power plant, JPL has constructed a 258 km 400 kV double-circuit transmission line from the plant to Power Grid Corporation of India Limited's Raigarh substation. This is perhaps the first 400 kV transmission line constructed without any technical collaboration. Work on the transmission line was started in October 2006

and was completed in April 2008.

The company is very conscious about environment management. It has installed electrostatic precipitators with 99.9 per cent efficiency and the devices are constantly monitored and maintained. The company also has a zero-discharge concept whereby waste water is fully recycled and reused.

A common problem with coal-based plants is ash handling. JPL has wet ash and dry ash handling systems. Fly ash is utilised in cement bricks, tiles and brick manufacturing. The company has also planned a fly ash technology park where various products of fly ash will be demonstrated.

The company operates this plant on a merchant basis and has not signed long-term power purchase agreements. It supplies most of the power it produces to JSPL and the Chhattisgarh State Electricity Board. Apart from that, it supplies power to the distribution companies of Andhra Pradesh, Gujarat, Maharashtra,

Tamil Nadu, Delhi, Haryana, etc.

The company's business model is integration. It has gone for pithead projects to avoid transportation costs. It also has its own coal mining and transmission line. Internalisation has helped JPL to insulate itself from various risks.

"We have gained sufficient experience from our first project and can make full use of that experience in future expansions," says Maroo. JPL now plans a brownfield expansion of 2,400 MW at the existing plant, at an estimated cost of Rs 120 billion. The project will be financed on a 70:30 debt-equity ratio of which JPL would contribute Rs 36 billion from its internal accruals. The plant would consist of four units of 600 MW each. The BTG order has been placed with BHEL at an estimated cost of Rs 5 billion. This is the biggest order ever placed by a private company with BHEL. The first unit of the plant will be commissioned by 2012 and the final unit by 2013.

Hydro interests

The company has very aggressive plans in the hydro power sector as well. It plans to set up a 6 MW hydro plant on its existing Kurket river dam on a pilot basis. The project would be commissioned by 2012. Once this project is complete, the company will use the know-how on several hydro projects ranging from 100 MW to 1,000 MW in Nepal, as well as in Himachal Pradesh, Arunachal Pradesh and other north-eastern states.



Table 1: Jindal Power – Financial highlights

Quarter	Net sales (Rs billion)	Profit after tax (Rs billion)
December 2007-March 2008	1.25	0.19
April-June 2008	2.94	0.41
July-September 2008	6.54	3.15
October-December 2008	11.61	5.75

Source: JPL

Table 2: Gross generation

Period	Generation (MUs)
April-June 2008	962
July-September 2008	1,489
October-December 2008	1,950

Source: JPL

Renewable plans

Further, JPL plans to enter the renewable energy space. It is in talks with various technology developers to work out the best possible technologies in solar energy. It is looking at concentrated solar power generation. The company has also applied to the Rajasthan government for setting up a 500 MW solar farm in the state. It is looking at setting up a solar rooftop pilot project at its existing Raigarh thermal power station, in which it would generate either electricity or heat to feed the boilers, thus minimising coal consumption. JPL is also working on a 22 MW wind power project in Maharashtra. Apart from that, it plans to set up a 100 MW wind plant in the southern part of the country. The location is yet to be finalised. "We are

giving a lot of emphasis on renewable energy because we feel that the future lies there," says Maroo.

Financial performance

The company has witnessed steady financial growth. It has declared its financial performance for four quarters starting from December 2007 to March 2008. Table 1 shows the financial performance of the company in the past three quarters. "We have performed satisfactorily over the past four quarters and are satisfied with the third quarter results of 2008-09. The company has achieved financial closure for its projects and has also started receiving cash flows. So it is insulated from the current financial crisis," says Maroo.

In view of the company's ambitious expansion plans, the current financial environment can be very challenging. Though the company has started generating cash flows, it still has to raise equity from its parent company, JSPL. Raising debt from the market is also a major challenge going forward.

Conclusion

Overall, the company has a good business model and ambitious growth plans. It has to be seen how successfully JPL is able to execute these and achieve its targets. ■

Vijutash Angurana