

# We want to make substations our focus area

— **Subhash Sethi**, Chairman,  
SPML Infra Ltd



*SPML Infra Ltd very recently clinched a Rs. 177.4 crore mandate from Jharkhand Urja Sanchar Nigam Ltd, to set up five substations as part of the World Bank-funded “Jharkhand Power System Improvement Project”. T&D India caught up with **Subhash Sethi** to learn more on the current order, and to understand how the company has established a very successful track record in power T&D project execution. While asserting that the current order will be completed well before the scheduled completion date, Sethi observes that substations—both AIS and GIS—will be company’s focus area when it comes to power infrastructure projects.*

## Let us start by understanding the new Jharkhand order in some detail.

The Government of India has received financing from the World Bank for improvement and development of electricity supply infrastructure in Jharkhand under

the ‘Jharkhand Power System Improvement Project’ scheme. These two projects received by SPML Infra from the client, Jharkhand Urja Sanchar Nigam Ltd (JUSNL) is part of the scheme. The project entails supply, installation, testing and

commissioning of five 132/33kV power substations at Chainpur in Gumla district, Hansdiha in Latehar district, Narayanpur in Palamu district, Kolebira and Kurdeg along with two additional bays at Kamdara in Simdega district of Jharkhand. Apart from the substation, SPML Infra Ltd will also be responsible for associated civil works, control room and buildings, staff quarters, roads, boundaries and other miscellaneous work as per specifications.

## Specifically, would these substations be AIS or GIS?

These are air insulated substations (AIS).

## What challenges do you foresee in the implementation of this project?

SPML Infra has recently completed the 220kV grid substation project in Ratu, Jharkhand and our team is already available in the state. With the rich experience of substation



220kV GIS substation, Alipurduar, West Bengal



220kV AIS substation, Ratu, Jharkhand

projects and working within the state will help us in executing these projects as per given schedule. There are not many challenges we foresee as of now except that the area of projects are spread across four districts in the state. The other factors like transportation of machineries and equipment, trained engineers and labour force will not pose much challenge as we have good execution team and trusted suppliers with us and these projects will also provide employment to local residents.

#### Was the Ratu power transmission project special in any way?

Yes, the project entailed implementation of SCADA-SAS system. This was the first such instance for a power transmission project in Jharkhand.

#### Do you see a growing inclination of power utilities to go in for GIS substations as opposed to AIS ones? What are the relative complexities during execution of these two?

Yes, with the land space for power infrastructure in cities getting concentrated and quality of power supply is becoming paramount,

power utilities in India is opting for high capacity gas-insulated switchgear (GIS) substations for better quality and durability.

GIS is technologically advanced and more reliable than the traditional AIS as it uses a superior dielectric gas, SF<sub>6</sub>, at moderate pressure for phase-to-phase and phase-to-ground insulation. AIS works on air insulation metal-clad system with drawn out circuit breakers as compared to GIS with fixed, mounted circuit breakers that are sealed for life. GIS system is much easier to install than AIS system due to its compactness and much smaller size. It is also light weight and requires almost half of the space that AIS setups need.

In terms of operation, GIS system is significantly easier to operate and has lesser maintenance. Breakdowns in GIS are negligible compared to AIS. Although the cost of GIS is much higher than AIS, the reliability, modern technology and almost zero maintenance for over 20 years makes all the difference.

#### Do you face challenges related to manpower, especially technical manpower, for substation projects?

There are several challenges faced by the contractors while executing substation projects. The key challenges are finding qualified technical manpower needed to erect and install the technically advanced high voltage substation, high capacity transformers, switchyards, line bays, and other installations. The core challenge is motivating technical teams to move to remote site areas where amenities and resources are limited. Sometimes, the absence of proper road connectivity also poses challenge in transporting heavy machineries and mobilizing workforce from one place to another.

#### We learn that within the power T&D space, SMPL Infra would be focusing on substations. Please discuss. How do you see the potential of more substation orders from state power utilities?

Yes, our focus in power infrastructure development will be more on substation projects both AIS and GIS format. Substation projects are easier to execute and can be completed within or even before the stipulated time. Other transmission line projects take longer time to execute and have more complexities in terms of land acquisition, right-of-way, securing statutory clearances, etc.

Several Centrally-sponsored power infrastructure development schemes with dedicated budgets like DDUGJY, UDAY, IPDS, UJALA, Saubhagya, etc. towards development of power T&D infrastructure and rural and urban household electrification, are under execution. These schemes have already shown good results and we expect that more substation projects will be tendered in coming months funded either by the government or with bilateral funding from ADB or World Bank. We are quite hopeful to add more such projects in our pool with our strategic planning and bidding.



500 MVA auto transformer, Mainpuri, Uttar Pradesh

**Has SPML executed substation projects for Power Grid Corporation of India? What is your inclination towards 400kV substation projects?**

Power Grid Corporation is our

esteemed client for whom we are executing a number of power substation projects in several states. We will certainly be bidding for new projects from Power Grid. We are already qualified to bid for 400kV

substations and have executed extension of it in Rajasthan, Uttar Pradesh and West Bengal. We will certainly be interested to bid and execute 400kV substation projects in future.

**Till date, how many substations has SPML Infra built? Apart from this, how many substation projects are under construction, including the current JUSNL order?**

SPML Infra has executed over 100 substation projects in different voltage levels in several states of India both government and bilateral funded from 33kV to 400kV capacities in AIS and GIS formats. Currently we are executing more than 30 substation projects in Tripura, West Bengal, Odisha, Haryana, and Jharkhand. ■

## RENEWABLE ENERGY

# Waaree Energies touches 2.5 GW of cumulative solar panel shipments



Inside view of Waaree Energies' solar module manufacturing facility at Vapi, Gujarat

**W**aaree Energies, a solar panel manufacturer and EPC player, recently crossed 2.5 GW of cumulative shipments of solar panels. Waaree, started its commercial shipment of solar modules in 2018.

In July 2018, Waaree Energies increased its solar module manufacturing capacity to 1.5 GW per year, translating to around 1.5 GW, translating to 4 mw per day.

Waaree solar modules have been shipped to six continents, across 68 countries, including USA,

UK, UAE, Australia, Germany, Italy, Czech Republic, Bangkok, Singapore, and Vietnam.

With more than 120 tests performed at various stages of manufacturing, Waaree modules are trusted and financed by over 25 leading banks and NBFCs globally. Waaree serves over 5000 customers globally which illustrates the trust gained by the company over a period of 30 years of its existence, a release from Waaree Energies said.

Waaree has observed the maximum demand from Western India. This is largely due to their enhanced

demand from the C&I sector, while Southern India witnessed an uptick due to the vast farms that are viable for ground mounted plants. The residential segment overall has picked up demand by 60 per cent since 2018 on account of lucrative government policies, while the overall solar PV market witnessed a growth of 40 per cent since 2018.

Besides the 2.5 GW of modules that it has already supplied till date, the company has also commissioned over 600 mw of EPC projects in India. Waaree is present in 280 locations in India through its wide channel partner network, and has successfully held its position as a Bloomberg Tier 1 manufacturer consecutively for the past 17 quarters.

**Raymond Group:** In a related development, Waaree Energies, as EPC partner, has associated with Raymond Group to provide open access solar solution in Ahmednagar, Maharashtra. With a capacity of 2.5 MWp, the plant is expected to reduce carbon dioxide emission by around 3,650 tonnes per year. In a first of its kind in Maharashtra, the commissioned plant has been developed under the group captive model and will have an annual electricity generation capacity of 38 lakh kwh. ■