POWERLINE

Talwandi Sabo Power Limited

Strong focus on performance and efficiency

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Vikas Sharma, CEO and Whole-time Director, TSPL

Talwandi Sabo Power Limited (TSPL), which operates a 1,980 MW thermal power plant based on supercritical technology, is Punjab's largest power supplier and one of the oldest independent power producers (IPPs) in the country. The plant is among the best performing power plants in India today, and operated at an availability level of 91 per cent in 2019-20. In a recent interview with Power Line, Vikas Sharma, chief executive officer (CEO) and whole-time director, TSPL, spoke about the company's performance and future plans, the impact of Covid, and his outlook for the sector. Excerpts...

What were some of the significant highlights for TSPL in the past one year or so?

TSPL's 1,980 MW supercritical thermal power plant (TPP) in Banawala, in Mansa district of Punjab, is one of India's best-in-class TPPs. It supplies 100 per cent of the electricity it generates to Punjab State Power Corporation Limited (PSPCL) and is vital to Punjab's agricultural economy, which depends heavily on electricity. The plant has been performing very well in terms of availability and plant efficiency. Its auxiliary power consumption, heat rate and specific water consumption have improved substantially over the past couple of years. We are the largest power supplier in Punjab, and our plant load factor depends on the requirement of the state.

How has the operational and financial performance of TSPL been in recent years?

TSPL's 2019-20 performance has been extremely encouraging. The plant functioned at an overall level of 91 per cent availability and 100 per cent coal availability. The last fiscal year has seen the plant record its best ever rates of auxiliary power consumption, specific oil consumption and net station heat rate.

What has been the impact of Covid-19 on the company's operations? How is the impact being mitigated?

TSPL used the circumstances created by Covid-19 to become more agile and efficient. Since the outbreak of Covid-19, TSPL has quickly adapted to the new normal and has taken stringent measures to prevent the spread of the pandemic in areas surrounding our operations, thereby ensuring the health and well-being of our communities, associates, business partners and workforce. TSPL is one of the few plant owners in India to have quickly ensured 100 per cent Covid-19 testing for all its employees and business partners, in association with the Mansa district administration.

Digital technology has been extensively leveraged to ensure adherence to safety protocols as well as to manage operations with greater efficiency and minimal human intervention for social distancing. TSPL has maintained stringent Covid-19 prevention protocols, and ensured continued and uninterrupted planned operations and power production, with minimum manpower and resources. We rapidly adapted to the new normal of virtual functioning, conducting meetings, training and interactions on virtual platforms. Along with this, sanitisation and disinfection protocols continue to be enforced with greater rigour.

> *"TSPL operates one of the finest power plants in the country. We aim to transform it into one of the best in the world."*

What is TSPL's fuel sourcing strategy?

TSPL has a long-term fuel supply agreement with Mahanadi Coalfields Limited for an annual coal linkage of 7.7 million tonnes, and has been materialising 100 per cent of its coal through the rail mode only. Thanks to an efficient rail system, we have not faced any railway infrastructure bottlenecks so far. It is pertinent to mention here that TSPL owns one of the largest private sidings in India, stretching from Saddasingh Wala railway station to the plant yard, with a track route length of around 16 km.

What are the company's plans and progress with regard to the installation of emission control equipment?

TSPL is equipped with ecofriendly supercritical technology to conserve natural resources and reduce emissions, in line with our ethos of zero harm, zero waste and zero discharge. We have been complying with the new emission norms for suspended particulate matter, mercury and NOx in stack emissions, and we have been meeting the required levels of specific water consumption.

TSPL is equipped with a zero liquid discharge system to achieve best-in-class specific water consumption. Hybrid electrostatic precipitators with bag filters have been installed with 275 metre tall flue stacks, along with continuous emission monitoring stations to monitor ground-level concentration (GLC).

The installation of flue-gas desulphurisation (FGD) solutions has been the way forward in countries where coal-powered plants use coal with higher concentrations of sulphur. Despite Indian coal having very low sulphur content (around 0.4 per cent) in comparison to the coal reserves of countries such as the US, Indonesia and South Africa (around 0.7 per cent to 3 per cent), the government has been recommending the installation of FGD solutions in coal-fired plants as a means to control SO2 emissions.

The GLC of SO2 is being continuously monitored by TSPL with four ambient air quality monitoring stations (AAQMSs). As per the records of these AAQMSs, the SO2 GLC in the areas surrounding TSPL has been within the range of 8.4 to 16.1 µg per Nm3 (less than 20 per cent of the prescribed limit of 80 µg per Nm3). However, being one of the most environmentally conscious plants in the country, we are in the process of retrofitting the FGD solutions in our plant in keeping with the directives of the Central Pollution Control Board.

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What are some of the digitalisation/automation initiatives that have been undertaken or are planned by TSPL?

At TSPL, innovation and R&D form the backbone of everything we do. We are leading many innovations through initiatives such as the commissioning of advance pattern recognition (APR), which will be instrumental in facilitating predictive maintenance of the plant, thereby improving its reliability through machine learning and artificial intelligence. TSPL has extensively leveraged digital technology to monitor plant performance in real time for fast and informed decision-making and greater operational efficiency. Currently, the team is working on complete automation of the unit light-up procedure, which will go a long way in minimising error and improving start-up time.

What are the key issues and challenges currently impacting the company? How are these being addressed?

The unprecedented global pandemic has led to lower fly-ash utilisation this year. It has now started to pick up again, but regaining pre-Covid levels is going to be slightly difficult. Further, highly varying power demand in the paddy season and the winter season puts stress on the plant, and to alleviate this stress, we are working with PSPCL to increase the utilisation of the units.

What will TSPL's major focus areas be for the next two to three years? Could you also elaborate on the power generation capacity addition plans of your parent company, the Vedanta Group?

TSPL operates one of the finest power plants in the country. We aim to transform it into one of the best in the world, with benchmarked operational and safety parameters. The key focus areas will be working towards 100 per cent fly ash utilisation and operational excellence. TSPL is, moreover, working with the Punjab government to explore the rationalisation of coal costs. We are also open to exploring the possibility of expansion, including in the renewable energy space, in the future, as per the demand of the state.

What is your outlook for the power sector over the next few years?

The power sector is key to any country's growth trajectory. There are challenges, with certain policy issues leading to the power sector getting stressed. However, some forward-looking steps are being taken by the government to resolve these issues. A few bold reforms in the power sector will go a long way in improving the performance and efficiency of this critical sector, which is vital to the country's economic activity.