

OPEN FORUM

Demand And Supply



“ The most critical concern today is the demand-supply imbalance in skilled resources, including manpower and vendor capacity.

Rajeev Dalela
President TLD (India & SAARC) Kalpataru Power Transmission Limited

“ HVDC is not just a technological upgrade, it represents the backbone of a sustainable, interconnected, and resilient energy future.

Ramesh Suryavanshi
International Power Consultant



“ The power sector evolution demands adaptive engineering solutions... We are retrofitting legacy plants with digital overlays, that allows modernisation without full-scale replacements.

Amit Varshney
Director-RM Controls & VR Engineering

“ AI and advanced forecasting tools allow smarter energy scheduling, enabling us to anticipate demand-supply shifts and optimise dispatch with precision.

Shantanu Upasani
Director - Construction, ENGIE India



RM Controls & VR Engineering catalysts for modernisation, clean energy integration



The duo is particularly focused on retrofitting legacy systems with digital overlays, allowing clients to modernise without complete infrastructure replacement.

Amit Varshney
Director
RM Controls & VR Engineering



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The power sector in India is rapidly evolving, which demands adaptive engineering solutions. Following the trend, the duo RM Controls and VR Engineering Consultancy Services are advancing on multiple fronts. Amit Varshney shares more insights. Let us hear him.

How is RM Controls enhancing grid integration and hybrid plant solutions?

We have strengthened our capabilities in grid integration solutions, particularly for managing renewable intermittency through advanced SCADA systems and distributed control architectures.

Our focus has shifted toward hybrid plant solutions that seamlessly integrate solar, wind, and storage systems with conventional generation. We are investing in talent development—training our teams on smart grid technologies, energy management systems, and protocols specific to renewable energy. Additionally, we are collaborating with technology partners to deploy sophisticated load forecasting and balancing solutions that help grid operators maintain stability despite the variable patterns of renewable generation.

How is your digital control room approach enabling the cost-effective and customised modernisation of legacy plant systems?

The digital shift is no longer optional—it is a matter of survival. We have positioned ourselves as enablers of this trend by developing comprehensive digital control room solutions that consolidate plant operations into unified platforms. We are particularly focused on retrofitting legacy systems with digital overlays, allowing clients to modernise without complete infrastructure replacement. To stay competitive, we have adopted agile project methodologies, invested in R&D for indigenous solutions that reduce our dependence on imports, and established quick-response teams for real-time troubleshooting. Our competitive edge lies in offering cost-effective, customised solutions rather than one-size-fits-all approaches.

How are your predictive maintenance and IoT analytics reducing unplanned outages?

Reliability engineering is undergoing a paradigm shift from reactive to predictive models. We are integrating IoT sensor networks throughout critical plant equipment, including turbines, transformers, and switchgear, to capture real-time data on vibration, temperature, pressure, and electrical parameters. This data feeds into AI-powered analytics platforms that identify anomaly patterns and predict failures before they occur. Our

predictive maintenance modules have helped clients reduce unplanned outages by up to 35 percent in pilot projects. We are also implementing condition-based monitoring systems that optimise maintenance schedules based on actual equipment health rather than fixed intervals. Furthermore, we are developing performance optimisation algorithms that continuously adjust operational parameters to maximise efficiency while staying within equipment safety limits.

How is your strategic roadmap positioning the company as a key partner in India's clean energy transition?

Our strategic roadmap aligns directly with the country's decarbonisation journey. Key innovation areas include: developing indigenous energy storage system controls—particularly for battery integration and pumped hydro automation; advancing green hydrogen production facility automation as this sector scales; creating carbon capture-ready control frameworks for industrial applications; and expanding into electric vehicle charging infrastructure management systems. We are also investing heavily in microgrids and distributed energy resource management platforms that enable localised energy ecosystems. Geographically, we are expanding beyond traditional power generation into industrial energy efficiency projects. Our ultimate goal is to become a comprehensive partner in the clean energy transition, providing not only equipment but also strategic advice to help clients navigate the complex path toward sustainable, resilient, and economically viable energy systems. ⚡

