

# L&T Press Release

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## L&T makes new strides in Digital Energy Solutions business

*Secured mandate to implement Energy Management Systems in South India  
and expands portfolio in United States*

**Mumbai, September 30 2024:** The Digital Energy Solutions (DES) arm of Larsen & Toubro's Power Transmission & Distribution (PT&D) business has received the mandate to develop and implement Energy Management Systems in regional and state load dispatch centers in South India. This order is the latest addition to such digitally based intelligent projects being executed by L&T DES globally.

### Digital Energy Solutions (DES)

The Digital Energy Solutions arm of L&T's Power Transmission & Distribution vertical is a specialized set-up of power system experts offering advanced grid services, energy consulting services and system integration solutions to speed up the digitalization of electric grid in India, Middle East and the USA.

### Transmission & Distribution Management and Control

As part of the order in Southern India, Energy Management System and associated software systems will be implemented for 12 set of control rooms. These systems are being implemented for main and backup configurations for the Southern Regional Load Dispatch Centre (RLDC) and the State Load Dispatch Centers (SLDC) of Andhra Pradesh, Kerala, Puducherry, Tamil Nadu and Telangana. The integration and implementation of these systems will be carried out without causing any downtime for the existing system.

L&T DES will implement this upgradation of control rooms with power system applications supplied by the world's leading OEM to monitor and control the energy flow in electricity transmission network in real time to ensure reliable and secure grid operations. The upgrade work will leverage L&T-Spark-CRIM™ (Control Room Integration Middleware) Platform to integrate substation data.

Through another recent mandate, L&T DES team will implement upgradation of power and transmission control room in the western United States, with one of the most complex configurations involving more than 15 EMS hosts, deploying advanced applications to monitor and control the energy flow in real-time. The scope includes design and implementation of

power and transmission network operation situational awareness to assist operators and analysts to improve grid reliability.

L&T is already executing a slew of advanced grid modernization and digitalization orders in India, including the upgradation work in National and Regional Transmission Asset Management Centers consisting of 13 control rooms nation-wide integrating 270 EHV transmission substations.

On the Distribution Grid Management side, L&T DES is implementing advanced distribution management systems in Mumbai and Vadodara.

### **Renewable Integration and Control**

L&T DES team implements L&T-Spark-HECS™ (Hybrid Energy Management and Control System) to monitor and control the renewable hybrid plant of 185 MW Solar cum 254 MWH energy storage capacity which L&T is executing in Bihar.

With fast evolving buildout of renewable hybrid plants, the business is engaged worldwide in providing Solar-Storage Power Plant Controller implementations for large renewable energy projects. Currently, L&T-Spark-PPC™ (Solar Power Plant Controller) has been powering 6 solar plants with multiple gigawatts of peak production capacity ensuring full regional grid compliance in India and Middle East regions.

In a recent milestone, 700 MW ArRass solar plant went live in production powered by L&T-Spark-PPC™, monitoring and controlling 200+ solar inverters to meet the plant performance while honoring the real-time deployment signals from Saudi Electric Central Region Control Center (CRCC) assisting in reliable grid operation with advanced control functions including synthetic inertia.

In Puerto Rico, United States, L&T DES team has been working on an interconnection simulation study and Substation control engineering assignment involving 8 grid interactive renewable hybrid substations consisting of solar and storage. Upon the successful completion of engineering design phase for the first substation, L&T DES team in USA has been awarded to implement L&T-Spark-HECS™ (Hybrid Energy Management and Control System) thus providing end to end solution delivery from design to completion. The offered solution will be one of the first fully integrated implementations combining Solar, Energy Storage and Substation supervisory monitoring and control, from a single platform with full functional Historian and Hyper Local Energy Forecasting duly integrated with weather monitoring system.

L&T DES has established the technical team as a specialized set-up of world leading power system experts offering advanced grid services providing complete simulation study for renewable grid interconnection followed by grid interactive renewable hybrid substation engineering and control design.

### **Advanced Grid & Energy Innovation Services**

L&T DES business in USA continues to be the center of excellence for providing advanced consulting services and research & development assignments for energy systems and grid.

This includes resilience planning, feasibility assessment, simulation studies, bulk power balancing authority services, cybersecurity compliance etc. for various digitalization and decarbonization projects in United States.

L&T DES team will work on recently awarded grant projects, being carried out for partners under contract with California Energy Commission (CEC) and USA Department of Energy as part of the California Energy Commission (CEC) grant funding opportunity “*GFO-20-305: California Community Microgrid - Reimagining Affordable Mixed-Use Development in a Carbon-Constrained Future*”. The grant is aimed at building an all-electric, transit-integrated, affordable, and supportive community. Salient features of this demonstration include the first scaled bi-directional EV Charging in the USA and the first 95%-100% resilient apartment community in the world. Ultimately, this will serve as a new template for rapid utility interconnection to comply with *SB 410, the Powering Up Californians Act* aimed at speedier customer interconnections to the utility grid.

### **Hybrid Energy Network Operation Center**

L&T DES business in USA is all set to provide turnkey solution for 300 MW Solar “Balancing Authority” services in western United States. Balancing Authority (BA) services enable renewable plant integration while meeting NERC (North Electric Reliability Council) criteria administered by regional reliability council for reliable operation of renewable asset and grid. These services will facilitate multiple monetary value streams by allowing energy transactions within and beyond the local utility jurisdiction, availing most optimum combination of trades and transactions while meeting NERC and WECC (Western Electric Coordination Council) reliability compliance. The project will be delivered by the facility called HENOC (Hybrid Energy Network Operation Center) in Fairfield, California, USA. The facilities and personnel involved in the project have been certified by NERC.

Commenting on the development **Mr T. Madhava Das, Whole-Time Director & Senior Executive Vice President (Utilities)** - Larsen & Toubro said: “In line with L&T’s ethos of *technology for sustainable growth*, and banking on our deep domain expertise in Power T&D and Renewable generation areas, we are happy to speed up the data driven transition of our customers.

### **Background:**

**Larsen & Toubro** is a USD 27 billion Indian multinational engaged in EPC Projects, Hi-Tech Manufacturing, and Services, operating across multiple geographies. A strong, customer-focused approach and the constant quest for top-class quality have enabled L&T to attain and sustain leadership in its major lines of business for over eight decades.

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