



Fruits of
Excellence

We believe it is essential for corporates to minimize the environment, health, safety and social impacts of their products throughout lifecycle stages, while maximizing economic benefits. L&T is focused on implementing its projects with minimal EHS impact through an integrated business process that identifies, manages and minimises risks in these areas. The Company provides a Green products & services portfolio, which helps its clients to improve their environment footprint and move towards a low carbon economy mode. At all our units and project sites, environment preservation and providing a healthy and safe work environment is given prime importance.

Green Portfolio

Innovation is what gives us an edge in business and we have developed a Green Products & Services Portfolio. Contribution of our green portfolio to overall sales was 26.27% in 2015-16. There is an increase of 49.83% over the previous year.

Our Green Products & Services portfolio contributed 26.27% to our overall sales during 2015-16

E&A filed application for 114 patents, 12 trademarks, 37 designs and 1 copyright in India, 2 foreign patent applications in Europe and China in 2015-16. This was the 9th consecutive year of filing more than 100 patent applications.



Gujarat CCTV project- L&T's prowess as a Master Systems Integrator (MSI), three key cities in Gujarat are now under 24/7 surveillance which eases traffic management and enhances vigilance. Putting together this state-of-the-art CCTV project consists of fixing a third eye at 288 locations.

Highlights of L&T's activities in the arena of product stewardship are as follows:

Infrastructure Business



Two projects secured awards from the Indian Concrete Institute, two more secured the Construction Week Smart 'Project of the Year' award.

On the Engineering front, the business undertook key initiatives towards digitisation, automation and adoption of modular techniques for construction. Building Information Modelling (BIM) and Design Automation are being implemented across business segments to provide optimal solutions.

Modular construction techniques have been successfully implemented in the construction of Nuclear Power Plants, resulting in significant time optimisation.

The Company commissioned the Delhi Metro Rail Corporation's (DMRC) CE07 line stretch of 37 km.

The 38 km Stage 1 Track works for the Chennai Metro was successfully completed.

The Company is building an underground Metro system for the city of Doha and setting exceptional standards in tunnelling.

The Doha Metro is one of the world's most advanced Mass Rail Transit systems and expects to have its Phase 1 Metro operational by the end of 2019 and Phase 2 by 2026.

L&T's Water & Effluent Treatment (WET) business has set another record by constructing Asia's first and largest Micro Filtration (MF) plant of 158 MLD for river water treatment at the 2X800 MW Yermarus Thermal Power Station, near Raichur.

The Combined Water Supply Scheme of 181 MLD Water Treatment Plant for Vellore Corporation will provide drinking water to 2.4 million people.

Our Power Transmission & Distribution (PT&D) business executed projects to improve power quality and significantly reduced AT&C losses through distribution reform projects – taking electricity to

thousands of households in economically backward areas and electrifying hundreds of villages. The Solar business commissioned 200 MWp in the last year, including India's largest tracker-based solar PV plant in Tamil Nadu.

L&T's rural electrification expertise has brought electricity to over 24,000 Indian villages.

A state-of-the-art Sewage Treatment Plant has been installed at the President of India's estate for re-use of 2 million litres of waste water for horticultural activities.

L&T's Smart World business is currently executing India's largest city surveillance project comprising 6,000 cameras at over 1,500 locations in Mumbai City.

The Smart World business commissioned India's First Smart City Project – Jaipur Smart City

L&T Kansbahal introduced the very first surface miners in Northern Coalfields Limited (NCL) coal mines in 2015-16.

Green buildings constructed by the Buildings & Factories business help customers to reduce energy and water consumption, utilize recycled material and locally source most of construction material.

Electrical & Automation Business



This business won the prestigious National IP Award 2015 in the category 'Top Organizations for Designs', from the Department of Industrial Policy & Promotion and Intellectual Property Office, Govt. of India.

L&T's Control & Automation business made an entry into the Solar business with a tie-up with an Italian Company for an L&T-branded solar inverter, completing the solar solutions portfolio.

The Electrical Standard Equipment (ESE) business developed an outdoor compact substation 'N-Qube' to cater to the needs of the rapidly growing infrastructure sector.

L&T Hydrocarbon Engineering



L&T Hydrocarbon Engineering, a wholly-owned subsidiary, has won national and international accolades from eminent institutions, clients and the media. These include the National Safety Council (Maharashtra Chapter), British Gas, Petronas Carigali Myanmar, Frost and Sullivan (F&S) and The Economic Times India Manufacturing Excellence Award (IMEA).

The Company commissioned the Habshan-Ruwais-Shuweihat gas pipeline project built on an EPC basis for GASCO, Abu Dhabi.

It commissioned the Mukta B Platform (MB Platform) and pipeline project for British Gas Exploration and Production India Limited, involving a wellhead platform, sub-sea pipeline and platform modifications.

Power Business



L&T is executing complete EPC orders for three different 2x660 MW ultra-supercritical power projects at Khargone - Madhya Pradesh, Khandwa - Madhya Pradesh and at Chhabra - Rajasthan

L&T is executing two gas-based projects in Bangladesh – 360 MW Bheramara and 225 MW Sikalbaha.

A cumulative capacity of 2,228 MW built by L&T attained commercial operation. This includes two steam turbine generators, one steam generator and two blocks of a gas-based combined cycle power plant.

Heavy Engineering Business



The Company is proud to be associated with the International Thermonuclear Experimental Reactor (ITER), the world's 'first-of-its-kind' fusion reactor. An international collaborative project, ITER involves contributions from seven member entities viz., China, European Union, India, Japan, Russia, S. Korea, and USA. The Cryostat is the world's largest high-vacuum pressure vessel and its components are currently being fabricated at L&T's Hazira facility.

L&T Infotech



L&T Infotech, a wholly-owned subsidiary, offers a wide spectrum of end-to-end solutions covering IT infrastructure consulting, design, managed services, migration services, operational support, desktop support, cloud enablement, hosting and migration. Our aim is to provide our clients extensive services which help in automation of their business processes, using application development, maintenance, support & testing and customized service delivery plans.

The Company has agreements with a number of industry majors in delivering its Infrastructure management service offerings in a technologically-agnostic way. This approach is beneficial to clients and helps establish its credibility with them, with a view to eventually becoming their thought partners and long-term service providers.



Ultrasonic Testing Augments Productivity

Phased Array Ultra Sound Testing (PAUT) has replaced conventional Radiography Testing to enhance the quality and precision of L&T Hydrocarbon Engineering's deliverables. PAUT is widely used for nondestructive testing (NDT) to detect discontinuities i.e. cracks or flaws in objects manufactured from metals.

Highlights:

- Elimination of radiation hazards
- Eliminates downtime
- Improved Probability of Detection (POD)
- Improved Precision
- Flaw characterization / depth determination
- Real-time results
- Highly productive – speeds up inspection

PAUT technology is 160% more productive in comparison to radiography.

Customer Delight

L&T's strength lies in the flexibility to develop and adapt products to meet customers' needs and therefore, it has received commendable references across the globe. L&T provides customers with high-quality solutions in reduced timeframes, delivering operating efficiencies and better value for its shareholders. We stress on not only meeting, but exceeding customers' expectations, through a continuous thrust on operational excellence, supply chain management, resource utilisation and cost optimisation.

Customer Feedback

Customer Satisfaction Surveys are conducted across all businesses and prompt corrective measures are implemented for all feedback and complaints received. Every month, the Heavy Civil Infrastructure business reviews and acts on customer feedback on product quality from projects.

The Power business obtains feedback through Voice of Customer (VoC) surveys. The results of this year's survey are encouraging, and show an increase in satisfaction levels.

The Buildings and Factories business collects on-site feedback from customers every quarter, on a scale of 1 to 10 (10-Excellent, 1-Poor). This year, we scored an average rating of 8.0. The feedback is reviewed during the management review meeting and action plans are drawn to improve the performance on the areas rated below average.

Product Labelling

We have taken specific steps to ensure a robust system of labelling across our products, with adherence to all the relevant codes and specifications. All our electrical and automation products and industrial machinery developed in-house, have the Bureau of Indian Standards (BIS) label. Most of these products are internationally certified, verified and tested at third party laboratories. At the time of delivery, product specific documentation is also shared with the client.

Marketing Communication

The Marketing Communication team helps us to identify, engage and communicate with multiple stakeholders – customers, channel partners,

consultants, collaborators, etc., and all our communication conforms to the recommended guidelines.

We do not engage in sale of banned or disputed products. During the reporting period, no complaints were received from any of our stakeholders on the subject of incorrect or misleading marketing communication.

Customer Health, Safety and Privacy

The health and safety of our customers is of prime importance and we ensure that safety aspects are considered at every step of the project, from design to commissioning. We provide operational and maintenance manuals and conduct training for our customers' employees to minimize the risks of our product or process-related health and safety issues. International practices and standards are followed

at all times and all our products are provided with adequate labelling, including product information and possible hazards. No incidents of non-compliance were reported with respect to regulatory and voluntary codes concerning the health, safety and labelling aspects related to any of our products or projects during the year. There were no complaints regarding breach of customer data or privacy in the FY 2015-16.

Compliance

As a responsible corporate, we adhere to all statutory regulations and voluntary codes related to our products and services. We have implemented a structured system to monitor and report compliance to regulatory requirements on a quarterly basis. During the reporting period, there were no incidents of non-compliance with statutory requirements, and no monetary fines were imposed.

Concrete Solution to Water Efficiency



Construction projects require copious amounts of water, so efficient water use, is a priority area. At NTPC Lara site, L&T Power initiated waste water recycling. Water used for cleaning of the boom placer and batching plant is collected after being cleared in a Transit Mixer, passed through a net or mesh for removal of big particles like stone chips etc, then transferred to a settling tank and used for curing and sprinkling on the road to suppress dust.

When waste (sludge) fills $\frac{1}{4}$ of the settling tank, it used for road repair. Helmets, gumboots and hand gloves (rubber or polythene) keep users safe from splashes during waste-handling.

Recycling waste water for curing and sprinkling of water on road for dust suppression saves 960,000 litres of water annually.



Waste Water Collection Tank