



MSI and Products Business



India is home to some of the world's fastest growing cities. Urbanisation and development are triggering exponential demand for power, resulting in transmission congestion challenges. There is an urgent need to strengthen, upgrade and uprate corridor intensity of ageing transmission infrastructure with imaginative, innovative and cost-effective solutions.

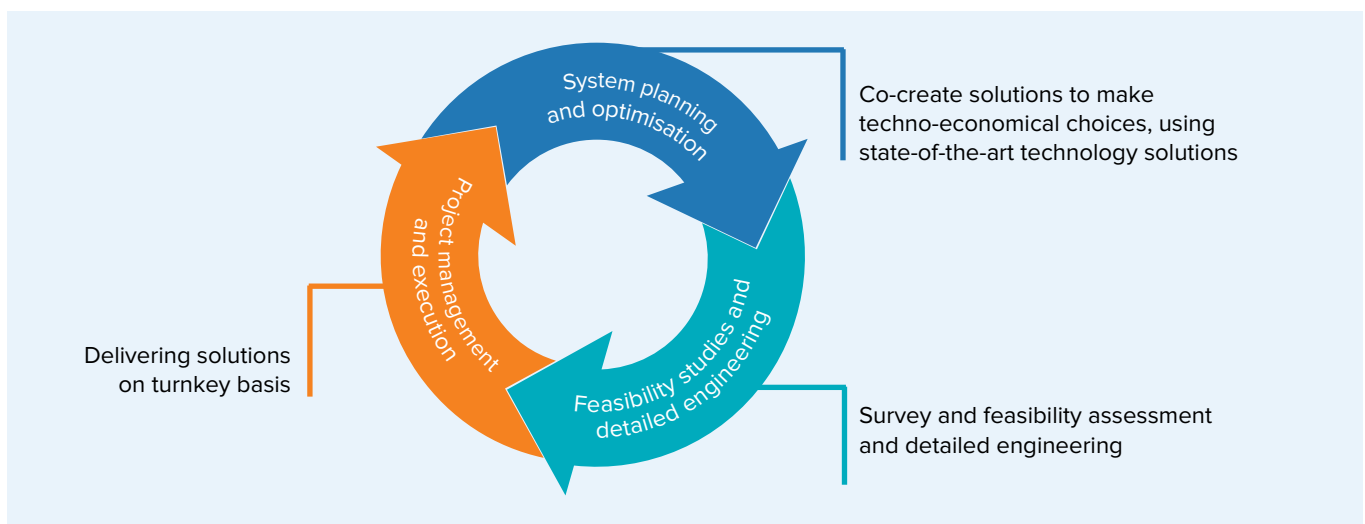
Our custom-built solutions, top of the line technological prowess, engineering expertise, system design and specialised EPC services are clear

value differentiators. We are India's first and largest integrated manufacturers of OPGW. Creative problem-solving, strategic investments and industry-leading research and development are inextricably tied to our long-standing commitment to customers. We strive constantly to refine operations and deliver best-in-class customer service. We are innovating on multiple fronts to build the future of energy and address customer challenges swiftly and efficiently through the unwavering prism of time, space and capital.

MASTER SYSTEM INTEGRATION (MSI)

A full service operation, our MSI business delivers multi-fold increase in throughput, upgrades to existing infrastructure, uprate of overhead conductors and OPGW-based communication systems in the shortest possible time.

Business Model



Capabilities

- Expertise in power system planning studies and network optimisation
- End-to-end design expertise; digital tools for substations, conductor, cable systems
- Zero shutdown (live-line) reconductoring capability
- Industry leading global partnerships state-of-the-art technical solutions
- Use of robotics and aerial technology for safe stringing of OPGW and power conductors

Differentiators

- Engaging deeply with customers to solve challenges of time, space and capital in developing their transmission networks
- Faster turn-around times for feasibility assessment and for execution engineering
- Introduced this methodology in the country, allowing line uprates with no disruption in supply through the line
- Bringing the best and the latest of solutions such as power flow controller, dynamic line rating, tower coating, to utilities in India, for maximising asset utilisation
- Passionate proponents of innovation, for faster execution and for better safety and quality standards

Flagship Projects



KERALA INTERSTATE CORRIDOR TRANSFORMATION
Massive uprate/upgrade exercise to revamp the inter-state transmission network with 15-24 times increase in throughput

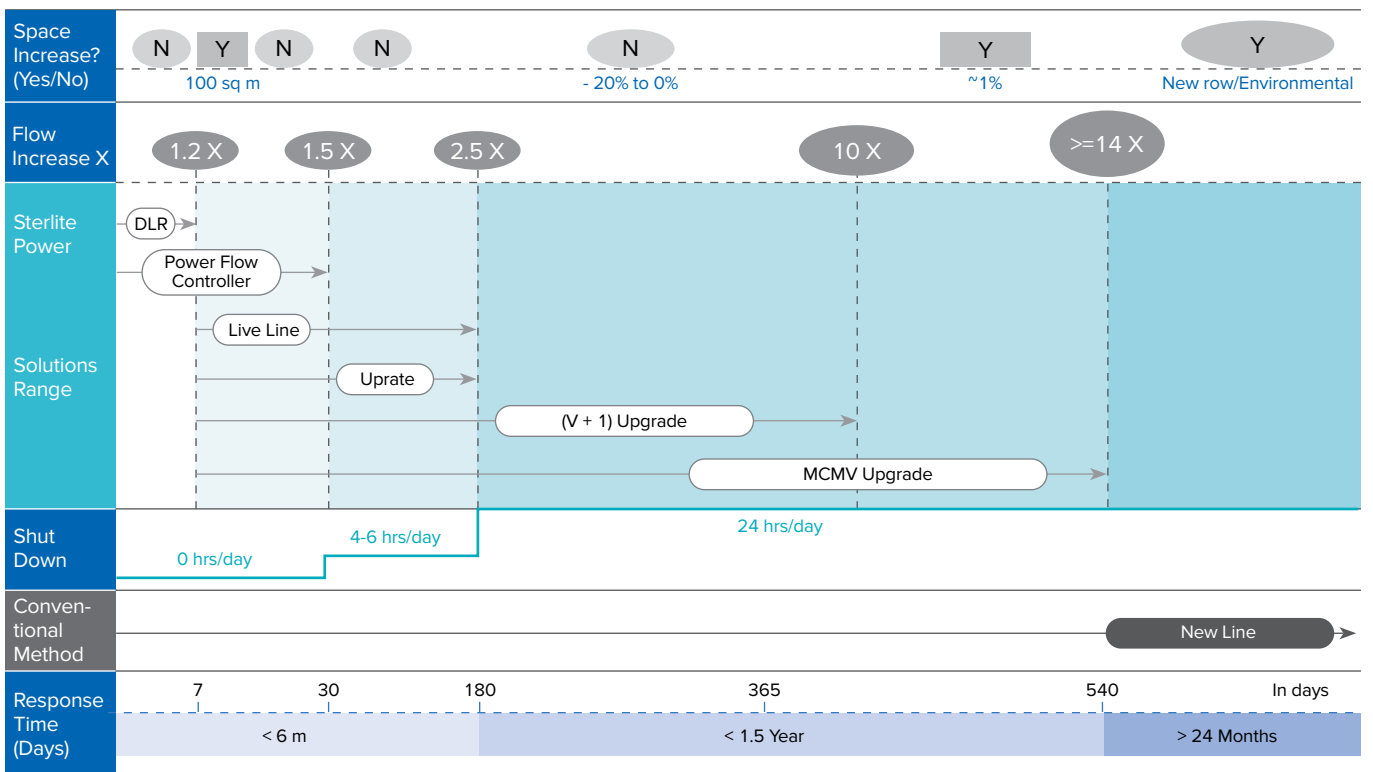


GANGA RIVER CROSSING PROJECT – BIHAR
Longest span on 400 kV line with HPC (quad configuration)



BRINGING RELIABLE & QUALITY POWER TO DELHI
Over last few years, Delhi has uprated ~50% of its 220kV network with a view to have a 'Zero generation scenario' grid plan and rely on imported power. The city will also now have to gear up for upgrade of its substations and lines on critical corridors. Sterlite Power has partnered with Delhi in this transition with execution of ~80% of the uprate projects.

Comprehensive Range of Solutions



Solutions Continuum: Addressing time, space and capital

4,600+ ckm

Of uprate and upgrade to existing transmission line (completed or under execution)

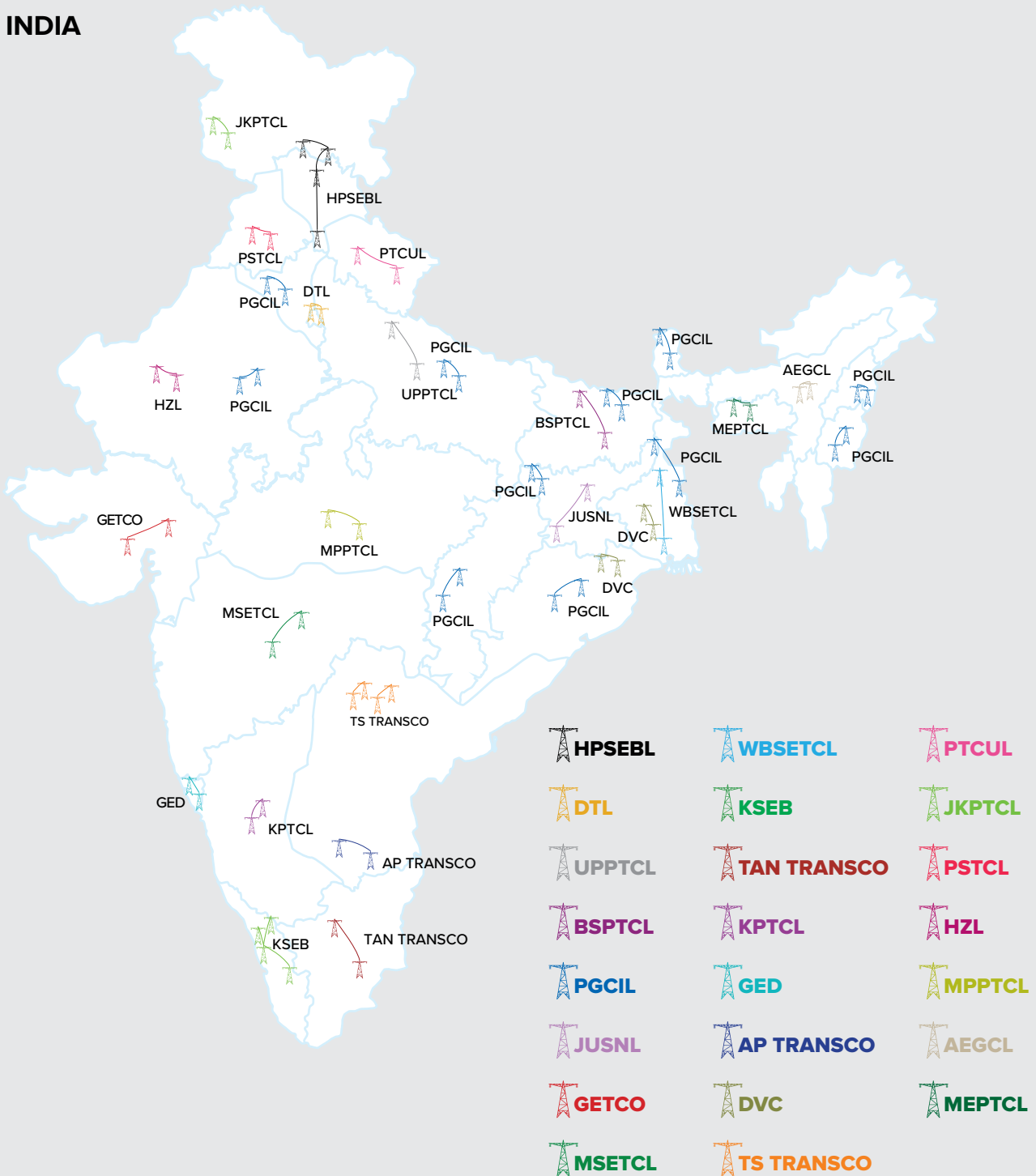
108

Critical corridors in 15 states

34,000+

OPGW-based communication projects under live-line condition (completed or under execution)

INDIA



This map is a graphical representation designed for general reference purposes only

Transmission Technologies

INTELLIGENT GRID MONITORING CONTROL

Dynamic Line Rating (DLR) and smart valves will enable utilities to assess in real time and control power flows

SKYROB™

Robotics technology to ensure safety of 'high-risk' operations, involving installation, inspection, and maintenance of OPGW on high-voltage transmission lines

AERIAL TECHNOLOGY

Drones for stringing conductors on transmission lines for safety, speed, and tough terrains

Industry-leading Diversified Portfolio

Sterlite Power is a leading manufacturer of power cables, conductors and OPGW, supplying to all major Indian states and private utilities besides exporting to 60+ countries. It has four state-of-the art manufacturing assets in Silvassa, Jhasruguda and Haridwar.

Overhead Products Business

CONDUCTORS

- Complete range of power conductors from ACSR to High Performance Conductors (HPC) like composite core, INVAR, ACCC, ACSS and GAP type
- Four NABL-accredited manufacturing facilities with production capacity of 1,62,000 MT/year and 12,000 km/year of HPC
- Supply to 60+ countries
- First player in India with upstream integration of molten metal for manufacturing conductors
- Conductor facilities at Rakholi and Piparia scored 97% and 93%, respectively in the Workplace Conditions Assessment audit conducted by Intertek in November 2018

OPTICAL GROUND WIRE (OPGW)

- India's only fully integrated manufacturer and solutions provider of OPGW; NABL-accredited manufacturing facility
- Capacity of 18,000 km/year
- Planning, application, design engineering and execution capabilities to meet requirements of power systems/utilities for communication, protection and commercial purposes
- First conductor and OPGW manufacturer in India to obtain a landmark assessment and certification for measurement and reporting of greenhouse gas emissions, as per ISO 14064:2006

Underground Products and Turnkey Business

CABLES & SOLUTIONS

- State-of-the-art facility for manufacturing cables with NABL accredited Test Lab
- Wide product range covering 6.6 kV to 400 kV power cables
- New products like three core cables, fibre-integrated power cables, high-ampacity, low-loss cables and CCD are in focus
- Range of 110+ innovative designs to meet industry requirements
- EHV turnkey projects, include cable laying and substation development



OVERHEAD SEGMENT DIFFERENTIATORS:

- Fully backward and forward integrated with control over the entire value chain – from products to services – to ensure uninterrupted supplies of raw material
- Years of in-depth experience in transmission lines services
- Access to smelters of Sterlite Group companies to ensure abundant raw material, regardless of global aluminium shortages
- Optimal capacity - Three state-of-the-art manufacturing facilities
- Proximity to Seaports - All the plants are located near Seaports for easy movement of materials
- Only conductor manufacturer in the world owning transmission lines in India and Brazil.

UG BUSINESS (TURNKEY AND PRODUCTS)

- State-of-the-art manufacturing facility (2010) with 2 longest CCV lines (Maillefer)
- Latest equipment's from Europe and India for 220 kV, expandable to 400 kV
- NABL accredited Test labs for Type-Test up to 220 kV
- Strong R&D and technical expertise for New Product Design, Development, and turnkey Solutions

DIFFERENTIATORS

- First Indian cable manufacturer to develop 5 Breakthrough Innovations in Power Cables – FIPC, CCD, HA, Low Loss and 3 core 66kV Cables.
- Patent Received for UltraEff Cables.
- Highest Market Share in 66kV Segment – 45%
- First Cable manufacturer in India with 100% Green solution for Packing and Drum (Only Steel is used) – thereby reducing carbon footprint
- Inhouse Execution Capability up-to 400kV
- First cable manufacturer in India to develop Highest Cross Section (1,600 sqmm-Copper) in 132kV Segment. Project commissioned successfully in Gujarat for Torrent Power

Key Achievements

CONDUCTOR

- Global leader in manufacture of overhead T&D conductors – HTLS, ACSR, ACAR, AAAC, AAC
- **3,70,000+** km of conductors supplied outside India
- **1,62,000** metric tonnes of annual conductor capacity

OPGW

- India's first and only fully-integrated OPGW solution provider
- **50,000+** km of OPGW along with hardware supplied globally
- **18,000** km OPGW as annual manufacturing capacity

HV/EHV CABLES

- **1,400+** km of 66kV Cables supplied to Utilities pan-India
- **300+** km of 132kV Cables supplied to Utilities PAN India
- **8,000** km of MV (33/11kV) Cables supplied pan-India