

EMC LTD.



SPANNING POWER GLOBALLY
Since 1953





VISION & MISSION



Our Vision

Setting the standard of excellence in modern power systems globally

Our Mission

- **Provide end-to-end integrated power system solutions globally through Best-in-Class Technology, Quality and Safety**
- **Continuous improvement of processes to ensure customer satisfaction**
- **Create an environment for our people to pursue excellence through continuous learning**



INTRODUCTION



Strong Foundation

- “EMC Ltd.” formerly known as Electrical Manufacturing Company Ltd.
- Established in 1953
- **More than 6 decades of experience** in the T&D sector.
- **Qualified for all segments** in the T&D sector.

A Leading Player

- **Offering complete turnkey solutions** in power transmission systems and associated sub-systems.
- In the **elite group of companies qualified to execute 765kV** transmission line projects and up to **765kV sub-stations** and industrial power systems.
- **Qualified to execute EHV Transmission Lines up to 400kV** in leading European and African Countries
- In-house manufacturing facilities: conductors and hardware along with towers & tower test bed.

Strong Execution Capabilities

- Built over **14,000 kms** of transmission lines of up to **765kV**.
- Delivered large, **complex projects** across **all voltage platforms** and in **challenging climatic and topographic conditions** that include deserts, snowfields, seas, mountainous regions and thick forests as well as in exigent socio-political conditions including war-torn regions.

High Margin Business

- Huge market opportunity in the **premium 400kV – 765kV segment**.
- High entry barriers and minimal competition, therefore revenue and **margins are high**.
- EMC among very **few players (6-7)** operating in this segment.

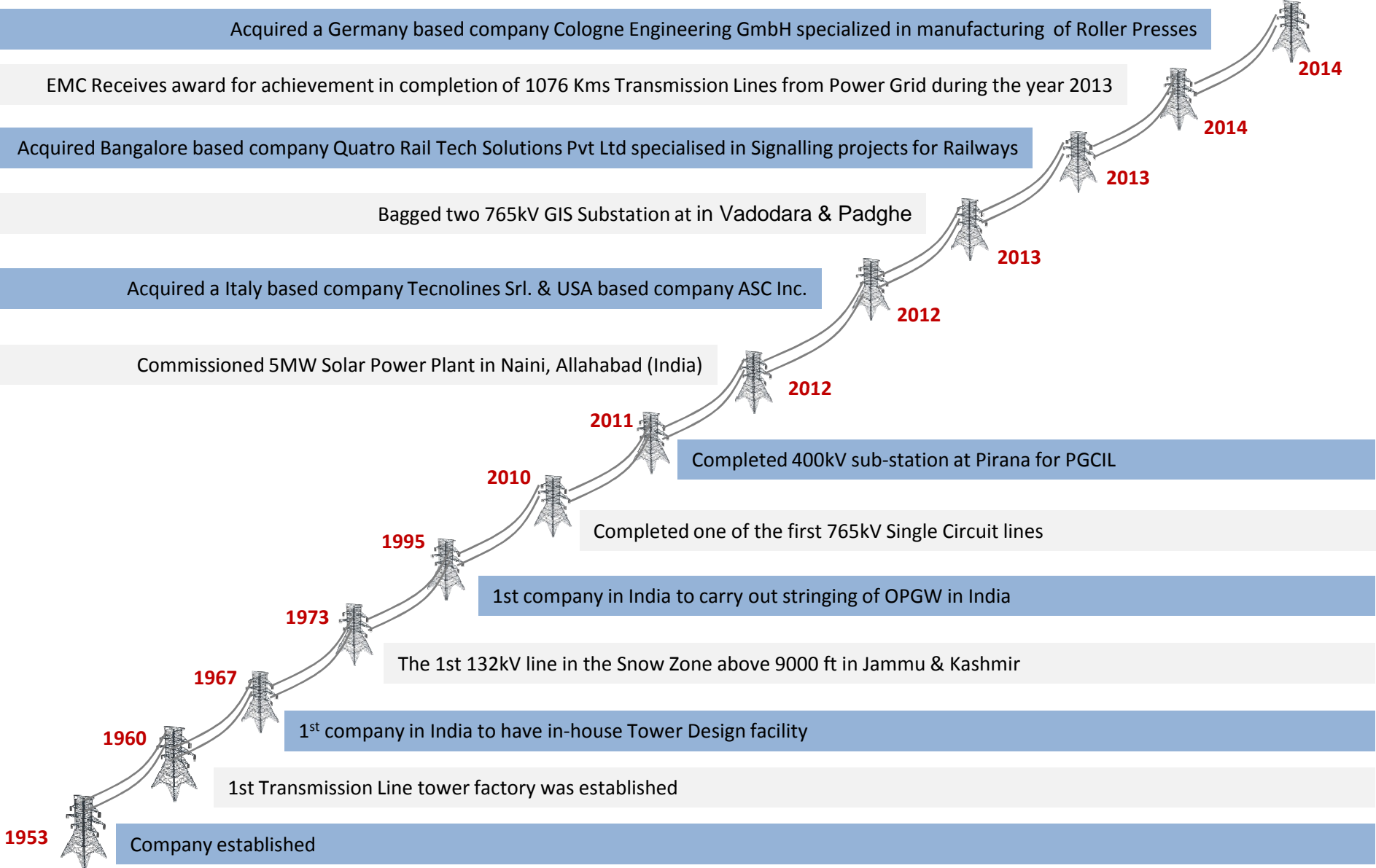
Talented Human Resource

- Highly experienced professionals from the EPC industry.
- It has a strong team of more than 150 talented engineers.
- Organisational strength of over 1500 employees in total.

Being an established player in the Power Systems industry with turnkey solutions, excellent project execution and skilled manpower, EMC has great advantage over the new entrants and other established players in the sector.



MILESTONES & ACHIEVEMENTS





TRANSMISSION LINE PROJECTS





OPERATING SEGMENTS (1/6)



Transmission Line Projects

Turnkey solutions in transmission line projects up to 765kV and ready for 1,200kV projects

Activities

Supply Contracts:

- Transmission line towers including Bolts & Nuts and Tower Accessories, Line Hardware, Insulators and Earth-wire.

Construction Activities:

- Survey, detailed soil investigation, civil construction of foundations, erection of towers, stringing of conductors and testing & commissioning of line.

Key Projects Undertaken

- Supplied over 450,000 mt of Towers including 40,000 mt overseas.
- Built over 12,000 kms lines for many utilities in India and abroad including Power Grid, NTPC, DVC, various State Utilities etc. Presently executing 17 orders of 400kV & 765kV of over 150,000 mt of Towers and 2550 kms of lines.
- 765kV: Currently executing 4 contracts of over 1000 kms for PGCIL.
- 400kV: Completed over 4,000 kms and currently executing 13 lines of over 1,200 kms.
- Up to 220kV: Completed over 5,700 kms, of which approx 1,200 kms are outside India.
- Through its subsidiaries currently executing one 400kV transmission line project of over 40kms in Finland and one 300kV D/C transmission line project of over 70kms in Sweden

Features

- First ISO-9001 certified company in India in transmission line projects
- Also has been accredited with ISO 14001 certification by KVQA
- Qualified to execute 765kV transmission line projects

One of the leading Indian EPC player qualified for overhead Extra High Voltage transmission line up to 765kV



EHV SUBSTATIONS / DISTRIBUTION SYSTEM / INDUSTRIAL POWER DISTRIBUTION SYSTEM



EHV Substations



Distribution System

**Industrial Power
Distribution System**





OPERATING SEGMENTS - (2/6)



EHV Substations / Distribution System / Industrial Power Distribution System

Operating Segments

EHV Substations

Distribution System

Industrial Power Distribution System (IPDC)

Activities under each Segment

- EHV Substation projects up to 400 and 765kV
- Supply contracts for major equipments & Auxiliary Systems of substations
- Construction activities including erection, testing & commissioning as EPC contractor

- 33 / 11kV HT/LT Substation & Distribution line up to consumer metering
- Supply of equipments
- Construction including erection, testing & commissioning as EPC contractor

- Load Distribution Centre (LDC)
- Underground tunneling & electrical cabling & cable bridge
- PLCC & SCADA installation,
- Ventilation & A/C Systems
- Plant illumination
Electrification, Street Lighting

Projects Undertaken

- Supply of equipment & materials and construction of 400 / 220kV Pirana Substation with 12 bays for PGCIL as EPC contractor.
- The work includes Civil construction / Control Room Building / Fire Fighting system etc.

- Rural electrification work in Nawada, Jehanabad and Arwal districts of Bihar having 15 substations (33 / 11kV) for BSEB through PGCIL under RGGVY Scheme.
- The work also includes consumer metering in over 1200 villages.

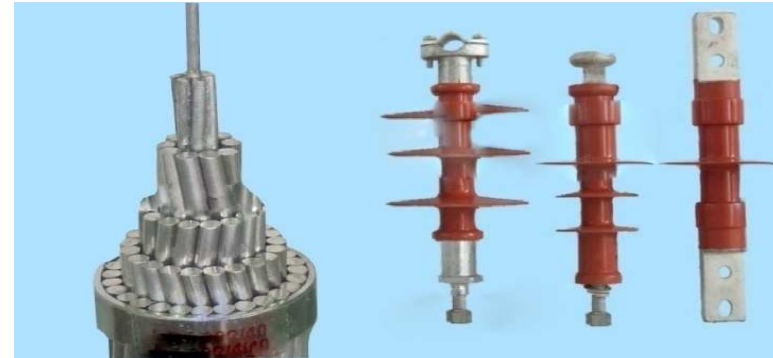
- Civil & electrical contract for IPDC project of SAIL - IISCO's steel plant at Burnpur in a JV with Areva (Areva scope limited to supply of their own equipments), 13 sub-stations, 10 LDCs and over 5 kms of underground concrete tunnels for cable laying and 2 kms. of cable ridges, 27,000 cu.mtrs RCC work.
- SCADA & Automation



MANUFACTURING ACTIVITIES



Towers



Hardware & Conductors



**Signaling & Safety
Products**



**Auto & Defence
Components**



OPERATING SEGMENTS (3/6)



Manufacturing Activities

Operating Segments

Towers/ Structures

Hardware

Conductors

Activities under each segment

- Manufacturing facilities located at Kolkata & Naini in India and Tulsa, Oklahoma in USA have best in class plant and technology that includes CNC machines and a galvanizing plant

- Manufacturing of hardware fittings, and accessories suitable for overhead power transmission lines.

- Manufacturing of bare conductors and conductor accessories suitable for overhead power transmission lines.

Projects Undertaken

- Manufactured & supplied over 350,000 mt.
- Currently over 150,000 mt of orders in hand.

- Hardware Fittings & Accessories – 1st company in India to supply hardware fittings to NTPC

- Conductors – manufactured & supplied over 30,000 kms including 7,000 kms of 61 strands ACSR “Moose”.



OPERATING SEGMENTS (3/6)



Manufacturing Activities

Operating Segments

Signaling & Safety Products

Alloy Forging & Machine Products

Activities under each segment

- Signaling Systems
- Security & Surveillance Systems.
- Selective Telephone Systems
- Intrusion Detection and Access Control.
- Anti Collision Device Systems

- Manufacturing quality non-ferrous alloys, extrusions & forging and special aluminum alloy / copper components. Factory at Agarpara near Kolkata.

Projects Undertaken

- Currently executing order of indoor signaling system for Adani Rail Project and Signaling system, Chittagong, Bangladesh awarded by Ansaldo.

- Auto & Defence
- Currently executing orders for Bajaj Auto, MACO Pvt. Ltd. LML Ltd.
- Ordnance Factories / Gun & Shell Factory, Rifle Factory, Small Arms Factory



SOLAR POWER





OPERATING SEGMENTS (4/6)



Solar Power

Activities

- Committed to green power having commissioned a 5 MW Solar power plant at Naini, Allahabad.

Features

- Successfully commissioned on March 04, 2012. under GOI's Jawaharlal Nehru National Solar Mission (JNNSM).
- Has been selected against very tough competition among 400 participants and has already signed a Power Purchase Agreement (PPA) with NTPC Vidyut Vyapar Nigam Ltd. ensuring sale of power for the next 25 years.
- The plant is environment friendly and will provide sustainable & renewable energy.
- The first solar plant of its kind in the state of Uttar Pradesh, India.
- EMC also to gain the benefits of 'Carbon Credit' from this plant.



RAILWAY INFRASTRUCTURE



Railway Electrification



Signaling, Telecommunication, Safety & Security Systems



SCADA



Civil & Track works



OPERATING SEGMENTS (5/6)



Railway Electrification / Signaling

Operating Segments

Railway Electrification, Signaling, Telecommunication, Safety & Security Systems and Civil & Track Works

Activities under each Segment

- Over Head Electrification (OHE), Traction Substation (TSS) & associated SCADA systems and General electrical work
- Signaling, Telecommunication, Safety & Security System: design, engineering, , installation, testing, commissioning, maintenance and development of technologies
- Automatic Fare Collection Systems
- Construct bridges, buildings (at stations & yards), platforms, etc. & Track works

Projects Won / Bid

- Awarded on Turnkey Basis 25 kV, 50 Hz, Single Phase OHE including TSS, SCADA & Electric General Works in Vizianagaram - Singapur Road for 138.84 RKM / 369 TKMs & in Kumedpur–Old Malda & Old Malda – Singhabad for 79 RKM/168 TKMs
- Pre-qualified along with JV partner GCF SpA for OHE, substation & SCADA systems for Delhi Mass Rapid Transport System (Phase #3) for U/G stations.
- Through its Subsidiary EMC is currently providing Signaling & Telecommunication consultancy to various clients like Adani's for Sarguja Rail Corridor Project and Chittagong railway station Project, Bangladesh

Partnerships

- Company would soon formalise partnerships through binding agreements with leading global companies on future cooperation for Railway infra projects



OPERATING SEGMENTS (5/6)



Quatro Rail Tech Solutions Pvt Ltd, Bangalore (India)

Quatro Rail Tech Solutions Pvt Ltd (QRTS) provides Signalling, Telecommunication Safety, Security and Train Diagnostic solutions for the Railways and Transportation domain in general.

- **EMC is the majority shareholder (60%) of (QRTS)**
- Company provides design, engineering, supply, installation, testing, commissioning, maintenance, trading, innovation and development of technologies in the areas of Signalling, Telecommunication, Safety and security systems in the domain of Railways and Metro systems
- Automatic Fare Collection Systems(AFCS), OHE and other Railway and Metro related systems.
- The Company is currently providing Signaling & Telecommunication consultancy to various clients , execution of turnkey signalling solutions to Indoor systems of four stations of Adani's Sarguja Rail Corridor Project in the state of Chattisgarh and design, engineering and project management and execution& commissioning of Signaling System and turnkey execution of telecommunication system of Chittagong railway station, Bangladesh



INTERNATIONAL BUSINESS





OPERATING SEGMENTS (6/6)



International Business- NORTH AMERICA



Advanced Steel & Crane Inc., Tulsa, Oklahoma, USA

Since **1970**, Advanced Steel & Crane, Inc. has provided Substation steel structures and components to major Electrical Utilities as well as many Rural Electric Cooperatives across the **United States** and **Canada**.

Today this company serves electric utilities by supplying transmission and sub-station structures and components. They also cater to general fabrication and metal processing needs.

▪ **Facilities:**

- 6 Buildings of total square footage of **28,117 sq. ft.** on approximately **4 acres** of property including 2 fabrication areas.
- Several Galvanizing facilities exist nearby.

▪ **Product line:**

- **Utility Substation Steel Structures-** Structural Distribution/Transmission Steel & Lattice Products, square, round, folded plate or aluminum, with shop assembly if needed.

- **Anchor Bolts and Cage**

▪ **Customers:** More than 70 customers, mainly utilities across North America.



OPERATING SEGMENTS (6/6)



International Business - EUROPE



TECNOLINES S.r.L., Italy

- Established in **1956**, TecnoLines Srl. (“Company”) specialises in executing EHV Transmission Line projects on a turnkey basis.
- **EMC** is the **majority shareholder** (70%) of TecnoLines. The balance is held by RDF Group (Italy).
- TecnoLines specializes in providing **EPC** services for Transmission lines ranging from **110-400kV**.
- TecnoLines has certified manpower <>, and sufficient equipment with centralized workshop at Pordenone (near Venice), Italy.
- TecnoLines is **pre-qualified** in all **Utilities** across Europe (including Scandinavian Countries) and Africa.
- TecnoLines in association with its partners is currently executing one **400kV transmission line project in Finland** and two **DC transmission projects (300kV and 400kV) in Sweden**.



OPERATING SEGMENTS (6/6)



International Business - EUROPE



MBE Cologne Engineering GmbH, Germany

Cologne Engineering GmbH is one of the specialized companies in Germany for manufacturing of Roller Presses

- It provides the offering to its clients in Oil & Gas, Mining, Mineral and Cement Industry in the fields of Independent contract Manufacturing, Consulting and related Services
- The company boasts of a team of more 130 professionals having experience in various segments of precision engineering fabrication
- Previously, It was part of production unit of KHD Humboldt Wedag AG - one of the global market dominating companies, known for supplying plants for cement- and minerals- industry
- Location: Cologne-Kalk with a production area of approx. 40.000 m²



KEY MANAGEMENT TEAM



Mr. Manoj Toshniwal
Managing Director

- Prominent entrepreneur
- Over 20 years of experience.
- Has in-depth knowledge and understanding of the Power Industry.

Mr. Ramesh Chandra Bardia
Joint Managing Director

- Prominent entrepreneur
- Over 35 years of experience in investment and finance Industry.
- Involved with many financial institutions as a promoter.

Mr. Suraj Mall Singhi
Non-Executive Independent
Director

- Over 45 years in manufacturing and power sector.
- Held very senior position in Fort Gloster Industries Ltd.
- Also Director at JDS Trade Links Pvt Ltd. and General Investment Company Ltd.

Mr. Saubir Bhattacharyya
Non-Executive Independent
Director

- Over 40 years of experience and expertise in business, administration, customer service, human resource management for renowned companies like SBI.
- On panel of special directors of BIFR, arbitrators MCX Ltd & NSE Ltd and on the board of STESALIT Ltd.
- Member of Circle Credit committee.
- Held position of Chief Operating Officer of The Calcutta Stock Exchange Ltd.



KEY MANAGEMENT TEAM



Mr. D P Sharma

Executive Director,
Finance & Audit

- Over 40 years of professional experience in very senior positions in some of the leading engineering & steel companies like HDC & Usha Martin.

Mr. Manish Agarwal

Non-Executive Director

- Holds over 18 years of professional experience in International & Domestic Financial and Banking field across various sectors like Infrastructure, Natural Resources, Urban Development, Manufacturing , Services & Social Enterprises, etc.
- Is on Board of various companies like Leverage Capital International LLC , Oxley Group, Anjali Microfinance Pvt. Ltd etc.
- Holds Professional Memberships of many reputed industry bodies like Confederation of Indian Industry (CII).



TOP CLIENTS



**Power Grid Corporation
of India Ltd.**



**Transmission
Corporation of
Andhra Pradesh**



**Indian Iron and
Steel Company**



**Maharashtra State
Electricity Transmission
Co. Ltd.**



**Jammu & Kashmir
Power Development
Department**



**Central Organisation for
Railway Electrification**



**Maharashtra State
Electricity Distribution
Co. Ltd.**



**South Bihar Power
Distribution Company
Ltd.**

AMEREN CORP

**Ameren Corporation,
USA**



Fingrid Oyj, Finland



**Svenska Kraftnat,
Sweden**



**Rural Electrification
Authority, KENYA**



ONE-STOP SHOP FOR TURNKEY SOLUTIONS AND SYNONYMOUS WITH TIMELY EXECUTION



EMC Advantage

EMC offers total turnkey solutions, complete with design, engineering, electrical, mechanical & civil works and associated auxiliary systems for:

Transmission

- Transmission lines up to 765/800 kV
- Sub-stations up to 400 kV

Distribution

- HT/LT distribution in the industrial sector
- LT distribution in rural areas and rural electrification up to consumer metering

Balance of the plant (BOP)

- Both EHV sub-station and plant electrification for integrated steel & power plants
- Illumination packages for area and production units

Railway Infrastructure

- Overhead Electrification
- Signaling & Telecom
- Traction Substations
- Track Laying
- General Electrification

Our Sectors

- Power Transmission Sectors
- Industrial Sectors
- Defense Automobiles
- Railways

Product Lines

- Transmission Line Towers
- Conductors
- Insulator Hardware Fittings and Accessories
- Performed Line Products
- Non-ferrous Extrusion, Forgings and Die Casting



WHAT IS THE EMC ADVANTAGE?



- Over 6 decades of professional experience
- Leading turnkey power solutions provider
- One of few companies in India capable of undertaking and successfully executing extra high voltage projects
- One of the few companies globally capable of helicopter based Tower Erection & Stringing
- One of the few companies capable of Installation of High Voltage Cables
- Offers comprehensive turnkey solutions with design engineering, erection, testing and commissioning, including all auxiliary systems such as lighting & illumination and fire protection systems
- One of few Indian EPC players qualified and executing Gas Insulated Sub-stations (GIS) projects on turnkey basis
- In-house facilities to design and manufacture:
 - Towers
 - Conductors suitable for power transmission and distribution
 - Insulator hardware fittings and accessories
 - Non-ferrous extrusion, forgings and die castings
- Design and Testing of Towers for Destruction Tests and having in-house Test Bed
- Constructed over 14,000 kilometers of transmission lines of up to 765 kV
- Consistently exhibited strong time-bound execution capabilities both domestically and abroad
- One of few Indian EPC players qualified in 765 kV transmission lines & now poised to enter 1200 kV segment
- EMC through its subsidiary is qualified to execute of EHV Transmission Lines upto 400kV in leading European and African Countries
- Foray in to Railways business in the following areas: Projects of Indian Railways (all zones and divisions) on turnkey basis, Metro Rail Projects including Mono Rail & Dedicated Freight Corridor



FINANCIAL HIGHLIGHTS

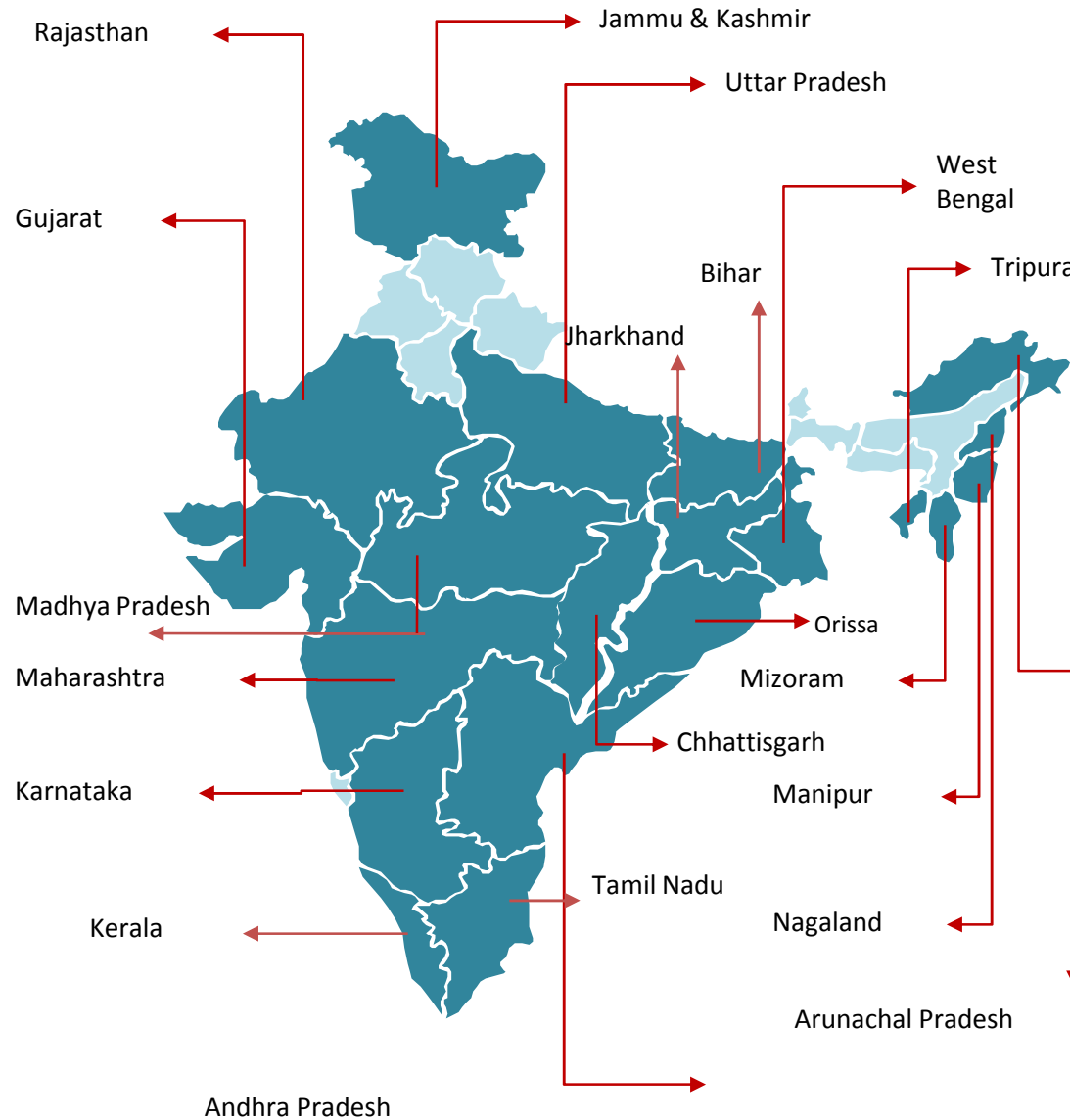


Financials (FY 2010 - FY 2014): *INR crore*

Particulars	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
Net Sales	653.4	901.2	1206.0	2027.4	3224.6
Operating Expense	610.2	831.0	1100.4	1838.4	2934.0
EBITDA	43.2	70.2	105.6	189.0	291.0
EBITDA Margin (%)	6.6	7.8	8.8	9.3	9.0
Profit Before Tax	36.6	63	86.4	137.2	204.4
PAT	24	42.6	56.4	92.4	132.7
PAT Margin (%)	3.7	4.7	4.7	4.5	4.1



PROJECT PRESENCE - INDIA





PROJECT PRESENCE - OVERSEAS





GLOBAL OFFICES

