

Reimagining  
**OUR WORLD**



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Our core strength lies in the ability to consistently adapt, invent and innovate based on our customer's requirements.

Expertise spanning over  
**5 decades**

**10,000+**  
prestigious assignments

# Engineering

## A Whole New World.

Someone once said that innovation is change that unlocks new value – a perfect statement that resonates with Tata Consulting Engineers Ltd (TCE). At TCE, we look at collaboration with customers for their unique needs, evolving to match the changing requirements of our customers, and innovation through value engineering. This, we consider as our unique value proposition and our key strengths. As leaders in transformational business solutions across industries and sectors, we infuse into every project, our expertise, keeping up with customer trends. We also take that extra leap forward towards delivering solutions that surpass expectations.

in over  
**55** countries

Total projects under management  
at approximately **\$35 bn**



Tata Consulting Engineers Ltd

# Reinventing the world as we know it.

Established in 1962, TCE is a 100% subsidiary of Tata Sons Ltd. that offers its customers invaluable expertise – a by-product of over five decades of premier service as an integrated engineering service provider. To date, we have over 130 active projects, and have completed over 7,500 assignments in over 55 countries, some of which are a first of their kind. We have cemented long-standing relationships with large international organisations across the world. Thanks to the quality, integrity and multi-disciplinary expertise that we promise our clients, we enjoy industry-wide acclaim and trust from our clientele.



Evolving and diversifying into several industry sectors, some of it funded by international funding agencies, we have built capabilities and built up scale. Through evolving market trends, industry evolution and progress, the one constant that has held us in good stead is our promise of ethical practices and a robust commitment to values.

Eminent in the engineering consultancy services domain, we have an established presence in almost all key industry segments, capabilities to handle multi-dimensional, large scale assignments, and long-term relationships fostered across the globe. Our specialised, in-house talent pool and ability to provide holistic solutions under one-roof, makes us a force to be reckoned with, in the engineering consulting sector.



## VISION

To be an internationally respected engineering consultant, offering comprehensive solutions.



## MISSION

Provide technically excellent and innovative solutions, for adding value for all stakeholders, and operate globally as professional consulting engineers.



## CORE VALUES



Customer satisfaction and loyalty



Responsibility to society



Organisational and individual growth



Technical excellence with professional ethics



Employee dignity and self-respect



## Business Sectors

# Transforming the business landscape to serve our clients.

We offer our patrons a complete spectrum of engineering consultancy services, and are, perhaps, the only engineering consultant providing this under one roof. We serve as a one-stop shop for end-to-end engineering solutions, and are among the few organisations that have the highest concentration of multi-disciplinary expertise ranging from civil, mechanical, instrumentation, electrical and digital.





We are an internationally trusted design engineering and project management consultant offering solutions across the asset lifecycle.

## SECTORS WE OPERATE IN

### INFRASTRUCTURE

- Water, Wastewater & Sewage
- Environment & Sustainable Infrastructure
- Master Planning & Urban Development
- Building & Facilities
- Industrial & Manufacturing Facilities
- Ports, Transportation

### POWER

- Thermal
- Nuclear
- Renewables (Solar, Wind, Hydro)
- Captive Power
- Energy Storage
- Transmission & Distribution

### RESOURCES - MINING & METALS

- Ferrous & Non-Ferrous
- Geology & Mining
- Beneficiation
- Material Handling

### RESOURCES - HYDROCARBONS & CHEMICALS

- Oil & Gas
- Petrochemicals & Refineries
- Food & Pharma
- Speciality Chemicals







# INFRASTRUCTURE

## Water, Waste & Environment

Encompassing everything in water management, waste management and environment.

Providing water management and ecology solutions, Tata Consulting Engineers' Infrastructure Business, works with governments and large international development funding institutions to bring about changes in the living environment to a large populace.

Water treatment, sewage treatment, water supply distribution, storage and pumping, studies and formulation of policies in water efficiency and several one-of-a-kind technical solutions are some of the areas of our expertise in water management.

TCE helps ensure positive impact on the environment for its clients through environmental and sustainability related services.



We are proud partners in some of India's most prestigious infrastructure facilities such as smart cities, water & waste management, rail system planning and aerotropolis engineering consultancy projects.







## Built Environment

Encompassing master planning and infrastructure, buildings, architecture and manufacturing facilities.

We have successfully managed complex engineering projects across the infrastructure spectrum. Our hallmark of success lies in large capital investment projects, first-of-its-kind innovation and professionalism that comes from working with public enterprises, government bodies and international institutions such as World Bank, Asian Development Bank (ADB) and Japan International Cooperation Agency (JICA).

## Transportation

Encompassing ports, airports, urban and other transportation including road and rail.

We are proud partners in some of India's most prestigious urban infrastructure facilities such as metropolitan airports, rail system planning and aerotropolis engineering consultancy projects. We develop stand alone transport infrastructure solutions for large cities and also connectivity mapping for tech cities and large SEZ spaces.





TCE has proven its mettle in the Energy sector and has till date contributed to the generation of about 150 GW of energy.

# POWER

## Power Business Unit

Power Generation encompassing fossil fuel, hydro and renewable, transmission and distribution.

- i) Power Generation-Thermal, gas & fuel-Greenfield coal, gas and fuel fired power generation in combined cycle and co-generation plants.
- ii) Transmission & Distribution

## Renewable

Solar, Wind & Hydro energy solutions and ancillary services

## Nuclear

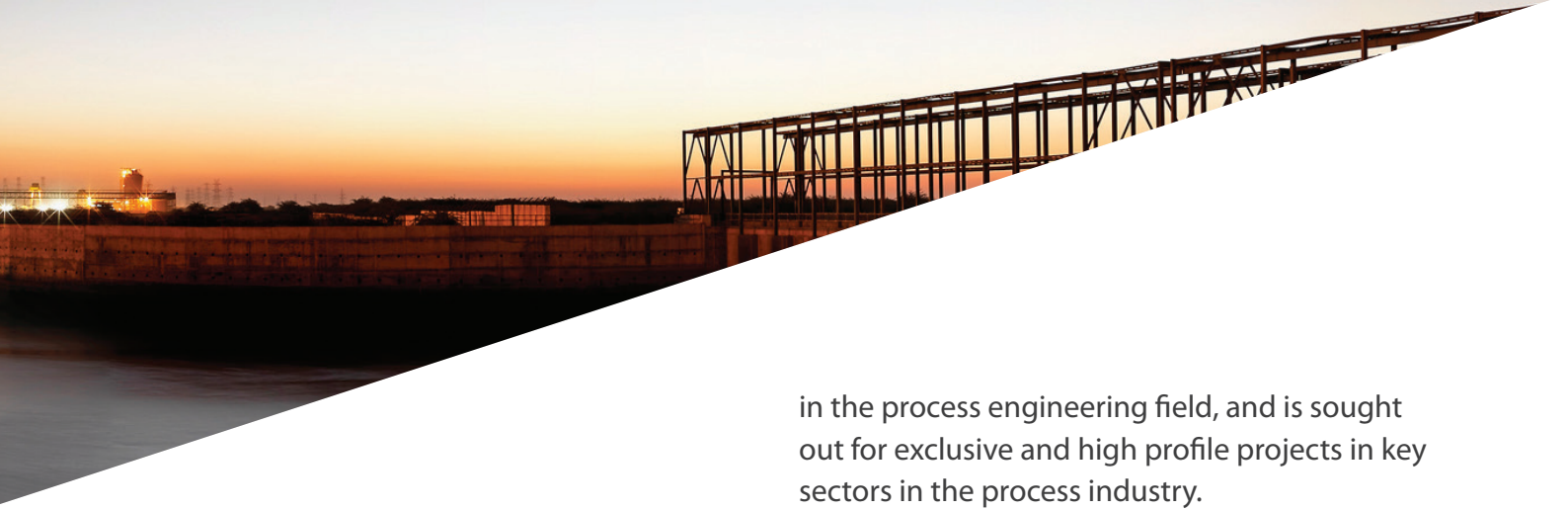
Encompassing fuel fabrication and waste management.

TCE Nuclear Energy is a partner to the country's nuclear power program right from inception. The Nuclear Energy business evolved with the nation's alternative energy program. Working closely with the country's power generation bodies, our expertise spans all aspects of the nuclear power generation process.

## Re-Engineering & Modernisation

TCE provides OPEX related solutions for efficiencies in power generation process, OEM design solutions, combined cycle power plants, re-engineering for conversion of power generation facilities, maintenance, outage management etc.





in the process engineering field, and is sought out for exclusive and high profile projects in key sectors in the process industry.

### **Metal and Mining Business Unit**

Encompassing ferrous and non-ferrous metals, geology and mining, beneficiation, material handling.



The Mining business focuses on Geology and Mining, Mineral Processing and Beneficiation and Material Handling. Our Mining sector solutions are mission critical to the mining and metals process, with technological inputs being imperative in the decision-making and successful execution of large projects. We support our clients with solutions to assist in end-to-end mining activities from upstream raw material targeting to downstream mining project management including shared services.

## RESOURCES

### **Hydrocarbon & Chemical Business Unit**

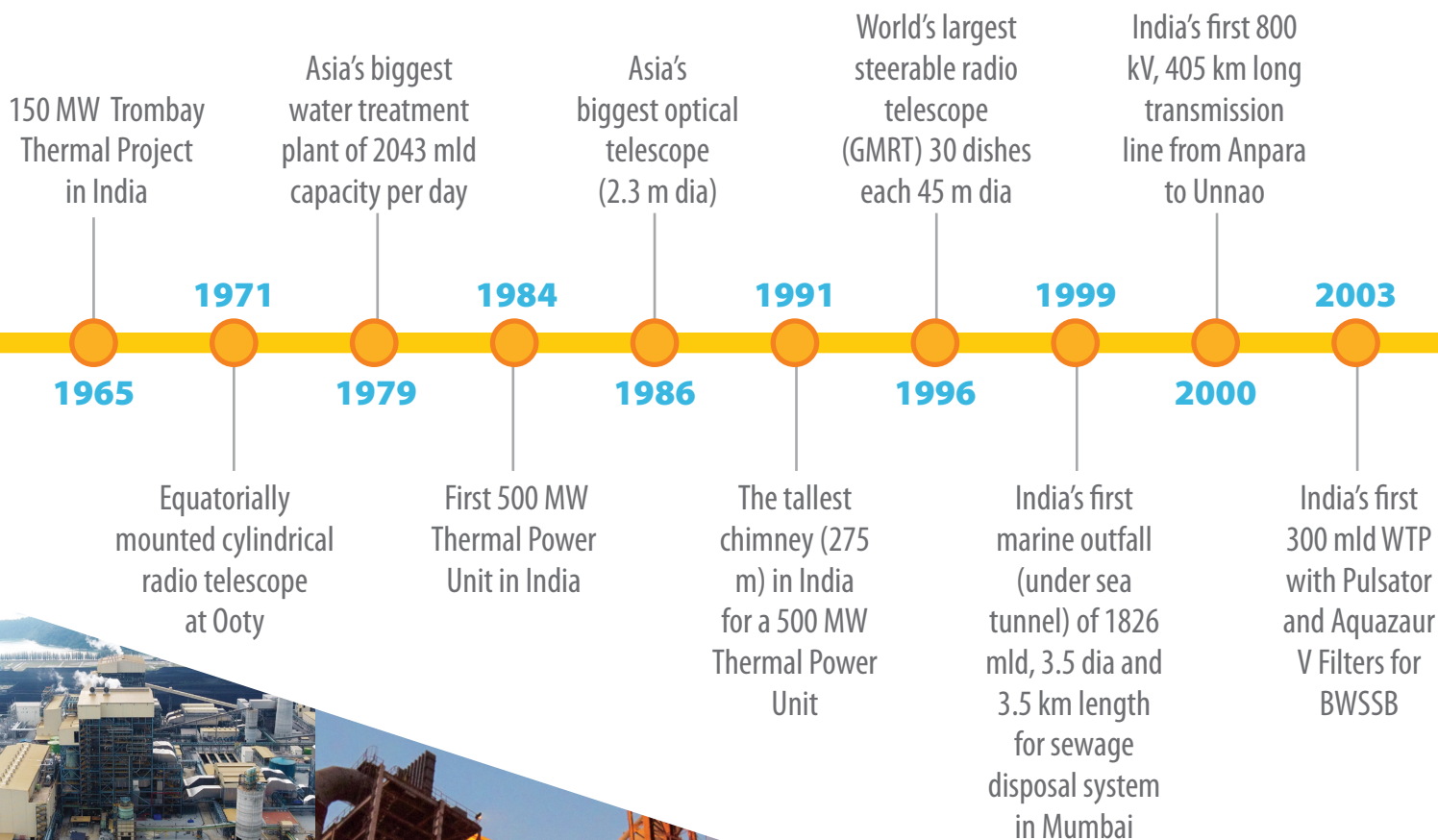
Encompassing oil and gas, petrochemicals and refineries, food and pharma, specialty chemicals.

TCE's innovative chemical process engineering translates to smart business solutions for our customers. Our company has proven its mettle

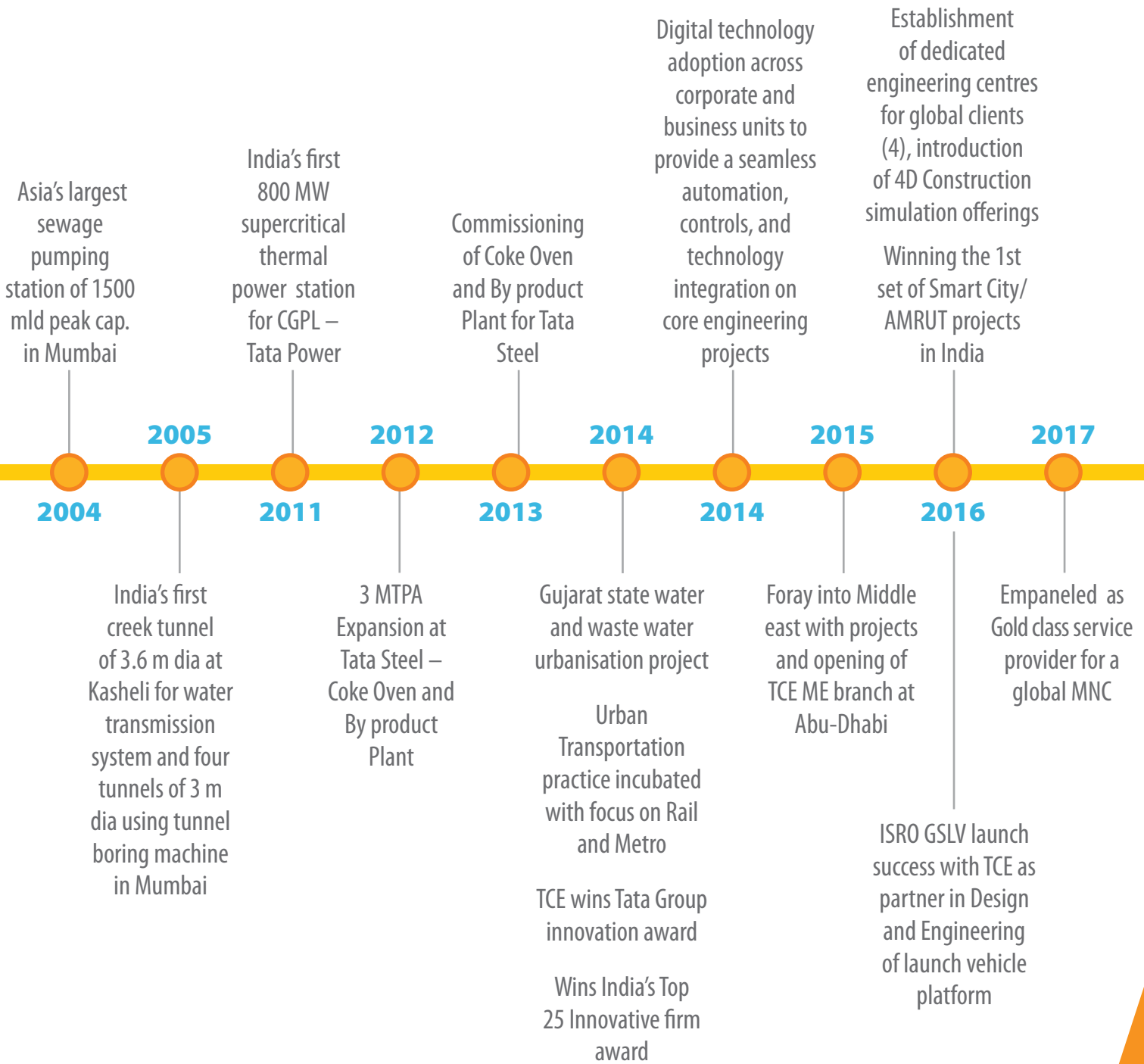
In the sphere of Steel and Metals, our focus lies on ferrous and non-ferrous metals. We handle Metallurgy, Material Handling, Iron Making, Coke Making, Steel Making, Ferro Alloys and Rolling Mills. At TCE Steel and Metal we are proud to deliver value to our global clients in all aspects of material handling, iron making and coke making.

## Key Milestones

# A glimpse into a pioneering journey.









We provide end-to-end solutions from concept to commissioning, project management consultancy & asset life cycle management solutions.

### Services Offered

# Dynamic service providers to an evolving engineering world.

Our tried and tested technology capabilities have been developed over the years with diversified projects delivered to a global clientele. A dedicated talent pool with core engineering skills in key industry segments, makes our service line a completely integrated service model. Expertise in complex projects, collaboration with downstream parties for project delivery, cost effective and environmentally-friendly solutions, core engineering skills, quality systems, processes and simulation tools – we, at Tata Consulting Engineers, are the go-to consultants for integrated engineering solutions from concept to commissioning.



## SERVICES



### Design & Engineering Services

## OFFERINGS

- ▶ Project Concept Development
- ▶ Pre-feasibility & Feasibility Reports
- ▶ Detailed Project Reports
- ▶ Environmental Study Reports
- ▶ System Studies
- ▶ Frontend Engineering Design (FEED)
- ▶ OE Services
- ▶ Detailed Engineering including 3D modelling as per requirement



### Project Management & Safety

- ▶ Project Management
- ▶ Engineering Review
- ▶ Construction Management / Supervision
- ▶ Program Management
- ▶ Interface Management
- ▶ Specialised Services
- ▶ Quality & Safety Audits
- ▶ Outage Management
- ▶ Safety Training



### Procurement Management

- ▶ Procurement Assistance
- ▶ Quality Inspection & Equipment Management
- ▶ Vendor Quality Assessment
- ▶ Vendor Management
- ▶ Inquiry/Tender Preparation & Award



### Digital & Advanced Technologies

- ▶ 3D Modelling & 4D Simulation
- ▶ Asset Digitisation
- ▶ Engineering & IT Services
- ▶ BIM & IIoT
- ▶ New Machine Development
- ▶ Machine Localisation
- ▶ Machine Component Development
- ▶ Design Validation
- ▶ FE Analysis
- ▶ Special Projects

By virtue of our multi-faceted talent and services, we stand apart as a unique engineering consultant that has the ability to grow, evolve and change as per industry trends and customer requirements.

Understanding that no project is the same, we, at TCE apply our unique capabilities to provide innovative solutions to the most complex of projects.

# The TCE Advantage

System engineering and integration for complex projects from concept to commissioning

Applied engineering to take up first-time projects and provide innovative solutions

Expertise in all engineering streams within TCE to provide value engineering solutions across the engineering spectrum

Institutionalised engineering practices and methodologies and application of international codes and standards

Customised delivery models with multi-disciplinary talent distributed across dedicated in service delivery centres and a combination of off-shore, on-site model

Availability of state-of-the-art design, engineering and construction management IT suites specific to every industry segment it operates in

Best in-class safety standards and track record of safe management practices

Services from the largest concentration of industry experts and certified project management consultants

Unique services based on specific requirements such as Dedicated Engineering Centres for exclusive long-term engagement

Serving as extended, engineering arm to meet requirements of all engineering needs of owners, OEMs, EPC



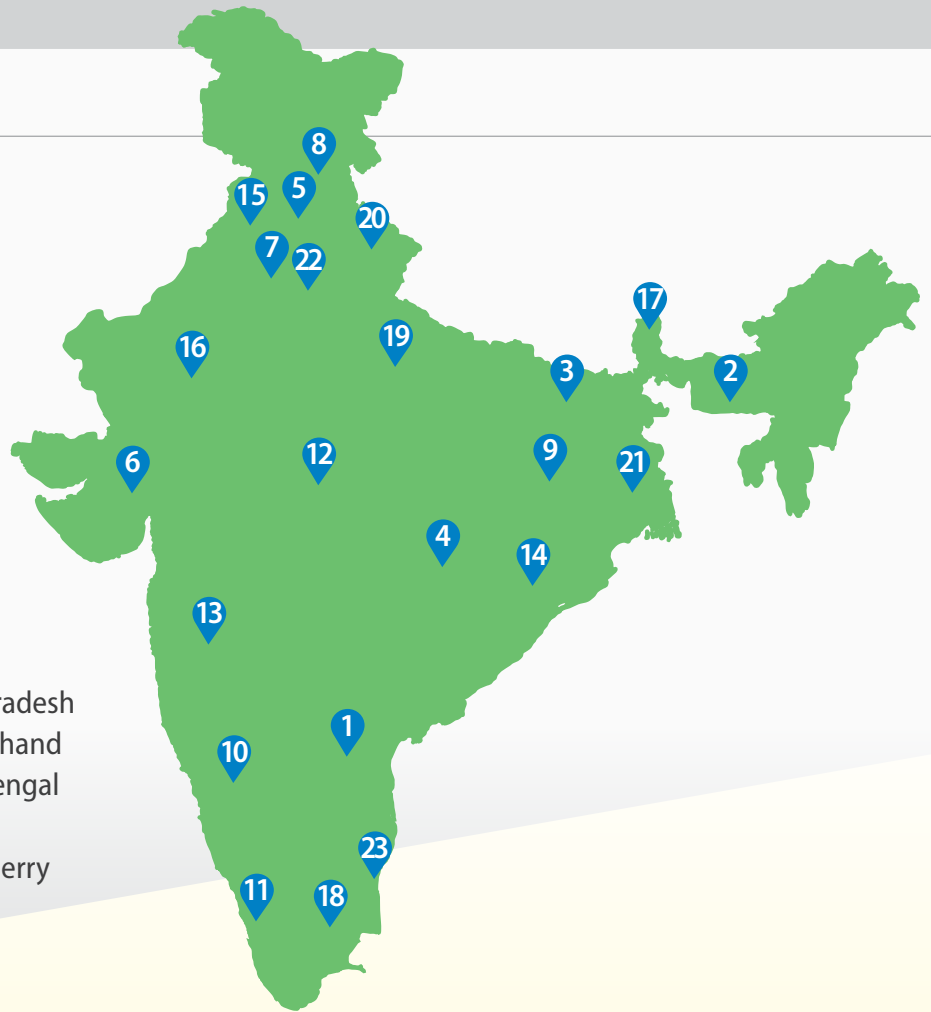
## INTERNATIONAL PROJECTS

- |                         |                  |                    |
|-------------------------|------------------|--------------------|
| 1. Nigeria              | 12. Oman         | 23. United Kingdom |
| 2. India                | 13. Italy        | 24. France         |
| 3. South Korea          | 14. Thailand     | 25. Sri Lanka      |
| 4. United States        | 15. Netherlands  | 26. Singapore      |
| 5. Saudi Arabia         | 16. Nepal        | 27. Spain          |
| 6. United Arab Emirates | 17. Australia    | 28. Kuwait         |
| 7. Japan                | 18. Uganda       | 29. Namibia        |
| 8. Egypt                | 19. Malaysia     | 30. Indonesia      |
| 9. Bangladesh           | 20. China        | 31. Vietnam        |
| 10. Tanzania            | 21. South Africa |                    |
| 11. Zambia              | 22. Iran         |                    |



## PROJECTS IN INDIA

- |                     |                   |
|---------------------|-------------------|
| 1. Andhra Pradesh   | 19. Uttar Pradesh |
| 2. Assam            | 20. Uttarakhand   |
| 3. Bihar            | 21. West Bengal   |
| 4. Chhattisgarh     | 22. Delhi         |
| 5. Chandigarh       | 23. Puducherry    |
| 6. Gujarat          |                   |
| 7. Haryana          |                   |
| 8. Himachal Pradesh |                   |
| 9. Jharkhand        |                   |
| 10. Karnataka       |                   |
| 11. Kerala          |                   |
| 12. Madhya Pradesh  |                   |
| 13. Maharashtra     |                   |
| 14. Odisha          |                   |
| 15. Punjab          |                   |
| 16. Rajasthan       |                   |
| 17. Sikkim          |                   |
| 18. Tamil Nadu      |                   |



Maps not to scale

Awards & Accolades

# Celebrating path-breaking solutions.



**2017**

TCE teams presented at IEEE

TCE teams receives the Certificate of Appreciation for chairing session on Smart Energy at a seminar organised by IEEE



**2016**

TCE teams receives Best Paper award by ICI

TCE teams receives the Certificate of Appreciation for outstanding services as President of ISA Kolkata chapter



**2015**

**Bentley's 2015 Be Inspired Award**  
"Innovation in Land Development"

**46th EEPC Award**  
Star Performer Award For Engineering Services Under Large Enterprise Category



**2014**

**CII-Innovation Awards 2014**

Trophy And Certificate For Being Among The Top 26 Innovative Companies in India

**2013**

**Council of Power Utilities**

India Power Awards – Best Consultant

**2012**

**Modern Power Systems, UK**

Fossil Power Innovation award for 4000 MW Ultra Mega Power Plant at Mundra, Gujarat

**2011**

**CNBC- TV 18**

Excellence in Infrastructure under the category of “Best Design Project” for the “Rajasthan Urban Infrastructure Project”

**Tata Innovista 2014**

Promising Innovation - Core Process In Thermal Power Plants/Flue Gas Desulpharisation Systems





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TCE Corporate Communications

### **Engineering A Better Tomorrow**



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