



Projects and Energy Solutions



Your Reliable EPC and O&M Partner



Conserving Resources, Preserving the Future.

Thermax provides systems and solutions in the critical domains of energy and environment. The products and services developed by Thermax help industries achieve better resource productivity and improved bottom lines while maintaining the cleanest environment. Our vision for the future is firmly anchored in the belief that, to stay competitive, business houses need to adopt sustainable practices.

Thermax's product portfolio covers heating, cooling, water and waste management, and specialty chemicals. The company designs, builds and commissions large boilers for steam and power generation, turnkey power plants, industrial projects execution on EPC basis, waste-to-energy systems and air pollution control projects.

Projects & Energy Solutions (P&ES), a pioneer in bringing the concept of EPC (Engineering, Procurement and Construction) in industrial power generation offers turnkey - EPC solutions to industries across multiple sectors. Set up in 1995, the division has extensive experience of setting up projects for Captive, Cogeneration & Waste Heat Recovery Power Plants, Petrochemicals & Refinery units, Flue Gas Desulphurisation (FGD) Plants & Gasification Units.

Our engineering expertise in modularisation and standardisation significantly reduces project cycle time and offers a compact layout ensuring seamless execution and right first time.

Thermax's commitment to customers continues beyond EPC with our digitally enabled cutting-edge O&M services guaranteeing plant availability and reliability.

Safety remains our foremost priority, demonstrated by ISO 45001:2018 certified sites that guarantees safe execution.



Our Offerings

Power Plant EPC



Captive and Cogeneration Plants

Thermax is a pioneer in EPC of captive, cogen and trigeneration solutions for the industry for more than 25 years. Spanning over 150 varied projects, P&ES division has contracted more than 3,500 MW of power plants on turnkey EPC basis, globally.

- Biomass based – 150+ biomasses
- Coal – All types of Indian and imported coal
- Natural gas



Waste Heat Recovery Power Plants

Thermax has been at the forefront of waste heat recovery power plants for more than a decade. Thermax's expertise in WHR boiler design and experience in executing EPC solutions set the benchmark by generating maximum power from the available waste heat.

- Cement Waste Heat Recovery Power Plants
- Steel and Sponge Iron



Independent Power Plants

We have varied IPP installations running flawlessly based on various fuels including biomass. With majority customers giving us the repeat orders have boosted our efforts in providing the world class solutions to the industry.

- Coal Based IPP
- Biomass Based IPP



Flue Gas Desulphurisation Plants

In our continuous endeavour to provide improved emission control, we offer world class FGD systems for the power plants. With licensing agreement with world leading technology provider, our system achieves

- Wet Flue Gas Desulphurisation
- Spray Dryer Absorber
- Dry Sorbent Injection



Waste to Energy

Thermax has rich experience, proprietary technology of waste to energy, RDF boilers and licensed technology for MSW (Municipal Solid Waste). We provide WTE solutions that help to safely utilise and dispose non-recyclable solid waste in an environmentally friendly way.

- Municipal Solid Waste Based Plants
- RDF Based Plants
- Industrial Waste

Our Offerings Industrial EPC



Refinery & Petrochemicals Process Units

Thermax's has proficiency in managing large scale complex greenfield and brownfield projects and more than 50 years of OEM experience. We have successfully contracted EPC of sulphur recovery units, amine regeneration unit, SWS and TGTU with leading refinery organisations.

- Refinery Process Units
- Sulphur Recovery Units
- Vacuum Gas Oil Mild Hydrocracking



Coal Gasification Plants

Thermax's in-house developed gasifier technology converts all types of coal into syngas to replace oil or gaseous fuel saving fuel costs. The syngas can be used to manufacture chemicals like methanol, ethanol, etc. Our technology utilises a wide variety of coal from high or low ash Indian coal to imported coal thus offering flexibility, utilising coal < 6mm size

- Atmospheric and Pressurised Fluidised Bed Gasification
- Air and Oxy-Blown Technology



Bio-CNG Plants

With cutting edge technology, we provide a unique flexible solution to convert 2G lignocellulose feedstocks to Bio-CNG from various waste sources, including biomass, agro waste, municipal solid waste, and food processing waste. We are executing multiple plants across India enabling clean, sustainable energy while promoting circular economy.

- Multiple feedstocks like soya, sugarcane trash, cotton straw, press mud, MSW, cattle dung etc.
- Flexibility in Capacity Plants
- Complete Digestion of 2G Feedstock



Ferro Alloys Production Units

We offer comprehensive EPC solutions for all types of ferro alloys production units. Our integrated SAF solution, with SAF – submerged arc furnace (with technology tie-up), provides end to end service for customer including all mechanical, electrical and civil required for the production unit.

- Waste Heat Recovery Solutions
- Integrated EPC solution with SAF



Factory EPC

We offer tailor made EPC solutions for setting up manufacturing units for various industries. With experience of installing most complex EPC projects, we are best placed to serve the industry.

- Chemicals - Agro, Specialty Pharma Intermediates and Bulk Chemicals
- 1G & 2G Ethanol
- Auto Ancillaries

Our EPC Capabilities



Engineering

Thermax's engineering expertise is embellished by technically proficient engineers who work on state-of-the-art technology. We provide design solutions as well as detailed engineering to give an exhaustive range of services to a diverse clientele. STAAD, AUTOCAD 3D, REVIT, ETAP, RCDC, Steam-Pro, GT-Pro, TEKLA, etc. are some of the tools with which the engineering is optimised. The engineering process is coupled with Primavera for monitoring progress. With its world-class engineering practices and expertise in all the leading engineering standards, Thermax provides the perfect solution.



Procurement

Established and reliable international sourcing helps in procurement of quality components with the best cost. Stringent approval processes are applied to shortlist and finalise the most suitable domestic and overseas suppliers. The procurement process is integrated with ERP as well as Primavera for efficient and fault-free purchase process. Project progress monitoring, contracting and contract management capability along with best supplier management practices enable Thermax to maintain 100% in time performance.



Project Management

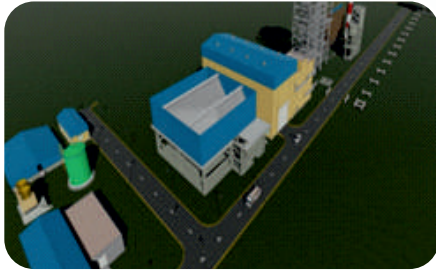
Our detailed project management, integrated planning and the use of online dashboards enhance the quality and efficiency of delivery. Our QPMP / IPMA qualified project managers ensure the deliverables with respect to time, performance, quality & cost are met through professional project control tools and dashboards. We have a unique IT system that integrates our core planning platform with ERP and functional trackers. This ensures availability of real time progress tracking across E, P & C functions.



Construction

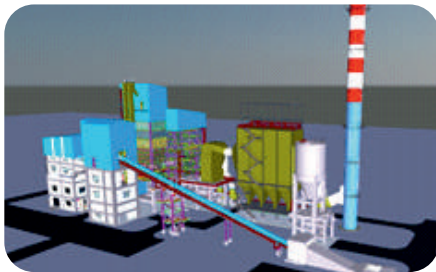
We have the capability to execute 20+ concurrent projects spread across domestic and international sites. Our experience of concreting 100,000 m³/annum along with 80,000 ton of mechanical erection and handling of more than 2,000 workforce at site speaks volumes about our execution capability. ERP enabled construction progress monitoring along with front estimation tool provides seamless control on the ground. Technology enabled material handling ensures better availability and traceability. A well structured team led by site in charge, supported with area engineers, site planner and site safety personnel help in completing the project on time, maintaining high standards of safety.

Our EPC Expertise Combined with Digital Capabilities



Latest Design Automation Software

- In-house expertise for the latest engineering and design s/w like STAAD, AUTOCAD 3D, REVIT, ETAP, TEKLA, STEAM-Pro, GT-Pro, etc.
- Primavera integration with ERP for effective project management and control
- Modularisation



3D Laser Scanning

- Faster generation of 2D drawings and conversion to 3D models for brownfield projects
- No manual measurement or referring to old drawings
- All interfaces are taken care at the design stage, robust clash checking



Building Information Modelling

- Clear visualisation of architecture, engineering, and construction
- Automated 3D model & drawing generation
- 5D monitoring with Integration of time and cost with 3D engineering



Operation & Maintenance



We offer world-class operations and maintenance services for power plants, utilities (like boiler, chillers, WTP/FTP, compressors, electricals, etc.), process plants and FGD units ensure round the clock availability in a safe and compliant environment.

Our expertise stems from demonstrated and successful operations & maintenance of plants and equipment across different sizes, configurations, technologies / makes and industries. Our experienced and trained team, ensure efficient and reliable operations even at variable load.

With Value Added Services (VAS), our experts analyse customer's plants and provide solutions to maximise asset utility and minimise costs. Our services aim to reduce energy consumption, enhance availability and efficiency of plants while driving down the lifecycle costs through continuous innovation.

Thermax EDGE™ Live, a unique digital service, integrates industrial assets across multiple locations and perform real-time data analytics. Powered by artificial intelligence, machine learning, and Thermax-engineered algorithms Thermax EDGE™ Live boosts plant performance, enhances uptime and provides forward-looking indicators for plant performance.

OFFERINGS

Power Plant O&M

FGD

Utility Equipment O&M

Shutdown & Breakdown Maintenance

Value Added Services

Digital Solutions

Spares

Energy Management Solutions



There are significant tailwinds accelerating energy efficiency as a top-team agenda in industries globally. Through our Energy Management Solutions – EMS, we provide one-stop solution for end-to-end energy management, efficiency improvement and guaranteed savings for customer's plants. Through our proprietary processes, we deliver integrated energy management solutions from plant assessment to realisation of guaranteed savings.

With understanding of all aspects of various industry sectors, we effectively address generation, distribution, and consumption sides of the energy. Our energy experts deploy proven solution to enhance generation capacity, optimise fuel consumption and recover waste heat at various process steps. Inhouse developed digital platform ensures real time assessment and analysis for measuring the before and after condition as well as the sustenance.

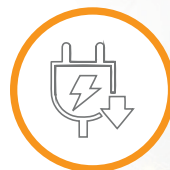
Thermax offers these services in CAPEX as well ESCO mode – where the complete responsibility of analysis, solution design, implementation, monitoring and finance is taken care by us!



10% guaranteed savings



Integrated solutions



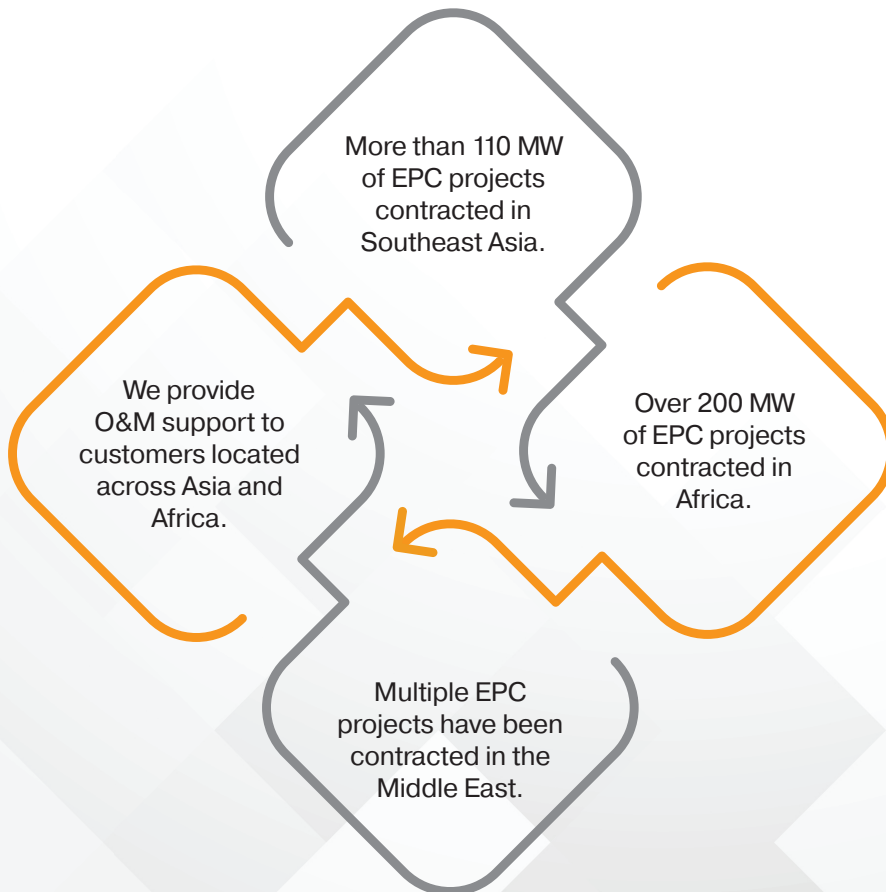
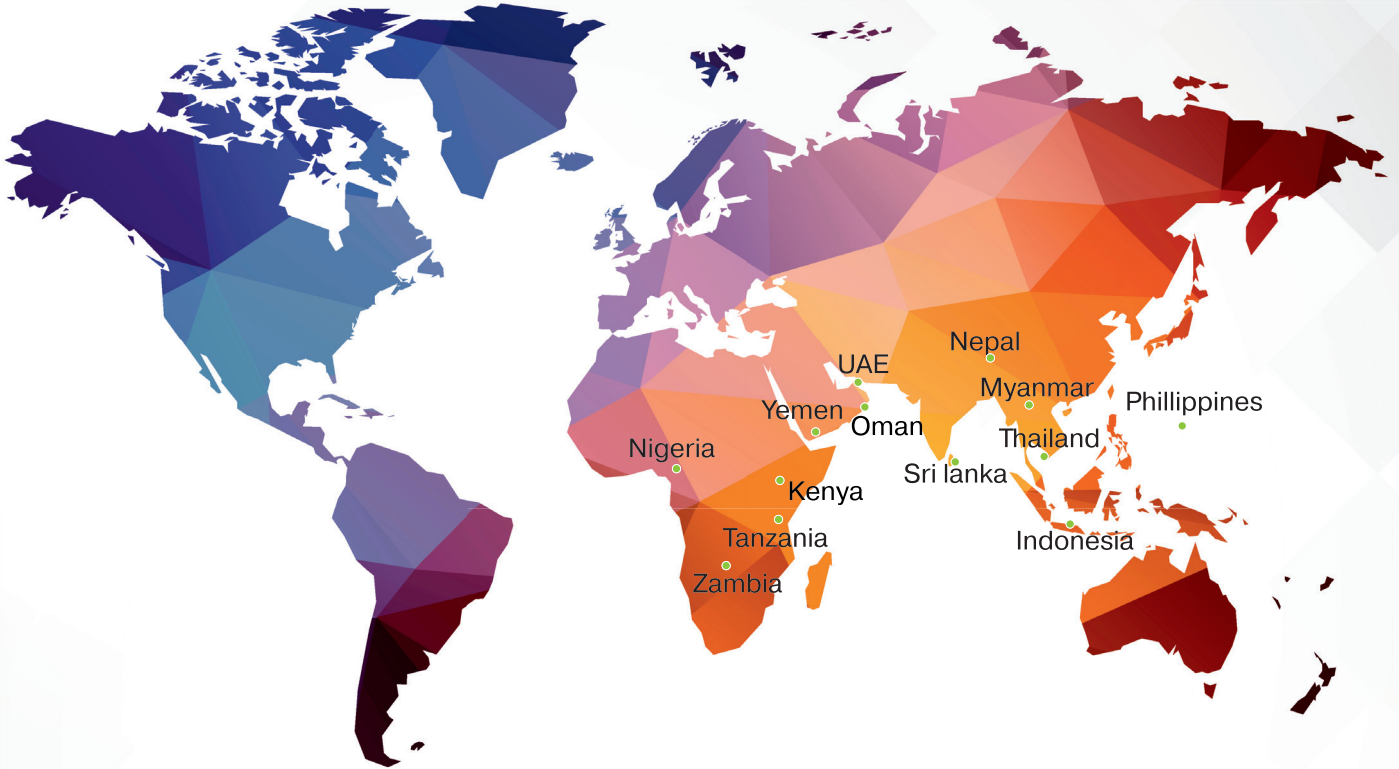
Improvement in overall efficiency



Strong understanding of value drivers



Our Global EPC Presence



Thermax Advantage



In-house manufacturing capability for emission control equipment, fired heaters, boilers, MCC (Motor Control Center), and incinerator packages, among other items.



Technology-driven EPC execution offerings on-time delivery, high performance, and the lowest lifetime cost.



Contracted over 3,500+ MWe across 150+ power projects on an EPC basis.



Established global EPC player with installations in multiple countries.



Digital offering integrating industrial assets across multiple locations, providing real-time dashboards.



ISO 45001:2018 certified sites.



In-house O&M capability, ensuring guaranteed plant performance.



Key Projects



Biomass-Based Power Plants



Bataan 2020

Capacity - 12.5 MW
Configuration - 1x12.5 MW
Fuel - Rice Husk
Location - Philippines

Received repeat order from the customer Won the Gold Award in Asian Power 2012 for the best biomass cogeneration plant in Asia O&M services from Thermax



Isabela Biomass Energy Corporation

Capacity - 20 MW
Configuration - 1x20 MW
Fuel - Rice Husk
Location - Philippines

Won the Sustainable Energy Finance Award by International Finance Corporation Received repeat order from the customer O&M services from Thermax



Cagayan Biomass Energy Corporation

Capacity - 15 MW
Configuration - 1x15 MW
Fuel - Biomass
Location - Philippines

Repeat order from the customer Comprehensive O&M from Thermax



Assam Bio Refinery

Capacity - 25 MW
Configuration - 1x25 MW
Fuel - Biocoal + Biomass
Location - Assam, India

Key Projects



Cement Waste Heat Recovery



Rain Cement

Capacity - 4.1 MW

Configuration - 1x6.4 MW

Fuel - PH & AQC Exhaust Gas

Location - Andra Pradesh, India

Repeat order from the customer O&M services from Thermax



Wonder Cement

Capacity - 18 MW

Configuration - 1x18 MW

Fuel - Waste Heat from PH & AQC

Location - Rajasthan, India



JK Cement

Capacity - 13 MW

Configuration - 1x6.4 MW

Fuel - Waste Heat from PH & AQC

Location - Rajasthan, India



Gujarat Sidhee Cement

Capacity - 5.5 MW

Configuration - 1x5.5 MW

Fuel - Waste Heat from PH & AQC

Location - Gujarat, India

Key Projects



Steel Waste Heat Recovery



Tata Metallics

Capacity - 10 MW

Configuration - 1x10 MW

Fuel - Coke Oven Waste Gas

Location - West Bengal, India

Repeat order from the customer O&M services from Thermax



Kirloskar Ferrous Industry Limited

Capacity - 20 MW

Configuration - 1x20 MW

Fuel - Coke Oven Waste Gas

Location - Karnataka, India



Tata Sponge Iron

Capacity - 18.5 MW

Configuration - 1x18.5 MW

Fuel - Waste Heat from DRI kiln

Location - Orissa, India

First sponge iron enterprise in India to earn carbon credits



Sesa Goa

Capacity - 30 MW

Configuration - 1x30 MW

Fuel - Coke oven fired gas and blast furnace gas

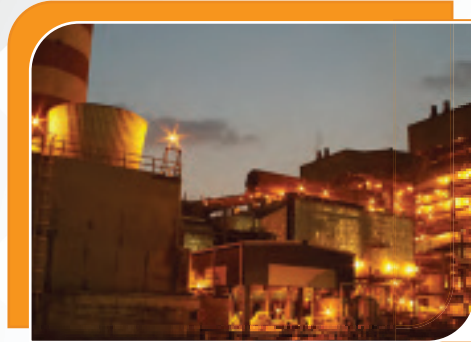
Location - Goa, India

Repeat orders from customer

Key Projects



Coal-Based Power Plants



Meenakshi Energy Private Limited

Capacity - 2 x 150 MW

Configuration - 2x150 MW

Fuel - Coal

Location - Andhra Pradesh, India



Trident Ltd.

Capacity - 16 MW

Configuration - 1x16.3 MW

Fuel - Coal

Location - Madhya Pradesh, India



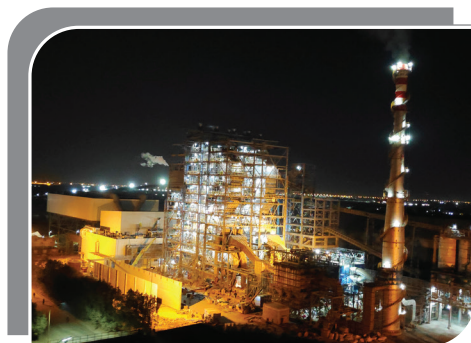
Sudarshan Chemical Industries

Capacity - 8 MW

Fuel - Coal

Location - Maharashtra, India

Repeat order from the customer Comprehensive O&M from Thermax



Sharjah Cement Factory

Capacity - 40 MW

Configuration - 1 X 40 MW

Fuel - Coal

Location - Sharjah, UAE

Key Projects



Coal-Based Power Plants



Indian Metals & Ferro Alloys Limited

Capacity - 2 x 60 MW
Configuration - 2x60 MW
Fuel - Coal
Location - Orissa, India



Ankur Biochem

Capacity - 9.8 MW
Configuration - 1 X 9.8 MW
Fuel - Coal
Location - Jharkhand, India
Repeat orders from customer

Gas-Based Power Plants



Arvind Mills

Capacity - 2 x 27.5 MW
Configuration - 1x27.5 MW
Fuel - Natural Gas/Naptha
Location - Gujarat, India



ONGC Mangalore Petrochemical Refinery

Capacity - 72 MW
Configuration - 2x22+1x28 MW
Fuel - Natural Gas / HSD/ LSHS
Location - Karnataka, India
Repeat order from the customer O&M services from Thermax

Key Projects



FGD-Key Projects



Damodar Valley Corporation

Capacity - 1000MW (2X 500 MW)
Location - Jharkhand
Application - Power Generation



Maithon Power Limited

Capacity - 1050 MW (2X 525 MW)
Location - Jharkhand
Applicaion - Power Generation

Bio-CNG Plants



EverEnviro Resource Mgmt.

Capacity - 15 TPD
Location - Dhuri, Punjab
Feed - Paddy straw and other Agro Waste



EverEnviro Resource Mgmt.

Capacity - 15 TPD
Location - Patran, Punjab
Feed - Paddy straw and other Agro Waste

Conserving Resources,
Preserving the Future.



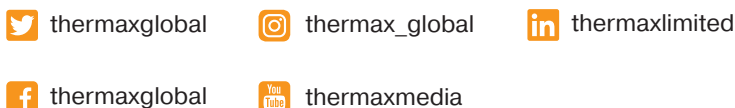
Registered Office

Thermax Limited
D-13, MIDC Industrial Area, R D Aga Road,
Chinchwad, Pune 411 019, India.
Email: enquiry@thermaxglobal.com
Customer Care: 1800-209-0115

Business Office

Sai Chambers,
15 Mumbai-Pune Road, Wakdewadi,
Pune 411 003., India.
Email: enquiry@thermaxglobal.com
Customer Care: 1800-209-0115

www.thermaxglobal.com



This brochure presents only some of our products and we reserve the right to amend any product details without notice.
The photographs used in the brochure are indicative and may not match the actual plant.