



Engineers India Limited



**Energising Business
*Across The Power Sector***



Engineers India Ltd. (EIL) is a leading global engineering consultancy and EPC company. The Company has a diverse portfolio comprising Hydrocarbon, Chemicals & Fertilizers, Mining & Metallurgy, Infrastructure, Water and Waste Management, Solar & Nuclear Power sectors.

EIL has emerged as a 'Total Solutions' engineering consultancy company providing design, engineering, procurement, construction and integrated project management services from 'Concept to Commissioning' with highest quality and safety standards. It also provides specialist services such as heat and mass transfer equipment design, environmental engineering, specialist materials and maintenance and plant operations and safety services.

EIL has successfully completed all projects, all of which are operating smoothly (in most cases at more than rated capacity), and has, hence, created an array of

satisfied clients. EIL has secured many repeat businesses from its clients which is a sign of client satisfaction, confidence and trust reposed in EIL.

EIL has earned the reputation of being a veritable

Over the past five decades, EIL has executed more than 5000 projects including over 400 major projects worth USD 200 Billion in total cost.

treasure of technical knowledge, skills and professional competence. EIL has worked with almost all process licensors and a large number of engineering/contracting companies worldwide and our engineers are well versed with international engineering codes and standards. With a workforce of over 3000 experienced employees & a variety of specialised services available under one roof, EIL offers an unique advantage to clients like none other.

5.6 million available Technical Manhours annually
9,600 available Construction Management and Supervision Man-months annually

GLOBAL PRESENCE

Geographical Regions	Key Countries served
Middle East	UAE Bahrain Kuwait Iran Oman Saudi Arabia Qatar Iraq
Asia / Asia Pacific	Australia Malaysia Indonesia Bangladesh Vietnam
Europe	Norway Turkey
Africa	Algeria Ghana Kenya Nigeria Angola Sudan Cameroon

Track Record

- 72 Major Refinery projects, including 10 Grass root refineries,
- 9 Petrochemical complexes,
- 41 Oil and Gas Processing projects,
- 213 Offshore platforms including 40 process platforms,
- 46 Pipeline projects,
- 13 Ports, Storage & Terminals,
- 9 Fertilizer projects,
- 32 Mining and Metallurgy projects,
- 33 Infrastructure projects (airports, highways, bridges, water management, & energy-efficient intelligent buildings),
- 23 Turnkey/EPC projects.
- Infrastructure Projects
- Power / Captive Power Projects

Strength & Innovative Solutions

- Wide exposure to process technologies in Hydrocarbon sector and have implemented major process units.
- Dedicated R&D centre which has developed over 30 process technologies, which includes technologies for Petroleum Refinery, Oil & Gas Processing & Aromatics.
- In-house Specialist services in: Geotechnical, Material selection, Corrosion and Maintenance, Refractory engineering, Environmental engineering, Energy efficiency studies. Safety studies such as Risk Analysis, EIA, HAZOP, SIL, QRA& RRA.
- Exposure to recent technological developments via practical implementation on projects.
- Continuous Process improvement through feedback from operating plants.
- Strong Basic Design Capabilities.
- Exposure to wide range of technologies.
- Experienced and qualified technical personnel.
- Extensive in-house data bank of Process Design, Engineering, Costing and Procurement for completed projects.
- Extensive Vendor Database with over 1800 Vendors globally. Annual worldwide Equipment Procurement of over USD 2 to 4 Billion.
- In-house Construction Management Team for Quality Assurance and Construction Supervision.
- In-house bulk material control systems for management of bulk materials from Engineering to Construction stages.
- Continuous updation of Design Procedures based on feedback from clients and post-commissioning services.

Leadership Position in Design, Engineering and Project Management

- All services from Concept to Commissioning under one umbrella.
- Established Process Design Capabilities.
- Global presence and experience in project execution in challenging terrain, delivering Cost effective, Time bound, Quality solutions.
- Dedicated Planning, Estimation & Costing Specialistst .
- Extensive Revamp including low cost revamp and Modernization experience, and yield maximization experiences.
- More than five decades of Integrated Engineering & Project Management Experience in Hydrocarbon Industries.

Quality & HSE

- An ISO 9001, ISO14001 and OHSAS18001 certified company.
- Follows its in-house Quality and HSE procedures, manuals and lessons learnt during all stages of project execution from Conceptualization to Commissioning of the project.
- Adheres to International and Local Environmental regulations and norms during implementation of all its projects.
- Received several Safety awards and Certifications from various clients and safety accreditation councils.





EIL has been associated with various projects in the power sector(both captive & Independent) since 1970's for various clients and has further cemented its credentials in recent past. Innovative and cost effective design and value engineering has always been the mantra at EIL.

A dedicated team of professionals at EIL continuously strive to bring out the best out of every opportunity at hand, with a vision to create a new benchmark through every project executed.

EIL has been providing best contracting and project implementation strategies to achieve project completion in best possible time and cost.



THERMAL

- Captive Power Plants
- Gas Based IPPs of 350+ MW
- Super Critical Power Plants of 660MW



SOLAR

- Ground Mounted Solar Photovoltaic Plants
- Concentrated Solar Power Plants
- Rooftop mounted Photovoltaic Plants



NUCLEAR

- Nuclear Power Plant
- Nuclear Fuel Fabrication Complex

POWER

POWER VERTICALS

EIL has in house expertise to provide design and engineering services for the main power plant facilities as well as for entire balance of plant (BOP) facilities including infrastructure facilities.

EIL Offerings

- Lifecycle Evaluation for the Project
- Configuration Optimisation
- Energy audit through BEE certified energy auditors
- MOU with Leading Clients/Technology Consultants
- Internationally acclaimed Softwares, Viz., "Gate Cycle", "PVSyst" etc.
- Knowledge & working experience various International Standards and regulations viz., ASME PTC, IBR, GOST, PNAE, AERB etc.
- Value Engineering for high Quality and Productivity



EIL Services

(from Concept to Commissioning)

- Concept planning & site selection studies.
- Pre feasibility / Feasibility studies
- Detailed Project studies
- Site survey, soil investigation, EIA / EMP studies, infrastructure planning.
- Assistance in obtaining project related clearances.
- Steam and power balance and power plant configuration studies
- Basic engineering including selection & sizing of main plant & equipment, balance of plant (BOP) equipment.
- Procurement services.
- Detailed engineering services of systems / equipment
- Project management & site supervision services.
- Inspection & expediting services.
- Commissioning & post commissioning assistance.
- Owner's Engineer Services

Technological Excellence

Thermal

- Steam Power balance and Captive Power Plant Configuration Studies
- Specifications for Main Plant equipment & system including boilers, turbines, fuels (solid/liquid/gaseous) handling & feeding systems, condensate & feed water systems, draft system, flue gas cleaning system, etc.
- Equipment Layout aligned with Owner's maintenance practices
- Power System studies and short circuit analysis
- System definition and sizing of all utility systems for captive steam/ power generation
- Fuel Oil System including unloading, storage and handling system, startup and sustained operation facilities.
- Fuel Gas conditioning and firing systems
- Coal/ pet coke Handling System including railway sliding, stacking and reclaiming, crushing system, conveying system, etc.

- Complete automation and control including BMS. Alignment of OEM controls to main plant.
- Design of Chimney (RCC/Steel, single/multi flue).
- Complete Civil, Structural and architectural design
- Complete steam/ power generation facilities, BOP system definition, specifications, Basic Design Engineering Package, Detailed Engineering, Procurement and Construction Management.



FR	Feasibility Report	SC	System Configuration Study	BD	Basic Design
EP	Engineering for Procurement	DE	Detailed Engg	P	Procurement
C	Construction Supervision	PMC	Project Management Consultancy	S	Specialist Services

ONGOING

Captive Power plant of 2xFr.5 + 2x65TPH HRSG for GSPC, Kakinada in LSTK/OBE Mode

SC BD EP P C PMC S

3xFr 9E + 3X220TPH HRSG + 2X30MW STG + 4X300TPH Boiler Combined cycle cogeneration steam and power plant, IOCL, Paradip Refinery Project

SC BD EP P C PMC S

4XFr.6 GTG +4X110TPH HRSG+ 2x220 TPH Boiler +2x30 MW STGCombined cycle cogeneration steam and power plant, OPaL Petrochemical Project

SC BD EP P C PMC S

2X170 TPH Boiler + 1X9 MW STG+2X25 MW STG cogeneration plant for GAIL Pata

SC BD EP DE P C PMC S

3X85 TPH HRSG +1 X120 TPH Boiler +1 X15 MW STG cogeneration plant for GAIL, Vijaypur

SC BD EP DE P C PMC S

8X Fr6 GTG+ 8X110TPH HRSG+4X31 MW STG+4X400 TPH Boiler Combined cycle Cogeneration power plant, DORC, Dangolte Refinery & Petrochemicals Project,

SC BD EP DE P C PMC

3XFR. 6 GTG+3X110 TPH HRSG+ 2X25TPH Boiler Cogeneration Power Plant, BPCL - Kochi, IREP

SC BD EP P C PMC

Recently Completed and Ongoing Projects

THERMAL

FR Feasibility Report

EP Engineering for Procurement

C Construction Supervision

SC System Configuration Study

DE Detailed Engg

PMC Project Management Consultancy

BD Basic Design

P Procurement

S Specialist Services

THERMAL

2012

1XFr.5+GTG+1XFr 6 GTG+2x85 TPH HRSG+4x270 TPH Boiler+2x28.45 MW STG Combined cycle cogeneration steam and power plant, MRPL Refinery Expansion Project

SC BD EP

P C PMC S

Completed

2 X Fr. 6 GTG + 2 X 110 TPH HRSG+4X240TPH Boiler+2X33.15 MW STG+1X30 MW STG Combined cycle cogeneration steam and power plant for HMEL, Bhatinda

SC BD EP

P C PMC S

2010

3X33 MW Petcoke/Coal fired Cogeneration steam and power plant, BORL Refinery Project

SC BD EP

P C PMC S

Ongoing

Comparison Study for Coal to Polygeneration vs coal to power (Equipment for 8 x 660MW Ultra Mega Power) Project at Chhattisgarh

FR SC BD EP DE P C PMC S

2010

5x H-25 GTG (25.5 MW)+5X95 TPH HRSG +2X406.5 TPH BOILER, 3 X36.7 MW STG Combined Cycle Cogeneration Captive Power Plant IOCL, PNCP

SC BD EP

P C PMC

Ongoing

2 x Fr.5 GTG + 2X 80TPH HRSG +2X80 TPH Boiler+ 1x 13.5 MWSTG Combined cycle Cogeneration Captive Power Plant, BCPL, Brahmaputra Petrochemical Complex Project

SC BD EP

P C PMC

Recently
Completed and
Ongoing
Projects

Solar & RE

- Solar Resource Analysis
- Energy Yield Estimation
- Panels Optimization and Selection of Suppliers
- Solar PV array layout
- Electrical Design & Optimization
- Structural load analysis and design
- Balance of Turbine Island Systems.
- Integration of utilities, system definition and specifications



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2014	125MW Solar Thermal Power Project at Jaisalmer, Rajasthan for M/s. AREVA (Engineering for Balance of Turbine Island)
2012	5MW Solar PV Plant at Jaisalmer, Rajasthan for M/s. GAIL
2014	90KW Solar PV Plant at EIL R&D Complex, Gurgaon, Haryana
2014	7.2 KWP Rooftop Solar PV projects on EIL Buildings at Khelgaon (Delhi)
Completed 2009	Installation of 3 nos. Dish Stirling Engines in EIL Complex, India
Completed	Detailed Feasibility Study for setting up SPV for implementing large scale renewable projects
Completed	Feasibility Report on Solar Photovoltaic Installations at GAIL's Pata Site

			EP	DE			C	PMC	S
			EP				C	PMC	S
			EP		P	C	PMC	S	
FR	SC	BD	EP		P	C	PMC	S	
FR	SC	BD	EP	DE	P	C	PMC	S	
FR	SC	BD	EP	DE	P	C	PMC	S	
FR	SC	BD	EP	DE	P	C	PMC	S	

SOLAR & RE

Recently Completed and Ongoing Projects

Nuclear

- Balance of Turbine Island Systems.
- Balance of Plant System Definition, Sizing of Systems & Detailed Engineering for procurement and construction
- Chlorination, Hydrogen, Oxygen, Nitrogen Generation plants & chemical preparation facilities
- Health Physics Units
- HSD / Fuel Oil System including unloading, storage and handling system.
- Mechanical Equipment & Piping Design using ASME SEC.III
- Complete Civil, Structural and architectural design for buildings and structures
- Electric Power Evacuation Systems including 400kV GIS & GIBD, 230kV GIS & GIBD etc.
- Heavy water project residual design detail engineering and constructions supervision.

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FR Feasibility Report

EP Engineering for Procurement

C Construction Supervision

SC System Configuration Study

DE Detailed Engg / Review of Detailed Engg

PMC Project Management Consultancy

BD Basic Design

P Procurement

S Specialist Services

Ongoing	500TPY Greenfield Nuclear Fuel Complex at Kota, Rajasthan	FR SC BD EP DE P C PMC S
2011	Updation of EIA report for KKNPP- 3 to 6	FR SC BD EP DE P C PMC S
2012	Analysis & Thermal modeling for deep sea discharge for KKNPP- 3 to 6 for MOE's CRZ clearance	FR SC BD EP DE P C PMC S
2012	Engineering Services for Intercepting drainage system for KKNPP-3 to 6	FR SC BD EP DE P C PMC S
2012	Engineering Services Contract for Balance of Plant of KKNPP-3&4	FR SC BD EP DE P C PMC S
2013	Preparation of Procurement Specifications for first priority equipment with Russian specifications under NPCIL's scope of procurement for KKNPP-3&4	FR SC BD EP DE P C PMC S
2013	Design Adequacy Re-evaluation work of Heavy Water Plant (Manuguru)	FR SC BD EP DE P C PMC S
Completed	Seismic Evaluation of RCC Civil Structures of Buildings 1001 and 1002 of NRB Kalpakkam	FR SC BD EP DE P C PMC S

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Recently
Completed and
Ongoing
Projects

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Delivering Excellence through People