

RELIANCE INFRASTRUCTURE LTD.

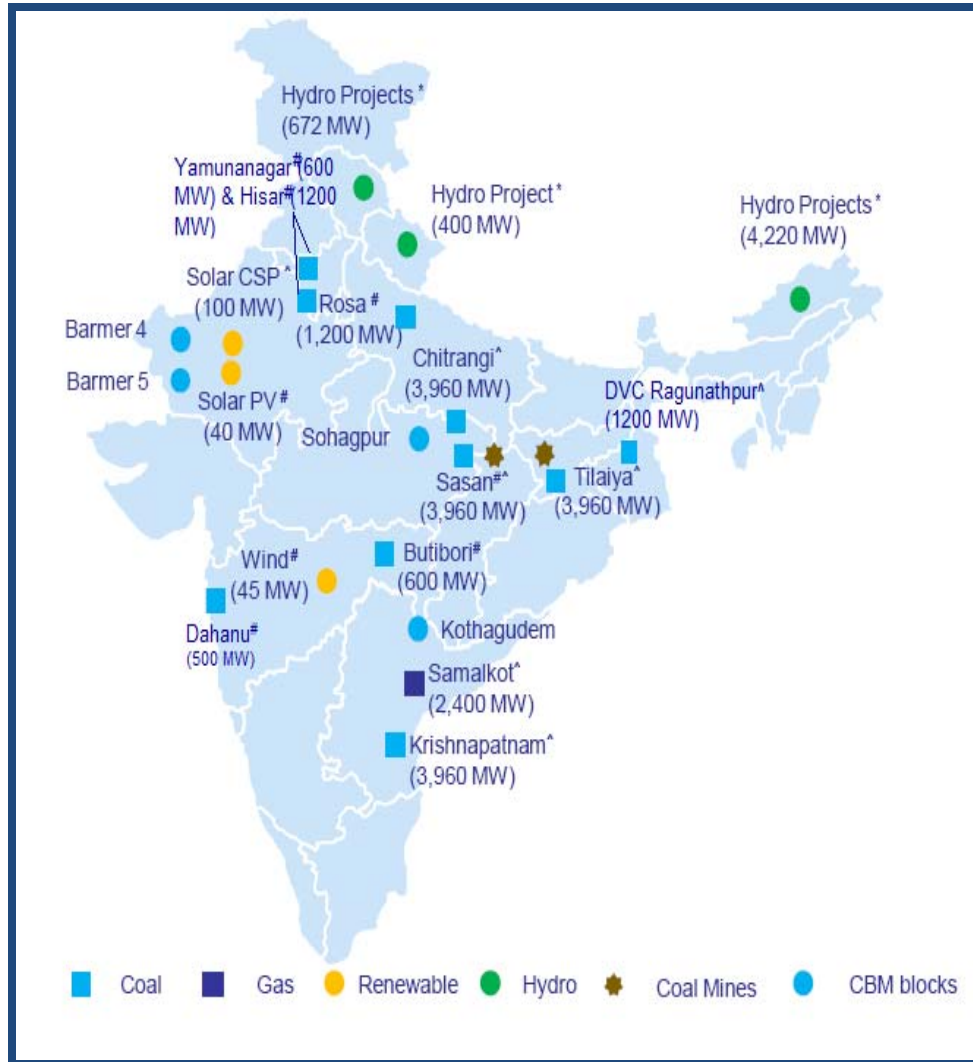
EPC - ENGINEERING GROUP SERVICES

The logo for Reliance Infrastructure Ltd. features the word "RELIANCE" in a white, sans-serif font. The letter "I" is stylized with a red triangle pointing upwards from its base. The text is centered within a dark blue rectangular background.

RELIANCE

“EPC division is committed to meet the customer expectations by continual improvement of process in Engineering, Procurement & Construction Services”.

Project Sites & Location:



❖ Well diversified Portfolio with fuel type, off take & location in power generation :

- ❖ Coal Based Power Generation
- ❖ Gas Based Power Generation
- ❖ Renewable Energy

- Solar Energy
- Wind

➤ Hydel based Power generation

| Type | Completed (MW) | Under Development (MW) | Total (MW) |
|-------|----------------|------------------------|------------|
| Coal | 8100 * | 13200 | 21300 |
| Gas | 385 | 2400 | 2785 |
| Solar | 140 | --- | 140 |
| Wind | 45 | --- | 45 |
| Hydel | --- | 5292 | 5292 |

❖ We have experience in all types of power generation technologies — from supercritical coal-fired to advanced class gas turbine to Renewable energy.

* Including external projects

Operating Projects; ^ Projects Under Construction; * Projects Under Development

- **Engineering Services:**



Project Conceptualization & Development

Proposal Engineering & Cost Estimation



Project Basic & Detailed Engineering

Standardization to reduce repeat engineering



Developmental Activities for new technologies

Documentation, Training, Quality and IT

Our Projects:❖ **SASAN UMPP-6X660MW THERMAL POWER PROJECT**

Customer: Sasan Power Limited.

- Largest Pit head integrated Power & Coal Project in India
- Among 10 largest coal based plants in the world
- Equipped with Environment friendly low emission supercritical technology
- Longest Single flight Coal transportation through Overland Conveyer of 15km Length in world.
- Large current (24000 amp) high voltage generator circuit breaker
- Centralized Operation, Control and Monitoring from Remote CCR building.

❖ 2400MW SAMALKOT COMBINED CYCLE POWER PROJECT



Customer: Reliance Power Limited/Samlkot Power Limited.

- Largest Gas based Project in India.
- Compact layout with lowest land requirement.
- Implementation of GIS (Gas Insulated Switchyard) Switchyard.
- Remote monitoring of Site activities from Headquarters via CCTV installed at site.
- Gas turbines ready for generation in just 14 months record time.

❖ 4x300MW ROSA THERMAL POWER PROJECT

Customer: Rosa Power Supply Company Limited.

- First private sector plant in Uttar Pradesh.
- Commissioned 4 months ahead of schedule.
- Designed & commissioned Infiltration Gallery unique water intake system.
- Innovative approach to design flood drainage through 3D imaging.
- Synchronization Unit 1 in 30 months, Unit 2 in 32.5 months, Unit 3 in 25.7 months, Unit 4 in 25.7 months

❖ YAMUNANAGAR-2X300MW DCRTPP THERMAL POWER PROJECT

Customer: Haryana Power Generation Company Limited.

- First 300MW unit size plant installed in India
- First Power project in the Haryana state to be awarded to private developer.
- First Project in the country where BTG equipment was supplied by M/s Shanghai Electric Cooperation (SEC), China
- Fastest implemented coal based Green Field project of this capacity in India.
- Round the clock working at site for early completion of the Project.

❖ HISSAR-2X600MW RAJEEV GANDHI THERMAL POWER PROJECT

Customer: Haryana Power Generation Company Limited.

- **600MW-Largest single unit capacity in Northern region**
- **Advanced and integrated planning for execution.**
- **BTG supplier : Shanghai Electric Cooperation (SEC), China**
- **Most aggressive commissioning schedule**
- **Commercial operation (COD) of the project achieved.**

❖ RAGHUNATHPUR-2X600MW DVC RAGHUNATHPUR THERMAL POWER PROJECT-Phase-I



Customer: Damodar Valley Corporation (DVC)

- Achieved 85% construction progress despite adverse conditions like land disputes, stoppage of works by locals, etc.
- Unit 1 already synchronized to the grid. Full Load of 600 MW has been attained.
- Unit 2 commissioning expected to be completed by March 2015.

Engineering Initiatives:



- **Central core engineering group:** Fully functional to introduce latest technology; enhance quality, standardization of engineering deliverables, and facilitating knowledge sharing from completed and ongoing projects.
- **Engineering Management Practices:** Best practices in engineering management have been adopted for effective resource utilization and productivity analysis for all engineering departments.
- **Engineering Automation Group:** Incorporates the best and intelligent 3D plant design automation technology to facilitate development of 3D plant models.
- **On Line E-Library:** World-class facilities in terms of standard / reference materials provided to the engineering staff by RInfra – Library and Resource centre at engineering offices and supported by world class IT infrastructure.
- **GIS (Geographic Information System) Group:** Set up to introduce geo-spatial technology in engineering with wide range of GIS based solutions for construction of power plant infra-structure.

Technological Initiatives:

- Feasibility for upcoming projects with State-of-the-art Advanced Ultra supercritical Coal based Power Plant with unit rating upto 1000MW.
- Installation of FRP (Fiber-Reinforced Plastic) type cooling towers in Sasan & Samalkot Project.
- Use of Prestressed concrete Spun Piling System implemented first time in the Country resulting in saving of substantial cost.
- Implementation of Ground Improvement Technology in some structures as substitute for piled foundations resulting in saving of substantial cost.
- Terracing layout concept adopted in different Projects for cost optimization & faster execution
- Use of Fly Ash bricks in Rosa and Sasan projects to reduce carbon foot prints.
- Use of State of Art software like ETAP for Electrical Power System studies and Protection Relay coordination studies.
- Extensive installations of Remote control I/O (Full form) Cabinet's for Coal & Ash handling plant in Sasan UMPP.