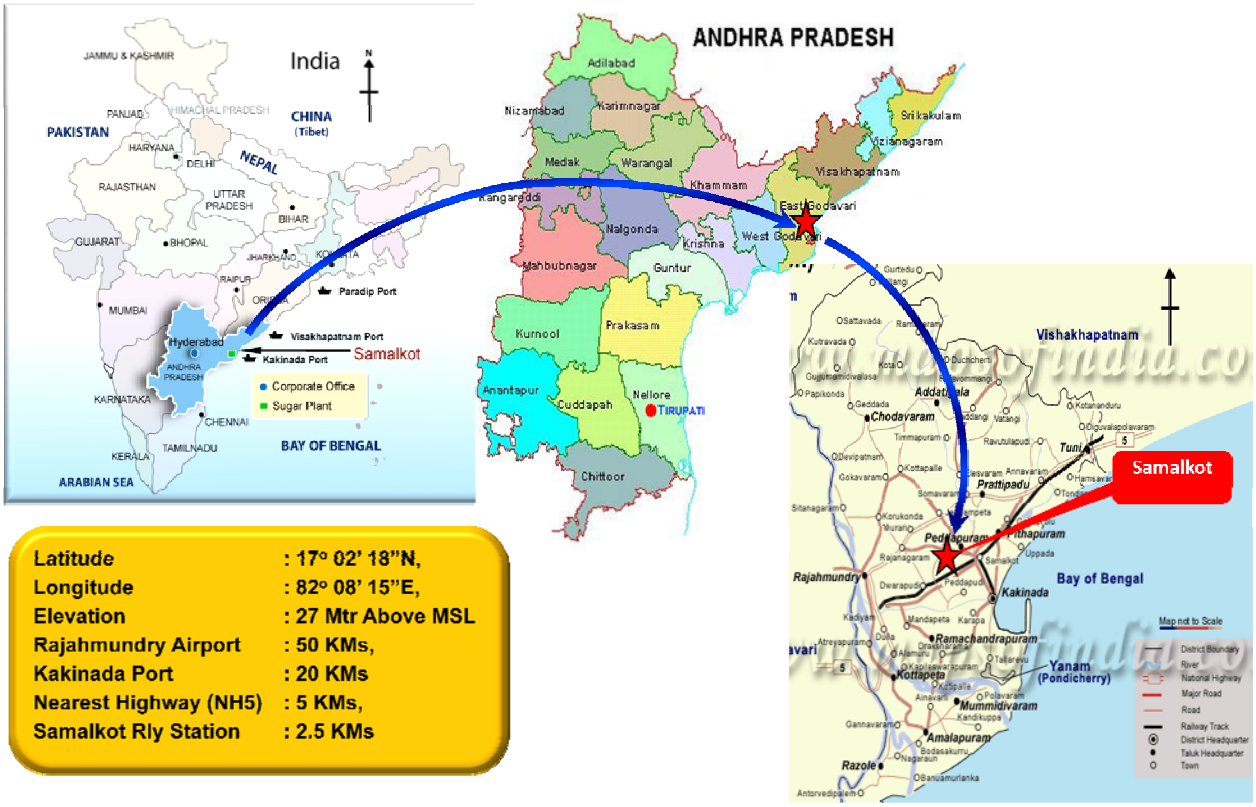
# Samalkot – 2400MW Gas Based Combined Cycle Power Project at Samalkot, Andhra Pradesh, India

## A. Samalkot Location Details:

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|---|---|
| **Latitude** | **: 17° 02' 18"N,** |
| **Longitude** | **: 82° 08' 15"E,** |
| **Elevation** | **: 27 Mtr Above MSL** |
| **Rajahmundry Airport** | **: 50 KMs,** |
| **Kakinada Port** | **: 20 KMs** |
| **Nearest Highway (NH5)** | **: 5 KMs,** |
| **Samalkot Rly Station** | **: 2.5 KMs** |

## B. About 2400MW Samalkot Power Project:

Samalkot Power Limited (SPL) is implementing a 2400 MW Combined Cycle thermal power plant at Industrial Development Area of Peddapuram, Samalkot Mandal, East Godavari District, Andhra Pradesh, India.

Reliance Infrastructure Limited has appointed Black & Veatch, USA a renowned engineering consultant as main engineering consultant for the Project. Toshiba Power Systems and Tractebel Engineering have been appointed as civil & structural and gas pipeline consultant respectively.

## C. Project details:

**Project Capacity** : 2400MW

**Module Configuration** : Three Modules of 800MW nominal Capacity.

**Major Equipment Suppliers** :

- ✓ Gas Turbines, Steam Turbines, Generators and Auxiliaries - M/S General Electric USA.
- ✓ Heat Recovery Steam Generators - CMI-EPTI USA
- ✓ M/s Hangzhou for Condenser and Auxiliaries,
- ✓ M/s Hamon Belgium for Cooling Towers
- ✓ M/s Xian Electric, China - GIS
- ✓ M/s Hyundai Heavy Industries - Generator Transformers.
- ✓ EPC contract for civil works - M/S Shapoorji Pallonji & Co.

**Power Evacuation** : Power Evacuation at 400kV Level through 2x400 kV DC Quad Lines to PGCIL Pooling Station at Vemagiri.

**Water Conveyance** : 26.2 cusec water from Godavari River located at 45km distance from site.

**Fuel Supply** : Gas pipeline of 50Km length from Gadimoga landfall point of RIL's D-6 gas field.

## D. Project Highlights:

- Using Advanced class 9FA Gas Turbines
- Largest Gas based Capacity under development by a Private sector power producer

- **Fast track execution : Fastest Erection of Gas Turbines- Four Gas Turbines(FA-9, 240 MW) at "Full Speed No load" in record time of 18 Months and created a new bench mark in Power Industries Globally** (against standard of about 21 Months and subsequent GTG with a gap of 1 month each, totaling to 24 months).

- **Use of Prefabricated steel Structures ( 14000 MT) :**
  - ✓ The use of Pre-engineered, Pre-fabricated Power House Building Structures at Samalkot site eliminated conventional site fabrication work and only work remained was to "align various structures & bolt" the voluminous prefabricated cargo as per the final Layout drawings. This resulted into ease of erection and huge resources & time saving to tune of 30%.

- **Plant Layout Optimization:**

  - ✓ Lowest Acres per Megawatt ratio of land use at Samalkot compared to similar plants in India & abroad.
  - ✓ Optimized Engineering layout citing land scarcity.

- **Use of Fiber Reinforced Plastic ( FRP) material for Cooling Towers:**

  - ✓ The FRP type Cooling Tower at Samalkot is one of the very few Cooling Towers employing "FRP material" & having such a huge capacity in Indian Power Sector.
  - ✓ Reduction in Critical Path of voluminous Civil works normally in the Conventional Cooling Towers.
- **OHSAS 18001: 2007 Certification by M/s Det Norske Veritas AS (DNV)**

  - ✓ OHSAS 18001:2007 certification provided to the project in recognition to an all-round response to regulatory, social and economic challenges like minimum workplace injuries, improved company's productivity, and cut costs by gaining full control of staff safety-related risks, minimum risks of potential accident-related litigation and integrate OH&S prevention measures up and down the company, engaging endorsement for the approach from both staff and senior officials.

## E. Samalkot Views