



GAIL (India) Limited

Replacement of Natural Gas-based Powered Closed Cycle Vapour Turbo generators (CCVTs) with Solar Power Systems

CASE STUDY

Summary

Six numbers of 10kWp each solar powered system has been commissioned at six Radio Repeater (RR) stations under GAIL O&M Dibiyapur region. CCVTs are provided at RR stations (often located remotely) for supplying electrical power to installed instrumentation and burn natural gas for its operation. It was decided to install Solar power system to conserve Natural Gas by replacing CCVTs at Natural Gas Receiving Terminals or Intermediate Pigging stations or Sectionalising Valve stations in pipeline under Dibiyapur region. This Project of Solar PV plants (6 nos. of 10 kWp each) is generating 86400 unit (kWh)/year of electricity.

Objective of Intervention

To increase utilization of renewable energy in normal operations wherever feasible one such initiative is Natural Gas Based Powered Closed Cycle Vapour Turbo generators (CCVTs) Replacement by Solar Power Systems at GAIL Stations

Type of Intervention and Location

Conservation of Natural Gas & Adoption of Renewable Energy in Operations at GAIL Operations & Maintenance (O&M) locations under GAIL, Dibiyapur, Uttar Pradesh



Description of Intervention

It was decided to install Solar power system to conserve Natural Gas by replacing CCVTs at Natural Gas Receiving Terminals or Intermediate Pigging stations or Sectionalising Valve stations in pipeline under the Dibiyapur region. This Project of Solar PV plants (6 nos. of 10 kWp each) is generating 86400 unit (kWh)/year of electricity. Investment required and economic returns from the project amount to a total expenditure which stands at INR 98.30 Lakhs. Approx. monetary (annual) saving is INR 26.5 lakhs

Intangible or Tangible Benefit

Environmental returns imply Annual Natural Gas Saving of approx. 0.265 MMSCM and approx. 1638 CO₂ tonnes equivalent /year Intangible returns - Saving of Natural Gas i.e., public good leading to indirect benefit to the society at large.

About GAIL (India) Limited

GAIL's commitment towards sustainability is ingrained in their vision statement- Be the Leading Company in Natural Gas and beyond, with Global Focus, Committed to Customer Care, Value Creation for all Stakeholders and Environmental Responsibility. Being an energy company, GAIL is committed to play a key role in building sustainable energy future for the country. From its humble beginning as a gas transmission company, GAIL became the largest Natural Gas Marketing & Transmission Company in the country. As an integrated energy major, GAIL is having around 11,000 Km Gas Pipelines, 2040 Km LPG Pipelines, seven gas processing plants of 1.4 MMTPA LPG / Liquid Hydrocarbons capacity and gas based petrochemical plant of 410,000 TPA polymer capacity.