

BRIEF SUMMARY OF THE PROJECT

1.0 INTRODUCTION:

M/s General Mediterranean Holding through its subsidiary **M/s. Chennai Power Generation Limited (CPGL)** proposes to install a 1050 MW (2 x 525 MW) Combined Cycle Power Project to be fuelled by RLNG (Regassified Liquefied Natural Gas) envisaged to be supplied from the IOCL terminal at Ennore Port through pipelines. The proposed Plant will be located in **Kattupalli and Kalanji villages at Ponneri Taluk, Thiruvallur district, Tamil Nadu state**. After considering alternate sites, this site is selected because of its techno economic and environmental advantages.

Out of 175.08 acres of land 153.08 acres is proposed for the Main Plant and 22 acres of (Part of land falls in Zone III) is proposed for Pipe Corridor Area. Out of total plant area of 175.08 acres of land, in that 56 acres of land are owned by proponent and the balance area is yet to be acquired from private land owners. The project area is a typically plain coastal area with sandy soil and sparse vegetation. The general slope of the area is from Northwest to Southeast. The Bay of Bengal is located at 1.5 km – East of the project area and Buckingham canal is located at 100m in the West of the project area. There is no habitation in the project site and no rehabilitation or resettlement issue arises.

This site is a part of Survey of India Topo sheet No. 66 C/7, lying approximately at Latitude 13⁰ 19'8.55" to 13⁰ 20'06.48"North and Longitude 80⁰ 19'36.30"- 80⁰ 20'04.33" East. The site is 6 km north of Ennore Port, which is 25 km north of Chennai. Chennai Airport is about 40 Km from the site. Athipattu Railway junction is located 8 km on SW. The area is approachable from the North Chennai Power Plant (NCTP) – Ennore Port road, which branches off the Chennai – Manali – Minjur road near Vallur village.

The location was selected by TNEB and the Project conceived by TNEB as a 1050 MW Gas based project was allotted through the MOU route and was signed with TNEB by the Company.

There are no declared biospheres, wild life sanctuaries, or tiger sanctuary or migrating corridor or Coastal zone in the core zone and 10 km buffer zone. Pulicat Sanctuary is located 12 km from the project boundary. Other industries like North Chennai TPS, Vallur TPS, Ennore port, L & T ship yard, L & T Port, Chettinad Coal Terminal, Chennai Metro Desalination plant, etc are found in the buffer zone.

Regassified Liquefied Natural Gas (RLNG) will be used as fuel. The Gas for proposed 1050 MW Gas fired CCPP shall be supplied by Indian Oil Corporation Limited (IOCL) to the site from their proposed RLNG terminal at Ennore port (6 km). The RLNG shall be brought from the proposed RLNG terminal of IOCL at Ennore Port up to the proposed power plant through pipelines to be constructed by IOCL. The LNG terminal at Ennore port is under construction by IOCL and the terminal is likely to be commissioned by September – October 2018

The Combined Cycle Power Plant (CCPP) will consist of two modules. Each Module will have one Gas Turbine Generator, one HRSG and one Steam Turbine Generator and its capacity will be 525 MW. There will be two modules for a total capacity of 1050 MW (2 X 525 MW).

The Power Plant shall be designed for optimum efficiency, availability and reliability using advanced class Gas turbine of state-of-art technology. Gas Turbine with high open and combined cycle efficiencies and having proven performance record shall be installed. Gas Turbine shall be provided with low NOx fuel burners to make the power station environmentally compliant to local norms.

Triple pressure Heat Recovery Steam Generator with optimum steam parameters shall be selected to maximise the waste heat utilisation from gas turbine exhaust flue gas.

Steam Turbine Generator from reputed manufacturers will be installed to optimise the combined cycle efficiency of the module. Separate HP/LP by-pass system for HRSG capable to by-pass MCR flow of steam from HRSG is envisaged for quick and independent start-up of HRSG while the steam turbine is in partial load.

The total water requirement for the power plant is 5,450 m³/hr (1,30,800 m³/day) for 1050 MW plant. The total annual water requirement will be approximately 48 MCM. The entire water requirement will be met from Sea water. Sea water intake pump house with pipelines is proposed to deliver total cooling and consumptive water requirement of the power plant to the pretreatment plant and makeup to the cooling tower basins located in the plant area. About 4127 m³ / hr of waste is expected to be generated from this plant of which 4045 m³/hr will be from Cooling tower blow down, RO reject and 82 m³/hr is expected to be from other sources.

The cooling tower blow down and RO rejects (totaling) 4045 m³/hr will be discharged back in to the sea based on Stimulation Modelling study and in compliance with regulatory norms in order to keep temperature differential between blow down and receiving sea water within permissible limits .Other waste Water Collected (82m³/hr) will be collected in the Central

Monitoring Basin (CMB) and after treatment shall be utilized for Plantation or other industrial use.

To ensure proper dispersion and dilution of generated SO₂ and NO_x into the atmosphere, stack of 70 m height is proposed with an approximate exit velocity of 30 m/s.

The Developer has conducted Plant Location studies, had initial discussions with equipment manufacturers, suppliers, vendors, contractors, power purchasers and industry professionals. The supply, erection, testing and commissioning will be contracted out to the EPC Contractor.

The construction period has been estimated as 24 months from the zero date reckoned as the date of financial closure for Module1 and 30 Months for Module 2, from the date of Notice to Proceed (NTP). The Project Cost is estimated at US \$ 825.16 million (Rs. 53635.4 Million @ Rs 65 Per \$), indicating a per MW all-in cost of about US \$0.83 million for a 1050 MW Plant. The Project is proposed to be financed at a debt to equity ratio of 70:30, corresponding to US \$ 247.55 million in equity and US \$ 577.61 million in debt.

Considering the increasing Power demand, installation of plants of similar technology in various parts of the country and the cost economics, this project is techno economically viable for implementation.

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