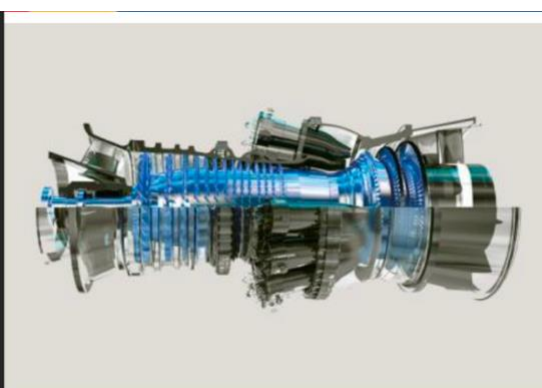


360 MW CCGT

Plant Capacity	388.5 MW at Site Condition With GT Evaporative Cooling, Duct Firing and Fuel Gas Heating ON.
Site Conditions	DBT- 29.2°C, RH- 71%, Atm. Pressure – 1010.7 Mbar, Elevation – 24.5m Above MSL.
Plant Heat Rate	1730 kCal/Kwh (on HHV)
Auxiliary Power Consumption for Plant	10.450 MWh. (2.69 %)
Guaranteed Emission Limits	NOx -35 ppmv & Co – 15 ppmv @ 15% O2
Plant O&M	O&M as per OEM CSA (LTMA and LTAPSA) by GE for Gas turbine and Generator.
Power Evacuation	Through 2 quad moose feeders from 400 kV switch yard
Supplementary Duct Firing	27.3 MW. (47.3 m Kcal/hr)
Water Consumption	13392 m ³ /Day.
Plant Start Up time	Cold Start Up - 260 Min Warm Start Up- 120 Min Hot Start Up – 90 Min
Fuel	Natural Gas with HHV – 9832 kCal/m ³ . At 35 Bar, 15°C
Plant Area	26 Acres (built up area).

360 MW CCGP

Particulars	Make	Site Rating	Special Features
Gas Turbine	GE 9351 FA	232.54 MW	Indoor installation
HRSG	CMI, India	HP/ IP / LP F326/ 36/ 29 P 127 / 27 /4 T 568/ 329/258	Vertical , Triple Pressure , Reheat, Supplementary Firing
Steam Turbine	Alstom ST-F15.	156 MW	Reheat, Single Flow, Condensing type
Generators	GT – GE ST - Alstom	GT – 285 MVA ST – 190 MVA	GTG – H2 cooled STG – Air cooled
Supplementary Firing	Supplied by CMI	Approx. 20MW	In-line type with BMS
Power Transformer for GTG	CGL	290 MVA	
Power Transformer for STG	CGL	190 MVA	
Unit auxiliary transformer	VoltAmp	20 MVA	
EDG	Cummins	1.01 MVA	
Circulating water pump	WPIL	18000 M3/hr.	
Condensate Extraction pump	Sulzer	430 M3/hr.	



GE PG 9351 FA with DLN2.0+

Heavy duty 9FA gas turbines from the experienced F class fleet with over **25 million hours of operation.**

Features

- Enhanced 24K hardware for increased reliability and availability.
- Mark VI Control System controls the gas turbine using real-time physics based modeling, increasing the overall performance, operability, and reliability of the gas turbine.

Gas Turbine

Capacity 233* MW (at site conditions).

Fuel Natural Gas

Starting Means Load Commutated Inverter (LCI)

Air Filtration Self-Cleaning

Inlet Air Cooling Evaporative Cooler

Compressor Cleaning On-line and Off-line Water Wash

Exhaust System Exhaust Diffuser with Expansion Joint for Axial Exit

Emissions Control Dry Low NOx 2.0+

Gas Turbine Generator

Rating 285MVA hydrogen cooled

Frequency 50 Hz

Cooling Hydrogen

Power Factor (pf) 0.80 Lagging, Capability to 0.95 Leading

Terminal Voltage 15.75KV

Generator Excitation Digital Static Bus Fed

360 MW CAPP



Alstom – Steam Turbine ST-F15 and Generator

Features

- Turbine:- 2 casing , condensing steam turbine
- Sliding pressure operation.
- Triple pressure single reheat.
- Manufactured by Alstom Germany.
- 100% bypass capability for HRH /LP.

Steam Turbine

Make	ALSTOM
Capacity	156.15 MW
Main Steam Parameters	<ul style="list-style-type: none"> ▪ HP Steam: 324 T/hr. @ 127 Bar, 568 Deg C ▪ IP Steam: 361 T/hr. @ 26 Bar, 568 Deg C ▪ LP Steam: 32 T/hr. @ 5 Bar, 320 Deg C

Steam Turbine Generator

Rating	183.7 MVA
Frequency	50 Hz
Power Factor (PF)	0.85 Lagging
Terminal Voltage	15.75KV
Cooling	Air Cooled



Heat Recovery Steam Generator (HRSG)

Supplier – L&T , Design - CMI

Vertical, Triple pressure , Reheat type HRSG with supplementary duct firing.

Water Circulation:-

HP :- Forced circulation – Pump capacity – 1041 M³/hr.

IP :- Natural Circulation

LP :- Forced Circulation – Pump Capacity – 153 M³/hr.

Make		CMI Design		
Type	Triple Pressure HRSG installed at the exhaust of the Gas Turbines			
Steam Parameters	Unit	HP	IP	LP
- Steam generation	tph	326	36	29
- Pressure	Bar (a)	127	27	4
- Temp.	°C	568	329	258

360 MW CCPP

