

Generator

The power plant is based on a 2-on-1 Ansaldo/Shanghai Electric AE64.3A Combined Cycle Gas Turbine (CCGT) configuration with high efficiency (up to approximately 54.1%) and reliability for power generation. The plant will have a net power capacity of approximately 234.1 MW at ISO condition of 15° C ambient temperature.

Each Gas Turbine (GT) is equipped with an individual Heat Recovery Steam Generator (HRSG) for live steam generation. The live steam from each HRSG is connected to common headers that supplies steam to the steam turbine for electricity generation.

This FGPP is designed to operate under full load with the highest efficiency, which is optimum operating scenario.

Parameter	Unit	Value
Rated power	MW	80
Rated voltage	kV	10.5
Rated frequency	Hz	50
Rated power factor		0.85
Number of poles		2
Number of phase		3
Rated speed	r/min	3000
Cooling type		Air-cooled
Excitation type		Static excitation

Main Transformer

- (1) Generator step-up Transformer (GSUT)

Parameter	Value
Rated capacity	100MVA
Rated voltage	230 ± 8x1.25%/10.5kV (115kV as optional)
Voltage regulation	On load tap-changing
Rated frequency	50Hz
Wiring group	YN,d11
Impedance voltage	18%
Grounding	Directly grounded

- (2) Unit Auxiliary Transformer (UAT)

Parameter	Value
Rated capacity	20/20MVA
Rated voltage ratio	10.5±2×2.5%/6.3kV
Voltage regulation	De-energized tap-changing
Rated frequency	50Hz
Wiring group	D, yn1
Impedance voltage	16%
Grounding	High side grounded

Switchgear

Two (2) sets of GT generator, One (1) set of ST generator will be connected to 230kV switchgear (115kV as optional) with a generator-transformer unit connection. The 230kV switchgear will be indoor GIS with double bus bar configuration. There are two (2) 230kV outgoing transmission lines.