Siemens 5000F(4) Combustion Turbine Generator package and related accessories as described below.

1.1 Scope of Supply

- One (1) Siemens STG6-5000F(4) Combustion Turbine
  - Dry Low NOx Combustion system, with a requirement for fuel gas performance heating.
  - Evaporative Coolers, 85% effectiveness
  - Inlet Air Heating System (utilizing combustor shell air)
  - Pre-Engineers pipe rack and interconnecting piping
  - Single Piece Exhaust

  One (1) GT Generator Package, 16.5 kV, 255 MVA, TEWAC
  - One (1) SCF Starting Package
  - One (1) SES Excitation Package
- Gas Turbine & Generator Accessory Equipment, including controls, HVAC, lighting, fire protection, electrical package, oil systems etc.
- Gas Turbine Tools and maintenance Equipment
  Gas Turbine enclosure, with associated lighting, HVAC and fire protection.

1.2 Exclusions to Scope of Supply

- Anchor Bolts and Embedments, Siemens will provide design criteria.
- Instrument Air Compressor.
  Electrical Interconnecting Material
  - All Conduit systems between packages / skids
  - Cable, conduit, tray for all medium voltage power from source to MCC terminal for power electrics
  - Cable, conduit, tray for all low voltage power, communications and instrumentation
  - ISO-Phase Bus
  - Generator Breaker

  Flushing and First Fills.
- An option exists to purchase Technical Field Assistance, TFA is not currently part of scope of supply.

1.3 Equipment Warranty

- Equipment Warranty Period: One (1) year after the date of First Fire or twenty-four (24) months after the Actual Delivery Date or after 8,000 Total Equivalent

Operating Hours, whichever first occurs.

- Un-bladed Gas Turbine Rotor Warranty Period: Twenty-four (24) months after the date of First Fire or forty-four (44) months after the Actual Delivery Date or after sixteen thousand (16,000) Total Equivalent Operating Hours whichever first occurs.

1.4 Other CTG Key Characteristics

Table 1.1: Key Characteristics of Siemens CTG

Parameter	**Description**	
Inlet Guide Vanes	1 row of variable inlet guide vanes and 3 rows of variable guide vanes	
Inlet Air Filter	Static	
Combustor	Dry Low NOx	
Number of Combustors	16	
Number of Stages	13	
Pressure Ratio	17.4:1	
Emissions Guarantees (-30 °F to 105 °F)	Gas Turbine Load: 70-100% Nox: 25 ppmvd @15% O_2 CO: 10 ppmvd @15% O_2 VOC: 1 ppmvd @15% O_2 Particulate: 9 lb/hr	Gas Turbine Load: 60-70% Nox: 25 ppmvd @15% O_2 CO: 40 ppmvd @15% O_2 VOC: 3 ppmvd @15% O_2 Particulate: 9 lb/hr
Performance Estiamtes Ambient Conditions: 12.979 psia, 38.8 °F, 60% RH Fuel Gas @ CTG: 510 psia, 410 °F, 20,195 BTU/lb (LHV)	Net GT Power: 190,085 kW Net GT Heat Rate: 8,940 BTU/kWh (LHV) Exhaust Flow: 3,696,049 lb/hr Exhaust Temperature: 1095 °F	
Noise Guarantee	85 dBA at 3 ft from equipment, 5 ft above ground	
Control System	SPPA-T3000	

Alstom Steam Turbine Generator package
and related accessories as described below.

2.1 Scope of Supply

One (1) 160 MW Alstom Steam Turbine Generator
- Turbine Assembly
- Steam Control Valves and Operators
- Gland Sealing Skid

One (1) Generator Package, 18.0 kV, 187.65 MVA, TEWAC
- One (1) Static Excitation System
- Power System Stabilizer
- Key Phaser

– Sound Enclosure with associated lighting, HVAC
Steam Turbine & Generator Accessory Equipment, including controls, HVAC, lighting, fire protection, electrical package, oil systems etc.
Electrical Package including MMCs
– Steam Turbine Tools and maintenance Equipment
– Field Erection Supervision, Alstom to clarify man weeks included
– Piping from valves to steam turbine inlets, including some pre-fabricated piping and some field fabricated piping.

2.2 Exclusions to Scope of Supply

– Anchor Bolts and Embedments, Alstom has provided design criteria.
CO2 Fire Protection System.
STG by-pass system
Instrument Air Compressor and Dryer
– Electrical Interconnecting Material
  - All Conduit systems between packages / skids
  - Cable, conduit, tray for all medium voltage power from source to MCC terminal for power electrics
  - Cable, conduit, tray for all low voltage power, communications and instrumentation
  - ISO-Phase Bus
  - Generator Breaker
  - DC Distribution Panel, Battery Charger
– Flushing and First Fills.

2.3 Equipment Warranty

- Equipment Warranty Period: November 15, 2010

2.4 Other STG key Characteristics

Table 2.1: Key Characteristics of Alstom STG

Parameter	**Description**
Type	3 Pressure reheat, axial exhaust
Cylinder Configuration	One (1) High Pressure section and an Opposed Flow Intermediate Pressure / Low Pressure section
Output at Generator Terminal	156,733 kW
Throttle Conditions	13,130 kPa (a) / 560 °C / 567 °C
Throttle Flow Rate	375,620 (MS) / 384,900 (HR) kg/hr
Exhaust Pressure	8 kPa (a)
Exhaust Flow Rate	389,220 kg/hr