

Section 2.0 Scope of Work and Equipment List

2.1 The Scope of Work for the proposed project is generally outlined as follows:

Major Equipment – Owner will supply Two (2) GE Model 7121 Frame 7EA Gas Turbine Generators with auxiliaries. One (1) 13.8KV to 230KV Generator Step Up Transformer (GSU), 230 KV Breaker and 230KV Disconnect Switch.

2.1.1 Contractor will provide the Balance of Plant which includes the following outlined list of major equipment and deliver them to site:

- One (1) 7,000 cu meter DFO tank
- One (1) 1,000 cu meter DFO tank
- DFO transfer and forwarding pumps with fuel filters
- Demin transfer and forwarding pumps with filters
- Demin Fiberglass Storage Tanks
- Oily Water Separator
- Instrument and Service Air Compressor
- Office and Control Building
- DCS System
- 230 KV Expansion Bay to existing plant substation with 3 ea SF6 Breakers and 6 ea Disconnects
- 230 KV Transmission Line from new 7EA Plant to existing 230 KV Substation

The contractor will design and install the facility as described in the following sections of this document. The design will include the necessary Civil, Foundations, Structural, Mechanical, Electrical, Instrumentation, and Control System to install the above listed equipment.

2.1.2 Balance of Plant – The contractor proposes to furnish and install the Balance of Plant equipment and materials, which comprises the following:

- Complete design of the facility including civil, foundations, structural, buildings, mechanical, electrical, instrumentation and control.
- Contractor will provide site preparation, material and labor for concrete foundations, piers and plant gravel.
- Contractor will provide Installation of the complete Power Plant with the inter-ties as described later in this document.
- Contractor will provide mechanical installation of the various items of equipment with the associated inter-ties of treated water, natural gas, liquid fuel, waste water, and Fire Water.
- Contractor will provide installation of the plant including the 230 KV high voltage GSU, 230KV SF6 breaker, 230KV disconnects, dead end tower, transmission line with relays, poles to Owners substation, grounding, lightning protection, and cathodic protection.
- Contractor will provide and install 230 KV Expansion to Owners' 230 KV Substation.

- Contractor will provide Instrumentation and Control Systems including plant instrumentation, metering, and Plant DCS.
- Contractor will install Owner supplied buildings including:
 - GTG PEECC Buildings
 - PDC Building
- Contractor will furnish and install following Buildings:
 - Climatized Control and Office Building
- Contractor will also supply the following:
 - Natural Gas Interconnect Piping to Existing Header System Adjacent to Plant
 - Liquid Fuel Tank 7,000 cubic meter
 - Liquid Fuel Interconnect Piping to Contractor furnished 1,000 cubic meter Day Tank adjacent to Plant
 - Treated Water Interconnect Piping to Existing Demin Tank
 - Treated Water Day Storage
 - Waste Water Interconnect Piping to Existing Header System
 - Fire Water Interconnect Piping to Existing Header System
 - Plant fire Water Underground Piping System with Monitors, Hydrants, Etc.
- Project Management, QA/QC, Safety and Training.
- In addition, the Contractor will perform:
- Plant commissioning, check out, start up, and training with Vendor Technical Representatives present.
- Plant Performance, Reliability, and Environmental Testing.
- Furnishing of plant documentation including Vendor Information, Warranty, Engineering, Turnover documents, O&M Manuals and As Built Drawings.

Section 2.2 Equipment List - Detailed Division of Responsibility

Material/Responsibility	Qty	Description
OWNER	2	GE Model 7121 Frame 7EA (60Hz) Gas Turbine Generators with Associated Equipment as Coming From Southaven Including:
Electrical	1	Electrical PDC Building
	2	13.8 KV 5000 amp Gas Turbine Generator Breakers NEMA 3R
	2	15KV Cable Bus 4500 A
	1	230 KV SF6 Circuit Breaker
	1	230 KV Disconnect Switch
	1	13.8 KV / 480 V 3000 KVA Station Service Transformer
	1	13.8 KV / 4160 V 3380 KVA Station Service Transformer
	2	4160V 800 HP Starting Motors
	2	480 V GTG MCC
	1	480 V Distribution board
	1	13.8 KV / 230 KV Generator Step up transformer (2 ea. GTG capacity)
Mechanical	2	L.O. Cooler w/cooling water fin-fans (3-50hp) & water pumps (2- 75Hp)
	2	Fuel Gas Metering
	2	Fuel Gas Module/Purge Air
	2	Fuel Gas Heaters
	2	Fuel Gas Filter/Coalescer
	2	Demin Water Inject Pump 100 hp
	2	Demin Water Filters
	2	Liquid Fuel Inject Skids
	2	Liquid Fuel Filters
	2	Fogging Pump Skids
	2	Inlet Air Fogging Systems
	1 Lot	Project Site free and clear of rock and ground water
	1 Lot	Natural Gas Fuel Tie in Point at Plant Boundary with measurement
	1 Lot	#2 Diesel Fuel Supply Inter-tie Point
	1 Lot	Treated Water Supply to Inter-tie Point – 272 gpm
	1 Lot	Treated Water for Commissioning and Startup
	1 Lot	Waste Water Disposal Line at Inter-tie Point
	1 Lot	Eight (8) Telephone Circuits to Project Site
	1 Lot	Permits for Environmental, Transportation, Building, Construction, Operations, etc.
	1 Lot	Construction & Commissioning Water and 480V three phase power
	1 Lot	Access Roads to site
	1 Lot	Import Duties and Taxes
	1 Lot	Construction lay down area (3 acres) adjacent to project site
	1 Lot	Transportation of Owner Equipment from the US to Site
Contractor – Energy Parts Solutions EPC		
Responsibility		
Civil / Structural	1 Lot	Removal of all unused building foundations, underground piping, etc. on the proposed project site
	1 Lot	Site Preparation, Rough Grading, Excavation, and final grading
	1 Lot	Plant Concrete Foundations
	1 Lot	Plant Paving, Gravel and Pads for Turbine and Generator
	1 Lot	Basic Architectural Treatment and landscaping
Buildings	1	Climatized Control and Office Building

Material/Responsibility	Qty	Description
Contractor (continued)		
Mechanical		
	2	100% Demin Water Forwarding Pumps – 10Hp – 300 gpm
	6	Demineralized Gallon Water Storage Tanks, 21,000 Gallon each
	2	100% Demineralized Water Forwarding Pumps for Turbine Wash
	1	Oily Water Separator
	1	Waste Oil Tank, 10,000 Gallon.
	1	Waste Oil Delivery Pump
	1	Waste Water Tank, 10,000 Gallon
	1	Waste Water Delivery Pump
	1	Instrument Air Package with two compressors, receiver, filters and dryer
	1	Liquid fuel storage tank, (7,000 Cu. Meters)
	2	Liquid Fuel forwarding Pumps
	1	Liquid Fuel Day Tank (1000 cu. Meters)
	2	Liquid Fuel Forwarding Pumps
	4	Liquid Fuel Filters
	1	Natural Gas ESD Valve
	1	Natural Gas Scrubber
	2	Fuel Gas Regulator Skid
Electrical		
	1	480 V BOP MCC
	1	480 V Distribution Board
	1 Lot	BOP 480 V / 120 V Transformers, Lights, Panels etc.
	1	UPS System for Control Room
	4	Welding Receptacles
	1	Plant Grounding Grid
	1 Lot	Lightning Protection
	1 Lot	Cathodic Protection for underground steel piping
	1 Lot	Area Lighting
I&C		
	1 Lot	Plant Instrumentation
	1	Plant DCS System
230 KV Substation		
	3	230 KV SF6 Breakers
	6	230 KV Disconnects
	3	Dead End Towers
	3	Lightning Arrestors
	1	Line Current Differential Relay
	1	Relay Panel to house Protective Relays and Switches
	9	CT's
	1 Lot	230 KV Insulators and ACSR Cable Bus & Fittings
	1 Lot	Lot interconnect with existing 120 V AC and 125 V DC
230 KV Transmission Line		
	4	Metal Tangent or Turning Poles (95ft)
	3	Metal Transmission Poles (95ft)
	1 Lot	Bare 795 ACSR Cable
	1 Lot	Lot Static wire with Fiber Optic cable laced to it
Construction		
	1 Lot	Construction Tools, Rental Equipment & Rental Cranes
	1 Lot	Temporary Power Distribution
	1 Lot	Local Subcontractor(s) Electrical & Mechanical Craft Labor
	1 Lot	Transportation of all Contractor supplied BOP equipment

Material/Responsibility	Qty	Description
Engineering	1 Lot	Construction Offices, Storage, Temporary Facilities and Utilities
	1 Lot	Lubricants, Chemicals, Filters, etc. for Plant Commissioning
	1 Lot	Balance of Plant Start up and Commissioning Spare Parts
Project Management	1 Lot	Conceptual and Detail Design Engineering (Total Plant)
	1 Lot	Project Management with QA/QC, safety, and training
	1 Lot	Plant Commissioning and Testing
	1 Lot	Overall Plant Training