20 MW COAL FIRED POWER PLANT

STEAM TURBINE GENERATOR SET:

Manufacturer: ABB VAX

Rating: 20,800 KW

HP TURBINE:

   Nominal output: 14300 KW

   Rated speed: 12,019 rpm

   Inlet steam: 1500 psig/950 deg F

   Exhaust steam: 190 psia

   Inlet steam flow: 225,800 lbs/hr

   Extraction steam: 0-76,968 lbs/hr 210 psia

                       0-70,394 lbs/hr 72 psia

                       0-22,084 lbs/hr 18 psia

Straight condensing @ 20 mw steam flow: 180,000 lbs/hr

LP TURBINE:

   Nominal output: 10,070 KW

   Rated speed: 4,578 rpm

   Inlet steam: 190 psia

   Exhaust steam;   2.5" Hga

GENERATOR:

   Rating: 26,100 KVA

   Voltage: 13800 V, 3 phase, 60 Hz

   PF: 0.8

   Speed: 1800 rpm

   Type: TEWAC

CONDENSER:

   Surface area: 12874 sq. ft.

   Steam condensed: 94294 lbs/hr

HISTORY:

   Year built: 1988

   Year shutdown: 2010

TURBINE SCOPE OF SUPPLY:

   HP turbine, HP gear reducer, LP turbine, LP gear reducer, Generator with exciter

   Generator terminal box, Generator breaker and control panel, AVR, NGR, Condenser

   CEP with motors, CW pumps with motor, Lube oil system, Hydraulic oil system

   Main steam stop valve, Extraction valves, Feed water heaters, Turbine and generator sole plates

   Turbine control panel, All available drawings and manuals

BOILER:

Manufacturer: B & W

Type: Circulating fluidized bed

Predicted Performance @ MCR:

   Steam Flow: 225,800 lbs/hr

   Steam pressure: 1550 psig

Steam temperature: 960 deg f

Air Entering FD Fan: 80 deg f @ 29.25 IN HG

Boiler Efficiency: 87.4 %

Input to Furnace: 308.6 MKB/HR

Fuel (Coal):   30.1 MLB/HR

Sorbent (Limestone):   4.7 MLB/HR

Fuel (Coal) Design Specification:

Size: 1-1/4X0

Grindability   48

Moisture (Total):   15.1 %

Volatile Matter: 31.4 %

Ash: 13.9 %

Sulfur: 2.6 %

H2:   4.0 %

Carbon: 57.1 %

Heating Value: 10245 BTU/LB

Sorbent (Limestone) Design Specification:

CACO3:   89.00 %

MGCO3:   1.70 %

BOILER SCOPE OF SUPPLY:

  Complete boiler and auxiliaries, coal handling system and exhaust flue gas system up to the ESP.

 All equipment is currently installed and can be dismantled and loaded on buyer's trucks for shipment.