80 MW LM2500 + Dual Fuel Gas Turbine Power Plant

Complete plant with (2) Two 30 MW LM2500 + Gas Turbines, (2) Two Steam Turbines, HRSG (Heat Recovery Steam Generators), 11 KV, 50HZ, Plant installed in 2005, Dual Fuel: Natural Gas (NG) and Liquid Fuel, Hours run since overhaul 3700 hrs. & 5000 hrs., (3) Transformers, air cooled condensers, electrical systems, control systems, cooling systems, compressor systems, starting system, lubricating system, fire fighting system and other auxiliary systems for base load operation with load cycling capabilities.

The Plant's cooling requirements are satisfied by utilizing an air cooled condenser for the steam turbine, and a cooling water (ECW) system, utilizing an air-cooled heat exchanger for the auxiliary systems. The power generated is delivered to grid via existing 154 kV transmission line to local substation. The terminal point is at the 154 kV switchyard gantry including conductor and earth wire span to the first tower.

The station auxiliary supply for the Plant is from two (2) station auxiliary transformers; one transformer is connected to the 11 kV switchgear of Gas Turbine Generator No. 1 and the other to the 11 kV switchgear of Gas Turbine Generator No. 2. Electric supply for normal start-up, shut down and maintenance periods of the Plant is available from grid operator via back feed through the GTG step-up transformers.

TECHNICAL DETAILS OF PLANT	
BRAND NAME	GENERAL ELECTRIC
MODEL	LM2500 Plus PK
POWER	30 MW
START UP DATE	Oct 14, 2005
TURBINE PRODUCTION DATE	2002
FUEL TYPE	NATURAL GAS & LIQUID FUEL (DUAL)
GENERATOR BRAND NAME	ABB
GENERATOR COOLING	WATER COOLED
GENERATOR REVOLUTION	1.500 rpm
GENERATOR POWER	37.800 KVA

WEIGHT	55.5 MT
GEN. PRODUCTION DATE	2002

BRAND NAME	IST (INNOVATIVE STEAM TURBINES) CANADA
TYPE	OTSG (ONCE THROUGH)
PRODUCTION DATE	2002
HP STEAM PRESSURE	54 barg
HP STEAM TEMPERATURE	475 °C
HP FLOW	9,89 kg/sec
LP STEAM PRESSURE	3,98 barg
LP STEAM TEMPERATURE	245 C
LP FLOW	3,98 kg/sec
PREHEATER PRESSURE	22,9 barg
PREHEATER TEMP	115 C
PREHEATER WATER FLOW	5,5 kg/sec

BRAND NAME	GE NUOVO PIGNONE ITALY
MODEL	HNK 50/80
POWER	21,99 MW
REVOLUTION	5.050 rpm
CONDANSATE TEMP	49 °C
CONDANSATE PRESSURE	-0,8816 barg
TURBINE WEIGHT	72.000 kg
GENERATOR WEIGHT	45200 kg
GEAR BOX BRAND NAME	FLENDER
GEAR BOX REVOLUTION	5.050/1.500 rpm
GENERATOR BRAND NAME	ABB
POWER	30.630 KVA
WEIGHT	46.000 kg
PRODUCTION DATE	2002

GAS TURBINE TRANSFORMER

154/11 KV TRANSFORMER POWER	40 MVA
MANUFACTURER	ABB
START UP DATE	09.06.2005

154/11 KV TRANSFORMER POWER	31 MVA
MANUFACTURER	ABB
START UP DATE	13.06.2005

DRY TYPE	
11/0,4 KV TRANSFORMER POWER	2500 KVA
BRAND NAME	ABB
START UP DATE	09.06.2005

STEAM TURBINE TRANSFORMER

154/11 KV TRANSFORMER POWER	31 MVA
MANUFACTURER	ABB
START UP DATE	13.06.2005

DRY TYPE	
11/0,4 KV TRANSFORMER POWER	2500 KVA
BRAND NAME	ABB
START UP DATE	09.06.2005

MANUFACTURER	HAMON / USA
CELL	5 EA
TYPE	TEK SIRALI
FAN MOTOR POWER	75 kW
COOLING	AIR
STEAM FLOW	25,64 kg/s
STEAM TEMPERATURE	45 °C
STEAM PRESSURE	62,5 mbara
FAN GEAR BOX MANUFACTURER	HANSEN
GEAR BOX POWER	190 kW
FAN MOTOR REVOLUTION	1485-297 rpm

2 X GE LM2500+ Gas Turbines & Steam Turbine Maintenance History							
	Overhaul Running hours	**Running Hours 10.July 2017**	**Running hours after Overhaul**	**Start @ Overhaul**	**Start @ 10.July 2017**	**Start after Overhaul**	**Explanation**
GT1	49.892	53.686	3.794	1.544	1.857	313	-
GT2	50.026	55.058	5.032	1.560	1.843	283	-
ST1	Not overhauled	56.000	56.000	1.570	1.900	330	Numbers are estimated by referencing GT running hours