



## STEAM TURBINE GENERATORS @ 50 Hz

Ref. No.	Output (MW)	Description
ST1038G	1,5	One (1) 1,5 MW used Siemens Condensing / Extraction Steam Turbine Genset Start-up: 1980 Shut-down: 1985 Running hours: 15.000 Conditions: excellent Inlet live steam @ 40 barG, 420 °C, 8 t/h Outlet steam @ 0,05 barA Extraction @ 0,33 barG 400 V, 50 Hz
ST1018G	3,4	One (1) 3,4 MW used Alstom Condensing Steam Turbine Genset Year of manuf.: 1975 Shut-down: 1996 Running hours: 40.000 Overhauled in 2002 Conditions: very good Inlet live steam @ 40 barG, 400 °C, 17 t/h Outlet steam @ 0,091 barA 5500 V, 50 Hz
ST1043C	5,5	Two (2) 5,5 MW unused Cantieri Navali Condensing Steam Turbines Year of manuf.: 1974 Running hours: 2.000 Conditions: "As New" Inlet live steam @ 18 barG, 330 °C, 28,5 t/h
ST1023	7	One (1) 7 MW unused Thermodyn Condensing / Extraction Steam Turbine Year of manuf.: 1988 Shut-down: 1996 Running hours: 1.000 Conditions: "As New" Inlet live steam @ 55 barG, 450 °C, 33 t/h Outlet steam @ 0,09 barA (0,294 max) Extraction @ 1,5-2,7 barG; 0-25 t/h; Injection @ 1,5-2,7 barG; 0-23,6 t/h
ST1042C	7,3	One (1) 7,3 MW unused De Pretto E.W. Condensing Steam Turbine Year of manuf.: 1972 Last inspec.: 1999 Running hours: 8600 Conditions: "As New" Inlet live steam @ 18 barG, 330 °C, 42 t/h
ST1041C	12	Two (2) 12 MW unused Franco Tosi Condensing Steam Turbines Year of manuf.: 1973 Last inspec.: 1999 Running hours: 8.600/6.000 Conditions: "As New" Inlet live steam @ 18 barG, 330 °C, 65 t/h
<b>ST1054</b>	<b>15</b>	<b>One (1) 15 MW unused Siemens Backpressure Steam Turbine</b> <b>Start-up: 2000 Shut-down: 2000 Running hours: 2.000 Conditions: "As New"</b> <b>Inlet live steam @ 108 barG, 525 °C, 120 t/h Backpressure @ 8-18 barG</b>
<b>ST1044G</b>	<b>17,5</b>	<b>One (1) 17,5 MW unused Siemens Backpressure Steam Turbine Genset</b> <b>Year of manuf.: 1973 Last inspec.: 1999 Running hours: 8600 Conditions: "As New"</b> <b>Inlet live steam @ 70 barG, 475 °C, 254 t/h Backpressure @ 18 barG, 335 °C</b> <b>22.500 kVA, cos.φ=0,8 6000 V, 50 Hz. With ST1043C, ST1042C, ST1041C "As New"</b> <b>power plant @ 59,8 MW, 4,25 kg/kW*h</b>
<b>ST1045G</b>	<b>17,5</b>	<b>One (1) 17,5 MW unused Siemens Backpressure Steam Turbine Genset</b> <b>Year of manuf.: 1973 Last inspec.: 1999 Running hours: 0 Conditions: "As New"</b> <b>Inlet live steam @ 70 barG, 475 °C, 130 t/h Backpressure @ 6 barG, 207 °C</b> <b>22.500 kVA, cos.φ=0,8 6000 V, 50 Hz</b>

\* B=Backpressure; C=Condensing; E=Extraction

### GAS TURBINE GENERATORS @ 50 Hz

Ref. No.	Output (MW)	Description
GT016	3,76	One (1) 3,76 MW used Nuovo Pignone FR 1 Gas Turbine Engine: MS 1452 A (FR 1A) Serial number: 05041 Year of manufacture: 1982 Shut down: 1997 Running hours: 32000 Fuel: natural gas/distillate oil. Skid mounted with enclosure, intake & exhaust ducts, speedtronic control panel
GT017	3,76	Two (2) 3,76 MW used Nuovo Pignone FR 1 Gas Turbines Engine: MS 1502 AR (FR 1AR) Serial numbers: 05054 – 05055 Year of manufacture: 1987 Shut down: 1997 Running hours: 53000 Fuel: natural gas/distillate oil. Skid mounted with enclosure, intake & exhaust ducts, speedtronic control panel
GT018	3,88	Two (2) 3,88 MW used Nuovo Pignone FR 1 Gas Turbines Engine: MS 1002 B (FR 1B) Serial numbers: 05158 – 05159 Year of manufacture: 1980 Shut down: 1999 Running hours: 23000 Fuel: natural gas/distillate oil. Skid mounted with enclosure, intake & exhaust ducts, speedtronic control panel

### GAS COMPRESSORS

Ref. No.	Capacity (Nm <sup>3</sup> /h)	Compressor coupling power (kW)	Description
CMP501	4.400	450	One (1) 0,45 MW used Worthington compressor Type: BDCB Gas handled: natural gas Rated discharge pressure: 9 barA
CMP016	473.880	3.000	One (1) 3 MW used Nuovo Pignone compressor Type: PCL 503 - 1/20 Serial number: 9519 Year of manufacture: 1982 Shut down: 1997 Running hours: 32.500 Gas handled: natural gas Molecular weight: 17,72 Rated Cp/Cv: 1,3 Inlet temperature: 20°C Rated discharge temperature: 35°C Inlet pressure: 52 bar A Rated discharge pressure: 62 barA Speed 10.290 rpm
CMP017	377.700	3.000	One (1) 3 MW used Nuovo Pignone compressor Type: PCL 503 - 1/20 Serial number: 9723 Year of manufacture: 1977 Shut down: 1997 Running hours: 29.000 Gas handled: natural gas Molecular weight: 17,72 Rated Cp/Cv: 1,3 Inlet temperature: 20°C Rated discharge temperature: --°C Inlet pressure: 53.4-56.1 bar A Rated discharge pressure: 69.1 barA
CMP018	72.650 (St.m <sup>3</sup> /h)	3.500	Two (2) 3,5 MW used Nuovo Pignone compressors Type: 2 BCL 406/A Serial numbers: 10049 – 10050 Year of manufacture: 1980 Shut down: 1999 Running hours: 20.500 - 26.500 Gas handled: natural gas Molecular weight: 16,12 Rated Cp/Cv: 1,3 Speed: 10290 rpm Inlet temperature: 20°C Rated discharge temperature: 92°C Inlet pressure: 50 barA Rated discharge pressure: 121 barA
CMP502	87.300 (m <sup>3</sup> /h)	3.200	Two (2) 3,2 MW “unused” Elliot compressors Type: 46M3 - 3DF Serial numbers: N-8072 N-8077 Year of manufacture: 1974 Gas handled: Hydrocarbon mixture Molecular weight: 26,21 Rated Cp/Cv: 1,212 Speed: 6.280 rpm Inlet temperature: 37°C Max. discharge temperature: 149°C Inlet pressure: 1,13 barA Rated discharge pressure: 2,52 barA Max. discharge pressure: 4,07 barA

CMP503	16.000 (m <sup>3</sup> /h)	3.500	Two (2) 3,5 MW “unused” Elliot compressors Type: 38M9 - 7 Serial numbers: N-8076 N-8081 Year of manufacture: 1974 Gas handled: ethylene Molecular weight: 28,05 Rated Cp/Cv: 1,24 Speed: 8.673 rpm Inlet temperature: -90°C Max. discharge temperature: 149°C Inlet pressure: 1,03 bar A Rated discharge pressure: 17.64 barA Max. discharge pressure: 21,71 barA
CMP504	44.826 (m <sup>3</sup> /h)	5.800	Two (2) 5,8 MW “unused” Elliot compressors Type: 46M6I Serial numbers: N-8073 N-8078 Year of manufacture: 1974 Gas handled: Hydrocarbon mixture Molecular weight: 26,05 Rated Cp/Cv: 1,211 Speed: 6.280 rpm Inlet temperature: 37°C Max. discharge temperature: 177°C Inlet pressure: 2,18 barA Rated discharge pressure: 8.9 barA Max. discharge pressure: 11,4 barA
CMP505	167.000	7.240	One (1) 7,24 MW used Nuovo Pignone compressor Type: 2 BCL 406/A Serial numbers: 10421 Year of manufacture: 1985 Shut down: 1999 Running hours: 41.000 Gas handled: natural gas Molecular weight: 17,47 Speed: 9910 rpm Inlet temperature: 20 °C Inlet pressure: 49 barA Rated discharge pressure: 129 barA
CMP507	174.000	12.000	Two (2) 12 MW “unused” Franco Tosi compressors Axial type with 17 stages Year of manuf: 1974 Last inspect: 1999 Running hours: 0 Conditions: “As New” Gas handled: air Inlet pressure: -0,04 barG Discharge pressure: 4,55 barG Rated Speed: 4.300 rpm
CMP506	72.265	13.500	Two (2) 13,5 MW “unused” Elliot compressors Type: 60M8 - 7 Serial numbers: N-8075 N-8080 Year of manuf: 1974 Shut down: 1999 Running hours: 41.000 Gas handled: propylene Molecular weight: 42,2 Rated Cp/Cv: 1,172 Rated Speed: 4.200 rpm Inlet temperature: -38°C Max. discharge temperature: 149°C Inlet pressure: 1,08 barA Rated discharge pressure: 17,45 barA Max. discharge pressure: 20,61 barA

#### GAS COMPRESSION UNITS

Ref. No.	Output (MW)	Description
GCU102	3,76	One (1) 3,76 MW used Nuovo Pignone Gas Compression Unit Engine: Nuovo Pignone MS 1452 A (FR 1A) Serial number: 05041 Compressor: Nuovo Pignone PCL 503 - 1/20 Serial number: 9519 Year of manufacture: 1982 Shut down: 1997 Running hours: 32000 Fuel: natural gas/distillate oil. Skid mounted with enclosure, intake & exhaust ducts, speedtronic control panel
GCU101	3,88	Two (2) 3,88 MW used Nuovo Pignone Gas Compression Units Engine: Nuovo Pignone MS 1002 B (FR 1B) Serial numbers: 05158 - 05159 Compressor: Nuovo Pignone 2 BCL 406/A Serial numbers: 10049 - 10050 Year of manufacture: 1980 Shut down: 1999 Running hours: 23.000 Fuel: natural gas/distillate oil. Skid mounted with enclosure, intake & exhaust ducts, speedtronic control panel

## PUMPS

Ref. No.	Description
PMP010	One (1) "KSB" Pump Model: HDA 80 Capacity: 85,27 m <sup>3</sup> /h Head: 891 m Speed: 2960 rpm
PMP011	Two (2) "KSB" Pumps Model: HDA 80 Capacity: 63,5 m <sup>3</sup> /h Head: 891 m Speed: 2960 rpm
PMP015	One (1) "KSB" Pump Model: HDA 65/14 Capacity: 22 m <sup>3</sup> /h Head: 914 m Speed: 2950 rpm
PMP020	Two (2) "Siemens" Vacuum Pump Model: NR44916
PMP030	Two (2) "KSB" Pumps Driven by: "Marelli" electrical motor, 220/380 V Power: 30 kW Capacity: 120 m <sup>3</sup> /h Head: 43 m Speed: 2960 rpm
PMP032	Two (2) "KSB" Pumps Driven by: "Marelli" electrical motor, 220/380 V Power: 30 kW Capacity: 100 m <sup>3</sup> /h Head: 43 m Speed: 2950 rpm
PMP033	One (1) "KSB" Pump Driven by: "Siemens" electrical motor, 380 V Power: 4 kW Capacity: 9 m <sup>3</sup> /h Head: 56 m Speed: 2895 rpm
PMP045	Four (4) "KSB" Centrifugal Pumps Model: HPK C 200 400 Fluid: water Capacity: 475 m <sup>3</sup> /h Head: 58,5 m Speed: 1480 rpm Power: 95 kW
PMP050	Four (4) "KSB" Multistage Centrifugal Pumps Model: HCN 6-9 stages Fluid: water Capacity: 440 m <sup>3</sup> /h Head: 150 bar Speed: 2880 rpm Power: 2100 kW
PMP051	Two (2) Pumps Sets, each driven by a 2200 kW "KKK" Steam Turbine and composed by: - One (1) "KSB" Centrifugal Pump Model: HPK C 200 400 Fluid: water Capacity: 475 m <sup>3</sup> /h Head: 58,5 m Speed: 1480 rpm Power: 95 kW - One (1) "KSB" Multistage Centrifugal Pump Model: HCN 6-9 stages Fluid: water Capacity: 440 m <sup>3</sup> /h Head: 150 bar Speed: 2880 rpm Power: 2100 kW ("KKK" Steam turbines available)
PMP052	Two (2) Pumps Sets, each driven by a 2200 kW electrical motor and composed by: - One (1) "KSB" Centrifugal Pump Model: HPK C 200 400 Fluid: water Capacity: 475 m <sup>3</sup> /h Head: 58,5 m Speed: 1480 rpm Power: 95 kW - One (1) "KSB" Multistage Centrifugal Pump Model: HCN 6-9 stages Fluid: water Capacity: 440 m <sup>3</sup> /h Head: 150 bar Speed: 2880 rpm Power: 2100 kW - One (1) hydraulic torque variator (electrical motors not available)
PMP055	Four (4) UNUSED "KSB" Multistage Centrifugal Pumps Model: HDAN 80/9 Fluid: water Temperature: 137°C Capacity: 105 m <sup>3</sup> /h Head: 54 bar Speed: 2950 rpm Power: 220 kW Suction: DN 125 Discharge: DN 80
PMP057	Four (4) UNUSED "Brueninghaus Hydromatik" Variable Displacement Pumps Model: A7V055 DR/61L PPB01 Type: A7V Year: 03/1995 Fluid: mineral oil Capacity (max): 2,3 l/s Head (max): 350 bar Speed (max): 3750 rpm Power (max): 80 kW Torque (max at 350 bar): 305 Nm