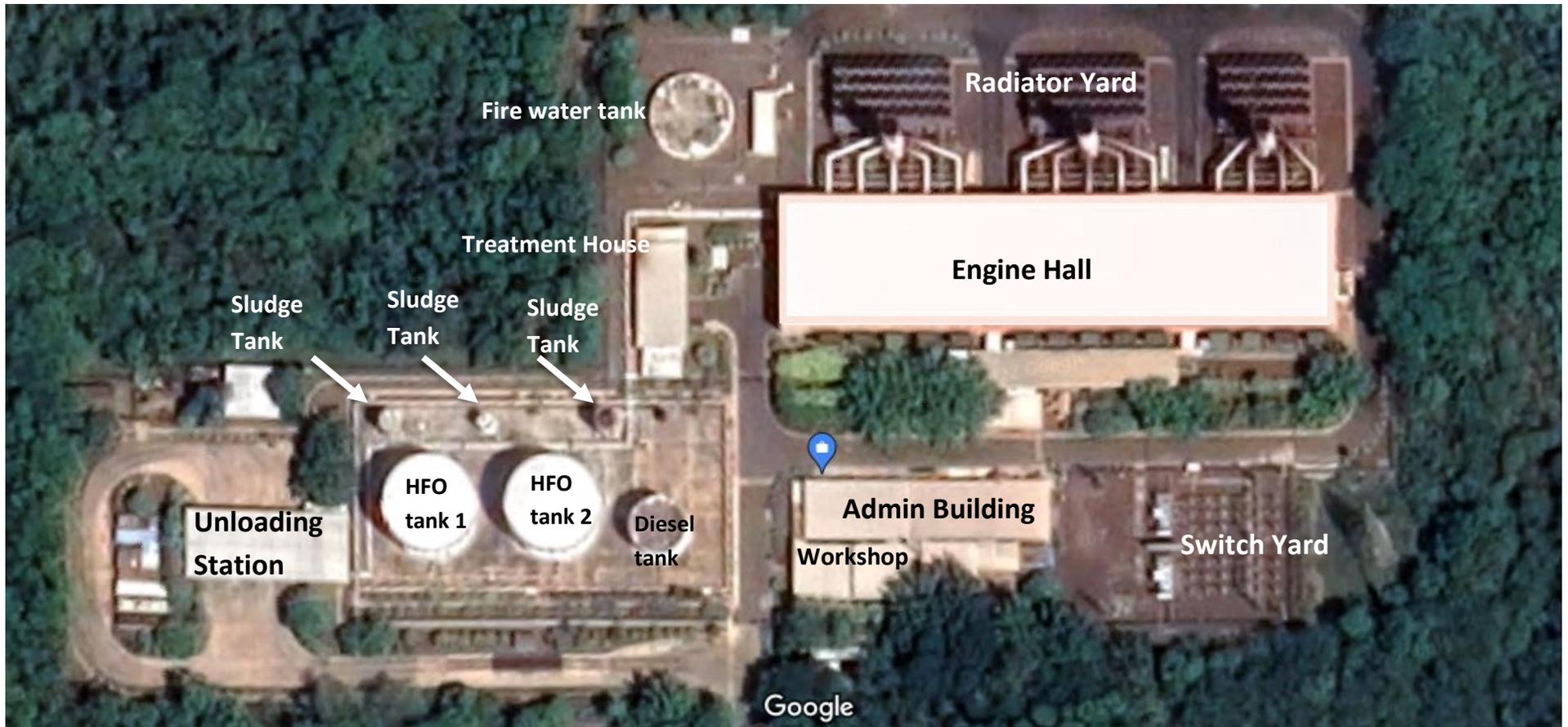


INFORMATION MEMORANDUM

Ref. DG- 33.24 – One 100 MW Power Plant for Sale



February 2022



Plant Layout

Technical Details of DG Sets

Engines

No of Engines	14
Year of manufacture	2004
Manufacturer	MAK / Caterpillar Motoren GmbH & Co: KG
Model	CAT 16CM32C
Nominal Output	7680 kW
Nominal Speed	750 RPM (Four-stroke)
Rotation	Counter Clockwise
Turbo Charger	ABB TPL 65 - A 30
Fuel Injection Pump	L'Orange PEO-GO 62 A
Lube Oil type	SAE 40
Fuel Grade	HFO /Diesel

Alternator

Manufacturer	AVK DEUTSCHLAND GmbH & Co. KG.
Type	DIG171m/8
Voltage	11000 V
Output	9127 kVA
Frequency	50 Hz

Information summary on plant performance and maintenance

Fuel used and engine specific fuel oil consumption:

<u>Fuel Grade</u>	<u>Density @15°C</u>	<u>Viscosity</u>	<u>Calorific Value</u>
HFO (180cSt)	0.96	180 cSt @ 50°C	41.00 MJ/kg

Lubrication Oil used and engine specific lube oil consumption:

Mobil Gard M440 and Caltex Taro 40XL

Lubrication oil consumption 4.6kg/h ±50% at any load

Operation History of the Plant

- Date of the plant commissioned April 2005.
- Date of the Operation and Maintenance transferred from Caterpillar Power Generation Systems July 2008.
- Plant operated and supplied energy to the National Grid as per the terms of the Power Purchase Agreement (PPA) from the date of plant commissioning.
- Carried out all Scheduled and Overhaul maintenance scopes as per guide lines of the engine and equipment manufacturers.

Details of engine running hours, SFC, and SLC

Engine 1-7

Engine No	1	2	3	4	5	6	7
Cumulative Running Hours	93152	90799	87143	89956	89773	91581	90198
SFC (ISO) g/kWh	201.90	204.82	204.03	202.23	203.91	204.81	203.23
Specific LO Consumption (g/kWh)	0.85	0.85	0.81	0.81	0.64	0.82	0.81

Engine 8-14

Engine No	8	9	10	11	12	13	14
Cumulative Running Hours	90723	90288	86355	90547	88419	85162	86431
SFC (ISO) – (g/kWh)	203.32	202.32	201.72	203.12	202.50	203.27	202.94
Specific LO Consumption (g/kWh)	0.89	0.72	0.79	0.98	0.96	0.89	0.71

01 Main Engines Maintenance Major Overhaul					
Engine No	Engine Present Running hrs at 07th February 2022	Plant and Equipment Identification No/ Engine serial No	Last performed Running hrs	Time period	Remarks/ Last performed date
1	93152	34048	87042	15000hrs	1-Mar-20
2	90799	34043	79476	15000hrs	4-Mar-19
3	90293	34044	74900	15000hrs	15-Mar-18
4	89956	34046	81374	15000hrs	5-Aug-19
5	89773	34045	84970	15000hrs	11-May-20
6	91581	34050	76352	15000hrs	23-Feb-18
7	90198	34049	79935	15000hrs	23-Apr-19
8	90723	34047	88526	15000hrs	1-Dec-20
9	90288	34055	87203	15000hrs	25-Sep-20
10	86355	34053	73189	15000hrs	15-Oct-18
11	90547	34051	83054	15000hrs	20-Nov-19
12	88419	34052	85018	15000hrs	10-Aug-20
13	88001	34054	83488	15000hrs	1-Jun-20
14	88534	34056	81016	15000hrs	1-Oct-19

02 Main Engines Maintenance 4000hrs planned					
Engine No	Engine Present Running hrs at 07th February 2022	Plant and Equipment Identification No/ Engine serial No	Last performed Running hrs	Time period	Remarks/ Last performed date
1	93152	34048	92796	4000hrs	21-Mar-21
2	90799	34043	90070	4000hrs	2-Mar-21
3	90293	34044	87013	4000hrs	25-Aug-20
4	89956	34046	86376	4000hrs	27-Aug-20
5	89773	34045	87142	4000hrs	31-Aug-20
6	91581	34050	90750	4000hrs	23-Feb-21
7	90198	34049	89762	4000hrs	16-Mar-21
8	90723	34047	88526	4000hrs	1-Dec-20
9	90288	34055	87,203	4000hrs	25-Sep-20
10	86355	34053	85830	4000hrs	9-Mar-21
11	90547	34051	87493	4000hrs	14-Oct-20
12	88419	34052	85018	4000hrs	10-Aug-20
13	88001	34054	83488	4000hrs	1-Jun-20
14	88534	34056	85602	4000hrs	14-Sep-20

03 Lube oil Separator Maintenance 4000hrs					

Lube oil Separator	Present Running hrs at 07th February 2022	Plant and Equipment Identification No/ serial No	Last performed Running hrs	Time period	Remarks/ Last performed date
1	92517	9014-301	91687	4000hrs	28-Feb-21
2	2890	9014-303	2852	4000hrs	26-Mar-21
3	31412	9014-307	31377	4000hrs	08-May-21
4	89174	9014-305	89133	4000hrs	28-May-21
5	46739	9014-311	46699	4000hrs	8-May-21
6	91602	9014-309	91577	4000hrs	3-May-21
7	24561	9014-313	24520	4000hrs	14-May-21
8	89031	9014-317	88992	4000hrs	29-May-21
9	24781	9333-655	24741	4000hrs	12-May-21
10	23673	9014-321	23636	4000hrs	29-May-21
11	88119	9014-325	88081	4000hrs	6-May-2021
12	30837	9014-329	30796	4000hrs	10-May-21
13	42474	9014-327	42437	4000hrs	4-May-2021
14	35366	9014-319	35330	4000hrs	5-May-2021

04 Lube oil Separator Maintenance 8000hrs					
Lube oil Separator	Present Running hrs at 07th February 2022	Plant and Equipment Identification No/ serial No	Last performed Running hrs	Time period	Remarks/ Last performed date
1	92517	9014-301	88202	8000hrs	9-Jul-2020

2	2890	9014-303		8000hrs	13-Jun-2020
3	31412	9014-307	19822	8000hrs	3-Jul-2020
4	89174	9014-305	83919	8000hrs	10-Apr-2020
5	46739	9014-311	42986	8000hrs	27-Jul-2020
6	91602	9014-309	87716	8000hrs	23-Jul-2020
7	24561	9014-313	20774	8000hrs	10-Jul-2020
8	89031	9014-317	81967	8000hrs	14-Oct-2019
9	24781	9333-655	18695	8000hrs	20-Feb-2020
10	23673	9014-321		8000hrs	8-Jul-2020
11	88119	9014-325		8000hrs	11-Jul-2020
12	30837	9014-329	28092	8000hrs	17-Nov-2020
13	42474	9014-327		8000hrs	13-Jul-2020
14	35366	9014-319	31302	8000hrs	2-Jul-2020

05 HFO Separators					
HFO Separator	Present Running hrs at 07th February 2022	Plant and Equipment Identification No/ serial No	Last performed Running hrs	Time period	Remarks/ Last performed date
1	94926	9014-315	87602	16000 hrs	12-Sep-19
			90387	4000 hrs	04-Jun-20
			94926	4000 hrs	23-Apr-21
2	94018	9014-335	70635	16000 hrs	09-Dec-18

			78583	8000hrs	25-Nov-20
				4000 hrs	10-Apr-21
3	83571	9035-422	80904	8000 hrs	25-Nov-20
				4000 hrs	22-Mar-21

06 Starting air Compressors					
Starting air Compressor	Present Running hrs at 07th February 2022	Plant and Equipment Identification No/ serial No	Last performed Running hrs	Time period	Remarks/ Last performed date
1	52087	04.8545-1-1	48836	12000hrs	29-May-19
			50637	12000hrs	
2	59005	04.8545-1-2	53005	12000hrs	22-Sep-19
			56595	2000hrs	30-Jul-20
			58875	6000hrs	11-Mar-21
3	3465	138768	10029	8000 hrs	15-Aug-17
			2399	2000 hrs	02-Jan-21
			3386	12000hrs	4-May-21

07 Generator Coupling replacement					
Engine No	Engine Present Running hrs at 07th February 2022	Plant and Equipment Identification No/ Engine serial No	Engine Running hrs @ Installation	Time period/ Last performed running hrs	Remarks/ Last performed date
1	93152	34048	93152	93152	27-Jan-22
2	90799	34043	90799	90799	28-Jan-22
3	90293	34044	87143	87143	22-Sep-20
4	89956	34046	89956	89956	1-Feb-22
5	89773	34045	89773	89773	2-Feb-22
6	91581	34050	91581	91581	8-Feb-22
7	90198	34049	90198	90198	3-Feb-22
8	90723	34047	90723	90723	8-Feb-22
9	90288	34055	90288	90288	7-Jan-22
10	86355	34053	86355	86355	6-Jan-22
11	90547	34051	90547	90547	10-Jan-22
12	88419	34052	88419	88419	5-Jan-22
13	88001	34054	85162	85162	3-Nov-20
14	88534	34056	86431	86431	17-Dec-20

Spare part sales with the plant assets

The Power Plant has been maintaining a substantial amount of engine and auxiliary spare parts assuming a 20 years' plant operation after completion of the 15-year period. The management of the Power plant has decided to sell all its stock of spares too with the assets under a separate enquiry.

The categories of spares vary from electrical (engine & auxiliaries), mechanical (engine & auxiliaries), rotation spares, safety spares, and to consumables. These spare parts are maintained/stored in accordance with specified standard recommended by the suppliers. The list of available spare parts is available separately.

Pictures Overview of the plant



Power House



Power House



Generator Control Panels



Switch Gears



Switch Gears



Radiator Yard



Fuel Treatment Unit



Fuel Separators



Fuel Storage Tanks



Unloading Station



Power House Building (structure also available for sale)



Control Room Building



Step Down Transformers