



FOR SALE

COMPLETE 9MWe POWER STATION



Moorland Energy Limited
42 Brook Street
London W1K 5DB

Introduction



Moorland Energy Limited, a UK registered company, invites offers for its complete 9MWe power station.

The power station was initially purchased by the company with a view to generating revenue through gas to power, however, having made a significant gas discovery in early 2009 the company has re-modelled its development plan and, as a consequence, has no further requirement for the plant.

The power station was built in 1997 and was in operation until decommissioning in

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April 2009. The three Wartsila units have been operated and maintained in accordance with the manufacturers systems and procedures, although the three generating units will require overhaul prior to reinstallation.

During the decommissioning process, all the equipment, including the buildings, were carefully recorded to facilitate the re-installation process. The three Wartsila engines are currently stored within First Energy's facility in Hereford, UK. The component parts have been labelled, protected and containerised to ensure reinstallation costs are kept to a minimum. All the equipment is available for inspection subject to prior arrangement.

Moorland Energy Limited is willing to sell the power station ex works or as a fully overhauled plant, the details of which will be agreed with the purchaser.

Additional information pertaining to the power station can be obtained by contacting either:

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Operations Director
Moorland Energy Limited
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Inventory

In summary, the power station consists of the following component:



- Three Wartsila 3.0MWe 16v 25g gas powered 11,000 Volts generating sets
- Associated auxiliary and motor control panels
- Pumps, lubricating oil heat exchangers, and air compressors etc.
- Gas train
- 12 air blast radiators – four per generating unit
- Five panel 11000 volts switchboard
- 500 kVA station transformer
- Medium and low volt cables
- Control instrumentation cables
- Steel frame metalclad building
- 15 metre 3 way chimney
- Clean and dirty oil tanks

Power Generating Units:

Number of units	Three
Manufacturer & Type	Wartsila W16V25SG
Engine Power	3125kW
Rated Output	(ISO 3046/1: 3000kW
Speed	1,000 rpm
Bore	250mm
Stroke	300mm
Swept volume/cyl.	14.7 litre
Fuel Input	7317kW
Oil consumption	1.7kg/hr +/- 25%
Generator rating	3670kW
Generator voltage	11,000
Protection / Insulation	IP23 Class F

Brief History:

	Total hours run – 60,301
Unit 1 (Serial No. 4125)	Ten thousand hour service at 53,620 hours Five thousand hour services at 58,733 hours Total hours run – 53,844
Unit 2 (Serial No. 4250)	Ten thousand hours services at 46,399 hours Five thousand hour service at 52,100 hours Total hours run – 59,111
Unit 3 (Serial No 4124)	Ten thousand hour service at 53,090 hours

Recommended Overhaul Requirements

Moorland Energy Limited requested First Energy Limited to provide a scope of work that would be required on each generator prior to reinstallation. The result of this is as follows:

Unit 1 (Serial No. 4125)

- Recommend cylinder head overhaul
- All main and pre-chamber gas valves to be replaced
- Engine heaters to be overhauled
- Turbocharger waste gates to be replaced

Approximate cost to complete scope of work UK£55,200.00

Unit 2 (Serial No. 4250)

- Cylinder 9 and turbocharger requires repair following dropped valve
- New radiator required. Loss of capacity due to damaged tubes
- Recommended cylinder head overhaul
- All main and pre-chamber gas valves to be replaced
- Engine heaters to be overhauled
- Turbocharger waste gates to be replaced

Approximate cost to complete scope of work UK£140,200.00

Unit 3 (Serial No 4124)

- Requires new intercooler core, tubes failed causing air-locks in cooling water
- Recommend cylinder head overhaul
- All main and pre-chamber gas valves to be replaced
- Engine heaters to be overhauled
- Turbocharger waste gates to be replaced

Approximate cost to complete scope of work UK£70,200.00

Containerised Inventory

Container # 1

- Cooling water piping (radiators)
- Cooling water support steels (radiators)
- Platform steps (radiators)
- Platform handrails
- 2 x Air box grilles
- 9 x expansion vessels
- Radiator walkways and steps
- Room cooler hangers
- False floor steel supports
- Exhaust spring hangers
- 1 x Air box (Filter / Silencer)
- 1 x Pump room walkway
- Cable tray / ladder
- Roof duct boards



Engine water and oil cooling circuits showing plate heat exchangers and exhaust silencers above. The engine cells are to the left off the picture

Container # 2

- Cooling water piping

Container # 3

- 3 x L/O PHE
- 3 x J/W PHE
- Platforms (external radiators)
- 4 x air bottles
- 3 x Catalysts
- 3 x Air inlet bends
- 12 x sets radiator leg extenders



Air start equipment

Container # 4

- 5 x 11ku panels
- 3 x generator local panels
- 3 x radiator panels
- 5 x 11kv circuit breakers
- 1 x 11kv protection panel
- 1 x 11kv protection panel
- 1 x generator PLC panel
- 1 x 24 VDC panel
- 1 x 110 VDC panel
- 1 x 415 VAC distribution panel
- 1 x 415 VAC aux drive panel
- 1 x 11ku CB trolley
- 1 x lot of engine parts
- 1 x lot of oil hoses, clamps
- Room vent ducts



Generator control panels

Container # 5

- Coils HV cables
- Clean and dirty oil tanks
- Building gutters and down pipes
- Cooling water pipes
- Engine cell vent ducts
- Engine platform and gratings
- G1 cell runway beams
- 1 x pump room vent duct
- 3 x generator cell doors
- Gas vent pipes
- 3 x exhaust gas trousers
- Double door frame
- Various building steels



Five panel ABB 11000 volt switchboard with three genset incomers, one station transformer feeder and one mains outgoing breaker

Container # 6

- 2 x Air filter boxes
- 2 x pump room floor plates
- Exhaust support steels (roof)
- Various walkways, grating & steels



Container # 7

- 3 x room cooler
- 3 x alternator cooler
- 1 x auxiliary transformer
- 1 x 11kv VT's
- 3 x Gas trains
- Building doors
- Generator AVM's
- Coils HV cables

24v and 110v battery charging panels

Container # 8

- Building wall panels
- 3 x exhaust straights
- Air dryer
- Pump roof vent silencer



Container # 9

- 2 x EXH silencers – G3
- Various building steels

Station transformer

Container # 10

- Building wall panels
- Cooling water pumps
- 3 x exhaust silencer outlet bends
- Alternator cooling duct



Container # 11

- 2 x boxes cables
- 1 x box generator parts
- Inner wall panels
- Building doors
- Engine walkways, platform and steps
- Pump room vent ducts
- Exhaust spring hangers
- Cell doors
- False floor panels
- Air start compressor
- 3 x Crankcase vent filters
- Generator cell runway beams

Decommissioning photographs



Container # 12

- 2 x exhaust silencers – G2
- Various building steels
- Props for concrete walls

Container # 13

- 2 x exhaust silencers – G1
- Various building steels

Container # 14

- 2 x Gas separators and valves
- 3 x Air inlets trousers
- 1 x Air inlet filter cowl
- 2 x packs of polystyrene
- Flashing
- Cell door frame