TECHNO-COMMERCIAL PROPOSAL

1. SCOPE OF WORK

Our scope includes the supply of a second-hand Siemens SGT-400 Turbine Generator.

SGT – 400 Gas Turbine Generator Set, with integral Local Equipment Room:
Units to be supplied is unused, tested only, installed.

2. PACKAGE DESCRIPTION

Our Scope of supply includes one (1) new 2014 Siemens SGT-400 Natural Gas Turbine Generator Sets, rated at 13,4 MW, 50 Hz, and configured for natural gas fuel. **The units are unused, tested only (100 Hours) actually installed.**

The SGT-400 series turbines are proven, highly efficient, and ideally suited for industrial, utility and data centre applications.

Gas Turbine Package:

- **Original year of assembly: 2014 SGT 400**
- **Gas Turbine Core Engine Original**
- **Assembly location: Asia installed**

AC Generator:

- Original assembly location: SIEMENS Electrical
- Machines Original year of assembly: 2014
- Package and core engine serial numbers will be confirmed upon placement of order.
- The unit's supporting documentation is available for review at any time with prior notice

Scope of Supply:

- Driven unit
- AC Generator
- 3 phases
- 50 Hz
- 4 poles
- 0.8 power factor
- Cylindrical pole brushless
- type Filter ventilated
- Class F insulation with class F total
- temperature rise Generator bearing
- temperature instrumentation Lubricating oil
- piping from gas turbine to driven unit
- Gas Turbine Engine
- SGT 400 Gas turbine engine – ISO Rating 13,4 MW(e) – two-stage uncooled variable free power

- turbine offers nominal shaft speed up-to 6,600 rpm
- Gas generator
- Air inlet casing
- Compressor rotor
- Compressor stator wit variable Guide
- Vanes (VGV) Centre casing
- Combustion system – Dry Low Emissions (DLE) for dual fuels Compressor turbine rotor
- Compressor turbine stator
- Power turbine Hot gas interdict
- Power Turbine rotor Power turbine stator Output shaft drive Exhaust outlet casing
- Engine arranged for hot end drive
- Engine bearing temperature and vibration instrumentation
- Under base
- Under base – fabricated carbon steel construction, arranged for - multi point
- Mounting assemblies for the gas turbine core, auxiliary gearbox,
- auxiliaries, and main gearbox Driven unit – separate under base
- Integral lubrication oil tank – carbon steel
- Quantity 1 units SGT 400 generator packages available
- Ready for shipment
- Gas and Liquid fuel system included
- DLE combustion system
- Start System
- Hydraulic motor and pump – AC electric motor driven
- Gears, Couplings and Guards
- Gearbox seismic vibration instrumentation
- Auxiliary gearbox incorporating drives to start system and lubricating oil pump
- Drive coupling – high speed – flexible element dry type – turbine to gearbox
- Drive coupling – low speed – flexible element dry type – gearbox to AC
- generator Coupling guard – high speed – (carbon steel) – turbine to gearbox
- Coupling guard – low speed – (carbon steel) – gearbox to driven unit
- Lubricating Oil System
- Integral mineral oil lubricating system serving the gas turbine, gearbox and driven
- unit Lubricating oil pump main – gas turbine gearbox driven
- Lubricating oil pump auxiliary – AC motor driven
- Lubricating oil pump emergency – DC motor driven
- Lubricating oil system filter
- Duplex filter arrangement
- Continuous flow transfer valves
- Conforms to API 614
- Filter body – carbon steel
- Differential pressure indicator
- Temperature and Smart type pressure & level transmitters – aluminium
- bodies Lubricating oil tank immersion heater
- Lubricating oil system breather Lubricating
- oil breather oil mist eliminator

- Lubricating oil breather ducting – austenitic stainless steel
- Lubricating oil system cooler
- Air blast simplex lubricating oil cooler – package roof mounted
- Cooler fan – single
- (100% duty) Suitable for a non - hazardous area
- Lubricating oil cooler piping supply and return – austenitic stainless steel
- Gas Fuel System
- Pilot fuel flow control system with actuator and integrated pressure transmitters
- Main fuel flow control system with actuator and integrated pressure transmitters
- Rapid acting gas shut – off – valves (2-off)
- Temperature transmitter – aluminium body
- Gas fuel block and vent valve assembly – off package
- Acoustic Enclosure
- Acoustic enclosure – painted carbon steel, fitted over gas turbine, gearbox and auxiliaries
- Doors for personal access and maintenance
- 83 dB(A)
- Integral lifting beam for maintenance Integral lightning
- Acoustic system transmitters – Siemens standard smart type – aluminium
- Excluded – ground level enclosure access platforms and steps
- Acoustic Enclosure Ventilation System Ventilation air inlet filter pad type
- Enclosure ventilation inlet and outlet dampers – air operated
- Ventilation fan – single – AC electric driven – Zone 2
- Ventilation air system – negative pressure Ventilation
- air silencer
- Ventilation air inlet and outlet ducting
- Integral support for turbine enclosure ventilation system
- Gas Detection System
- Gas detection equipment comprising
- 2 – I.R. point gas detectors (vent outlet)
- Fire Protection System
- Fire protection system comprising
- 3 – I.R. multi spectrum flame detectors 2 – Heat detectors
- Single sounder / beacon (end of package) 1
- – Beacon (inside package)
- Status indicator (end of package) 1 –
- MAC (Manual Alarm Contact)
- Fire Extinguishing
- Fire shot CO2 fire protection system – in accordance with NFPA
- 12 Cylinders housed in a weatherproof cabinet
- Extinguisher system distribution pipework and nozzles
- Piping from cabinet to package
- Combustion Air Inlet System
- Combustion air filter – simple static element – painted carbon steel Combustion air filter –
- weather hood
- Combustion air filter – mist eliminator Combustion air filter – EPA filter stage Combustion air

- silencer – painted carbon steel
- Combustion air inlet ducting – painted carbon steel
- Integral support for combustion air inlet system
- Maintenance access platform and ladder – combustion air filter
- Combustion Exhaust System
- Exhaust diffuser – ferritic stainless steel – horizontal orientation
- Exhaust silencer – ferritic stainless steel hot section – coated carbon steel outer
- casing Exhaust stack – ferritic stainless steel – floor standing vertical orientation –
- 15 m height Thermal insulation and aluminium cladding – personnel protection only

Package Electrical Systems
Integral Local Electrical Room (LER)
Designed to provide environmental protection for the SGT-400 package control panels and its operators. Fully equipped with lighting, power and environmental controls consisting of:

400 V AC – Package motors and heaters supply 230V 50Hz distribution board
Internal and external lighting Industrial 230 V 50 Hz outlet

Air conditioning/heat pump unit capable of maintaining control room at 20°C in all ambient conditions A baseplate designed to support the control panel shelter and internal tread plates which will attach to the end of the SGT-400 package driver unit baseplate to allow for a single point lift of the driver package

A single control panel cubicle with support frame
The combined control panel will consist of a battery charger, unit control panel for turbine and generator control and monitoring and motor control centre
Batteries – VRLA type, sized to ensure a safe run-down of the turbine and driven unit in an emergency case

Package Auxiliaries:

Turbine compressor – mobile cleaning system – 316 stainless steel tank – on and off-line wash Drain tanks on package
Auxiliary module pressure & level transmitters – Smart type – aluminium
bodies Instrument tagging – row tags – SIEMENS standard P&ID references
Package finish according to SIEMENS onshore standard

Control System:

Package Control System Hardware
Control system mounted within integral LER
Unit Control System section – simplex, incorporating a SIEMENS SIMATIC PLC platform
Control and monitoring of the package systems
Standard start-stop and load control functions – on-package
control panel HMI PC panel mounted
Operator display language – English Machinery vibration monitoring
Ethernet TCP/IP communications data link to DCS Generator Control Panel section containing Automatic voltage regulator
Synchronizing facility – automatic & manual with check synchronizer Generator metering equipment and electrical protection

SIEMENS Turbomachinery Applications – Remote Monitoring System – STA-RMSTM STARMS allows improved support for engine operators
Required operation during warranty period and thereafter with Long Term

Programs (LTP) service contracts

SIEMENS common Remote Service Platform secure communication through Virtual Private Network (VPN) via customer's internet service STA-RMS primary functions:

Automatic transfer of engine operation data to Remote Diagnostic Centre allowing:
Routine monitoring Predictive trending
Anomaly detection
Improved downtime prediction and scheduling Access to historic data
Fleet and unit performance reports

Remote access to the Human Machine interface allowing:
Direct operation of the Human Machine Interface by SIEMENS' support personnel Software updates during fault rectification helpdesk call
Faster troubleshooting and support

Testing Gas Turbine
Gas turbine core engine test – SE standard – the core has already been tested. Test data available

Driven Unit Test
Manufacturer's works acceptance test data of AC Generator. Pre-tested.

Drawings and Documentation
Standard set of certified information an approval drawing in English language
Existing drawings are to be reviewed and issued with relevant modifications or a project specific cover Operator manual – English language – CD only
Maintenance manual – English language – CD only
Driven unit manual – English language – CD only

Quality Assurance Programme
Material Record Book (MRB) – quality assurance and as built records – English language

3. Inspection, Testing & Acceptance

- Buyer / third-party inspection permitted
- Pre-dispatch inspection as required

4. PRICE BASIS:

S. No	Description	Qty (No)	Unit Price (USD)	Total Price (USD)
1	**Siemens SGT-400 Gas Turbine Generator Set Year 2014**	1	10,700,000	10,700,000
Total Amount (In words): Ten Million Two Hundred Thousand only				**10,700,000**

Notes:

1) Price Basis: **Ex-Works**
2) VAT excluded.

3) Export duties (if any): Seller's scope
4) Import duties, local taxes at destination: Buyer's scope
5) Buyer to provide End user signed forms duly filled for applying export license as required
6) Pre-Inspection cost and support will be extra available.
7) Demolition, packing, loading, and transport nearest port will be extra not included in above cost

5. PAYMENT TERMS:

- 10% Deposit into escrow prior to inspection
- 60% due upon contract signing
- Balance due prior to loading and

shipment Payment method: Bank wire

transfer (SWIFT)

Inspection: Deposit is required into escrow fully refundable if not as presented
Inspection is available after LOI signed and POF from the buyer one of our team must accompany inspector at buyers expense

- Purpose: Covers crating to Siemens standards, inspection preparation, and technical documentation access.

General:

- Offer is subject to prior sales and final sale & purchase agreement terms
- Inspection scheduling to be coordinated subject to site access and seller confirmation.

6. DELIVERY PERIOD

Lead Time: 4-6 Weeks from receipt of full payment.

Delivery term: Ex-Works
Shipping & Transport: To be arranged and paid by Buyer.

7. VALIDITY & CONFIDENTIALITY

- Offer validity: **7 days** from submission date, stock subject to sale
- All technical and commercial information to be treated as **confidential**

ASSET