FORM-A

**GUARANTEED VALUES & TECHNICAL REQUISITES OF GAS ENGINE GENERATOR.**

**Name of Manufacturer**:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl No | Item | Unit | Value | Test Location |
| 1 | Model Number of Gas Engine | - |  |  |
| 2 | Gas Engine Generator Speed | RPM |  |  |
| 3 | **GEG Gross Electrical Power Output** at 0.80 pf, at Site Condition (40 deg C ambient temperature, 50% relative Humidity) utilising Gas fuel of composition & calorific value as specified in Table – 1 (Average) | MW |  |  |
| 4 | *Station Electrical Auxiliary loads* (indicate break-up of all electrical loads and electrical losses which are considered) | kW |  |  |
| 5 | **Guaranteed GEG Net Exportable Electrical Power Output** (i.e after deducting *Station Electrical Auxiliary loads*) at 0.80 pf, at Site Condition (40 deg C ambient temperature, 50% relative Humidity) utilising Gas fuel of composition & calorific value as specified in Table – 1 (Average) | MW |  | Site |
| 6 | **Guaranteed GEG Net Heat rate** (i.e after deducting *Station Electrical Auxiliary loads*) at Site Condition (40 deg C ambient temperature, 50% relative Humidity) utilising Gas fuel of of composition & calorific value as specified in Table – 1 (Average) | kCal/kWhr |  | Site |
| 7 | **Guaranteed GEG Specific Lube oil consumption** at Site Condition (40 deg C ambient temperature, 50% relative Humidity) utilising Gas fuel of composition & calorific value as specified in Table – 1 (Average) | g/kWhr |  | Site |
| 8 | **Guaranteed GEG Gross Electrical Power** Output at Alternator Terminal at 0.80 pf, at Site Condition utilising Gas fuel of composition & calorific value as specified in Table – 2 (Rich Gas) | MW |  | Site |
| 9 | **Guaranteed GEG Gross Electrical Power Output** at Alternator Terminal at 0.80 pf at ISO condition utilising Gas fuel of OEM’s works with MN .........(OEM to declare) | MW |  | OEM’s works |
| 10 | **Guaranteed GEG Heat Rate**, at Gross Electrical Power Output, under ISO condition utilising Gas fuel of OEM’s works with MN .........(OEM to declare) | kCal/kWhr |  | OEM’s works |
| 11 | **Guaranteed GEG Specific Lube oil consumption** at Gross Electrical Power Output, under ISO condition utilising Gas fuel of OEM’s works with MN .........(OEM to declare) | g/kWhr |  | OEM’s works |
| 12 | Generator Terminal Voltage | V |  |  |
| 13 | Generator Phase | - |  |  |
| 14 | Generator Frequency | Hz |  |  |
| 15 | Service Water / DM water Requirement for Engine cooling system top up and Turbo Charger washing if any |  |  |  |

**PERFORMANCE CLASS AND ADDITIONAL REQUIREMENTS**

|  |  |  |
| --- | --- | --- |
|  | Description | Compliance (Yes/No) |
| 1. | Performance Class G2 as per ISO8528-5 | Yes/No |
| 2 | Transient response during   1. LPG Motor Starting, 2. Energizing 10MVA 11/33 kV Transformer, 3. Fault in downstream 11kV distribution network | ------ |
| a) | Frequency recovery to within (±) 3% in 2 sec. | Yes/No |
| b) | Frequency recovery to within (+) 4% in 0.1sec. | Yes/No |
| c) | Frequency recovery to within (-) 5% in 0.1sec. | Yes/No |
| d) | Voltage recovery to within (-) 9.5% in 3 sec. | Yes/No |
| e) | Voltage recovery to within (+) 4.5% in 2 sec. | Yes/No |
| f) | Voltage recovery to within (+) 14.5% in 0.4 sec. | Yes/No |

Notes pertaining to Factory Acceptance Test:

1. GEG guaranteed parameters under ISO conditions shall be utilising gas calorific value as specified in Table – 1 (Average) and MN range of .........................(OEM to declare)
2. If the calorific value of gas available at OEM’s works is different from OIL’s value, applicable correction curves shall be submitted along with the bid.
3. OEM’s declared range of MN shall include the MN corresponding to average gas composition (Table-1) of OIL.
4. The MN calculation procedure /curve/chart shall be provided with the bid.

We certify that the offered Gas Engine Generator set is designed to operate under all Gas fuel composition as mentioned in Table 1, 2 & 3 of this Tender document.

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OEM Authorised Signature Bidder’s Authorised Signature

Company Seal Company Seal