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EXPRESSION OF INTEREST (EOI) NO. EOI/SERVICES/O/503/2025-2026

Oil India Limited, a Government of India “MAHARATNA” Category Enterprise, engaged in the business of Exploration, Production & Transportation of Crude Oil and Natural Gas and Production of LPG invites Expression of Interest (EOI) from service provider(s) against **EOI No.: EOI/SERVICES/O/503/2025-2026** for ***‘Hiring of reputed Consultancy Agencies/ Service Providers/ Firms for carrying out various studies such as detailed and comprehensive techno-commercial study of OIL’s present electrical generation and distribution system with future load forecast, short-, medium- and long-term implementation measures for meeting the load demand, study and upgradation recommendation for its electrical distribution networks, feasibility of tapping power from State utilities for use in its production installations, feasibility of wheeling power from other states, cost benefit analysis for various options etc. for its Field Head Quarters at Duliajan and Moran fields, Assam.’***. Interested Parties having relevant experience and expertise (details are available at OIL’s website - www.oil-india.com) are invited to submit their EOI(s) at our e-mail id: eoicontracts@oilindia.in, indranilneog@oilindia.in, bikramjit.borgohain@oilindia.in within the stipulated date as indicated in the detailed EOI, followed by hard copies of the same through courier/post. The offer(s) may also be uploaded in Parties’ FTP server/File sharing website (portal) and the link(s) may be provided to us at any of our above e-mail id within above specified period. All Corrigenda, addenda, amendments, time extensions to the EOI will be hosted on the website and no separate notification shall be issued in the press. Prospective participants against the EOIs are requested to visit the website regularly to keep themselves updated.

INVITATION FOR EXPRESSION OF INTEREST (EOI)

For

Hiring of reputed Consultancy Agencies/ Service Providers/ Firms for carrying out various studies such as detailed and comprehensive techno-commercial study of OIL's present electrical generation and distribution system with future load forecast, short-, medium- and long-term implementation measures for meeting the load demand, study and upgradation recommendation for its electrical distribution networks, feasibility of tapping power from State utilities for use in its production installations, feasibility of wheeling power from other states, cost benefit analysis for various options etc. for its Field Head Quarters at Duliajan and Moran fields, Assam.

1.0 INTRODUCTION:

Oil India Limited (OIL), a Government of India Maharatna Public Sector Enterprise, is a pioneer energy company engaged in Exploration, Production and Transportation of crude oil & natural gas with its Field Headquarters at Duliajan in the District of Dibrugarh, Assam. The Company has been operating across the country as well as in several foreign countries either as an operator or as a JVC. The major Oil & Gas producing assets of the Company are located in Upper Assam Basin of Northeast India. The Operational area in Assam is spread over a radius of 150 km from Headquarters at Duliajan. Duliajan is connected by Air with the nearest Airport at Dibrugarh, 40 km away and well connected with all major cities of Assam.

2.0 PREAMBLE:

With the growing operations of Oil India Limited and to fulfil Oil India Limited's vision to contribute to sustainable energy security of India, the energy demand has seen a significant rise in the recent years. The demand for power will only rise further with the increase in OIL's activities and infrastructural development, along with the surge in production of crude oil and natural gas.

- 2.1 Recently, Government of India has encouraged national/state grid power connectivity for users of captive power plants for their own consumption. Further, OIL has also taken steps to reduce captive gas burning in its production installations as well as internal consumption of gas.
- 2.2 It is evident from above that the mandated reduction of dependence on natural gas as a source of energy for internal consumption has inevitably necessitated the increasing demand and usage of electricity.
- 2.3 In view of above, it is intended to develop a master plan for augmentation of electrical power and distribution network capacity at OIL's field headquarters at Duliajan and at Moran fields, to meet the projected rise in power demand in the near future. As a part of master plan development, a feasibility study is to be carried out to assess present and future loads, present generation capacity, identify generation shortfall and suitable measures in the short, medium and long term vis-à-vis grid power connectivity. In addition, other studies such as feasibility of wheeling power, cost benefit analysis etc. also require to be carried out for preparing a comprehensive future plan with implementation strategy.

3.0 POWER SCENARIO FOR OIL'S VARIOUS INSTALLATIONS:

At present, various installations of OIL FHQ are powered from either of the three sources:

- i) From OIL's Duliajan and Moran Power Stations through a system of overhead conductors/underground cable network
- ii) From the installation's own captive power plant
- iii) From M/s APDCL 11 kV/LT network

- 3.1 Duliajan Power Station (DPS): Duliajan Power Station is equipped with 1 (one) unit of 20 MW Gas Turbine Generator and 3 (three) units of 9.78 MW Gas Engine Generators as of now. The power station can give a continuous output of 18.5 MW base load. These machines are relatively new; the gas engines having been commissioned in 2023 and the Gas turbine generator in 2015.

DPS supplies electrical power to all the numbered production installations (e.g., OCS-1 to OCS-8 and GCS-1 to GCS-8) in and around Duliajan. Apart from these production installations, DPS also supplies electrical power to all OIL offices, housing, workshops, hospital, market, schools (within OIL boundary) etc. inside the OIL township. Further, under construction and in pipeline projects such as new housing and office building projects, new hospital building, new water treatment plant etc. will also be supplied with OIL power from DPS.

All the production installations are within a radius of about 10 KM from Duliajan Power Station.

- 3.2 Moran Power Station (MPS): Moran Power Station is equipped with 2 (two) units of 3 MW Gas Turbine Generators and 1 (one) unit of 3 MW Gas Engine Generator. The gas turbine generator sets were commissioned in 1998. The gas engine generator set is comparatively new, having been commissioned in 2017.

Moran power station supplies power to Moran OCS-1, Moran GCS, Moran OIL offices, Housing Colony, Moran Tank Farm etc.

All installations being powered from Moran Power Station are within a radius of 5 KM from Moran power Station.

- 3.3 The electrical power from DPS and MPS are supplied to the consumers through a vast network of electrical overhead lines and underground cables, at various voltage levels. However, the distribution infrastructure of OIL is aged, with vintage of more than 40 years, leading to frequent operation and maintenance challenges. This applies to both Duliajan and Moran OIL townships. Though piecemeal maintenance/upgradation measures are being carried out intermittently, this is not sufficient in view of the increasing load demand and ageing of the infrastructure. Hence it has become crucial for upgradation of the distribution infrastructure as well, in addition to the problem of catering to the future demand.

- 3.4 Apart from the installations that are powered by DPS and MPS, there are various new production installations that are powered from their own captive generating sets, either gas or diesel driven. As explained in Para 2.1 above, these installations will also finally be converted into grid electricity consumers.

For limiting the objective of this EOI, these installations with captive gensets are excluded from the scope of work under this EOI.

4.0 FUTURE POWER SCENARIO:

4.1 Duliajan:

The estimated future load demand is more than 10 MW at Duliajan township. Major infrastructure projects are in various stage of constructions or in pipeline, which will require huge amount of additional power in the coming future. It is evident that generation capacity of Duliajan Power Station (as detailed in Para 3.1 above) will be inadequate for meeting peak loads and future load demand.

Accordingly, future power requirement for Duliajan township (with its office/industrial/ domestic loads) as well as production installations being fed from DPS has to be looked into from short term, medium-, and long- term planning angle.

Further, as explained earlier, the distribution infrastructures of OIL for its various load centres are aged. Hence it has become crucial for upgradation of the distribution infrastructure as well, in addition to the problem of catering to the future load demand.

As the existing infrastructure may not be efficient in context to today's smart energy management systems, this will also be a hurdle to cross. Accordingly, technology to be adopted for upgraded power distribution needs to be looked into from efficiency point of view. In addition, OIL is actively engaged in renewable energy generation, mostly through rooftop solar plants (in Duliajan). Integration of the same with in-house generation from DPS and imported grid power (as discussed later) is to be critically reviewed.

As explained above, a few installations of OIL are already supplied with APDCL power. Further, seven (7) more installations are already planned to be supplied with electrical supply from APDCL. In addition to this, it has been planned to convert some installations/group of installations to fully electricity-driven installations, i.e., all equipment will be electrically driven instead of natural gas as source of power. As the new (under construction) 8 MGD water treatment plant is also a heavy power consumer, state grid connectivity is also considered for this installation as the primary source of power. These special cases are considered in the following paragraphs.

4.2 Moran:

As in Duliajan, there has been a spurt of growth of electrical power demand in Moran OIL township also. Most of these loads is expected from proposed new Secondary Tank Farm at Moran, new Sports Complex, new Fire service building, Central Tank Farm conference room and Training centre etc.

Further, as explained in Para 3.2 above, the gas turbine sets at Moran are almost 27 years of vintage. As gas turbines are not fuel-efficient machines, there may not be future induction of gas turbines as captive source of power. In view of the above, it has been planned to supply Moran with State Grid power. Accordingly, some steps have been taken for arranging grid power for meeting present and future load demands for Moran OIL township. However, a comparative study is also to be carried out for SITC of a gas engine genset as these are fuel efficient machines and can be used either as base load or standby sets.

4.3 **Usage of Grid Power in OIL's Production Installations:**

- 4.3.1 With the increase in crude oil and natural gas production, the number of production installations have also gone up leading to exponential electrical load growth. Earlier, most of the field installations were energized by Duliajan Power Station and Moran Power Station. However, as OIL's operation has expanded, the OIL electrical distribution network could not be expanded further, thus necessitating usage of captive gensets in individual installations which could not be supplied from DPS or MPS. Thus, the requirement of captive gensets have begun, which are mostly gas based gensets and at a few places, diesel gensets. The loads on Duliajan and Moran power stations have also increased because of load growth in original installations. This has also put pressure on the generation capacity of these two generation installations.
- 4.3.2 Government of India has encouraged national/state grid power connectivity for users of captive gas-fueled power plants to reduce their internal gas consumption. Further, OIL has also taken various steps to reduce captive gas burning in production installations as flare, internal consumption in OIL townships and reduction of usage of gas in captive power plants in production installations.
- 4.3.3 OIL's vision of attaining net zero target by 2040 also necessitates that captive gas consumption is reduced as far as possible.
- 4.3.4 With the above backdrop, it is necessary to take drastic measures for minimization of usage of natural gas for power generation for domestic usage. This is possible only with the utilization of Grid power from State/National Grids. A few production installations of OIL are already connected to APDCL power (Assam Power Distribution Company Limited, local DISCOM), and a few are being arranged for APDCL power supply. In addition, AEGCL (Assam Electricity Grid Corporation Limited, the state Grid company) infrastructure is also available for tapping power from HV grid lines.
- 4.3.5 **It has also been planned to "electrify" the Operations of a few Production Installations.** As part of the Project "Santulan" by OIL (a project under ESG for reducing and finally eliminating usage of natural gas for internal consumption and OIL's target of achieving Net Zero target by 2040), a few production installations have been earmarked for converting all gas burning equipment such as engines, crude oil heaters/heater separators/indirect heaters/emulsion treaters etc. to electricity driven equipment.

These installations are crucial in terms of production and as of now are supplied from Duliajan Power Station via HT overhead lines. Since "electrifying" all operations of an OCS or a GCS will demand huge amount of electrical power, OIL's own generation from DPS will not be able to cater to the load. Grid connectivity from nearby state/national grid is the only option.

4.4 **OIL's Green Power Initiative:**

Recently, OIL has constituted a 100% subsidiary company, M/s OIL Green Energy Limited (OGEL), which will be instrumental in harnessing the renewable energy generated through OIL's vast network of solar power and wind power plants mostly in Rajasthan, Madhya Pradesh and Gujarat. Green energy is a key ingredient in achieving OIL' Net Zero target by 2040.

It may be noted that OIL has formed another joint venture company titled AOGPL (APGCL-OIL Green Power Limited) with APGCL (Assam Power Generation

Corporation Limited) which will harness solar and hydro power in Assam and Arunachal Pradesh. The green power generated by this company can also be imported for OIL's use, as the Company at present is constructing a 25 MW solar plant at Namrup, Near Duliajan.

However, all angles are to be considered in the backdrop of feasibility and cost economics

5.0 OBJECTIVES:

In the backdrop of above, the objectives of the present EOI are enumerated as follows:

- 5.1 To evaluate and verify the existing power generation and distribution infrastructure for both Duliajan and Moran OIL townships.
- 5.2 To study the future load growth and prepare short-, medium- and long-term measures for meeting the load growth of the townships.
- 5.3 To identify capacity constraints for future requirements including source of power, distribution networks, substations, switchyards etc. Types, numbers & other details of power consumers and their power demand will be provided by OIL.
- 5.4 To develop a Master Plan for infrastructure augmentation (for both generation and evacuation of power) including load flow and short-circuit studies for Duliajan and Moran OIL townships and give recommendations thereof.
- 5.5 To study availability of grid power to production installations (as detailed in Para 6.0, "Scope of Work") and cost economics thereof.
- 5.6 To study the feasibility of "electrifying" the operations of a few production installations and grid connectivity to 8 MGD water treatment plant as primary source of power.
- 5.7 To study feasibility of wheeling of green power through the Grid connection for OIL's use in the earmarked installations.
- 5.8 To make a cost benefit study between grid power vis-à-vis OIL's own generation and provide a phased implementation strategy in the earmarked production installations.
- 5.9 Any other electrical consultancy study against the requirement of Electrical Engineering Department, OIL, Duliajan.

6.0 SCOPE OF WORK (FOR SUBSEQUENT CONSULTANCY SERVICE):

The scope of work for the required consultancy services is therefore summarized as follows:

Carrying out of various studies such as detailed and comprehensive techno-commercial study of OIL's present electrical generation and distribution system with future load growth forecast, short-, medium- and long-term phased implementation measures for meeting the load demand, study and upgradation recommendation for its electrical distribution networks, electrifying operations of production installations, feasibility of tapping power from State utilities for use in its production installations, feasibility of wheeling power from other states, cost benefit analysis for various options etc. for its Field Head Quarters at Duliajan and

OIL township at Moran, Assam. The scope of work will also cover the requirement of compliance regarding safety and statutory measures.

The period of consultancy will cover a period of 03 (three) years with provision for extension by 01 (one) year. However, the various studies to be carried out as outlined below will be against individual timelines given against each type of study.

In some instances, two or more studies may have to be carried out simultaneously, depending upon the requirement and exigency of the job as detailed by OIL.

6.1 **Present Load Survey and Future Load Forecasting:**

- 6.1.1 Collection of design and field data for the existing power generation and distribution system catering to various load centres/sites of FHQ Duliajan and Moran townships. Number of installations for Duliajan will be ~15 and for Moran field will be ~5. Types, numbers and other details of power consumers and their power demand including future demand data (for short-, medium- and long-term basis) will be furnished by OIL.
- 6.1.2 Analysis, review and verification of data of the existing load demand and power generation at actual site conditions.
- 6.1.3 Assessment of the margin in the capacity of the present generation system. Present generation capacity and respective OEM data will be provided by OIL.
- 6.1.4 Consolidation of load demand for the two townships (Duliajan and Moran separately) & carrying out of a master plan to undertake measures in short, medium term and long term to meet the deficit. Identification of generation shortfall based on the consolidated load demand (existing and future).

Timeline: 03 (three) months from the date of assignment of the job.

6.2 **Network Study:**

- 6.2.1 Study of the OIL distribution network (feeding from DPS and MPS) and identifying capacity constraints for future requirements including source of power, various substations and switchyards, the present condition of the overhead line and underground cable network, and operability of these network components in view of the future load growth.
- 6.2.2 Load flow study, short circuit and fault calculation of the DPS and MPS electrical networks in the backdrop of future power requirement. As Moran Township will eventually be powered from Grid power (as explained later), synchronization of grid power and GTG/GEG power and effect of grid fault on MPS load centres.
- 6.2.3 Protective relay coordination review for existing system and recommendation for augmented / new system.
- 6.2.4 Carrying out of SLD of existing and proposed augmented system. Input for development of SLD for existing system to be provided by OIL.
- 6.2.5 Study for Power factor improvement in existing and augmented system. Suggest remedial measures and the integration implementation process.
- 6.2.6 Study of extreme weather conditions on electrical system / component which are design for 40 deg C ambient.

6.2.7 Development and recommendation of a Master Plan for augmentation of captive generation (or sourcing of power from grid) and consolidation/augmentation/revamping/re-alignment of the design of the distribution infrastructure for both the townships to cater to the increasing demand as a long-term measure. Phased implementation plan for the Master Plan shall also be prepared.

Timeline: 04 (Four) months from the date of assignment of the job.

6.3 **Feasibility of Tapping Power from State Power Utilities for Use in Production Installations:**

To study availability of grid power to the installations earmarked.

6.3.1 Accessibility of grid power to the installations (to be earmarked by OIL) is to be ascertained. OIL will help in consultation with APDCL/AEGCL. However, the actual assessment including erection of new infrastructure (tapping point at APDCL/AEGCL end and terminal equipment at OIL end) will have to be carried out by the consultant. For cost estimates, budgetary quotations will be obtained from the state companies.

6.3.2 The grid is an infinite source of power. Hence compared to small electrical load of production installations, grid power will be an inexhaustible source of power in case of faults in OIL's system. Hence proper load flow and short circuit study for individual installations are critical.

6.3.3 Design optimization for the system before grid connectivity and site-specific layout optimization is to be carried out.

6.3.4 Energy optimization for the system before grid connectivity is to be carried out. Further, capacity utilization factor is to be studied for optimizing energy consumption through grid.

The above studies for optimization are particularly required for larger production installations.

6.3.5 Load flow, short circuit, effect of grid transients on the installation, motor starting, block loading study etc. are required for sizing of grid connectivity model. Existing ETAP model (as built status) shall be made available by OIL for carrying out load flow, short circuit and motor start-up studies in ETAP. ETAP study shall be carried out with block loads (at 11 kV with 7-8 block loads and at 3.3 kV with 5-6 block loads). Any other study such as relay coordination studies, harmonic analysis etc. is excluded from consultant's scope.

6.3.6 Since State grid/power utilities will provide power only up to a certain point near the installation, OIL has to arrange for rest of the infrastructure. Optimized planning as well as cost estimate of the infrastructure are to be carried out.

Timeline: 04 (Four) months from the date of assignment of the job.

6.4 **Design of New 33/11 kV Switchyard and 11 kV Switchgear Room at Moran Power Station (as part of Grid Connectivity activity at Moran OIL Township):**

As explained in Paras 4.2 and 6.2.2, Moran OIL township (as well as industrial and production installations supplied from MPS) will be requiring major power upgrades. Accordingly, it is planned for grid connectivity at a single point through

Moran Power Station. The battery limit of MPS will be from grid overhead lines tapping point to outgoing feeders from MPS. As per initial design, the tapping point from the grid overhead lines will be connected to a 33 kV switchyard, with 33/11 kV transformers, VCBs, isolators, CTs/PTs, earthing switches etc. From the switchyard the power will be transmitted to 11 kV indoor switchgear room. The job of the consultancy services will be as follows:

- 6.4.1 Design of a 33/11 kV switchyard with all components. The plinth of the switchyard will be in the premises of MPS. Net Metering facility will be provided on the incoming side for grid connection. Synchronizing facility will be provided for connection to downstream 11 kV switchgear panels.
- 6.4.2 Design of an 11 kV switchgear panel with synchronizing facility with bus sections and for grid connectivity for at least two buses. Control gear for the 33 kV system will also be housed in the 11 kV switchgear room. The switchgear panel will have feeders as per the requirement of OIL along with sufficient spare feeders.
- 6.4.3 Design of the civil construction of the building for the switchgear panel along with control room, battery unit room and other statutory requirement.
- 6.4.4 Load flow study for the switchyard and switchgear along with short circuit study of the system will be carried out. It may be noted that the 3 MW GEG unit will be maintained as back up power unit. Accordingly, earthing system for the grid as well as the existing GEG unit has to be studied and recommendation to be given.
- 6.4.5 **EPMC by the Consultancy service:**
 - a) Preparation and floating of the tender: Once the proposed system is finalized and approved by OIL, tender for the EPC contract for supply, construction, installation, testing and commissioning of the switchyard and 11 kV switchgear panels along with construction of the switchgear room will be prepared by the consultant. Tender will be published on OIL's website/GeM portal.
 - b) Technical scrutiny of the bids will be carried out by consultancy service.
 - c) Once contract is awarded, supervision of the job until successful commissioning of the system will be carried out by the consultancy service.

Timeline: 04 (Four) months from the date of assignment of the job till floating of EPC tender

6.5 **Grid Connectivity and “Electrifying” the Operations of the Production Installations and grid power to 8 MGD Water Treatment Plant as Primary Source of Power:**

- 6.5.1 a) **Study of Operation of Production Installations only on Electrical Power:** As part of the Project “Santulan” by OIL (a project under ESG for reducing and finally eliminating usage of natural gas for internal consumption and OIL's target of achieving Net Zero target by 2040), it is required that all new and upcoming production installations will be run solely on electrical power without consumption of natural gas for its internal processes and generation of power. Therefore, the equivalent electrical load is to be estimated which will be consumed in converting gas fired production equipment such as indirect heaters, heater treaters, emulsion treaters etc. to electricity driven equipment and to optimize the electrical load thus estimated. Further, equipment such as gas compressors which are at present run

with gas engines are intended to be run with electrical motors as prime movers. Equivalent motor ratings for such loads are to be ascertained.

As part of the requirement, it is planned to carry out a study to this effect on two nos. of existing production facilities as a pre-emptive step. Accordingly, two production installations (one OCS and one GCS) will be earmarked for the study. The requirement of the study will encompass the feasibility of converting all the natural gas burning equipment such as engines, crude oil heaters/heater separators/indirect heaters/emulsion treaters etc. to electricity driven equipment and assessment of the electrical power requirement.

b) Finalization of the load requirement after design optimization in consultation with Production department and Electrical Engineering Department.

c) To look into the feasibility of grid connectivity to meet the above electrical power requirement. The feasibility of grid connectivity from nearby State/National grid is required to be studied.

d) Load flow, short circuit, motor starting, block loading study etc. are required for sizing grid connectivity model. Existing ETAP model (as built status) shall be made available by OIL for carrying out load flow, short circuit and motor start-up studies in ETAP. ETAP study shall be carried out with block loads (at 11 kV with 7-8 block loads and at 3.3 kV with 5-6 block loads).

e) In line with the above installations, to verify and estimate the present and future electrical load requirement of the installations as well as upcoming loads with the scope of converting gas consuming equipment to electricity driven equipment. The list of installations will be intimated as required.

Timeline: 03 (three) months from the date of assignment of the job.

6.5.2 a) **Feasibility of Grid Connection to the New Water Treatment Plant:** The electrical load requirement of the 8 MGD new water treatment plant (under construction) is estimated at 2.5 MW. It is intended to use grid power as primary source of power to the plant. Power from DPS will be used as backup power.

b) To study the feasibility of procuring APDCL power for the new WTP. Load flow, short circuit, motor starting, block loading study etc. are required for sizing grid connectivity model. ETAP study shall be carried out with block loads (at 11 kV with 3-4 block loads and at 6.6 kV with 3-4 block loads).

Timeline: 02 (two) months from the date of assignment of the job.

6.6 **Feasibility of Wheeling Green power for OIL's use in the Earmarked Installations:**

To study the feasibility of wheeling green power from OIL's own subsidiary OGEL or JVC AOGPL through the Grid Connection to the installations for which grid connectivity is proposed.

6.2.1 OIL has a vast amount of green energy at its disposal. Also, OIL and APGCL joint venture company AOGPL are also in the process of building its first solar plant of 25 MWp at Namrup, 30 kms from Duliajan. As the OIL installations will eventually be connected to grid, it will be easier to run the installations on green grid power. The availability of green power from these sources (or from other green power

generators) will play a crucial role. Hence availability and accessibility of green power through the Grid for use in the OIL installations is to be thoroughly studied.

AOGPL green power from 25 MW solar plant at Namrup will be available readily once the plant is commissioned.

- 6.2.2 In case of feasibility of accessing green grid power, cost of such power for wheeling across states, exchange costs, transmission costs etc. will have to be worked out and a detailed cost analysis report will be prepared.

Timeline: 03 (three) months from the date of assignment of the job.

6.7 **Cost Benefit Study for Grid Power and OIL Power and carrying out of a Phased Implementation Plan for Execution:**

The installations mentioned in Para 6.5 are at present being supplied with OIL power. To reduce internal gas consumption, it is now necessary to supply these installations with grid power. Various costs will be associated with grid power such as fixed costs, actual consumption/energy costs, cost of erection of infrastructure for supplying power to OIL installations from the grid, security charges, power factor and overdraw penalties etc.

- 6.7.1 Preparation of Savings model in case grid connectivity is to be carried out. In addition, cost of green power will also be included in the CBA as an additional option to OIL.
- 6.7.2 Cost benefit analysis of grid power vis-à-vis OIL's own generation will be prepared. It is required to estimate various costs, make a cost benefit study between grid power vis-à-vis OIL's own generation.
- 6.7.3 To prepare a phased implementation strategy for the installations mentioned in Para 6.5.
- 6.7.4 The above study is required for any production/industrial installation mandated by OIL for grid connectivity in future.

Timeline: 03 (three) months from the date of assignment of the job.

6.8 **Study and Implementation Plan for Incorporating Neutral Grounding System in Production Installations of OIL:**

Neutral Grounding through resistance is a statutory requirement as per CEA Regulations 2023. Some of the production installations of OIL are not equipped with neutral grounding resistance. The consultant has to study the electrical system of the installations and design an NGR scheme which will meet both operational as well as statutory requirements. Particular installations will be earmarked by OIL.

Timeline: 03 (three) months from the date of assignment of the job for all earmarked installations.

6.9 **Study and Implementation Plan for Incorporating Lightning Protection System in Drilling and Workover Rigs of OIL:**

Lightning protection system is gradually being implemented in OIL's production installations. In line with this, it is now required to implement lightning protection

system in OIL's drilling and workover rigs also. Though drilling and workover rigs have some inherent lightning diversion capabilities because of the height of their masts and solid earthing system, this may not be sufficient in case of multiple lightning strokes in succession or breakage in the grounding path because of unwarranted breakage of earth conductors from mast to earth electrodes.

The consultant has to study the rig system (plant layout, i.e., how the equipments are arranged on the plinth, inter-equipment distances, resistivity of the soil etc.) of the earmarked rig and design a scheme which will meet both operational as well as statutory requirements. Rigs will be earmarked by OIL where lightning protection systems need to be installed.

Timeline: 04 (four) months from the date of assignment of the job for all earmarked rigs.

6.10 **Develop Layout plan of new electrical plant /system including site survey. HAZID, HAZOP, QRA, Risk matrix/ RACI for electrical system/plant:**

To develop electrical plant/system layout for any new electrical installations coming up in future or any existing electrical plant/installation being relocated in future. Civil layout design, electrical statutory requirement, tools for safety such as hazard identification (HAZID), hazards and operability (HAZOP), qualitative risk analysis (QRA), risk matrix, RACI (responsibility, accountability, control and information) etc. will be prepared and submitted for OIL's approval.

Timeline: 03 (three) months from the date of assignment of the job for the job.

6.11 **Smart Microgrid design and islanding operation in combination of GEG/DEG/BESS with grid power and auto start and stop for GEG/DEG etc. Develop implementation methodology for remote installations:**

For remote production installations with captive gensets, it is planned to use grid power as primary source of power. In case of grid power failure, backup power will be provided through the gensets. However, to minimize the usage of captive gensets, micro-grid system with battery energy storage system (BESS) and solar panels can be utilized.

For a few earmarked production installations of OIL, the consultancy service will be required to design a smart microgrid system in islanding mode in combination with the existing GEG/DEG and proposed grid connection. The system will be complete with automatic start/stop for GEG/DEG when grid power fails and battery system of microgrid is drained. Once the batteries are charged, the GEG/DEG will be synched out and the system will run on microgrid power, till grid power is restored.

Timeline: 03 (three) months from the date of assignment of the job for the job.

6.12 **Study and Implementation of modern, state-of-the-art technologies:**

Along with upgradation of existing system with conventional technologies, the consultancy service shall also have to study and suggest implementation plan for new and state-of-the-art technologies which will boost sustainable productivity and lower costs, such as, Energy Management System with Battery Energy Storage System (BESS) for upgrading power sources of installations with sizing and selection of type of battery, Demand side management – AI/ML in maintenance optimization, guiding to get ISO 50001, Integration of electrical system for remote

monitoring/ centralized control room, feasibility for integration of Electric Vehicle (EV) charging station/infrastructure and impact of harmonics generated by EV/solar on existing electrical system, the scope of Internet of Things (IOT) in existing/future system demand side management and suggest implementation plan.

Timeline: As assigned by OIL from the date of assignment of the job.

6.13 **Energy market and policy:**

The consultancy service will also provide guidelines and implementation plan for energy market and policy, including participation in open access for energy transactions, dynamics of cost of energy fluctuations, handling of green energy through RPO/REC etc.

Timeline: As assigned by OIL from the date of assignment of the job.

6.14 **Any other Consultancy Services related to Electrical Engineering Department and in line with the Study Requirements outlined in Para 6.1 to 6.13:**

7.0 SAFETY AND STATUTORY ASPECTS:

- 7.1 Study of existing electrical safety & protection system for the generation facilities and electrical distribution network and future additional/new safety recommendations in view of the prospective enhancement of power consumption and augmentation/revamping of distribution network. Relay coordination study is excluded from consultant's scope.
- 7.2 Risk analysis, control and remedies for power system reliability and availability in view of the grid connection to the installations.
- 7.3 Statutory requirements if any, for grid connection for use in production and internal/industrial/domestic, are to be properly studied and recommendation thereof to be made.

8.0 OUTLINE OF THE TASKS TO BE CARRIED OUT FOR EXECUTING THE SCOPE OF WORK:

- 8.1 **Stakeholder Consultation:** The objective of this task is to collect data from all the stakeholders, i.e., various departments in the two locations (Duliajan and Moran); collate the present energy consumption; discuss regarding the future plan of activities.
- 8.2 **Field visit:** The objective of this task is to visit the field installations, electrical distribution networks & substations/switchyards of OIL; collect the present energy consumption data; calculate the actual requirement of energy requirement; study & evaluate the Demand Side Management (DSM) initiatives applicable in fields & calculate the feasible energy savings thereof.
- 8.3 **Data analysis:** The objective is to map the future demand of energy requirement in field/industrial/domestic installations. Future demand data will be provided by OIL.

- 8.4 **Techno-economic study:** This shall include the feasibility study of grid connectivity to production installations as well as industrial/domestic installations along with the cost estimation and cost benefit analysis, considering the demand side management.

The Techno-economic study will also cover subjects like converting operations from a natural gas-based plant to fully electricity driven plant, feasibility of wheeling power from other states/nearby available grids, additional safety and statutory requirement arising out of grid power utilization in OIL installations.

- 8.5 Grid connectivity to Moran Power Station (for finally powering the production and industrial installations as well as housing in OIL township at Moran) is an immediate requirement. Hence the feasibility of importing grid power and construction of switchyard/substation etc. is to be studied and the final plan is to be materialized as early as possible.
- 8.6 Carrying out of a Phased Implementation Plan for Execution for each and every study is required.
- 8.7 Any other Consultancy Services related to Electrical Engineering Department and in line with the Study Requirements outlined in Para 6.1 to 6.9.
- 8.8 **Report Preparation & Presentation:** This includes the preparation of draft report with action plan; discussions on the draft report & then preparation of the final report, taking into consideration the views of stakeholders; presentation to the management on the outcome of the report.

9.0 DELIVERABLES:

For all of the jobs as described above, the consultant has to submit a draft report initially. There will be a presentation and discussion on the draft report. Amendments, if any as suggested by OIL, will be incorporated into the report. There may be two/three rounds of discussions before finalization of the report. A consolidated final report will be submitted after incorporating all the comments and corrections on the previous draft report.

The timelines will be as follows:

- i. Submission of initial Draft Report – Within 45 days from the date of assignment of the job (or as per timeline set for the job).
- ii. Submission of subsequent draft reports with corrections/amendments- As per timeline fixed by OIL.
- iii. Submission of final report- As per timeline fixed by OIL, but not later than the completion date set aside for the job.

10.0 PERIOD OF CONTRACT:

The duration of the consultancy services shall be for a period of 3 (three) years initially with a provision for extension up to a period of 1 (one) year.

11.0 GENERAL NOTES:

- 11.1 All documents submitted along with the EOI should be clear & legible.

- 11.2 The EOI is liable to be ignored in case of submission of any misleading/false information or representation by the Service Provider.
- 11.3 OIL INDIA LIMITED reserves the right to ignore any or all EOIs and also to curtail/enhance the scope of work stated above, if required, without assigning any reason thereof.
- 11.4 Information required to be furnished along with EOI:
The interested service providers shall submit the supporting information and data listing the organization's background, qualification, relevant experience, list of similar projects executed etc. in the enclosed format as given below.
- 11.5 Details of scope of work, experience and qualification criteria and other requirements of the EOI etc. will be available and regularly updated at OIL website www.oil-india.com. All corrigendum, addendum, amendments, time extension etc. to the EOI will be hosted in the OIL website and no separate notification shall be issued in the press. Prospective participants against the EOIs are requested to visit the website regularly to keep themselves updated.
- 11.6 This EOI is non-binding in nature and submission of information should not be considered as shortlisting/selection for company in any subsequent RFP/Tender/Bid process that may be undertaken in future.
- 11.7 OIL reserves the right to terminate the EOI process at any point of time without assigning any reason.
- 11.8 No participant shall contact OIL on any matter relating to the EOI after the last date of submission of EOI unless requested for so in writing. Any effort by the bidder to influence OIL in the decision making in respect of EOI will result in the rejection of that bidder.
- 11.9 Based on the responses received against this invitation, a virtual meeting/ offline discussion (as per convenience of OIL) may be held with the responding Service Provider to discuss on the information/ views submitted. Date and time shall be intimated separately.

Format for submission of relevant information [as per Para 11.4 above]:

Name and address of service provider	Experience in the field of electrical consultancy (no. of yrs.)	Qualification of work force	List of similar projects executed	Financial turnover	Footprint in other countries if any	Any other information

12.0 CLIENT OBLIGATIONS:

- 12.1 Data w.r.t existing power plants, existing loads, future loads, space for installation of new facilities, existing utility data, or any other data as required for study w.r.t. existing facilities shall be made available by OIL.

12.2 Details such as existing SLD, load analysis etc. of existing Electrical system shall be made available by OIL for verification of existing Electrical system.

13.0 PRE-QUALIFICATION CRITERIA

13.1 Technical Criteria:

13.1.1 Selection of prospective Consultancy Organisation for the Consultancy work:

Based on the information provided by the interested parties against the EOI, the prospective service providers will be short-listed. Short-listing of the participants will broadly be based on the following criteria-

- i) Participants should have experience in the business of study, design, evaluation of various topics of electrical engineering such as types of power generation and/or power supply systems, grid power systems in India, new concepts such as micro-grid/BESS, EV, smart centralized control room, IOT/AI/ML and capable of giving complete solutions including implementation plan for such concepts.
- ii) Participants having experience of working in an upstream/downstream oil and gas industry environment may have an added advantage.
- iii) Participants must have experience of successfully executed/completed at least one job [as mentioned in Para 13.1.1 i) above] only with Central Govt./State Govt./Public sector undertakings (Central or State)/ Nationalised Banks/Public Limited Company in last 07 (seven) years reckoned from the original EOI closing date. Following documents may be submitted in support of this.
 - a) In case of bidder executing jobs in Oil India Limited (OIL)-copy of Certificate of Completion (COC)/Certificate of Final Payment of jobs successfully completed during last 7 (seven) years as on the original Bid Closing Date, showing gross value of job done.

Or

 - b) In case of bidder providing services to Project owner/field development partner/project executor (other than Oil India Limited), copy of Completion Certificate of experience from the client (Project owner/field development partner/project executor) or end user to whom services were rendered by the bidder shall be submitted along with the bid in the organizational letter pad of the client during the last 7(seven) years as on the original Bid Closing date, specifying the following:
 - Brief description of work
 - Value of the contract
 - Contract period (in months)
 - Actual completion period (in months)
 - Year of completion
- iv) Out of the consultancy services rendered by the participant, at least one job should have been completed as an EPMC/EPCM contractor.

13.1.2 **Other Pre-Qualification Criteria (non-technical):**

- i) The participants shall be registered as a business entity under Registrar of Firms/ Companies in India.

- ii) The prospective/interested Service Provider should be technically as well as financially competent on their own. EOI(s) from Consortium of companies or Joint Venture companies/consortiums will not be accepted.
 - iii) The participants will demonstrate their experience and capability against this EOI by giving details of past orders/contracts in their response.
- 13.1.3 Detailed Scope of Work will be finalised after technical discussion with the short-listed parties. Interested parties may visit Duliajan/Moran on their own if they so desire.
- 13.1.4 A tender for Consultancy services will be floated once the specifications of the tender are finalized. The short-listed parties shall be invited to participate in the aforesaid tender.
- 13.1.5 The responding parties will be further evaluated on the basis of techno-commercial and commercial criteria during tender evaluation with quality based selection criteria.
- 13.1.6 **Notes:**
- i) If OIL desires, the participants should be willing to correspond further in this reference through video conferencing or physically at Duliajan, Assam.
 - ii) The participants willing to express their interest may visit Duliajan with prior intimation to Electrical Engineering Department, contact address as given below.
 - iii) The participants will provide the following Information:
 - Details of Incorporation of Service Provider's company along with date and place of Incorporation
 - Contact Details as per following:
 - Name of concerned person
 - Designation
 - Telephone number
 - Mobile number
 - Fax number
 - Address & e-mail
- 13.1.7 It may be noted that the selection and short-listing of the participants of the EOI will entirely be at the discretion of OIL. In case of non-selection of any participant, no further communication/clarification will be provided by OIL.

13.2 Financial Criteria:

- 13.2.1 Annual Financial Turnover from operations of the bidder in any of preceding 03 (three) financial / accounting years, reckoned from the original EOI closing date should be at least **₹ 86,66,700.00 (Rupees Eighty-Six Lakh Sixty-Six Thousand Seven Hundred)** only.
- 13.2.2 Net worth of the bidder must be Positive for the preceding financial/accounting year.
Note:
- i. **Annual Financial Turnover** of the bidder from operations shall mean: "Aggregate value of the realisation of amount made from the sale, supply or distribution of goods or on account of services rendered, or both, by the company (i.e. bidding

entity, as the case may be) during a financial year” as per the Companies Act, 2013 Section 2 (91).

- ii. **Net worth** shall mean: "Share capital + Reserves created out of profits and securities Premium – Aggregate value of accumulated losses (excluding revaluation reserves) – deferred expenditure – Miscellaneous Expenditure to the extent not written off and carried forward Loss - Reserves created out of write back of depreciation and amalgamation".

The Net worth to be considered against the clause above, should be read in conjunction with the definition of Net worth as mentioned in Section 2 (57) of The Companies Act, 2013.

Notes to Clause No. 13.2.2 above:

A. For proof of Annual Turnover & Net worth, any one of the following documents must be submitted along with the bid:

- (i) A certificate* issued by a practicing Chartered /Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual turnover & Net worth as per format prescribed in **PROFORMA-I**.

OR

- (ii) Financial Statements (Balance Sheet & Profit & Loss account **along with all the schedules/notes forming part of the Balance sheet & Profit and Loss Account**) audited by the auditors appointed under the statute like Companies Act etc. wherever applicable. In cases where the bidding/ supporting company (as applicable) are not required to prepare Audited Financial Statements as per the Law of the Land of the country of the bidding/supporting company as applicable, the bidder shall provide documentary evidence for the same along with a certificate from a practicing Chartered Accountant or equivalent to this effect. The bidder must also submit the financial statement as per the accounting standards of the country of the bidding/supporting company as the case may be, duly certified by the practicing-chartered accountant or equivalent.

Note: Mention of UDIN (Unique Document Identification Number) is mandatory for all Certificates issued w.e.f. February 1, 2019 by Chartered Accountant in Practice.

- B.** Considering the time required for preparation of Financial Statements, if the last date of preceding financial / accounting year falls within the preceding six months/ within the due date for furnishing of audit report as per Section 139(1) of IT Act, 1961 (read along with latest circulars/notifications issued by CBDT from time to time) reckoned from the original bid closing date and the Financial Statements of the preceding financial/accounting year are not available with the bidder, then the financial turnover of the previous three financial / accounting years excluding the preceding financial / accounting year will be considered. In such cases, the Net worth of the previous financial / accounting year excluding the preceding financial / accounting year will be considered. However, the bidder has to submit an undertaking in support of the same along with their technical bid as per **PROFORMA-II**.

- C.** In case the bidder is a Central Govt. Organization/PSU/State Govt. Organization/Semi-State Govt. Organization or any other Central/State Govt. Undertaking, where the auditor is appointed only after the approval of Comptroller and Auditor General of India and the Central Government, their certificates may be accepted even though FRN is not available. However, bidder to provide documentary evidence for the same.
- D.** In case the bidder is a Government Department, they are exempted from submission of documents mentioned under para **A.** and **B.** above.
- E.** Bid shall be liable for rejection if not accompanied with adequate documentary proof in support of Annual turnover and Net worth as mentioned in Para 13.2.1 & 13.2.2.

14.0 NOTE:

- i) Interested Agency/Firm/Vendor/Contractor/Service Provider must write clearly the EOI number and EOI Description on their EOI.
- ii) All documents submitted with the EOI must be self-certified by the vendor's authorized person. However, OIL reserves the right to verify the original documents.
- iii) All the copies of document submitted along with the EOI should be clear and legible.
- iv) OIL INDIA LIMITED (OIL) reserves the right to physically check the original documents/certificates, copies of which are submitted along with the EOI.
- v) The EOI is liable to be ignored in case of submission of any misleading/false representation by the vendor in the form of statements and attachments.

15.0 SUBMISSION OF EOI:

Interested vendors having relevant experience and expertise as above are invited to submit their EOI(s) at e-mail id: eoicontracts@oilindia.in, indranilneog@oilindia.in bikramjit.borgohain@oilindia.in within **13.11.2025 upto 15:00 Hrs (IST)**, followed by hard copies of the same in sealed envelopes super-scribing **“EOI NO.: EOI/SERVICES/O/503/2025-2026 FOR ‘HIRING OF REPUTED CONSULTANCY AGENCIES/ SERVICE PROVIDERS/ FIRMS FOR CARRYING OUT VARIOUS STUDIES SUCH AS DETAILED AND COMPREHENSIVE TECHNO-COMMERCIAL STUDY OF OIL’S PRESENT ELECTRICAL GENERATION AND DISTRIBUTION SYSTEM WITH FUTURE LOAD FORECAST, SHORT-, MEDIUM- AND LONG-TERM IMPLEMENTATION MEASURES FOR MEETING THE LOAD DEMAND, STUDY AND UPGRADATION RECOMMENDATION FOR ITS ELECTRICAL DISTRIBUTION NETWORKS, FEASIBILITY OF TAPPING POWER FROM STATE UTILITIES FOR USE IN ITS PRODUCTION INSTALLATIONS, FEASIBILITY OF WHEELING POWER FROM OTHER STATES, COST BENEFIT ANALYSIS FOR VARIOUS OPTIONS ETC. FOR ITS FIELD HEAD QUARTERS AT DULIAJAN AND MORAN FIELDS, ASSAM.’** through courier/post to the following address:

CHIEF GENERAL MANAGER (CONTRACTS)
OIL INDIA LIMITED
CONTRACTS DEPARTMENT
DULIAJAN-786602, ASSAM, INDIA.
Phone: 91-374-2808668,
Website: www.oil-india.com

Vendors may also upload their offer in their FTP server/File sharing website (portal) and the link(s) may be provided to us at our e-mail within the above specified period.

15.1 In case, the above-mentioned date happens to be a non-working day for OIL in Duliajan due to Bandh/holiday or for any other reasons, EOIs shall be received upto the next full working day till 15:00 Hrs. (IST) and opened accordingly. EOI may be sent by post/courier service or delivered personally at the tender box placed in the above office. However, OIL shall not be responsible for any consequence arising out of delay in receipt or non-receipt of EOIs.

15.2 OIL reserves the right for the following:

- (a) To accept or reject any/all EOIs submitted by parties; and
- (b) To cancel the process at any time without any liability and assigning any reason thereof to the applicants.

PROFORMA-I

CERTIFICATE OF ANNUAL TURNOVER & NET WORTH

TO BE ISSUED BY PRACTISING **CHARTERED ACCOUNTANTS' FIRM** ON THEIR LETTER HEAD

TO WHOM IT MAY CONCERN

This is to certify that the following financial positions extracted from the audited financial statements of M/s (Name of the Bidder) for the last 03 (Three) completed accounting years upto..... **(as the case may be)** are correct.

YEAR	TURN OVER In INR	NET WORTH In INR

Place:

Date:

Seal:

Membership Number:

Signature

Registration No.:

UDIN:

PROFORMA - II

**(TO BE EXECUTED BY THE AUTHORIZED SIGNATORY OF THE BIDDER ON
THE OFFICIAL LETTER HEAD OF THE BIDDER)**

CERTIFICATE OF COMPLIANCE TO FINANCIAL CRITERIA

Ref: Note 'b' under Clause 6.2 Financial Criteria of BEC/PQC

I _____ the authorized signatory(s) of
_____ (Company or Firm name with address) do
hereby solemnly affirm and declare/undertake as under:

**The balance sheet/Financial Statements for the financial year _____
have actually not been audited as on the Original EOI Closing Date.**

Yours faithfully,

For (type name of the firm here)

Signature of Authorized Signatory

Name:

Designation:

Phone No.

Place:

Date:

(Affix Seal of the Organization here, if applicable)

Note: This certificate is to be issued only considering the time required for preparation of Financial Statements i.e. if the last date of preceding financial/accounting year falls within the preceding six months reckoned from the Original Bid Closing Date.