



ऑयल इंडिया लिमिटेड  
(भारत सरकार का उद्यम)  
**Oil India Limited**  
(A Government of India Enterprise)

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### INVITATION TO e-BID UNDER SINGLE STAGE COMPOSITE BID SYSTEM

Tender No. & Date : SGI9949P16 dated 21.01.2016

Tender Fee : INR 1,000.00

Bid Security : INR 12,000.00

Bidding Type : SINGLE STAGE COMPOSITE BID SYSTEM

Bid Closing on : 07.04.2016 at 11.00 Hrs.

Bid Opening on : 07.04.2016 at 14.00 Hrs.

Bid Validity : Bid should be valid for 120 days from bid closing date.

Bid Bond Validity : Bid Bond should be valid upto 01.02.2017.  
(Bid bond format has been changed. Please submit bid bond as per revised format)

Performance Guarantee : Applicable @ 10% of order value.

Integrity Pact : Not Applicable

**OIL INDIA LIMITED invites electronic bids from Indigenous bidders under SINGLE STAGE COMPOSITE BID SYSTEM through its e-procurement site for the item detailed below –**

Item No.	Item Description	Quantity	UoM
10	<b>5 KwP SOLAR POWER PLANT</b> Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding and Transportation to site of 5 KwP Off-Grid Solar PV Power Plant for Repeater Station No. 6 & 7 at B G Hill, Narangi, Guwahati, Assam.	1	LS
20	Unloading at Site, Installation, Erection, Testing and Commissioning	1	LS
30	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years (Refer Clause no. 10.0 under Annexure – AA)	1	LS

***The general details of tender can be viewed by opening the eRFx [Tender] under RFx and Auctions in the e-portal through Guest Login. The details of tendered items can be found in the Item Data and details uploaded under Technical RFx. The bidding document is available in the Technical RFx -> External Area -> Tender Documents.***

#### **STANDARD NOTES:**

- The tender will be governed by “General Terms & Conditions” for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005 for E-procurement (LCB Tenders).

2.0 This Bidding document consists of :

- (i) Annexure AA : Job Description, Objectives, Scope of Works and Special Terms & Conditions.
- (ii) Annexure BB : Technical Specifications
- (iii) Annexure CC : Bid Rejection Criteria / Bid Evaluation Criteria
- (iv) Annexure DD : Commercial Check List
- (v) Annexure EE : Layout diagram of BG hill.
- (vi) Annexure FF : Bank Details

**LCB Doc. Booklet (No. MM/LOCAL/E-01/2005)** have been uploaded separately in the Technical RFx -> External Area -> Tender Documents.

3.0 Application showing full address/email address with Tender Fee (Non-refundable) of Rs. 1,000.00 in favour of M/s Oil India Limited and payable at Guwahati is to be sent to Chief Material Manager (PL), Oil India Limited (Pipeline Headquarters), P.O. Udayan Vihar, Guwahati -781171. **Application shall be accepted only upto one week prior to the bid closing date (or as amended in e-portal)**. The envelope containing the application for participation should clearly indicate "REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO ..." for easy identification and timely issue of user ID and password (*For bidders having existing user id and password issued by OIL, same may be used for submission of bid after payment of tender fee*). On receipt of requisite tender fee, USER\_ID and initial PASSWORD will be communicated to the bidder (through e-mail) and will be allowed to participate in the tender through OIL's e- Procurement portal. **No physical tender documents will be provided.** Details of the tender can be viewed using "Guest Login" provided in the e-Procurement portal. The link to e-Procurement portal has been also provided through OIL's web site [www.oil-india.com](http://www.oil-india.com).

**NOTE:** PSUs and SSI units are provided tender documents Free of Cost (as per Govt. guidelines), however they have to apply to OIL's designated office to issue the tender documents before the last date of sale of tender document mentioned in the tender.

4.0 **Tender Fee and Bid Security can also be paid through payment gateway in the e-tender portal.** Please refer to Vendor User Manual updated in the e-tender portal as well for further details.

5.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with Tender no. and Due date to **The Chief Materials Manager (PL), Oil India Limited (Pipeline Headquarter), P.O. Udayan Vihar, Guwahati -781171** before 14.00 Hrs. IST on the Bid Closing Date mentioned in the Tender.

- a) Original Bid Security.
- b) Any other document required to be submitted in original as per tender requirement.

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate.

6.0 **Bidders are requested to quote non Deemed Export prices.**

7.0 Please do refer the User Manual provided on the e-portal webpage on the procedure 'How to create Response' for submitting offer.

8.0 Bidders shall prepare the "Techno-commercial Unpriced Bid" and "Priced Bid" separately and shall upload through electronic form in the OIL's e-Tender portal within the Bid Closing Date and Time stipulated in the e-tender. The "Techno-commercial Un-priced Bid" shall contain all technical and commercial details except the prices which shall be kept blank. Details of prices as per Bid format / Commercial bid to be uploaded as attachment in the Attachment Tab "Notes and Attachments". **A screen shot in this regard is given below.**

Any offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in the tender.

**Display RFX Response:**

Go to this Tab “Technical RFX Response” for Uploading “Techno-commercial Bid”.

Go to this Tab “Notes and Attachments” for Uploading “Priced Bid” files.

On “EDIT” Mode- The following screen will appear. Bidders are advised to upload “Techno-Commercial Unpriced Bid” and “Priced Bid” in the places as indicated above:

**Edit RFX Response:**

Bid on “EDIT” Mode

Area for uploading Techno-Commercial Bid\*

Area for uploading Priced Bid\*\*

- 9.0 Bidders are requested to examine all instructions, forms, terms and specifications in the tender. Failure to furnish all information required as per the tender or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.
- 10.0 All the Bids must be Digitally Signed using “Class 3” digital certificate (e-commerce application) with organisation name as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India.

- 11.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that all documents which are to be submitted in a sealed envelope are also submitted at the address mentioned in note 5.0 above before **14:00 Hrs (IST)** on the bid closing date failing which the offer shall be rejected.
- 12.0 Other terms and conditions of the tender shall be as per General Terms & Conditions” in Booklet No. MM/LOCAL/E-01/2005 for E-procurement (LCB Tenders). However, if any of the clause of the Bid Rejection Criteria / Bid Evaluation Criteria (BEC / BRC) contradicts the clauses in the General Terms & Conditions of the tender and/or elsewhere, those mentioned in the BEC/BRC shall prevail.
- 13.0 In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidder who has already submitted the bid on or before the original B.C. date shall not be permitted to revise their quotation.
- 14.0 To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer may be summarily rejected.
- 15.0 No press advertisement will be published regarding amendment to Bidding Document or extension of Bid Closing Date. The same will be uploaded in OIL’s website and informed to all prospective bidders who have received the bidding documents. Bidders to keep themselves updated.

**Sd-**

**(M.B. SINGHA)**  
**DEPUTY MANAGER MATERIALS (PL)**  
**FOR CHIEF MANAGER MATERIALS (PL)**  
**FOR: GROUP GENERAL MANAGER (PLS)**

**JOB DESCRIPTION, OBJECTIVES, SCOPE OF WORKS AND SPECIAL TERMS AND CONDITIONS**

The following clauses shall be read in conjunction with General Terms and Conditions as well as Technical Specifications to the extent applicable. In case of any discrepancies between the stipulations in these documents, the General Terms and Conditions shall stand superseded.

**1.0 JOB DESCRIPTION:**

Detailed Project Report(DPR), Design, Manufacture, Supply, Installation, Erection, Testing and Commissioning with AMC of 5 KWp Off-Grid Solar PV Power Plant for Repeater Station No. 6 & 7 at BG Hill, Narangi, Guwahati, Assam .

**2.0 OBJECTIVE**

The main objective of this project is to prepare Detailed Project Report (DPR), Design, Manufacture, Supply, Installation, Erection, Testing and Commissioning with AMC of 5 KWp Off-Grid Solar PV Power Plant for Repeater Station No. 6 & 7 at B G Hill, Narangi, Guwahati, Assam.

**3.0 LOCATION AND OTHER RELATED DATA:**

The site is located atop of BORAGOHAIN (BG) Hill near OIL Township in Narengi, Guwahati, Assam. The proposed project site is elevated area and reachable by four wheel drive vehicle only through OIL's private road. **The bidders are advised to visit the site before bidding.** The visit can be arranged with due correspondence with OIL, Guwahati and for details of existing layouts of OIL's installation at proposed site. Drawing No. OI/PL-0742 may be obtained & referred to.

Latitude	: 26 degree 10'45"N
Longitude	: 91 degree 45'0"E
Humidity	: Max. : 100% and Min : 40%, Annual Average: 76%
Ambient Temperature	: 4 degree (Min.), 40 degree (Max.) Reference Temp: 24.2 degree Celsius.
Elevation	: 420 MASL
Maximum Total Rainfall	: 353.6 mm (July)
Earthquake Zone	: 5(IS 1893).

**4.0 SCOPE OF WORK:**

The proposed solar plant shall be primary power source for the plant. The main load consists of aviation lights for telecom tower, security/street lights, other lights & telecom equipments. The DG set will be employed only if the solar energy is not able to cater the load demand because of prolonged sunless days during the year or any undesired breakdown of the solar plant.

- 4.1 The scope of work includes preparation of Detailed Project Report (DPR), Verification of site and GHI data, Design, Manufacture, Supply, Installation, erection, Testing and Commissioning and AMC of Off-grid Solar Photovoltaic Power Plant of 5 KWp.
- 4.2 The system comprising of equipments, modules, interfacing devices, battery banks, and related items for Off-grid Solar Photovoltaic Power Plant of 5 KWp with system output voltage of 415 volts a.c.(Phase to phase) shall include the following but not limited to the supply, erection, testing and commissioning -

- a) Solar PV modules of composite capacity as mentioned above including mounting frames, structure, array foundation and module inter connection, Array Junction boxes.
- b) Power Conditioning Units that are remote communicable.
- c) AC power evacuation panel with bus bars and circuit breakers.
- d) Metering and protection /Isolation systems.
- e) LV Power and Control Cables (Copper) including end terminations and other required accessories for both AC & DC power.
- f) Earthing system for PV Array and all electrical equipments/devices employed, DC power system, lightning protection system, AC power system for LT, equipment etc, as required.
- g) Loading, Transportation, Unloading & delivery of equipments/materials from works/shops to OIL's site in good conditions.
- h) Unpacking, assembling, installation, Test running, commissioning and handing over the complete plant to OIL.
- i) The system should be capable of providing all the data including that of meters and PCU to the Remote Monitoring Facilities.
- j) UPS /Battery/ Battery charger system to be provided as part of the scope so as to keep control and data communication system live during total power failure. UPS system should have min. 18 hours back up.
- k) Contractor/Supplier shall be responsible for all civil jobs such as construction, erection, installation, etc. as required depending upon designed system and the site conditions including all material supply, labour etc. related to construction, erection and installation & commissioning.
- l) Contractor/Supplier shall be responsible for all tools, tackles and test equipment required for commissioning and carrying out tests.
- m) Contractor/Supplier shall be arranging boarding & lodging for his engineers and transportation of men and materials to site at his own expense.
- n) The Comprehensive AMC of the plant for 5 years after warranty period shall be the part of the Contract/Order.
- o) Supply and installation of 4(four) Numbers energy efficient outdoor LED light fittings (Reputed Make) for area lighting of suitable wattage including supply and erection of requisite poles.

## **SPECIAL TERMS AND CONDITIONS**

### **5.0 INSPECTION AND TESTING**

- a. OIL shall witness the full factory tests/pre-dispatch of the following items prior to dispatch by the vendor to the site.
  - PV Modules
  - ACDB Panel
  - PCU & Accessories
  - Battery Bank
- b. The Contractor/Supplier shall bear all costs in connection with inspections and tests at factory/works. However, cost of OIL's engineer in respect of travel and boarding & lodging will be borne by OIL.
- c. A minimum of 15 days prior notice shall be given to OIL before the scheduled date of the inspections/ tests.
- d. Within 15 days after the effective date of Contract/Order, the Contractor/Supplier shall submit a detailed Quality Assurance Plan (QAP), covering all activities under scope of supply of the Contractor/Supplier and all stages of inspection, for OIL to comment / approve the same, and indicate OIL's hold points.
- e. The Contractor/Supplier shall give OIL a minimum of ten days (10) days clear notice of any work being ready for inspection and tests specifying the period likely to be required for such inspection and tests. Thereafter, OIL or his inspector shall attend at the OEM's premises, such inspection and tests within seven (7) days of the date on which the equipment is notified as being ready for inspection and test.
- f. The Contractor/Supplier shall furnish to the OIL, 2 (two) copies of unpriced purchase orders including detailed technical specification and drawings placed on his sub-contractors/sub-suppliers as soon as such orders are placed by the Contractor/Supplier, but in any case not later than one (1) month before the expected date of the equipment getting ready for inspection.
- g. In cases where OIL have to conduct the inspection, whether at the premises or works of the Contractor/Supplier, the Contractor/Supplier shall, provide free of charge to OIL such labour, materials, electricity, fuel, water, stores, apparatus and instrument and/or facilities as may reasonably be deemed required to carry out efficiently such tests of the plant in accordance with the Contract/Order and shall give all such facilities to OIL or his authorised representative to accomplish such tests.
- h. When the inspection/tests have been satisfactorily completed at the contractor's/supplier's or his sub-contractor's/sub-supplier's premises, OIL shall issue a certificate to that effect (to the extent such certificate is required to be delivered by OIL pursuant to the Contract/Order).
- i. In case any Equipment fails in inspection/tests or the test reports are not satisfactory, OIL shall reject or demand rectification / re-inspection. Re-inspection/retest shall be carried out only after necessary rectification work/replacement by the Contractor/Supplier.
- j. No Plant, Equipment and Material shall be shipped before the inspection certificate /waiver certificate and dispatch clearance is issued by the OIL.
- k. In the case of commissioning spares, operating and maintenance spares and insurance spares, the same shall be offered for inspection along with the main equipment.
- l. The inspection, examination or testing carried out by OIL shall not relieve the Contractor/ Supplier from any of his obligations under the Contract/Order.

## **6.0 TRAINING**

After commissioning of the full system, Contractor/Supplier shall arrange for onsite training on operation & maintenance of plant to OIL's personnel. The training shall be for a period of at least one week.

## **7.0 SAFETY**

Upon arrival of Plant and Equipment/Materials at the Site, the Contractor/Supplier shall assume custody thereof and remain responsible thereafter for safe custody until the whole plant is handed over. **The Contractor/Supplier shall follow the safety instructions of OIL.**

## **8.0 BOARDING, LODGING & TRANSPORT**

The Contractor/Supplier shall take care of the boarding, lodging, and all travel expenses of their direct and indirect personnel during the execution of Contract/Order.

## **9.0 WARRANTY**

The mechanical structures, electrical works including power conditioners/inverters/charge controllers/ maximum power point tracker units/distribution boards/digital meters/ switchgear/ storage batteries, etc. and overall workmanship of the SPV power plants/ systems must be in warranty against any manufacturing/ design/ installation defects for a minimum period of 5(five) years from the date of commissioning by the Contractor/Supplier. The Contractor/Supplier shall rectify any functional failure in the system free of cost within 10 days from the date of information including replacement of the faulty component(s)/accessory if required during the warranty period.

Composite Warranty Certificate of the whole plant duly signed by authorized personnel of Contractor/ Supplier must be submitted with commissioning/completion certificate along with manufacturer's warranty certificates of each components & accessories and relevant test certificates.

## **10.0 COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT**

Comprehensive AMC is a part of the contract & will start after expiry of warranty period as mentioned in Point No. 9.0 above.

This shall cover two parts:

- a) Scheduled/ Preventive maintenances of the plant
- b) Unscheduled/ Break Down maintenance

a) Scheduled/ Preventive maintenance

**The Contractor/Supplier shall have to quote the rates for Annual Maintenance Contract for 5 years after the warranty period**, which includes bi-monthly visits or mutually agreed intervals and supply of essential spares. During the visit, cleaning of the panels & tightening of the connections shall be carried out.

The AMC shall include overall supervision of maintenance activities that are required to ensure optimum performance of the Solar system as per the performance guarantee parameters indicated above and Guaranteed Generation figures for 25 years to be submitted by the Contractor/Supplier.

b) Unscheduled/ Break Down maintenance

The Contractor/Supplier shall have to rectify any functional failure in the system. The Contractor/Supplier shall respond within 10 days from the date of information of such Break Down to rectify the problem.



The Contractor/Supplier shall supply all spares required during the AMC period. This includes spares for scheduled as well as unscheduled or breakdown maintenances.

#### **11.0 DELIVERY:**

The successful bidder must ensure customized design as per site conditions and deliver all the materials relating to the plant at the site only.

**All the transportation charges of the materials shall be in the account of the successful bidder. OIL will not bear any kind of transportation charges in any circumstances nor arrange for any transportation for any sorts of transfer.**

#### **12.0 PRICES:**

**The bidder shall quote prices for Narangi, Guwahati/Site**, which shall remain firm till the Contract/Order execution and inclusive of all taxes/ duties etc. as well as site supervision for successful commissioning/ performance.

#### **13.0 PAYMENT TERMS:**

Before the Contractor/Supplier becomes eligible for any payment under the Contract/Order the party shall submit Bank Guarantee towards Performance Guarantee as per para 15.0 below.

##### **Payment schedule for supply and installation & Commissioning:**

- a. 10% of the total price for design, supply of equipment, materials, maintenance tools and tackles & spares shall be paid against preparation of DPR, Verification of site & GHI data, Design of the plant and approval of DPR by OIL for the plant.
- b. 60% of the total price for design, supply of all equipment, materials, maintenance tools and tackles & spares etc. shall be paid against supplies on receipt of total supplies under the Contract/Order at site.
- c. 30% of the total price for design, supply of equipment, materials, maintenance tools and tackles & spares shall be paid on successful completion of installation, commissioning and handing over of the plant to OIL.

##### **Payment Schedule for 5 years Comprehensive AMC:**

- a. 90% on pro-rata towards the Annual Maintenance Contract shall be paid against submission of duly certified invoice on quarterly basis.
- b. The last 10% payment upon completion of successful completion of Annual Maintenance Contract.

#### **14.0 SITE VISIT:**

Bidders are advised to visit the location to study the site carefully before submission of their bids.

#### **15.0 PERFORMANCE GUARANTEES:**

Before the Contractor/Supplier is entitled for any payment under the Contract/Order, he shall submit a Bank Guarantee towards Performance Guarantee/Security, **10% of the total Contract Price** in full valid up to end of 3(three) months after scheduled expiry of post warranty AMC period. The Bank Guarantee towards Performance Guarantee/Security shall be from the Nationalized/Public Sector bank or other commercial bank as approved by OIL.

#### **16.0 PERFORMANCE GUARANTEE PARAMETER:**

Solar PV Module shall be having a minimum guarantee for a period of 25 years. In case of any deviation observed during operations from the performance guarantee parameters cited, the Contractor/Supplier shall be informed in writing by OIL. The Contractor/Supplier shall be responsible to rectify the same within 10 days of notification without any extra cost to OIL. Performance guarantee parameters on output Watts peak of solar module shall not be less than 90% at the end of 10 years and 80% at the end of 25 years.

#### **17.0 PENALTY:**

The Contractor/Supplier shall be allowed a notice period of 10 working days to rectify the fault(s) in the plant, discrepancy & deficiency in service or performance of the plant failing which a penalty of INR 100 per day shall be levied till rectification, is done.

#### **18.0 COMPLETION TIME:**

**The Completion and handing over of the SPV plant shall be done within 6(six) months from date of issue of LOI/PO.**

#### **19.0 LIQUIDATED DAMAGES:**

- a. OIL shall levy Liquidated Damages at the rate of 0.5% of the Contract/Order Price per week of delay in completion time, subject to a ceiling of 7.5 % of the total Contract/Order value. For this, purpose a delay of one day also shall be considered as a delay of one week.
- b. The liquidated damages on account of delay as well as performance parameters during warranty shall be limited to a maximum of 7.5% of the Contract/Order price. There shall be no cap on liquidated damages on account of performance parameters related to guaranteed generation.
- c. The Contractor/Supplier will have to satisfy the requirement of Technical Specifications. If the required parameters are not achieved, then the Contractor/Supplier will have to rectify the same within a period of one month, failing which the equipment will be rejected and all damages shall be recovered from the Contractor/Supplier.
- d. After erection/commissioning, the System supplied under the Contract/Order shall have to pass the site tests as stipulated in the Technical Specification without any deviations thereof, otherwise OIL shall have the right to reject the entire equipment & recover the amounts paid together with compensation in relation thereto or levy liquidated damages as deemed fit by OIL at his sole discretion.

#### **20.0 INSURANCE:**

**The Contractor/Supplier shall take Comprehensive Marine cum Erection Insurance policy for the complete Project.** The Contractor/Supplier shall be responsible for settlement of claims with the underwriters. The Contractor/Supplier shall be the loss payee under the policy and the Contractor/Supplier will arrange replacements / rectification expeditiously without waiting for settlement by insurance claim at Contractor/Supplier's own cost.

#### **21.0 SPARES:**

**Bidders to provide Commissioning Spares required for smooth commissioning of the plant. Bidder shall submit a list of such commissioning spares along with the bid. All such spares shall be supplied along with the main equipment. This will be considered during evaluation of the Bid.** The Contractor/Supplier shall return to OIL all unused and left over commissioning spares, after successful commissioning of the plant.

**Bidder shall, in addition, provide a list of recommended spares along with prices, quantity and sources. The prices of these recommended spares will not be considered while evaluating the main Bid.** However, the

prices shall remain firm for a period of three years after successful commissioning and handing over of the entire plant.

**Successful Bidder has to provide all spares required for the plant during the warranty & AMC periods.**

## **22.0 DRAWINGS / DOCUMENTS:**

The Contractor/Supplier shall submit for each plant all initial documents in 6(six) copies, final documents in 6(six) copies along with one soft copy, and "as built" documents in 6(six) copies along with 1(one) soft copy & 1(one) reproducible.

## **23.0 APPROVAL OF SYSTEM DESIGN:**

The design of each subsystem and bill of material intended to be used shall be submitted to respective authority for approval. Quality Assurance Plan should include design control, process control, quality control, testing of sub-system.

## **24.0 ARBITRATION:**

The venue of arbitration shall be Guwahati.

## **25.0 PERFORMANCE OF CONTRACT/ORDER:**

The Contractor/Supplier shall be responsible for the due and faithful performance of the Contract/Order in all respects according to the drawings, specifications, particulars and all other documents referred to in the Contract/Order. Any approval which OIL may have given in respect of the stores, materials, supplies or other particulars and the work or the workmanship involved in the Contract/Order (whether with or without test carried out by the Contractor/Supplier or the OIL) shall not relieve the Contractor/Supplier from his obligations and notwithstanding any approval or acceptance given by the OIL, it shall be lawful for OIL to reject the material, if it is found that the materials supplied and/or erection and/or construction work carried out by the Contractor/Supplier are not in conformity with the terms and conditions of the Contract/Order.

The Contractor/Supplier shall cooperate with the OIL's other Contractor/Suppliers, if any, for any associated plant and freely exchange all relevant technical information with them to obtain the most efficient and economical design and to avoid unnecessary duplication of equipment. The Contractor/Supplier shall also co-ordinate with other Contractor/Suppliers for any interface activity at his battery limits. No remuneration shall be claimed from OIL for such technical co-operation.

## **26.0 VALIDITY:**

The validity of the Contract/Order shall not be affected, should one or more of its stipulations be or become legally invalid and such stipulation is severable from and not fundamental to the obligations of either party to the Contract/Order. In such a case, the parties shall negotiate in good faith to replace the invalid clause by an agreed stipulation which is in accordance with the applicable law and which shall be as close as possible to the Contract/Order's original intent.

## **27.0 HANDING OVER:**

- a. On completion of the work, all rubbish, kilns, vats, tanks, materials and temporary structure of any sort or kind used for the purpose or connected with the construction/erection work shall be removed by the Contractor/Supplier and all pits and excavations filled up and the site handed over in a tidy and workmanlike condition and no final payment in settlement of the account for the said work shall be held to be due or shall be made to the Contractor/Supplier until such Site clearance and restoration shall have been effected by him and such clearance and restoration may be made by OIL at the expenses of the Contractor/Supplier in the event of his failure to comply with this provision within 7(seven) days after receiving notice in writing

from OIL to that effect. If it becomes necessary for OIL to have the site cleared as indicated above at the expense of the Contractor/Supplier, OIL shall under no circumstances be held liable for any losses or damages to such of Contractor/Supplier's property as may be on such site due to such removal there from, which removal may be effected by means of public sale of such materials and property or in such a way as seems fit and most convenient to the OIL.

- b. For the purpose of removing surplus materials in its original form, the Contractor/Supplier shall submit the documents/records evidencing the entry of materials inside the Plant by producing the Gate Entry Permits and consumption statements based on approved drawings to establish the surplus quantity of the materials belonging to the Contractor/Supplier. OIL shall allow the Contractor/Supplier to remove such materials if it is satisfied, in its sole and absolute discretion, only after completion of the entire Work.
- c. No imported Material shall be allowed to be taken out other than imported tools and tackles and instruments brought by the Contractor/Supplier on draw back basis and provided, he has carried out necessary documentation at the time of taking such items inside the Plant.
- d. The Contractor/Supplier shall return to OIL all unused and left over commissioning spares, after successful commissioning of the plant.
- e. OIL shall have the right to take possession or use any completed or partially completed Work. Such possession or use shall not be deemed to be an acceptance of any work done not in accordance with the Contract/Order. However, any damage to such work solely due to such provision or use shall be to the OILs account.

#### **28.0 USE OF COMPANY'S EQUIPMENT:**

Contractor/Supplier shall assume the risk of and shall be solely responsible for damage to and loss or destruction of materials and equipment during work or provided by Company in some circumstances. In case there is a loss or damage to the company's materials/equipment for causes attributable to Contractor/Supplier, the Contractor/Supplier shall compensate the company.

#### **29.0 WAIVERS AND AMENDMENTS:**

It is fully understood and agreed that none of the terms and conditions of the Contract/Order shall be deemed waived or amended by either party unless such waiver or amendment is executed in writing by the duly authorized agents or representatives of such party. The failure of either party to execute any right of termination shall not act as a waiver or amendment of any right of such party provided hereunder.

**NOTE:** Compliance statements relating to all points shall be provided by the bidder with the bid. Deviations, if any, should also be mentioned clearly & categorically in the offer/compliance statement. Any partial responded bid shall not be considered for evaluation.

**TECHNICAL SPECIFICATIONS**

Solar PV system must conform to the Balance of System (BoS) items/components of the SPV power plants of Ministry of New and Renewable Energy (MNRE) specifications or MINIMAL TECHNICAL REQUIREMENTS / STANDARDS FOR SPV SYSTEMS/PLANTS TO BE DEPLOYED UNDER THE PROGRAMMES OF MNRE, wherever any technical matters or standards are not spelt in the technical specifications of OIL.

**A. SOLAR PHOTO VOLTAIC MODULE:**

Multi/polycrystalline silicon, ground mounted or rooftop type as suitable for the site condition and shall have the following characteristics:

## i. Module Electrical Characteristic:

Maximum Power, Pmax(W)	: 200 Wp
Voltage at Pmax , Vmp	: not less than 28 v
Current at Pmax, Imp	: not less than 7.1 A
Open Circuit Voltage, Voc	: not less than 36 V
Short Circuit Current, Isc	: not less than 7.9 A
Temp. Coefficient Of Pmax (%/K )	: -0.45
Temp. Coefficient Of Voc (%/K )	: -0.35
Temp. Coefficient Of Isc (%/K )	: -0.5
Power Tolerance	: $\pm 3$
Max System Voltage V DC	: 1000/600
Cells per bypass diode	: 20 Nos.
Guaranteed Output Peak	: As per MNRE specification.
Operating Temp	: 0- 85 degree Celcius.
NOCT	: 45(+/-)2 degree Celcius

## ii. Environmental test condition characteristics to be specified by bidder:

- a. Operating Temp (Temp cycling Range)
- b. Static Load Back & Front(e.g. wind)
- c. Impact Resistance(e.g. hail)
- d. Humidity Freeze,Damp Heat

## iii. Markings, Identification and Traceability: As per Standards (MNRE).

## iv. Mechanical Characteristics;

- a. Dimension : Bidder to specify.
- b. Configuration : Bidder to specify.
- c. Weight : Light weight not more than 20kgs per panel.
- d. Frame : Anodized Alumunium frame with twin wall profile
- e. Anodization thickness: 17  $\mu$ m or more.
- f. Front Glass : High transmission, low iron, tempered and textured glass, 3.2 mm
- g. Junction Box : IS/IEC/UL approved IP65 rated 4-terminal with 3 bypass diodes.
- h. Output Cable : IS/IEC/UL approved USE-2 Solar, 4 mm<sup>2</sup> cross section.
- i. Type of Connector : IS/IEC/UL approved, low resistance, MC4 compatible.
- j. Mounting Hole : As per standard
- k. Grounding Hole : As per standard.

Bidder shall provide Manufacture's the data sheet, service assurance & warranty. The battery shall be installed & commissioned under the supervision of manufacturer's representative. Manufacturer's warranty card to be submitted at the time of handing over after commissioning.

**B. POWER CONDITIONING UNIT (PCU):**

- i. MPPT (Max. power point tracking) controller, inverter and associated control and protection devices etc. all shall be integrated into PCU.
- ii. The rating 5 KW or more.
- iii. PCU shall provide 3 phase, 415+/-5% V, 50+/- 1.5 Hz supply on AC side with THD<3%.
- iv. DC voltage ripple content shall not be more than 3%.
- v. Efficiency of PCU shall not be less than 85%.
- vi. Degree of protection should not be less than IP-44 indoor type & IP65 for outdoor type.
- vii. It shall have protection features such as over voltage, short circuit, over temperature etc.
- viii. The inverter shall be efficient based on MPPT with IGBT (Insulated-gate bipolar transistor) reliable power based design.
- ix. The system should be capable of providing all the data including that of meter and PCU through web based application through Built-in with data logging.
- x. PCU shall have facility to display basic parameters of the system.
- xi. PCU shall operate seamlessly without being effected on any power cut to the load.
- xii. Indications (through LEDs & LCD display)

- # Inverter ON
- # Load ON
- # Inverter under voltage/over voltage
- # Inverter over load
- # Inverter over temperature.

xiii. Protections:

- # Over voltage both at input & output
- # Over current both at input & output
- # Over/under frequency
- # Over temperature
- # Short circuit
- # Protection against lightening
- # Surge voltage induced at output due to external source.

Bidder shall provide Manufacture's data sheet, service assurance & warranty. The machine shall be installed & commissioned under the supervision of manufacturer's representative. Manufacturer's warranty card to be submitted to OIL at the time of handing over after commissioning.

**C. BATTERY BANK:**

48 Volts, 600 AH, C10 Battery Bank with Lead Acid Tubular TBS Batteries ,Industrial low maintenance lead acid, in transparent SAN containers with tubular positive plates, pasted negative plates, lids, ceramic vent plugs, separators bolts & nuts, cell insulators, stands, inter-cell connectors/fasteners, etc. dry and uncharged conforming to minimum IS:1652 of 2013 as per the details below –

- i. Voltage of each cell- 2 volts(single cell)
- ii. Type -Tubular TBS
- iii. Standard -IS 1651:2013(Fourth Revision)
- iv. Container -Transparent SAN container with Electrolyte High / Low level marking and SAN or ABS cover.
- v. Nominal Capacity in AH at 27°C discharged to final voltage of 1.80 V - 600 AH, C10.
- vi. Positive Electrode- Low Antimony Lead Alloy (< 3% Sb) made by High pressure casting method.
- vii. Negative Electrode- Pasted grid plate, Lead Calcium Alloy.
- viii. Separator- Micro porous synthetic Resin based.
- ix. Terminals- Leak Proof Brass/ Copper Insert bolt on type terminals.
- x. Inter cell Connector- Bolt on type copper insulated Inter cell connector.

- xi. Vent Plug - Ceramic anti splash with acid fume retaining vent plug.
- xii. Low maintenance- Topping frequency once in 6-12 months.
- xiii. Service Life -Expected service life for Standby float application at 27 degree C should be at least 10 years with 5 yrs. Warranty.
- xiv. Float voltage (5-45 degree C) - 2.20-2.26 Volts.
- xv. Boost voltage - To be mentioned as per the model offered.
- xvi. Operating Temperature range 10 – 45 degree C.
- xvii. Internal resistance < 1 mohm.
- xviii. Self Discharge rate < 5% per 28 days at 27± 2 degree C.
- xix. Bidder shall provide Manufacture's the data sheet, service assurance & warranty. The battery shall be installed & commissioned under the supervision of manufacture's representative. Manufacturer's warranty card to be submitted at the time of handing over after commissioning.

**D. AC DISTRIBUTION:**

The AC power output of the inverter shall be fed through a 3-phase,415,TPN,double throw Automatic Change Over Switch( to the AC Distribution Board (metering panel & isolation panel) which also houses A smart Energy Meter shall be provided as approved by the OIL to measure the delivered quantum of energy. ATS shall facilitate feeding the ACDB from DG Set only in case of failure of solar system.

Cables of appropriate size to be used in the system shall have the following characteristics:

- # Will meet IS 694/1554 standards.
- # Temp. Range #10oC to +80oC.
- # Voltage rating 660/1000V.
- # Excellent resistance to Heat, Fire, oil, cold, water, abrasion, UV radiation
- # Flexible, armoured, stranded, copper.

**E. AUTHORIZED TESTING LABORATORIES/ CENTRES: MNRE approved**

**F. LIGHTNING PROTECTION & GROUNDING:**

The Lightning conductors & grounding shall be provided as per Indian Standards (IS) in order to protect the entire Solar Array yard from Lightning strikes.

**G. LED SECURITY LIGHT:**

12 Watt, 230 Volt LED Street Light Fittings, Make: Any Reputed Indian Brand.

**NOTE: Offer and Compliance statements relating to all items shall be provided by the bidder with the bid. Deviations, if any, should also be mentioned clearly & categorically in the offer/compliance statement. Any partial responsive bid shall not be considered for evaluation and rejected.**

**H. Layout diagram of BG hill, drawing no. OI.PL.0742 attached as **ANNEXURE – EE.****

**BID REJECTION CRITERIA & BID EVALUATION CRITERIA**

**I. BID REJECTION CRITERIA (BRC):**

The bids must conform to the specifications, terms and conditions given in the tender document. Bids shall be rejected in case the items offered do not conform to the required minimum/ maximum parameters stipulated in the technical specifications and to the respective international /national standards wherever stipulated.

Notwithstanding the general conformity of the bids to the stipulated specifications and terms and conditions, the offer/ offers will be considered as non-responsive and is/are liable to be rejected, if the following conditions are not fulfilled:

**(A) TECHNICAL**

- 1.0 The offered Solar PV plant shall be rated for a minimum of 5 KWp.
- 2.0 The 5 KWp Solar PV Plant shall be a complete system and meet the specifications as per Technical Specifications of the tender and conforming to Ministry of New and Renewable Energy (MNRE) specifications.
- 3.0 Any offer which does not include all the jobs/services mentioned in the Scope of Work will be considered as incomplete and rejected.
- 4.0 Bidder shall be an Original Equipment Manufacturer (OEM) of Solar PV module or Bidders shall be Channel partner with valid accreditation of MNRE.
- 5.0 A bidder should have experience of setting up of minimum 2(two) numbers of not less than 5 KWp Solar PV power plant (each) from concept to commissioning including operation and maintenance (O&M) in India, one of which should be in a Central / State Govt. / public sector undertaking (PSU)/Public limited company, during the last seven (07) years.
- 6.0 The SPV Power Generation Projects as mentioned above, which the party has commissioned, should be working satisfactorily for at least one year from the date of commissioning.
- 7.0 The Bidder shall furnish documentary evidences in support of points 5.0 & 6.0 above along with their bid to establish his qualification/experience/track record of meeting the Technical Criteria as stated above. The certification authority shall be owner(s) or authorized personnel only. The certification by the bidder for his/her/their own Solar PV power plant will not be acceptable.
- 8.0 Following are the acceptable documentary evidences:
  - i. Copy of Work Order/ Contract agreement and completion certificate
  - ii. Performance Certificate from the user regarding successful operation of the Solar PV power plant.

**(B) FINANCIAL :**

- 1.0 Bidder should have experience of successfully executing order of atleast Rs 3.60 Lakhs for supply, installation & commissioning of SPV of 5 KWp or more during the last 3(three) years.



- 2.0 Annual financial turnover of the firm in any of the last 3(three) financial years or current financial year should not be less than Rs 12.00 Lakhs.
- 3.0 Documentary evidence to be provided along with the bid supporting point 1.0 & 2.0 above.

**(C) COMMERCIAL**

- 1.0 Bids are invited under **SINGLE STAGE COMPOSITE BID SYSTEM**. Bidders shall quote accordingly.
- 2.0 **Bid security of INR 12,000.00 shall be furnished as a part of the bid. Any bid not accompanied by a proper bid security in ORIGINAL will be rejected without any further consideration.** For exemption for submission of Bid Security, please refer Clause No. 8.8 of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. **The Bid Security shall be valid till 01.02.2017.**
- 3.0 Bidders must confirm that Goods, materials or plant(s) to be supplied shall be new of recent make and of the best quality and workmanship and shall be guaranteed for a period of twelve months from the date of commissioning of the complete package at site against any defects arising from faulty materials, workmanship or design. Defective goods/materials or parts rejected by OIL shall be replaced immediately by the supplier at the supplier's expenses at no extra cost to OIL.
- 4.0 The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.
- 5.0 **Validity of the bid shall be minimum 120 days. Bids with lesser validity will be rejected.**
- 6.0 All the Bids must be Digitally Signed using #Class 3# digital certificate (e-commerce application) with organisation name as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. **The bid signed using other than #Class 3# digital certificate, will be rejected.**
- 7.0 Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.
- 8.0 Bidders shall quote directly and not through Agents in India. Offers made by Indian Agents on behalf of their foreign principals will be rejected. Similarly offers from unsolicited bidders will be rejected.
- 9.0 Bids containing incorrect statement will be rejected.
- 10.0 No offers should be sent by Telex, Cable, E-mail or Fax. Such offers will not be accepted.
- 11.0 The following points are deemed as "non-negotiable" and offer shall be rejected straightaway without seeking clarification:
- i. Validity of bid shorter than validity indicated in the tender.
  - ii. Original Bid Security not received within the stipulated date and time mentioned in the tender.
  - iii. Bid security with (a) Validity shorter than the validity indicated in tender and/or (b) Bid security amount lesser than the amount indicated in the tender.

- 12.0 Bidders are required to submit the summary of the prices in their commercial bids as per price bid format (Summary), given below :

**PRICE BID FORMAT:**

Item No.	Item Description	Qty	UoM	Unit Price (INR)	Total Price (INR)
10	<b>5 KWp SOLAR POWER PLANT</b> Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 5 KWp Off-Grid Solar PV Power Plant for Repeater Station No. 6 & 7 at B G Hill, Narangi, Guwahati, Assam.	1	LS		
20	Unloading at Site, Installation, Erection, Testing and Commissioning etc.	1	LS		
30	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years ( <i>Refer Clause no. 10.0 under Annexure – AA</i> )	1	LS		

**NOTE:**

- The bidder shall quote prices on FOR Narangi, Guwahati/site basis, which shall remain firm till the contract execution and inclusive of all taxes/ duties (except octroi/entry tax), insurances etc. as well as site supervision for successful commissioning/performance, if any.
- Bidder to quote transportation charges including all applicable taxes to the site separately.
- To evaluate the inter-se-ranking of the offers, Assam entry tax on purchase value will be loaded as per prevailing Govt. of Assam guidelines as applicable on bid closing date. Bidders may check this with the appropriate authority while submitting their offer.
- Bidders to provide Commissioning Spares required for smooth commissioning of the plant. Bidder shall submit a list of such commissioning spares along with the bid. All such spares shall be supplied along with the main equipment. This will be considered during evaluation of the Bid.
- Bidder shall, in addition, provide a list of recommended spares along with prices, quantity and sources. The prices of these recommended spares will not be considered while evaluating the main Bid.

**II. BID EVALUATION CRITERIA (BEC) :**

The bids conforming to the specifications, terms and conditions stipulated in the enquiry and considered to be responsive after subjecting to the Bid Rejection Criteria will be considered for further evaluation as per the Bid Evaluation Criteria given below:

- The evaluation of bids will be done as per the Price Bid Format (SUMMARY) detailed vide Para 12.0 of BRC.
- If there is any discrepancy between the unit price and the total price, the unit price will prevail and the total price shall be corrected. Similarly, if there is any discrepancy between words and figure, the amounts in words shall prevail and will be adopted for evaluation.

- 3.0 Evaluation will be done on “total contract cost” basis to ascertain the lowest bid. (Clause 12.0 of the BRC)
- 4.0 Other terms and conditions of the enquiry shall be as per General Terms and conditions for LCB Tender. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BEC / BRC) mentioned here contradict the Clauses in the General Terms & Conditions of LCB Tender of the tender and/or elsewhere, those mentioned in this BEC / BRC shall prevail.