



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

**Tender No. & Date** : SGI0271P16 dated 17.02.2016

**Tender Fee** : INR 1,000.00

**Bid Security** : INR 4,90,000.00

**Bidding Type** : SINGLE STAGE TWO 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** : Applicable

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

Item No.	Item Description	Qty	UoM
10	Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 20 KWp Hybrid Solar PV Power Plant for <b><u>Repeater Station No. 8 (Dharampur, Nalbari, Assam).</u></b>	1	LS
20	Unloading at Site, Installation, Erection, Testing and Commissioning etc. <b><u>of item no. 10.</u></b>	1	LS
30	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years <b><u>of item no. 10</u></b>	1	LS
40	Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 20 KWp Hybrid Solar PV Power Plant for <b><u>Repeater Station No. 10 (Pratapkhata, Kokrajhar, Assam).</u></b>	1	LS
50	Unloading at Site, Installation, Erection, Testing and Commissioning etc. <b><u>of item no. 40.</u></b>	1	LS
60	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years <b><u>of item no. 40</u></b>	1	LS
70	Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 20 KWp Hybrid Solar PV Power Plant for <b><u>Repeater Station No. 11 (Cheponi, Alipurduar, West Bengal).</u></b>	1	LS
80	Unloading at Site, Installation, Erection, Testing and Commissioning etc. <b><u>of item no. 70.</u></b>	1	LS
90	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years <b><u>of item no. 70</u></b>	1	LS

100	Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 20 KWp Hybrid Solar PV Power Plant for <b><u>Repeater Station No. 15 (Belgachi, Purnea, Bihar).</u></b>	1	LS
110	Unloading at Site, Installation, Erection, Testing and Commissioning etc. <b><u>of item no. 100.</u></b>	1	LS
120	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years <b><u>of item no. 100</u></b>	1	LS
130	Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 20 KWp Hybrid Solar PV Power Plant for <b><u>Repeater Station No. 17 (Khagaria, Bihar).</u></b>	1	LS
140	Unloading at Site, Installation, Erection, Testing and Commissioning etc. <b><u>of item no. 130</u></b>	1	LS
150	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years <b><u>of item no. 130</u></b>	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:**

1.0 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.
- (ii) Annexure BB : Technical Specifications
- (i) Annexure CC : Special Terms & Conditions
- (ii) Annexure DD : Bid Rejection Criteria / Bid Evaluation Criteria
- (iii) Annexure EE : Figures
- (iv) Annexure FF : Details of Locations/Sites
- (v) Annexure GG : Commercial Check List
- (vi) Annexure HH : Bank Details
- (vii) Layout Diagrams

**LCB Doc. Booklet (No. MM/LOCAL/E-01/2005)** has 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 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.
- Original Bid Security.
  - 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 In case of SINGLE STAGE-TWO BID SYSTEM, 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:**

RFx Response Number: 60006452    RFx Number: TEST2    Status: Submitted    Su  
 RFx Owner: WIPRO\_TEST1    Total Value: 0.00 INR    RFx Response Version Nu

**Event Parameters**

Currency:

Detailed Price Information:

Terms of Payment:  90% against despatch+10% after receipt

Service and Deliv  
Incoter

**Partners and Delivery Information**

Function	Number	Name	Valid fr
The table does not contain any data			

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 Un-priced Bid" and "Priced Bid" in the places as indicated above:

**Edit RfX Response:**

Submit | Read Only | Print Preview | Check | Technical RfX Response | Close | Save

RfX Response Number 60006452 RfX Number TEST2 Status Withdrawn Submission Deadline 13.04.2013 11:00:00 INDIA  
RfX Owner WIPRO\_TEST1 Total Value 0.00 INR RfX Response Version Number 2 RfX Version Number 5

RFx Information | Items | **Notes and Attachments** | Conditions

Area for uploading Techno-Commercial Bid\*

▼ Notes

Add Clear

Assigned To	Category	Text Preview

Area for uploading Priced Bid\*\*

▼ Attachments

Sign Attachment Add Attachment Edit Description Versioning Delete Create Qualification Profile

Assigned To	Category	Description	File Name	Version	Processor	Checked
The table does not contain any data						

- 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 **Two Bid System** shall be followed for this tender and only the price-bids of the bidders whose offers are commercially and technically acceptable shall be opened for further evaluation.
- 13.0 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.
- 14.0 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.
- 15.0 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.
- 16.0 **The Integrity Pact is applicable against this tender.** OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide **Annexure XII** of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL’s competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of

the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid. **The name of the OIL's Independent External Monitors at present are as under:**

SHRI RAGHAW SHARAN PANDEY, IAS (Retd.),  
Former Secretary, MOP & NG,  
e-Mail ID : rspandey\_99@yahoo.com

SHRI RAJIV MATHUR, IPS (Retd.)  
Former Director, IB, Govt. of India,  
e-Mail ID : rajivmathur23@gmail.com

- 17.0 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)

Detailed Project Report (DPR), design, manufacture, supply, installation, erection, testing and commissioning with AMC of 20 KWp Hybrid Solar PV Power Plant for Repeater Stations along Naharkatia (Assam) – Barauni (Bihar) cross-country pipeline of Oil India Ltd.

## **1.0 OBJECTIVE**

The main objective of this project is to design, manufacture, supply, installation/erection, testing, commissioning and handing over of 20 KWp Hybrid Solar PV Power Plant with (DG & Battery Bank) for Repeater Stations along Naharkatia (Assam) – Barauni (Bihar) cross-country pipeline of Oil India Ltd. with remote monitoring as well as automatic starting/stopping of standby DG set(s) as and when required depending upon power/load requirement and pre-defined storage battery state of charge conditions. The suggestive Hybrid Solar Plant arrangement shall be similar as indicated in Figure: A - Virtual Grid (ANNEXURE – EE). All components, accessories materials and manpower along with post warranty comprehensive AMC of the plants for 5(five) years shall be part of the scope of work/contract.

## **2.0 SCOPE OF WORK**

A Repeater Station is an intermediate unmanned installation between two pumping stations normally situated at a distance of about 50 km from upstream or downstream of a pumping station. There are one or two Repeater Station(s) in between two pumping stations. The Repeater Station is used for pigging of crude trunk line and sectionalizing of crude trunk and Numaligarh - Siliguri product pipelines, cathodic protection of OIL's lines as well as IOCL's GSPL & DNPL, parameter measuring/monitoring through telemetry, various telecommunication devices of OIL and other operators. Electrical power required for above load/operations is presently generated by captive 2x20 KW DG sets (1 run+ 1 standby) on a 24 hours x 365 days basis as there are no grid supply to these Repeater Stations, failure of duty set will automatically start the other standby set and take the load. As mentioned above the connected loads are motorized isolation valves and other motorized valves, cathodic protection equipment for pipelines, telemetry and communication equipment of OIL & other operators, OFC equipment, security lights, building lighting and 2x1.5 ton air conditioners. Average normal load is 4-6 KW depending on climatic condition at the system voltage of 415 V A.C.

- 2.1 The scope of work includes preparation of Detailed Project Report (DPR), Verification of site and GHI data, Design, Manufacture, Supply, Installation, Erection, Testing, Commissioning, hand over and post-warranty Comprehensive AMC of the Hybrid Solar Photovoltaic Power Plant of 20 KWp as indicated in clause 1.0 & 2.0 above. The successful bidder shall submit Detailed Project Report (DPR) to OIL for approval within one month after issuing of LOA/Supply Order by OIL. The DPR must include at least solar assessment, radiation data, energy assessment, losses & correction, simulation data, SLD of the complete system, data monitoring & SCADA layout, Design Basis Report (DBR) including managements of DG sets & battery bank, array layout, mechanical design, battery assembly drawing, ACDB & Solar Bypass Panels, Bill Of Materials (Major items), detailed specifications of major items, cables, earthlings, surge protector etc.
- 2.2 The system comprising of equipment, modules, interfacing devices, battery banks, and related items such as wind speed sensor, temperature sensors (Module, ambient, device room, battery bank & battery room), insulation etc. for Hybrid Solar Photovoltaic Power Plant of 20 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, commissioning and handing over to OIL.
  - a) Solar PV modules roof top or ground mounted or combination of both depending upon the site conditions of composite capacity as mentioned above including mounting frames, structure, array foundation, ladder, module inter connection, Array Junction boxes etc.
  - b) Power Conditioning Unit (PCU) & STAND ALONE VIRTUAL GRID shall be remote communicable. The virtual grid arrangements shall be capable of controlling of power flow with real-time power flow indication, control/managements of the PCU, DG Sets, Battery Bank and monitoring of other devices such as sensor box, web box, router/modem etc. Suggestive layout arrangement of the devices shown in Figure: A - Virtual Grid (ANNEXURE – EE).

- c) AC power evacuation panel (ACDB) with bus bars and circuit breakers, smart KW/KWH meter indication phase indication lamps etc. Ref. Figure: B - ACDB (ANNEXURE – EE).
- d) Solar Bypass Panel with, CBs, isolators with Mechanical & Electrical Interlocking, Smart KW/KWH meter, phase indication lamps as indicated in Figure: C - SBP (ANNEXURE – EE).
- 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 equipment/devices employed, DC power system, lightning protection system, AC power system for LT, equipment etc, as required.
- g) **Loading, Transportation, Unloading & delivery of equipment/materials from works/shops to OIL's site (Detail of Sites provided in ANNEXURE – FF) 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 shall be responsible for all civil jobs such as, excavation construction, erection, installation, ramming, cleaning of site etc. as required depending upon designed system and the site conditions including all material supply, labour etc. related to construction, erection, installation & commissioning.**
- l) Contractor shall be responsible for all tools, tackles and test equipment required for commissioning and carrying out tests.
- m) **Contractor shall be arranging boarding & lodging for his engineers and transportation of men and materials to site at his own expense.**
- n) After Sale Service during warranty & Comprehensive AMC Service for 5(five) years after warranty period shall be the part of the contract as spelt in clauses 7 & 8 below.
- o) **Supply, installation and commissioning of Seven Numbers energy efficient outdoor type 25 W LED light fittings (Reputed Make, subject to approval by OIL) for area lighting, including supply and erection of requisite poles, earthing and connecting UG cable, junction boxes etc.**
- p) **Supply of one number Laptop (Make: Dell/HP/Asus) with each plant complete with genuine latest window operating system, Microsoft Office, security software, minimum Intel Core i5 processor or equivalent, Minimum 4GB DDR3 SDRAM or higher, Standard HD Graphics, minimum 500 GB or higher HDD, Integrated 10/ 100/ 1000 Gigabit Ethernet, 802. 11 a/b/g/n WLAN + Bluetooth v4.0 wireless Networking etc.**
- q) **Supply, along with installation (if applicable), suitable cleaning kits including ladder, stool, pressurized water jet arrangement including supply of 1 HP, 1-phase, 230 V AC mono block water pump (Make: CG or equivalent reputed brand) for facilitating cleaning of Solar PV modules.**
- r) Incorporation of suitable one-point ESD mechanism for emergency shutdown of the plant (Grid, DG, etc.) by security personnel in case of fire or otherwise.
- s) **To facilitate web based remote monitoring, the contractor shall provide for a postpaid broadband data connection in the name of OIL. Necessary documents for connection will be provided by OIL. The onetime expenses for the connection shall be borne by the contractor. However, the subsequent monthly recurring charges will be borne by OIL after successful handing over of the plant to OIL.**

### **3.0 INSPECTION AND TESTING**

- a) OIL shall witness the full factory tests/pre-dispatch inspection of the following items prior to dispatch by the vendor to the site.
  - PV Modules
  - ACDB Panel
  - PCU & Accessories
  - Battery Bank
- b) **The Contractor 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 inspection/tests.
- d) Within 15 days after the effective date of Contract, the Contractor shall submit a detailed Quality Assurance Plan (QAP), covering all activities under scope of supply of the Contractor and all stages of inspection, for OIL to comment / approve the same, and indicate OIL's hold points.
- e) The Contractor 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 its 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 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, but in any case not later than 1(one) month before the expected date of the equipment getting ready for inspection.
- g) In cases where OIL have to conduct the inspection at the premises or works of the Contractor, the Contractor 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 and shall give all such facilities to OIL or his authorized representative to accomplish such tests.
- h) When the inspection/tests have been satisfactorily completed at the contractor's or his sub-contractor's premises, OIL shall issue a certificate to that effect (to the extent such certificate is required to be delivered by OIL pursuant to this Contract).
- 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.
- 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 from any of his obligations under this Contract.

### **4.0 TRAINING**

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



## **5.0 SAFETY**

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

## **6.0 BOARDING, LODGING & TRANSPORT**

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

## **7.0 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 under warranty against any manufacturing/design/installation defects for a minimum period of 5(five) years from the date of commissioning by the contractor. The contractor 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 must be submitted with commissioning/completion certificate along with manufacturer's warranty certificates of each components & accessories and relevant test certificates.

## **8.0 AFTER SALE SERVICE & COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT**

After Sale Service during warranty period as mentioned in clause 7.0 above & 5-year Comprehensive AMC after expiry of warranty is a part of the contract & will start after expiry of warranty period.

This shall cover two parts:

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

### **a. Scheduled/ Preventive maintenance**

The contractor shall ensure at least two scheduled visits per year to check the health & operation of the plant & cleaning of the panels & tightening of the connections during warranty period. Any faulty parts or items shall be replaced promptly to ensure bare minimum outage of the plants as spelt in clause 7.0. The after sale service during warranty & 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.

The contractor shall have to quote the rates for Annual Maintenance Contract for 5 years after the warranty period, which includes scheduled visits mutually agreed interval and supply of essential spares. During the visit, cleaning of the panels & tightening of the connections shall be carried out.

### **b. Unscheduled/ Break Down maintenance**

The contractor shall have to rectify any functional failure in the system. The contractor shall respond within 10 days from the date of information of such Break Down to rectify the problem. The contractor shall supply all spares required during the warranty & AMC period. This includes spares for scheduled as well as unscheduled or breakdown maintenances.

**TECHNICAL SPECIFICATIONS**

SPV system must conform to the Balance of System (BoS) items/components of the SPV power plants of 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)	: $\geq 200$ 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 Celsius.
NOCT	: 45(+/-)2 degree Celsius

**ii. ENVIRONMENTAL TEST CONDITION CHARACTERISICS TO BE SPECIFIED BY VENDOR:**

- (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 CHARACTRISTICS**

- (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.

- v. Bidder shall provide Manufacturer's the data sheet, service assurance & warranty. The equipment 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) & VIRTUAL GRID**

- i. MPPT (Max. power point tracking) controller, inverter and associated control and protection devices etc. all shall be integrated into PCU.
- ii. The rating 20 KW or more
- iii. PCU/Virtual Grid 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. Min. Indications (through LEDs & LCD display) in PCU or Virtual grid or both as applicable.

# Inverter ON  
# LOAD ON,  
# Power, Energy (Day & Cumulative) generations.  
# Power flow  
# Battery SOC, SOH, charge/discharge etc.  
#system health, PCU Status, DG status, start/stop command etc.  
# Inverter under voltage/over voltage  
# Inverter over load  
# Inverter over temperature  
# Event logging, retrieving & accessible by external device such as PC or otherwise.

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.  
# The virtual grid capable of controlling of power flow with real-time power flow indication, control/ managements of the PCU,DG Sets, Battery Bank, auto synchronization& parallel run of DG Set & Solar and monitoring of other devices such as sensor box, web box, router/modem etc.& communicable by web based applications by local & remote PC(s) .  
#Enclosure: IP54/IP65 for indoor/outdoor installation.  
#Climatic Category: As per IEC Standards.  
# Make: Reputed Brand subject to approval by OIL.

- xiv. Bidder shall provide Manufacturer'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, 4500 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
- 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 – 50degree C
- xvii. Internal resistance < 1 mohm
- xviii. Self Discharge rate < 5% per 28 days at 27± 2 degree C.
- xix. Make: Reputed Brand subject to approval by OIL.
- xx. Bidder shall provide Manufacturer'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 AND SOLAR BY PASS PANELS :**

**1. ACDB**

The AC power output of the PCU or Virtual Grid or DG through Virtual Grid shall be fed to a 3-phase, 415, AC Distribution Board which will feed the existing Load Distribution Board (LDB) through 25 sq.mm 4-core armored UG power cable. Suggestive ACDB arrangement shall be as Figure: B - ACDB or better version with approval from OIL.

Suggestive Minimum BOM:

**Incomer:**

- 32 A 4P MCCB, 25KA Thermal Magnetic Release
- Digital Multi-functional Smart Meter with CTs
- LED,240 V AC Phase Indication Lamp Red, yellow & blue
- Control Fuse Base 20 A, with 6A HRC link
- 6A neutral link dropout type

**Outgoing:**

- 32 A 4P MCCB, 25KA Thermal Magnetic Release: 01 No
- 16 A 2P MCB, 10KA: 2 Nos.
- 16 A TPN MCB, 10KA: 1 No.
- 4 A 2P MCB, 10KA: 2 Nos.

## **2. SBP:**

Solar Bypass Panel (SBP) shall be used for bypassing the virtual grid and run the DG sets independently during any problem in the solar system. Suggestive SBP arrangement shall be as Figure-C(SBP) or better version with approval from OIL.

Suggestive Minimum BOM:

### **Incomer:**

- 63 A 4P MCCB, 25KA Thermal Magnetic Release: 2 Nos.
- Mechanical Interlock for above MCCBs: 2 Nos.

### **Outgoing:**

- 63 A 4P MCCB, 25KA Thermal Magnetic Release: 1 No.
- Digital Multi-functional Smart Meter with CTs: 1 No.
- LED,240 V AC Phase Indication Lamp Red, yellow & blue : 3 Nos.
- Control Fuse Base 20 A, with 6A HRC link
- 6A neutral link dropout type
- 6A Auto-Manual, Selection Switch,2P, 2Way 2Position: 1 No
- Control Relays as required.

## **3. Common Characteristics of ACDB & SBP:**

- # Will meet IS 694/1554 standards
- # Temp. Range #10°C to +80°C.
- # Voltage rating 660/1000V
- # Excellent resistance to Heat, Fire, oil, cold, water, abrasion, UV radiation
- # Internal wiring with suitable Flexible, PVC insulated, stranded, copper cables,1100v grade & colour coded.
- # IP Protection: IP 44 or above
- # Painted with texture finish electro static paint(powder coating),paint thickness:80±20 micron

## **E. AUTHORIZED TESTING LABORATORIES/ CENTERS**

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& POLES**

25 Watt, 230 Volt LED Street Light Fittings, Make: Any Reputed Indian Brand and Poles as per standard & requirement with OIL's approval.

## **H. SYSTEM & BATTERY HOUSE**

The system room shall house standalone virtual grid equipment, PCU, solar bypass panel, ACDB, UPS, Battery box & other devices. The Battery room shall accommodate the battery bank. The rooms shall be earthquake proof (commensurate to seismic zone-V) concrete structure with corrugated M S sheet roof or pre-fabricated steel puff panel structure with concrete foundation. The contractor shall design the structure & get approved by OIL .The electrification of both the house shall be in contractors' scope.

The shelter shall have at least-

1. Three lockable doors( one in system room & two in battery room)

2. 6 (six) sliding windows (4 in battery room & 2 in system room) with aluminum frame, grill & glass.
3. Fresh air ventilator as required.
4. 4(four) No. exhaust fans (2 in battery room, 1 in system room & 1 spare.) of Reputed brand.
5. 1(one) No. cabin fan & 1(one) No. stand fan (Reputed 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.**

**SPECIAL TERMS & CONDITIONS****1.0 GENERAL**

- a. Bidders are advised to visit all locations to study the sites carefully before submission of their bids.
- b. The successful bidder must ensure customized design as per site conditions for all locations and deliver all the materials relating to the respective plants at respective sites only.
- c. 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.

**2.0 PAYMENT TERM**

Before the contractor becomes eligible for any payment under the contract the party shall submit Bank Guarantee towards Performance Guarantee as per clause 3.0 below.

- 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 all five plants.
- 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 at respective five sites altogether.
- 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 all the five plants 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.

**3.0 PERFORMANCE GUARANTEE**

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

**4.0 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 shall be informed in writing by OIL. The Contractor 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.

**5.0 PENALTY**

The contractor shall be allowed a notice period of 10 (ten) working days to rectify the fault(s) in the plant(s), discrepancy & deficiency in service or performance of the plant(s) failing which a penalty of Rs. 1000 per day per plant shall be levied till rectification, is done.

## **6.0 COMPLETION TIME**

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

## **7.0 LIQUIDATED DAMAGES**

- a. OIL shall levy Liquidated Damages at the rate of 0.5% of the Contract Price per week of delay in completion time, subject to a ceiling of 7.5 % of the total contract value. For this, purpose a delay of one day also shall be considered as a delay of one week.
- b. The Contractor will have to satisfy the requirement of Technical Specifications. If the required parameters are not achieved, then the Contractor 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.
- c. After erection / commissioning, the System supplied under this Contract 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.

## **8.0 INSURANCE**

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

## **9.0 SPARES**

Bidder shall provide a list of recommended spares along with prices, quantity and sources for three years after post warranty comprehensive AMC. **The prices of these recommended spares will not be considered while evaluating the main Bid.**

Successful Bidder has to provide all spares required for the plant operation during the warranty & post warranty AMC period(s).

## **10.0 DRAWINGS / DOCUMENTS**

The Contractor shall submit for each plant all initial documents in 6 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.

## **11.0 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.

## **12.0 ARBITRATION**

The venue of arbitration shall be Guwahati.



### **13.0 PERFORMANCE OF CONTRACT**

The Contractor shall be responsible for the due and faithful performance of the Contract in all respects according to the drawings, specifications, particulars and all other documents referred to in this Contract. 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 (whether with or without test carried out by the Contractor or the OIL) shall not relieve the Contractor 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 are not in conformity with the terms and conditions of the Contract.

The Contractor shall cooperate with the OIL's other contractors, 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 shall also co-ordinate with other contractors for any interface activity at his battery limits. No remuneration shall be claimed from OIL for such technical co-operation.

### **14.0 VALIDITY**

The validity of the Contract 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 this Contract. 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's original intent.

### **15.0 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 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 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 in the event of his failure to comply with this provision within seven (7) 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, OIL shall under no circumstances be held liable for any losses or damages to such of Contractor'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 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. OIL shall allow the Contractor 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 on draw back basis and provided, he has carried out necessary documentation at the time of taking such items inside the Plant.
- d. 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. However, any damage to such work solely due to such provision or use shall be to the OILs account.

#### **16.0 USE OF COMPANY'S EQUIPMENT**

Contractor 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, the contractor shall compensate the company.

#### **17.0 WAIVERS AND AMENDMENTS**

It is fully understood and agreed that none of the terms and conditions of the Contract 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.

**BID REJECTION CRITERIA (BRC) /BID EVALUATION CRITERIA (BEC):**

Following BRC/BEC will govern the evaluation of the bids received against this tender. Bids that do not comply with stipulated BRC/BEC in full will be treated as non responsive and such bids shall prima-facie be rejected. Bid evaluation will be done only for those bids that passed through the "BID REJECTION CRITERIA (BRC)" as stipulated in this documents.

Other terms and conditions of the enquiry shall be as per general terms and conditions vide MM/LOCAL/E-01/2005 for E-procurement LCB tenders. However, if any of the clauses of the BRC/BEC contradict the clauses of the tender or MM/LOCAL/E-01/2005 elsewhere, those in the BRC/BEC shall prevail.

**1.0 BID REJECTION CRITERIA (BRC): BIDDERS' QUALIFICATION**

The bid shall conform generally to the specifications and terms and conditions given in the Tender Document. Bids will be rejected in case services offered do not conform to the required parameters stipulated in the Scope of Work. Notwithstanding the general conformity of the bid to the stipulated specifications, the following mandatory requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and rejected. All documents related to BRC must be submitted along with the Techno-Commercial Bid.

**A. TECHNICAL**

- i. The bidder shall bid for all the 5(five) locations, otherwise the bid shall be deemed as incomplete & such partial bid will not be considered for evaluation.
- ii. The offered Solar PV plant shall be rated for a minimum of 20 KWP.
- iii. The 20 KWp Solar PV Plant shall be a complete system and meet the specifications as per Technical Specifications of the NIT and conforming to MNRE specifications.
- iv. Any offer which does not include all the jobs/services mentioned in the Scope of Work will be considered as incomplete and rejected.
- v. Bidder shall be an Original Equipment Manufacturer (OEM) of Solar PV module or Bidders shall be Channel partner with valid accreditation of MNRE.
- vi. A bidder should have experience of setting up of minimum two numbers of not less than 20KWP 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 7 (seven) years.
- vii. The SPV Power Generation Projects as mentioned above, which the party has commissioned, should be working satisfactorily for at least 1 (one) year from the date of commissioning.

**Supporting documentary evidences to be provided**

The Bidder shall furnish documentary evidences in support of clause v, vi & vii above along with the bid to establish his qualification/experience/track record meeting Technical Criteria as stated above. For clause vi & vii 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.

Following are the acceptable documentary evidences for clause vi & vii:

- 1) Copy of Work Order/ Contract agreement and completion certificate.
- 2) Performance Certificate from the user regarding successful operation of the Solar PV power plant.

## **B. FINANCIAL**

Annual Financial Turnover as per Audited Annual Reports in any of the last 3(three) financial years or current financial year should not be less than INR 490.00 lakhs (Rupees Four Hundred Ninety Lakhs only).

For proof of Annual turnover, copies of the following documents should be submitted along with the bid:

- i) A certificate issued by a practicing Chartered/ Cost Accountants' Firm, certifying the Annual Turnover and nature of business, OR
- ii) Audited Balance Sheet and Profit and Loss account.

## **C. COMMERCIAL**

1. Bids are invited under **SINGLE STAGE TWO BID SYSTEM**. Bidders shall quote accordingly.
2. **Bid security of INR 4,90,000.00 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. 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. 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. **Validity of the bid shall be minimum 120 days. Bids with lesser validity will be rejected.**
6. 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. 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. 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. Bids containing incorrect statement will be rejected.
10. No offers should be sent by Telex, Cable, E-mail or Fax. Such offers will not be accepted.
11. 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.
  - iv. In case the party refuses to sign Integrity Pact.

12. 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	Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 20 KWp Hybrid Solar PV Power Plant for <b><u>Repeater Station No. 8 (Dharampur, Nalbari, Assam).</u></b>	1	LS		
20	Unloading at Site, Installation, Erection, Testing and Commissioning etc. <b><u>of item no. 10.</u></b>	1	LS		
30	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years <b><u>of item no. 10 (Refer Clause no. 8.0 under Annexure – AA).</u></b>	1	LS		
40	Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 20 KWp Hybrid Solar PV Power Plant for <b><u>Repeater Station No. 10 (Pratapkhata, Kokrajhar, Assam).</u></b>	1	LS		
50	Unloading at Site, Installation, Erection, Testing and Commissioning etc. <b><u>of item no. 40.</u></b>	1	LS		
60	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years <b><u>of item no. 40 (Refer Clause no. 8.0 under Annexure – AA).</u></b>	1	LS		
70	Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 20 KWp Hybrid Solar PV Power Plant for <b><u>Repeater Station No. 11 (Cheponi, Alipurduar, West Bengal).</u></b>	1	LS		
80	Unloading at Site, Installation, Erection, Testing and Commissioning etc. <b><u>of item no. 70.</u></b>	1	LS		
90	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years <b><u>of item no. 70 (Refer Clause no. 8.0 under Annexure – AA)</u></b>	1	LS		
100	Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 20 KWp Hybrid Solar PV Power Plant for <b><u>Repeater Station No. 15 (Belgachi, Purnea, Bihar).</u></b>	1	LS		
110	Unloading at Site, Installation, Erection, Testing and Commissioning etc. <b><u>of item no. 100.</u></b>	1	LS		
120	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years <b><u>of item no. 100 (Refer Clause no. 8.0 under Annexure – AA).</u></b>	1	LS		
130	Detailed Project Report (DPR), Design, Manufacture, Supply, Packing & Forwarding of 20 KWp Hybrid Solar PV Power Plant for <b><u>Repeater Station No. 17 (Khagaria, Bihar).</u></b>	1	LS		
140	Unloading at Site, Installation, Erection, Testing and Commissioning etc. <b><u>of item no. 130</u></b>	1	LS		
150	Comprehensive Annual Maintenance Contract for a Period of 5(Five) years <b><u>of item no. 130 (Refer Clause no. 8.0 under Annexure – AA)</u></b>	1	LS		

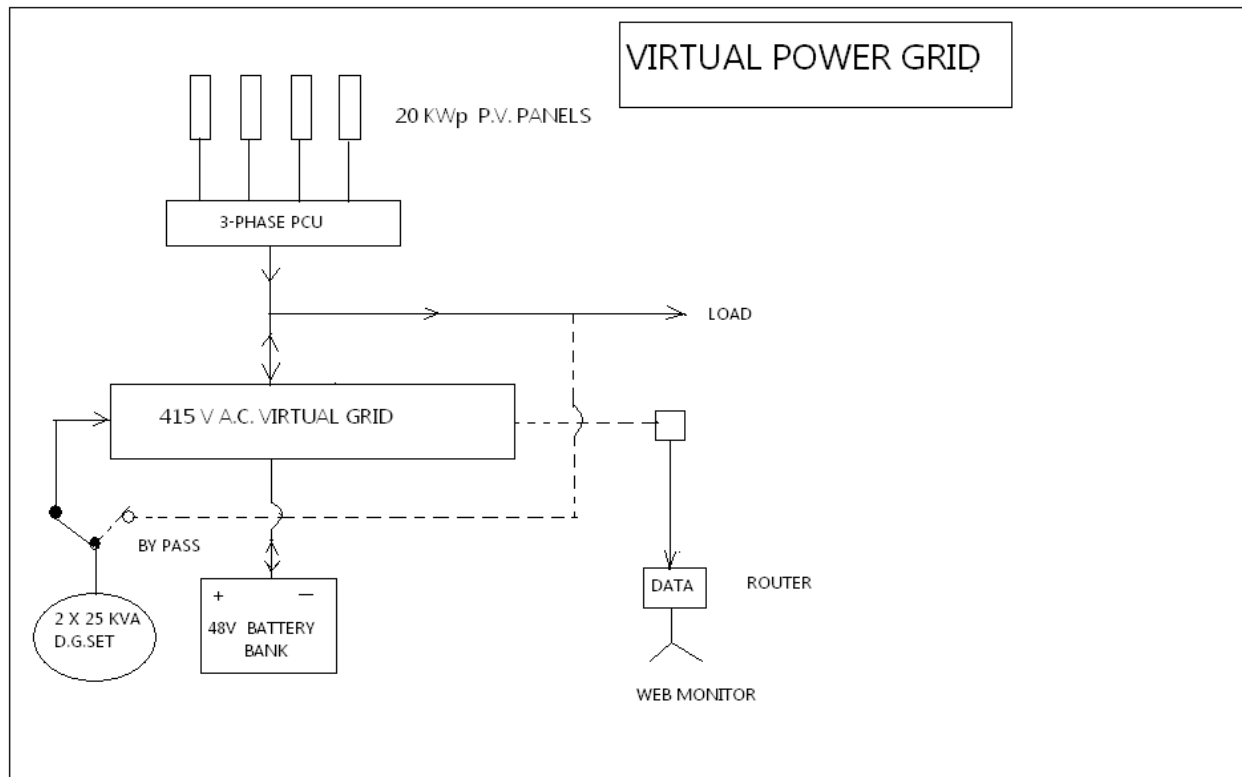
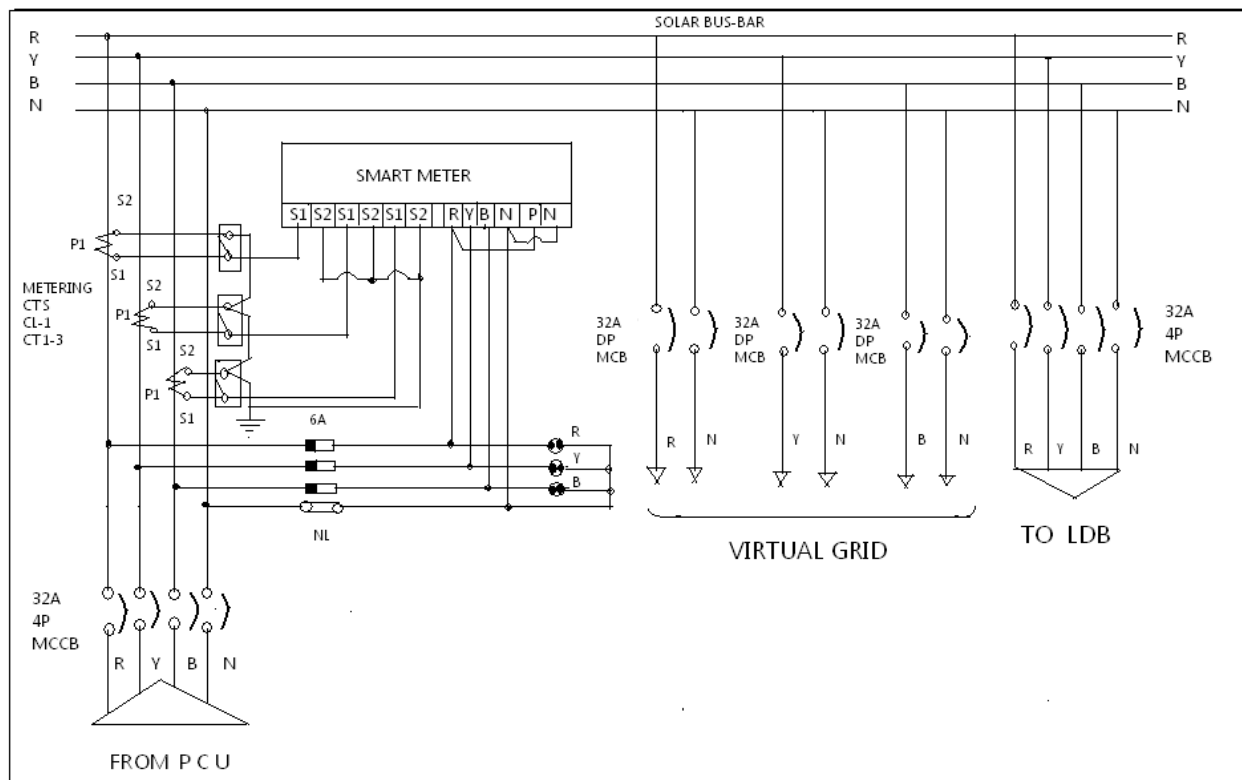
**NOTE:**

- i. The **bidder shall quote prices on FOR SITE basis (Detail of Sites provided in ANNEXURE – FF), 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.
- ii. **Bidder to quote transportation charges** including all applicable taxes to the sites separately.
- iii. 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.
- iv. 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.**

## **2.0 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:

1. The evaluation of bids will be done as per the Price Bid Format (SUMMARY) detailed vide Para C 12 of BRC.
2. 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. Evaluation will be done on “total contract cost” (Item no. 10 to 150) basis to ascertain the lowest bid.
4. 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.

**FIGURES & DIAGRAMS****FIG: A - VIRTUAL GRID****FIG: B - ACDB**

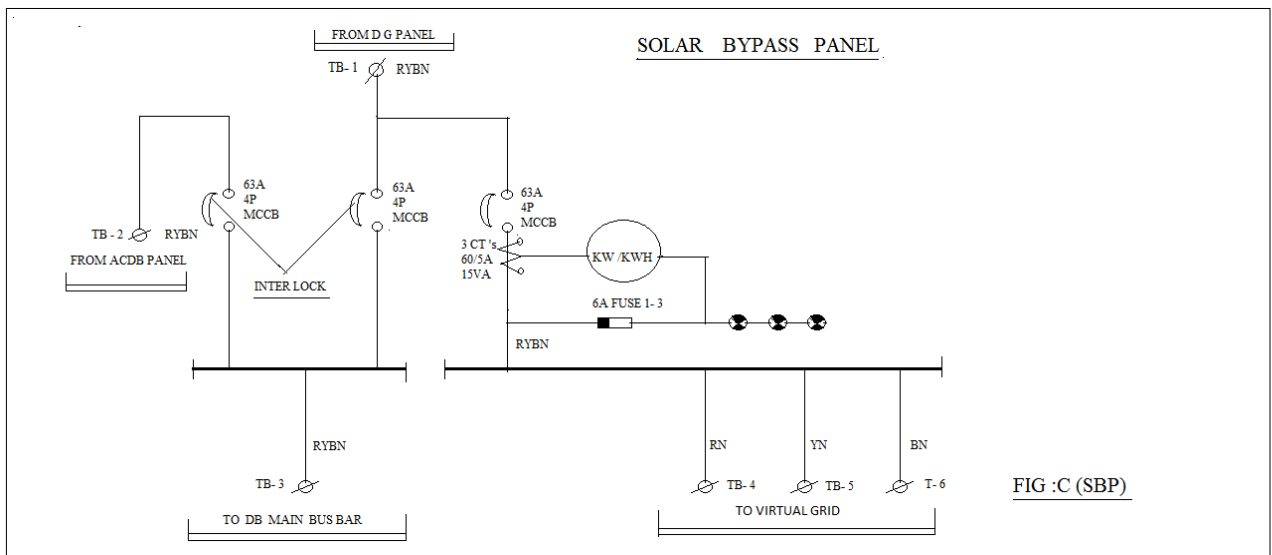


FIG :C (SBP)

**FIG: C - SBP**



**DETAILS OF LOCATIONS/SITES**

**(1) Repeater Station 8: DHARAMPUR**

Latitude: 26deg.25'03"N

Longitude: 91deg.23'03"E

HASL: 46.3 M

Address: Vill. - Dharampur, PO - Panigaon, Dist. - Nalbari, Assam -781303

***Layout Diagram Ref.: OI/PL-0743***

**(2) Repeater Station 10: PRATAPKHATA**

Latitude: 26deg.23'02"N

Longitude: 90deg. 07'56"E

HASL: 43 M

Address: Vill. - Pratapkhata, PO/PS - Fakiragram, Dist. - Kokrajhar, Assam -783337.

***Layout Diagram Ref.: OI/PL-0745***

**(3) Repeater Station 11: CHEPANI**

Latitude: 26deg.31'16"N

Longitude: 89deg.39'22"E

HASL: 64 M

Address: Vill. - Pachmi Chepani, PO - Kaleswarguri, PS - Samuktatala, Dist. - Alipurduar, WB - 736206.

***Layout Diagram Ref.: OI/PL-0746***

**(4) Repeater Station 15: BELGACHI**

Latitude: 25deg.49'57"N

Longitude: 87deg.40'59"E

HASL: 34 M

Address: Vill. - Belgachi, PO - Baisi, PS - Dagarua, Dist. - Purnea, Bihar - 851204

***Layout Diagram Ref.: OI/PL-0750***

**(5) Repeater Station 17: KHAGARIA**

Latitude: 26deg.30'54"N

Longitude: 86deg.28'30"E

HASL: 37 M

Address: Vill. - Sonhauli, PO/PS - Khagaria, Dist. - Khagaria, Bihar - 851204

***Layout Diagram Ref.: OI/PL-0752***