

which shall review and determine that local content requirements have been met, and issue a local content certificate to that effect on behalf of procuring company, stating the percentage of local content in the good or service measured. The Auditor shall keep all necessary information obtained from suppliers for measurement of Local Content confidential.

- d. The Local Content certificate shall be submitted along with each invoice raised. However, the % of local content may vary with each invoice while maintaining the overall % of local content for the total work/ purchase of the pro-rata local content requirement. In case it is not satisfied cumulatively in the invoices raised up to that stage, the supplier shall indicate how the local content requirement would be met in the subsequent stages.
- e. As regards cases where currency quoted by the bidder is other than Indian Rupee, exchange rate prevailing on the date of notice inviting tender (NIT) shall be considered for the calculation of Local Content.
- f. HPCL shall also have the authority to audit as well as witness production processes to certify the achievement of the requisite local content.

Sanctions:

HPCL shall impose sanction on manufacturers / service providers not fulfilling LC of goods/services in accordance with the value mentioned in certificate of LC.

The sanctions may be in the form of written warning, financial penalty and holiday listing.

In the event that a manufacturer or supplier of goods and / or service provider does not fulfil their obligation after the specified period in such warning, HPCL can initiate action for holiday listing such manufacturer/supplier/ Service provider.

A manufacturer and/ or supplier of goods and / or provider of services who has been awarded the contract after availing Purchase Preference is found to have violated the LC provision in execution of the procurement contract of goods and / or services, shall be subject to financial penalty specified in the following clause :

“The financial penalty shall be over and above the PBG value prescribed in the contract and shall not be more than an amount equal to 10% of the contract Price”.

Attachment 1 (Undertaking) to be submitted on letter head, duly filled, stamped and signed (as applicable) by :

- a) **Authorized signatory of the bidder having Power of Attorney for tender value < Rs. 10 Crores.**
- b) **The undertaking submitted by the bidder shall be supported by a certificate from statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of other than companies) for tender value > or = Rs. 10 Crores.**

UNDERTAKING

ATTACHMENT -1

Tender no. _____ dated _____

We, M/s _____ (***Name of Bidder***) hereby state and undertake that we meet all the requirements of the PP-LC / DMEP / DMTP (retain whichever is applicable and remove the balance options) Policy as set out in the tender document and hereby confirm that we are eligible for purchase preference under this policy.

In case our declaration is found to be incorrect at any point of time during the tender process or contract execution or thereafter, HPCL shall have the right to impose sanctions as stated in the subject PP - LC policy.

We hereby declare that the local content of Goods / Services / EPC / Works Contract (retain whichever is applicable and remove the balance options) as per the scope of job to be executed under this tender is %, at the time of bidding.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

(In case quoted value **exceeds Rs. 10 Crores**, the undertaking should be supported by a certificate from Statutory Auditor engaged by the bidder certifying that the bidder meets the mandatory local content requirement.)

Distribution of Order

Status of L1 Bidder	% Order Distribution	
Class - I Supplier	L1 Bidder : 100 %	
Class - II Supplier	Eligible Class - I Supplier : 100 %	In case of non-availability of eligible Class - I Supplier L1 Bidder : 100 %

No. F.9/4/2020-PPD
Government of India
Ministry of Finance
Department of Expenditure
Procurement Policy Division

512, Lok Nayak Bhawan, New Delhi
Dated the 12th November 2020

OFFICE MEMORANDUM

Subject: Performance Security.

As per Rule 171 of General Financial Rules (GFRs) 2017, Performance Security is to be obtained from the successful bidder awarded the contract for an amount of five to ten percent of the value of the contract to ensure due performance of the contract. Similar provisions also exist in the Manual for Procurement of Works 2019 and Manual for Procurement of Consultancy & other Services 2017 issued by this Department.

2. The Government is in receipt of many representations that on account of slowdown in economy due to the pandemic, there is acute financial crunch among many commercial entities and contractors, which in turn is affecting timely execution of the contracts. It has also been represented that this may affect the ability of contractors to bid in tenders and hence reduce competition. Requests are being received for reduction in quantum of Security Deposits in the Government contracts.

3. In view of all above, it is decided to reduce **Performance Security from existing 5-10% to 3% of the value of the contract** for all existing contracts. However, the benefit of the reduced Performance Security will not be given in the contracts under dispute wherein arbitration/ court proceedings have been already started or are contemplated.

4. Further, all tenders/ contracts issued/ concluded till 31.12.2021 should also have the provision of reduced Performance Security.

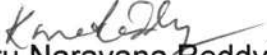
5. In all contracts where Performance Security has been reduced to 3% in view of above stipulations, the reduced percentage of Performance Security shall continue for the entire duration of the contract and there should be no subsequent increase of Performance Security even beyond 31.12.2021.

Similarly, in all contracts entered into with the reduced percentage of Performance Security of 3%, there will be no subsequent increase in Performance Security even beyond 31.12.2021.

6. Wherever, there is compelling circumstances to ask for Performance Security in excess of three percent as stipulated above, the same should be done only with the approval of the next higher authority to the authority competent to finalise the

particular tender, or the Secretary of the Ministry/ Department, whichever is lower. Specific reasons justifying the exception shall be recorded.

7. These instructions will be applicable for all kinds of procurements viz. Goods, Consultancy, Works, non-consulting Services etc and are issued under Rule 6(1) of the GFRs 2017.


(Kotluru Narayana Reddy)
Deputy Secretary to the Govt. of India
Tel: 24621305
Email: kn.reddy@gov.in

To,

All the Secretaries and Financial Advisers to Government of India

Copy to: Secretary, Department of Public Enterprises with a request to issue the same instructions to Central Public Sector Undertakings (CPSUs).

Tender No. : 2100097-HB-10120



Tender Published On : 31-May-2021 12:34

Technical Documents

Sl.No.	Description	Attached File	Set Value	Supporting Doc. Req'd
1	Scope and STC	Tender docs.pdf	-	No
2	Diagrams	Annexure.pdf	-	No

Schedule of Quantities			
Schedule-1			
Sl.No.	Description	Qty	UOM
Design, Fabrication, Manufacturing, Supply, Installation, Testing & Commissioning of 10KWp Solar PV Rooftop Power Plant each (Total 20 KWp) on turnkey basis including civil works in accordance with: Attachment I - Design & Technical Specifications Attachment II - Scope of Work Attachment III - Special terms & conditions at SV-08 station, G. Hosahalli Post, Hiresigara Village, Gonibidu Hobli, Mudigere Taluk, Chickamangaluru District & SV-09 station, Hunusehalli Post, Mavanur Village, Alur Taluk, Hassan District of HPCL MHMBPL			
1	Supply of 24 V 335Wp Solar PV panels as per the technical terms and conditions and scope of job.	62	Each
2	Supply & Installation of mounting structures for fixing the PV Solar panel on the roof as per the technical terms and conditions and scope of job including civil works & water-proofing.	2	Lump sum
3	MPPT charge controllers for existing 2 nos of 326V DC Battery banks as per the technical terms and conditions and scope of job.	8	Each
4	Supply of Array Junction Boxes as per the technical terms and conditions and scope of job.	2	Lump Sum
5	Supply of Mounting Panel including connection, Cables, MCB, SPDs, Metering accessories etc.as per the technical terms and conditions and scope of job.	2	Lump Sum
6	Supply of Earthing wires and connections as per the technical terms and conditions and scope of job.	2	Lump Sum
7	Supply of GI Strip (25 x 6) including laying and welding etc. as per the technical terms and conditions and scope of job.	200	Meters
8	Supply of lightning arrester including cabling etc. as per the technical terms and conditions and scope of job.	2	Each

9	Installation, Testing, Commissioning charges including installation and commissioning of solar panels, cables, IP based metering, Surge Protection Devices, MCBs, earthing, Panel enclosures with Changeover switches for MPPTs, meters, SPDs, MCBs, wiring etc, other accessories etc, as per the technical terms and conditions and scope of job.	2	Each
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Schedule-2

Design, Fabrication, Manufacturing, Supply, Installation, Testing & Commissioning of **10KWp Solar PV Rooftop Power Plant each (Total 20 KWp)** on turnkey basis including civil works in accordance with:

Attachment I - Design & Technical Specifications

Attachment II - Scope of Work

Attachment III - Special terms & conditions

at SV-15 station, Village: Haliyuru, Chunchanakatte Post, Chunchanakatte Hobli, KR Nagara Taluk Mysore District & SV-17 station, Village: Gerasanahalli, Bilikere Post Bilikere Hobli, Hunsur Taluk Mysore District of HPCL MHMBPL

1	Supply of 24 V 335Wp Solar PV panels as per the technical terms and conditions and scope of job.	62	Each
2	Supply & Installation of mounting structures for fixing the PV Solar panel on the roof as per the technical terms and conditions and scope of job including civil works & water-proofing.	2	Lump sum
3	MPPT charge controllers for existing 2 nos of 326V DC Battery banks as per the technical terms and conditions and scope of job.	8	Each
4	Supply of Array Junction Boxes as per the technical terms and conditions and scope of job.	2	Lump Sum
5	Supply of Mounting Panel including connection, Cables, MCB, SPDs, Metering accessories etc.as per the technical terms and conditions and scope of job.	2	Lump Sum
6	Supply of Earthing wires and connections as per the technical terms and conditions and scope of job.	2	Lump Sum
7	Supply of GI Strip (25 x 6) including laying and welding etc. as per the technical terms and conditions and scope of job.	200	Meters
8	Supply of lightning arrester including cabling etc. as per the technical terms and conditions and scope of job.	2	Each
9	Installation, Testing, Commissioning charges including installation and commissioning of solar panels, cables, IP based metering, Surge Protection Devices,	2	Each

	MCBs, earthing, Panel enclosures with Changeover switches for MPPTs, meters, SPDs, MCBs, wiring etc, other accessories etc, as per the technical terms and conditions and scope of job.		
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DESIGN & TECHNICAL SPECIFICATIONS**PART-A: DESIGN REQUIREMENTS:**

This specification covers design, manufacture, assembly, testing before supply, inspection, packing and delivery and other basic technical requirements. The equipment to be supplied against this specification is required for vital installations where continuity of service is very important. The design, materials and manufacture of the equipment shall, therefore, be of the highest order to ensure continuous and trouble-free service over the years.

The equipment offered shall be complete with all parts necessary for their effective and trouble-free operation. Such parts will be deemed to be within the scope of the supply irrespective of whether they are specifically indicated in the commercial order or not.

It is not the intent to specify herein complete details of design and construction. The equipment offered shall conform to the relevant standards and be of high quality, sturdy, robust and of good design and workmanship complete in all respects and capable to perform continuous and satisfactory operations in the actual service conditions at site and shall have sufficiently long life in service as per statutory requirements. If the dimensional drawings attached with this specification and the notes there to are generally of illustrative nature. In actual practice, notwithstanding any anomalies, discrepancies, omissions, in-completeness, etc. in these specifications and attached drawings, the design and constructional aspects, including materials and dimensions, will be subject to good engineering practice in conformity with the required quality of the product, and to such tolerances, allowances and requirements for clearances etc. as are necessary by virtue of various stipulations in that respect in the relevant Indian Standards, IEC standards, I.E. Rules, I.E. Act and other statutory provisions.

The Tenderer/supplier shall bind himself to abide by these considerations to the entire satisfaction of the employer and will be required to adjust such details at no extra cost to the employer over and above the tendered rates and prices.

Solar PV (Photo Voltaic) system is required to be installed on the rooftop of HPCL SV stations. The SV station is situated in remote rural area. The PV system design requirements are as enlisted below:

EXISTING SITE CONDITIONS:

1. LOAD DETAILS AT SV STATION TO BE FED THRU SOLAR PV SYSTEM:

Sl. No.	Load Description	Operating Voltage	Rating	No. of Loads	Duty (hrs/day)
1	UPS Battery Bank	326 V DC	6 KVA	2	24

2. EXISTING BATTERY BANK DETAILS:

Two (2) battery banks are available at SV station one each for providing backup power to 6KVA UPS system.

Sl.No.	Battery Banks	No. of Cells	Type	Battery Details
1	120AH for UPS System	163nos. x 2.25V End of Discharge Voltage: 1.85V	Tubular Lead Acid	Make: Exide Model: TP 120P

3. EXISTING POWER SCENARIO AT SV STATION:

The SV station is located in a remote rural area.

No. of hours of power cut daily: 8-14 hrs during day depending on season

No. of days to restore grid power during transmission breakdown: 3-4 days

4. DESIGN REQUIREMENTS:

4.1 The PV power system design shall be an Off-grid system. Existing battery banks shall be utilized as per design requirements enlisted herein.

4.2 UPS system loads are critical loads which have to be kept “**powered ON**” 24hrs x 365 days.

4.3 Power scheme will be as follows:

326V DC UPS Battery banks to be powered through MPPT charge controller connected to **10KWp** solar PV panels. The MPPT charge controller shall provide a potential free changeover contact once it is on and the same shall be interlocked with the UPS incomer to switch off the incomer when solar power is charging the battery banks. The cut off voltage of the MPPT shall be user configurable as per the site conditions.

4.4 Design of solar PV system shall be such as to utilize solar energy to the maximum possible extent while KEB (grid) supply shall be used as backup. i.e:

- The PV Power Control Unit (PCU) shall operate with solar priority for charging batteries.
- Grid power shall be the last priority to feed the load. The system shall be designed such that when Battery Bank voltage drops below 320 V or any set point decided by user to avoid Deep discharge while solar energy is insufficient/ unavailable then Grid Supply will be utilized to feed the loads & charge the batteries through existing UPS system.

4.5 The system shall be designed suitably along with required isolating & protection mechanisms.

4.6 The PV system shall provide clean regulated power to the load (ie without voltage fluctuations).

4.7 MPPT solar charge regulators shall be provided with following minimum features:

- Nominal battery voltage: 326 V. (163 x 2 V)
- Maximum charging current: 70 Amps
- Maximum battery charging voltage: 365 V (163 x 2.25 V)
- Prevent battery banks from Overcharging and Deep Discharging.
- Built-in Temperature compensation.
- Zero drop technology.
- Shall provide the NO-NC change over contacts with contact rating of minimum 230V/5A for utilizing to switch off/on the UPS incomer feeders in the station.
- The changeover contact condition shall be user configurable i.e. when the battery bank has started to charge from the MPPT charger with a minimum battery bank voltage then the changeover contact shall be activated.

4.10 MCBs shall be provided at suitable places to isolate power circuits.

4.11 Two MPPT charge controllers per Battery Bank shall be provided. These shall work with 50 % sharing basis and shall have isolation in-between to operate them on standalone basis. Suitable isolation to be provided.

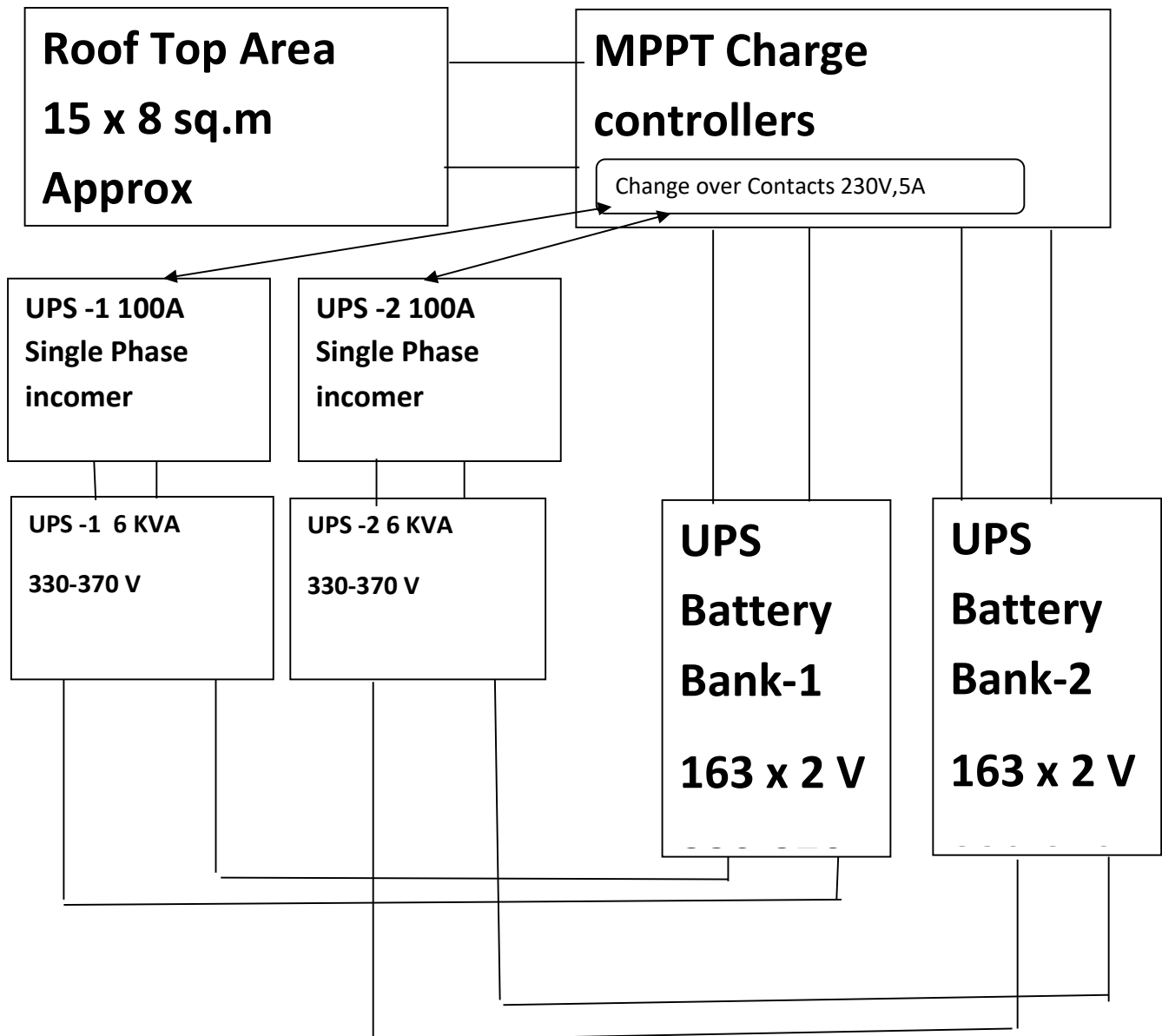
4.12 Following protections shall be provided at DC side & AC side:

a) Junction Box: Metal Oxide Varsistors (MOV) & fuses to be provided in JB for surge protection & short circuit protection.

b) MPPT:

- Surge Protection device
- Hardware Over voltage protection.
- Hardware over current protection & input current limit.

Fig 1. Power flow diagram of the system



Note: This diagram of the existing system is only indicative. For clarifications, please contact HPCL. Additionally, parties are advised to visit the site to understand the existing system and design requirements as per site conditions.

PART-B TECHNICAL SPECIFICATION:

1. PV MODULES:

1.1 The Poly-Crystalline PV modules must conform to the latest edition of any of the following / equivalent BIS Standards for PV module design qualification and type approval:

- Crystalline Silicon Terrestrial PV Modules IEC 61215 / IS14286

1.2 In addition, the modules must conform to IEC 61730 Part 1- requirements for construction & Part 2 - requirements for testing, for safety qualification.

1.3 Poly-Crystalline PV Solar panels should be of reputed make like TATA BP Solar, Enfield, Central Electronics Limited (CEL), Sunfield, Rolta PV, WAAREE etc. The bidder shall be an authorized distributor of a reputed manufacturer.

2. MODULE MOUNTING STRUCTURE

2.1 Modules shall be mounted on a non-corrosive support structures towards due south and at a suitable inclination to maximize annual energy output. Support structure design and foundation or fixation mounting arrangements should withstand horizontal wind speed up to 120 km/ hr.

2.2 Support/mounting structures shall be manufactured with steel angles & channels; spray galvanized to IS 1477 Part -1 with thickness of 85-90 microns as per IS 5905. All fasteners shall be of stainless steel. Hollow/pipe framework shall not be accepted.

2.3 Vendor to note that the mounting framework should facilitate quick & easy removal of panels for safe storage during expected storms/cyclone.

2.4 The foundation for Module Mounting structures shall be 1:2:4 PCC Construction. There shall be minimum necessary clearance between ground level and bottom edge of SPV modules.

2.5 Foundation bolts of suitable size to be used for fixing the structure on the rooftop. Necessary precautions to be taken by vendor while installing to ensure that water seepage does not occur into the building due to the foundation works.

2.6 Water proofing with bitumen wraps to be done over the concrete foundation blocks to overlap the existing bitumen water proofing in the rooftop.

3. ORIENTATION AND TILT OF PV MODULE

3.1 Modules alignment should be due south and with suitable tilt angle with horizontal so as to maximize energy output as per site conditions.

3.2 Vendor shall take note of the Orientation of the roof area given in the Annexure-1 and plan the installation of PV modules accordingly.

4. DC DISTRIBUTION BOARD (DCDB)

A DCDB shall be provided in between Power Control Unit and Solar Array. It shall have MCCB of Suitable rating for connection and disconnection of array section. It shall have meters for measuring Array voltage and Array current.

5. ELECTRONIC PROTECTIONS

5.1 Adequate protection is to be incorporated under “No Load” conditions, e.g. when the load is removed and the system is switched ON.

5.2 Components such as junction boxes etc. must be Weather proof.

5.3 The system should have protection against battery overcharge and deep discharge conditions.

5.4 Fuse should be provided to protect against short circuit conditions.

5.5 Protection for reverse flow of current through the PV module(s) should be provided.

5.6 Electronics should have temperature compensation for proper charging of the battery throughout the year.

5.7 Adequate protection should be provided against battery reverse polarity.

5.8 There should be a provision of protection against discharge through array by blocking diode.

6. OTHER SYSTEM COMPONENTS

6.1 All system components such as MCBs, Inverter, Junction Boxes, Charge Controllers and all other components required for the complete system shall be of reputed make and shall conform to applicable IS standards.

6.2 All the components shall be mounted inside a closed panel of suitable size and shall be wall mounted.

6.3 Suitable fans required for the components cooling shall be considered and these shall be spatially distributed inside the panel. Additionally fans shall be provided for temperature management. 230 V AC supply from the station shall be provided for the auxiliary loads from HPCL.

7. CABLING & EARTHING

7.1 Armoured cable shall be used for connecting the PV array JB to Power Control Units (MPPT charge controllers, UPS incomers etc). The control supply cabling in all respects shall be in vendor scope.

7.2 Suitable cable tray shall be provided for routing of the cables. If any existing cable trays are available the same shall be used.

7.3 Proper lugs, connectors, Double compression glands shall be used for terminations. Proper mounting arrangement to be made for components in panels with DIN rails, Connectors etc.

7.4 Suitably sized cables shall be used for battery bank, MPPT charge controller connections.

7.5 Entire earthing arrangement of PV system shall be connected to designated Earthpits in the station. Construction of new earthpits is not required.

7.6 Earthing of surge protection devices shall be independent of other groundings.

7.8 GI Strip 25 mm x 6mm shall be used for double earthing of the mounting framework.

7.9 The GI earth strips laid for earthing shall be welded and shall be provided with insulators for suitable isolation.

7.10 The lightning arrester shall be erected above and shall be connected to the lightning grid of the station.

8. OPERATION MANUAL

An Operation, Instruction and Maintenance Manual should be provided with the Solar PV Power Plant and detail of Wiring and Connection Diagrams will also be provided with the manual.

9. WARRANTY/ GUARANTEE

9.1 The complete Solar PV Power Plant must be warranted against any manufacturing/design/ installation defects for a minimum period of 5 years.

9.2 PV modules used in Solar PV Power Plant must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

9.3 The Warranty/ Guarantee Card to be supplied with the Solar PV Power Plant must contain the details of the system supplied.

9.4 During the Warranty/ Guarantee period, HPCL will have all the rights to cross check the performance of the Solar PV Power Plant. HPCL may carry out the frequent inspections of the Solar PV Power Plant installed and randomly pick up its components to get them tested at Govt. / MNRE approved any test center. If during such tests any part is not found as per the specified technical parameters, HPCL will take the necessary action. The decision of HPCL in this regard will be final and binding on the tenderer.

10. TEST REPORTS

The test certificate of various components of the proposed SPV system should be in accordance with guidelines of MNRE for off grid Solar PV systems. Test certificates from MNRE approved test centers shall also be considered valid.

11. MARKING

A strip containing the following details should be laminated inside the module so as to be clearly visible from the front side:

- a) Name of the Manufacturer or distinctive Logo
- b) Model or Type No.
- c) Serial No.
- d) Year of make.

SCOPE OF WORK

Mangalore Hassan Mysore Bangalore LPG Pipeline (MHMBPL) was commissioned in the year 2016. It is having main pumping station at Mangalore (MDS) and receiving stations at Yedyur (YRS) and Mysore (MRS). It has two nos IPS one each at Neriya (NIPS) and Hassan (HIPS). Pipeline evacuates LPG from MLIF to Bangalore (Yedyur) LPG plant and Mysore LPG plant. LPG from these locations is supplied to various LPG plants situated all over South India.

The pipeline has 18 SV stations along the route. These SV stations are provided with Valves, Telecom and CP system for controls. For the SV stations, the main source of power supply is from SEB. For having continuous availability of reliable power to the Telecom, CP System and Actuators, UPS with battery backup is provided. To harvest the solar energy and to provide uninterrupted power supply to SV stations, it is intended to provide solar power at 4 nos of SV stations of MHMBPL. The two SV stations situated in Chickamangaluru & Hassan District is made as schedule-1 and two SV stations situated in Mysore district is made as schedule-2.

The details of the project site details are as under:

i. SV-08

HINDUSTAN PETROLEUM CORPORATION LTD

SV8,

G. HOSAHALLI POST,

HIRESIGARA VILLAGE,

GONIBIDU HOBLI,

MUDIGERE TALUK,

CHICKAMANGALURU DISTRICT,

PIN – 577132

Contact: Shri J.Suresh , DGM-Pipeline Station, ph: 9451362039.

ii. SV-09

HINDUSTAN PETROLEUM CORPORATION LTD

SV9

HUNUSEHALLI POST,

MAVANUR VILLAGE,

ALUR TALUK,

HASSAN DISTRICT,