

LC of EPC Contracts

LC of EPC contracts shall be the ratio of the whole cost of domestic components in the combination of goods and services to the whole combined cost of goods and services.

The whole combined cost of goods and services shall be the cost spent to produce the combination of goods and services, which is incurred on work site. LC of the combination of goods and services shall be counted in every activity of the combination work of goods and services.

The spent cost as mentioned above shall include production cost in the calculation of LC of goods and service cost in the calculation of LC of services respectively as mentioned above.

Calculation of LC and Reporting

LC shall be calculated on the basis of verifiable data. In the case of data used in the calculation of LC being not verifiable, the value of LC of the said component shall be treated as nil.

Certification and Verification

Class – I / Class – II suppliers are eligible to bid only if they meet the local content norms, therefore whether or not they are eligible to avail PP-LC benefit, it will be mandatory to provide adequate documentation as mentioned below in order to establish their status as Class- I or Class – II supplier.

At bidding Stage :

a. Local Content

The bidder shall provide the percentage of local content in the bid.

b. Undertaking by the bidder

- The bidder shall submit an undertaking {(self-assessment) certified by the Authorized signatory of the bidder having Power of Attorney} **(as shown in Attachment 1)** along with the bid stating that the bidder meets the mandatory minimum LC requirement and such undertaking shall become a part of the contract.
- **In case the procurement value is more than Rs. 10 Crores**, 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) giving the percentage of local content.

After Contract Award:

- a. The bidder shall submit an undertaking {(self-assessment) certified by the Authorized signatory of the bidder having Power of Attorney} along with the bid stating that the bidder meets the mandatory minimum LC requirement and such undertaking shall become a part of the contract.
- b. **In case the procurement value is more than Rs. 10 Crores**, 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) giving the percentage of local content.
- c. Each supplier shall provide the necessary local-content documentation to the statutory auditor

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:

Date:

[Signature of Authorized Signatory of Bidder]

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 %

Tender No. : 21000252-HD-10157



Tender Published On : 11-Jun-2021 14:55

TENDER DOCUMENT				
Sl.No.	Description	Attached File	Set Value	Supporting Doc. Req'd
1	TENDER DOCUMENT	Tender Document.pdf	-	No

Introduction:

Hindustan Petroleum Corporation Limited (HPCL) is a Government of India Enterprise with a Navratna Status, and a Forbes 2000 and Global Fortune 500 company. HPCL has 2 major refineries one in Mumbai and the other in Vishakapatnam. It is listed on the Bombay Stock Exchange and the National Stock Exchange.

A feasibility study has been conducted at the HPCL Terminal in 3 HPCL POL Terminals /IRDs at HPCL Bihta Patna New IRD, HPCL Kanpur Terminal & HPCL Vadodara Terminal. HPCL intends to set up Grid Interactive Solar PV Power Generation Systems at all the 3 locations on a Lumpsum Turnkey Design, Supply, Installation & Commissioning with 5 years Comprehensive Operation & Maintenance at HPCL Patna New IRD & HPCL Vadodar terminal. . Also only Supply, Installation & Commissioning at HPCL Kanpur Terminal Contract Basis with the selected bidder/s.

II. Site Details

HPCL intends to set up Solar PV Power Generation Systems at the following locations, the capacities and addresses are as per table A:

TABLE A:

Sr.No	Location	Address	DC Capacity Proposed	Minimum AC Output required
1	HPCL Bihta Patna New IRD	Patna New IRD, Lai Road, Bihta, District-Patna, Bihar – 801103	200 kWp	180kW
2	Kanpur Terminal	HPCL KANPUR TERMINAL VILLAGE- RASULPUR GOGAMOU, RAIPUR GAJNER ROAD KANPUR DEHAT - 209121	120 kWp	110kW
3	Vadodara Terminal	HPCL POL Vadodara Terminal Near Bombardier Circle Village :- Asoj -Pilol Besides Savli Manjusar GIDC Vadodara - 391745	255 kWp	230kW

SOLAR PV INSTALLATION AREA DETAILS:

1.HPCL BIHTA PATNA NEW IRD :



The area numbered 2 having Blue rectangle is selected for setting up the Solar PV Plant at HPCL Bihta Patna New IRD . The area is undulated and land grading levelling will have to be carried out.

2. HPCL KANPUR TERMINAL

Vendor has to install complete setup on below two buildings



1. PMCC building roof top
2. Control room building rooftop.

Sno	Location	Installation type	Area available(sqm)
1	PMCC building	Flat Roof Mounted	900
2	Control room building	Flat Roof Mounted	400

3. HPCL VADODARA TERMINAL

Vendor has to install complete setup on below marked building/Ground Areas. Vendor to finalized the designed capacity of solar plant in each area.

SN	AREA	SIZE	AREA (SQ MTR)	SOLAR PLANT TYPE	AC CABLE LENGTH(APPROX) FROM MCC ROOM
1	DRIVERS AMENTY BLOCK	28.00 X 28.0	400	ROOF TOP	800
2	MARKETING ROOM	16.00 X 7.50	120	ROOF TOP	550
3	NEAR WATER TANKS	50.00x25.00	1250	GROUND	120
4	ALONG BOUNDARY WALL	120.00x5.00	600	GROUND	120
5	OPEN AREA NEAR C/R ROOM	100.00x15.00	1500	GROUND	250

Areas are displayed at google map as shown below.



iv. Scope of Work & Services for Design, Supply, Installation & Commissioning

1. The Grid Interactive Solar PV Power Generating System to be Designed, Supplied, Installed & Commissioned at the HPCL, Patna New IRD will be a GROUND/ROOF MOUNTED plant , Roof top-based units at Kanpur Terminal & GROUND/ROOF MOUNTED plant at Vadodara Terminal The DC Capacities and minimum AC Capacities of individual plants should be as per TABLE :1
2. The scope of work and services includes but is not restricted to the following:
3. Design, Supply, Installation, Commission testing at HPCL Patna New IRD, HPCL Kanpur Terminal & HPCL Vadodara terminal and 5 years comprehensive Operation & Maintenance at HPCL Vadodara Terminal & HPCL Patna new IRD of the respective Grid Connected Solar PV Power Plant.
 - a. Solar Modules of adequate quantity to meet the design requirements.
 - b. The Solar Module Mounting structure adequately designed to meet the technical requirements along with frames, purlins, rafters, sag rods and foundations with foundation bolts and other accessories. Design, Supply, Installation & commissioning only for HPCL Patna New IRD & Vadodara Terminal. For Kanpur Terminal only Design, Installation & Commissioning is required. Mounting Structure will be provided by HPCL in case of HPCL Kanpur Terminal.
 - c. Solar Plant Overall Performance Ratio shall be min 80% during PGTR and during CAMC period.
 - d. The Soil testing, clearing of site of trees, bushes, debris, vegetation, adequate ground improvement, landfilling, compacting, storm water drainage, leveling etc.
 - e. Grid Interactive String Inverters with Surge Protection Devices (SPD) either within the inverter or externally mounted in Array Junction Boxes.
 - f. Array Junction Boxes, if required.
 - g. Solar DC Copper Cables
 - h. LT Power and Control Cables including end terminations and required accessories for AC & DC power.
 - i. Datalogger for remote data monitoring along with Ambient Temperature Sensor, Module Temperature Sensor, Solar Irradiance Sensor and Wind Sensor.
 - j. Inverter Interaction Panel/s with AC SPD's.
 - k. Grid Interaction Panel/ Solar L.T Panel with SPD's, Digital Display of PF, Current, Voltage, Energy in KWh.
 - l. Communication cable sand other control cables.
 - m. Lighting Arrestors and Protection system, earthing kits and earthing systems.
 - n. PVC Pipe, trenches, Cement Pipes and accessories as required by design.
 - o. Pathways around the Solar Site and upto inverter and ACDB/ LT Panels locations.
 - p. Fencing along the perimeter of the Solar PV Yard with gate as per site requirement.
 - q. RCC Room / Enclosure for housing Inverters, Solar LT panel or other equipment.
 - r. HT Metering cubicle, CT's, PT's, Bidirectional Net Energy Meter as per guidelines of Local DISCOM and net metering policy. Necessary Check meter and accessories as per Local DISCOM requirements and as per net metering policy. Solar LT Metering Cubicle/s along with suitable CT's, PT's etc as per Local DISCOM requirements and as per net metering policy.

- s. Liasoning and seeking permissions from local DISCOM for connecting the Solar PV Plant to the DISCOM Electrical Network.
 - t. Liasoning and seeking permissions / approvals from CEIG/ Electrical Inspectors office for setting up the Grid Interactive Solar PV Power Generating System.
 - u. Liasoning and seeking permissions from any other Government department for setting up and running of the Grid Interactive Solar PV Power Generating System.
 - v. Liasoning and seeking permissions from any Government department for site clearing, removal of vegetation, cutting of trees, removal of debris etc
 - w. Water piping along with module cleaning equipment including hose pipes and water outlets at convenient locations within the Solar PV Yard for regular cleaning of the Solar PV Plant.
 - x. Compound Lighting as per site requirement.
 - y. Fire extinguishers, danger plates, name board etc.
 - z. Transportation, loading, unloading of all materials, equipments etc.
 - aa. Training of HPCL nominated executives and technicians.
 - bb. Testing equipments/ material for maintenance, monitoring and regular upkeeping of the Solar PV Power Generating system.
 - cc. Net meter is available at Vadodara , & Patna location , however generation meter & monitoring on laptops online is required. Quote accordingly. Have to terminate in panel before netmetering available.
 - dd. Any other equipment/ material/ service required for successful completion of the respective Solar PV Power Generating Systems. Design of the respective Grid Interactive Solar Power Generating System and its associated electrical & mechanical auxiliary systems includes preparation of Single Line Diagrams (SLD's), Plant Layout drawing, Solar Module Layout drawing, Electrical Layouts, Communication drawing for remote monitoring and sensors, Solar Module Mounting Structure Drawings, Foundation Drawings, Earthing System Drawings with design calculations, Lightning System drawing with field coverage calculations, Control Panels/ Electrical Panels drawings with Bus Bar & Spacer design calculations/ considerations, pathway design drawing, fencing and gate drawings, as build drawings, and any other drawings as required for construction of the Solar PV Plant.
4. The selected supplier shall submit the detailed design of the complete Solar PV Power Generation systems using PV SYST software to optimize the combination of modules considering the location, insolation nature of load etc. The weather data should be acquired from the latest version of Meteonorm software.
5. Civil Works shall be performed with respect to the following but not limited to
- a. Site Grading, Levelling, landfilling, compacting, clearing of vegetation if required.
 - b. Clearing of site of bushes, grass or any structure that would obstruct the construction of the Solar PV Plant after seeking permissions from local HPCL authorities or any local/ state/central government department.
 - c. Construction of suitable foundation for Module Mounting structure having modules fixed at fixed tilt angle. Foundation shall be designed as per the soil test report and pile foundation shall be considered at coastal locations. All such foundation shall be higher than road level to avoid contact of panels with water. Pathway to be above ground level if required with railings.

- d. Trenching for cable laying and water piping with necessary sealants / adhesives/ cement binders etc.
 - e. Manholes for maintenance work at regular intervals for Cables and water pipes.
 - f. Construction of Control Room with shed, Inverter housing and associated civil works.
 - g. Civil work for Mounting AC Distribution Panels/ Inverter Interaction Panels in field.
 - h. Water Storage Tanks for Module cleaning.
 - i. Civil work for Earth chambers and Lightning Arrestors.
6. Installation work shall be performed with respect to the following but not limited to:
- a. Clamping and securing the Solar Modules on the MMS frame / purlins.
 - b. Installation of String Inverters, Switchgears, AC Distribution Panels/ Inverter Interaction Panels, Solar LT Panels etc.
 - c. Installation and laying of DC and AC cables through Conduit pipes / Hume Pipes/ Cement pipes with proper sealing.
 - d. Installation of Cable trays, supports, brackets, Lighting Arrestor. Testing of all strings, DC inputs, Control Panels, AC & DC Terminations, Solar LT Panels , Communication systems, earth pits, etc and commissioning of the Solar PV Power Plant.
7. **Land Development, including contour survey, grading, Soil investigation, testing, ground improvement if required, compacting and construction of Storm water drainage to ensure that the site is free from any water logging during the monsoon.**
8. Obtaining CEIG clearance form Electrical Inspectors office as per Government rules and with any other government department for setting up the Solar PV Power Plant.
- Application and seeking permission approval from local DISCOM for net metering arrangement as per rules and regulations. Testing of Energy meters (HT, LT Check meter), CT'sPT's, metering Kiosks as per directive of local DISCOM and /or electrical inspector or any concerned office. Net metering agreement between DISCOM and HPCL to be ensured by the selected bidder.
9. Submission of following documents, drawings, Datasheets, design and engineering information to HPCL or its authorized representative for approval in 3 copies.
- a. Datasheets of all equipment / components.
 - b. Design calculation for LA, Switchgears, cable, Busbars, Earthing pits selection.
 - c. All Layout drawings
 - d. Wiring drawings
 - e. SLD's
 - f. PVSYST report
 - g. Soil testing report
 - h. Foundation report approved by Structural engineer
 - i. Module Mounting structure wind speed calculations approved by Structural engineer.
 - j. O&M Manuals
 - k. Test reports of all equipment and components.

11. Establishing a system to maintain an inventory of spare parts, tools, testing equipments, consumables and other supplies that would be used to facilitate the daily operation of the Solar PV Plant.
12. The installation shall be carried out by the selected bidder or his licensed electrical contractor holding a valid license as required by the State Government Authorities. All skilled labors like electricians, welders, fitters etc should possess valid certificates / licenses as applicable by local authorities.
13. The selected bidder shall provide the necessary drawings and documents required by statutory authorities and obtain approval before commencement of installation work. It shall be the sole responsibility of the selected bidder to obtain safety certificate/ approval from local statutory authorities.
14. Any modification in the equipment or installation that may be demanded by the inspecting authorities shall be carried out by the selected bidder at no additional cost to HPCL.
15. Clearing the site of after installation work should be carried out by the selected bidder. The site during construction stage should also be regularly cleaned of any unwanted material/ plastic packaging/ boxes etc.
16. The selected bidder shall provide a 1.5 m high Chain Link fencing as per specifications provided around the Solar PV plant. Prior approval of the drawing/ design shall be taken from local HPCL team.
17. The selected bidder shall furnish a schedule of inspection / testing of major equipment so that HPCL may send its representative to witness the tests. All equipment testing/ inspection reports, factory test reports, site commissioning report should be furnished by the selected bidder upon completion of installation and commissioning of the project. However, this shall not absolve the responsibility of the bidder on providing the performance guarantee/ warrantee.
18. HPCL team and /or its authorized representative may carry out physical inspection of all material delivered at site.
19. All equipment, components and material supplied should adhere to the latest version of international / national standards. [\(Certification given in technical specifications section\)](#)
20. Any other item not specifically mentioned in the specification but which are required for installation, commissioning and satisfactory operation of the Solar Power plant are deemed to be included in the scope of the specification unless specifically excluded on turnkey basis.

Summary of activities is as given below:

SUMMARY OF ACTIVITIES			
A	Approvals	Vendor	HPCL
1	All the documentation work related approval, clearance, submission from various State or govt. or any other legal authority to successful implementation and commissioning of the project. This includes permissions from GEDA, MGVL, CEIG, CEA (if required), Forest department, Electricity Board for net		√ (HPCL will provide only supporting document)
2	PESO Approval		√
B	General Works		
1	Contour & topography in AutoCAD with kmz at site as per signed off boundary coordinates between EPC and HPCL, SBC with Angle of friction, Cohesion and unit weight, chemical properties of Soil, ERT, CBR, Water sample testing	√	
2	Transit insurance, Workmen compensation, EAR insurance	√	
3	Handling Local issues (if any) for EPC Scope of Work	√	
4	Land development, Tree's cutting, bushes clearing for Complete plant area	√	
5	Construction Power and Water	√	
6	Temporary storage, security and manpower basic amenities	√	
7	Health, Safety and Environment Standards	√	
C	Supply, Design, Installation, Testing & Commissioning		
DC Part			
1	Supply of Photovoltaic Module	√	
2	Unloading at site, storage, inter carting, shipping on desired location from storage yard, Security and Installation of Photovoltaic Module	√	
3	Responsibility of Disposal of PV cartoons and any packing material	√	
4	Interconnecting Cables for PV Modules 4 sq. mm and 6 sq. mm as per design concept with supply of UV Resistance cable tie	√	
5	DC Connectors and termination kits and tools	√	
6	Cable Trench for DC Cable	√	
7	DC side Earth Pit (As per detailed engineering)	√	
8	PV Module Earthing	√	
9	MMS Earthing	√	
10	Inverter Body/Dedicated Earthing	√	
11	ESE Lighting Arrester Earthing	√	
12	Chain Link fencing with Gate and Fence Earthing	√	
13	Weather Monitoring System-Meteorological station with sensors and data logger with its fixing arrangement including pyranometer, anemometer, temperature sensor, ambient temperature sensor etc.	√	
14	Complete DC Yard Earthing	√	
15	ESE Lightning Arrester	√	

16	Cable termination and jointing kits (Indoor/Outdoor)	√	
17	Cable Tray along with Support structure/HDPE Pipe/Hume Pipe/Conduits for cable laying wherever required	√	
18	Connection accessories – lugs, ferrules, glands etc.	√	
19	Module Mounting Structures (Fix/ Seasonal Tilt structure) with associated accessories and Hardware fasteners	√	
20	Associated civil foundations for MMS	√	
	AC Part	√	
1	Supply of Power On Grid Inverters with Remote Monitoring and data logging	√	
2	Unloading at site, storage, inter carting, shipping on desired location from storage yard, Security and Installation of Inverter	√	
3	Supply of Inverter Interaction Panels (IIP)	√	
4	Trenching cable laying between inverter to IIP's to ACDB/ Main LT Panel upto grid point as per requirement of Utility for net metering	√	
5	Cable Tray along with Support structure/HDPE Pipe/Hume Pipe/Conduits for cable laying wherever required	√	
6	Uninterrupted Power Supply at Control Room with minimum 4 hours backup time (As per design concept)	√	
7	Supply of all energy meters including HT Bi directional meter (netmeter), LT Solar Generation meters, associated CT's , PT's as per requirement of EB	√	
8	Supply of metering cubicles(Main and / or Check) HT & LT with CT's and PT's as per requirement of EB	√	
9	Battery and Battery charger at Control Room with 4 hours (As per design concept)	√	
10	AC Earthing as per CEIG & Design requirement	√	
11	Control Room -AC Distribution Board	√	
12	Surge Protection devices and Fuses	√	
13	Rubber Mats for specific kV ratings	√	
14	Fire extinguisher & Fire Alarm in Control room	√	
15	Sand Buckets	√	
16	Termination at HPCL Main LT Panel end	√	
17	Termination of DC and AC cable along with termination kit, suitable lugs	√	
D	Civil Works		
1	All civil works related to MMS structure	√	
2	MMS Foundation as per design concept	√	
3	Foundations for AC Panels etc as per design	√	
4	Lighting Arrester Foundation	√	
5	Inverter Mounting Structure & Foundation if required	√	