

CENTRAL PROCUREMENT ORGANISATION (MKTG)
BHARAT PETROLEUM CORPORATION LIMITED
'A' INSTALLATION, SEWREE FORT ROAD
SEWREE (E), MUMBAI - 400 015



PRESS TENDER

**FOR THE JOB OF ENGINEERING, PROCUREMENT AND CONSTRUCTION (EPC CONTRACTOR)
FOR SETTING UP VARIOUS CAPACITIES SOLAR ROOFTOP PV POWER PROJECTS
AT 10 BPCL LOCATIONS (POL DEPOTS/ INSTALLATIONS AND LPG PLANTS)
ALONG WITH THEIR COMPREHENSIVE OPERATION & MAINTENANCE FOR 5 YEARS**



CRFQ NO.: 1000286552

PREBID MEETING ON: 18/08/2017 AT 1100 HRS IN BINA

DUE ON: 04/09/2017 AT 1500 HRS

Ref. 1000286552

8th August, 2017

M/s.

Dear Sir/Madam,

Subject: Invitation of bid for the job of Engineering, Procurement and Construction (EPC) contract for setting up various capacities of Solar Rooftop PV Power Projects in 10 POL and LPG Plant Locations along with its Comprehensive Operation & Maintenance for 5 Years
(CRFQ no. 1000286552 due on 04/09/2017 at 3 pm)

1. About the Company

Bharat Petroleum Corporation Ltd. (BPCL) is one of the leading Oil Refining and Marketing companies in India. The company produces a diverse range of products, from petrochemicals and solvents to aircraft fuel and specialty lubricants and markets them through its wide network of Petrol Stations, Kerosene Dealers, LPG Distributors and Lube Shoppe's.

BPCL now intends to set up some projects in the renewal energy sector.

2. Objective of the Tender

The objective of this tender is to invite bids from vendors for job of **Engineering, Procurement and Construction (EPC) contract for setting up Solar PV Power Projects at 10 POL and LPG plant locations aggregating to 4.12 MW capacity, along with its Comprehensive Operation & Maintenance for 5 Years.**

3. Only parties meeting the eligibility criterion specified in Annexure II (Bid Qualification Criteria) are eligible to quote. **Joint Ventures (JVs) and Consortiums are not eligible to participate.**
4. This tender document consists of the following annexures, which are enclosed:

a) Techno-commercial Bid:

- 4.1. Annexure I - Terms of Reference
- 4.2. Annexure II - Bid Qualification Criteria
- 4.3. Annexure III - General Instructions to tenderers for e-Tendering
- 4.4. Annexure IV - General Conditions of Contract
- 4.5. Annexure V - Special Conditions of Contract
- 4.6. Annexure VI - Integrity Pact
- 4.7. Annexure VII – POL and LPG Locations
- 4.8. Annexure VIII – Credential & Techno-Commercial Form

Information pertaining to Credential Information, Technical Information and Relationship with Directors shall have to be submitted online.

b) Price Bid: A price bid shall also have to be submitted online as per the proforma given in Annexure **IX** mentioned in point 4.3 above.

5. **INTEGRITY PACT (IP):** IP is a pact between BPCL (as a purchaser) on one hand and the bidder on the other hand stating that the two parties are committed to each other in regard to ensuring transparency and fair dealings in this procurement activity. Bidders shall have to essentially sign this pact (IP, mentioned in point 4.6 above), for participating in this tender, as per the pro-forma given at (Annexure - **VI**). The salient features of this program are:

- a. Proforma of Integrity Pact shall be uploaded by the bidder/s along with the bid documents, duly signed by the same signatory who is authorized to sign the bid documents. All the pages of the Integrity Pact shall be duly signed. Bidder's failure to upload the IP duly signed along with the bid documents shall result in the bid not being considered for further evaluation.
- b. If the bidder has been disqualified from the tender process prior to the award of the contract in accordance with the provisions of the Integrity Pact, BPCL shall be entitled to demand and recover from the bidder Price reduction/ Liquidated damages amount by forfeiting the EMD/ Bid security as per provisions of the Integrity Pact.
- c. If the contract has been terminated according to the provisions of the Integrity Pact, or if BPCL is entitled to terminate the contract according to the provisions of the Integrity Pact, BPCL shall be entitled to demand and recover from the contractor, Price reduction/ Liquidated Damages amount by forfeiting the Security Deposit/ Performance Bank Guarantee/ Supply & Performance Guarantee amount as per provisions of the Integrity Pact.
- d. Bidders may raise disputes/ complaints, if any, with the nominated Independent External Monitor whose name/ address/ contact numbers are as given below:

1. Name of IEM and E-Mail Id	Shri Brahm Dutt; dutt.brahm@gmail.com	To be contacted for: COMPLAINTS ONLY
2. IEM's Address	1/8 Safdarjung Enclave, New Delhi - 110 029.	
3. IEM's Mobile Number	09871920282	
1) Name of Procuring Officer-PO	Sandeep Srivastava	To be contacted for: All Other Clarifications / Details Regarding This Tender
2) PO's email ID	srivastavasan@bharatpetroleum.in	
3) PO's Office Address	BPCL, Central Procurement Organization (Mktg), A-Installation, Sewree-Fort Road, Sewree (E), Mumbai - 400 015	
4) PO's Contact Number	022-2417 6076; +9198694 67085	

6. All the documents associated with Techno-Commercial bid (consisting of all the afore-mentioned annexures, documents uploaded by the bidder and Techno-Commercial Information submitted) and price bid shall form the part of the tender. The entire bid shall be online only. General Instructions to vendors for e-tendering are as given in the Annexure III of this tender.

Offers should strictly be in accordance with the tender terms & conditions and our Terms of Reference (TOR). Bidders are requested to carefully study all the documents/annexures and understand the conditions and TOR before quoting the rates and submitting this tender. In case of doubt, written clarifications should be obtained, but this shall not be a justification for request for extension of due date for submission of bids.

7. A pre-bid meeting shall be held on 18.08.2017 at 11.00 AM @ Bharat Petroleum Corporation Limited, CPO Mktg Office, 'A' Installation, Sewree-Fort Road, Sewree-East, Mumbai – 400 015. An advance intimation about your presence in this meeting along with your clarification/ suggestion (in the following format) may kindly be sent to bhagats@bharatpetroleum.in

Annexure No./Clause No.:
Existing provision:
Clarification Required:
Suggested text for the amendment:
Rationale for the Clarification or amendment:

8. Please visit the website <https://bpcl.eproc.in> for participating in this tender process and submitting your bid online.
9. **BID SECURITY:** Bidders shall have to submit an Earnest Money Deposit (EMD) of **Rs 10 lakhs** in physical form at our office. For details, kindly refer Clause 8 of Annexure III
10. Your online bid as well as the instrument to be submitted in physical form should be submitted on or before the due date of this tender viz. **4th September, 2017 by 3 PM.**
11. Bid submitted after the due date and time of closing of the tender or not in the prescribed format is liable to be rejected. BPCL does not take any responsibility for any delay in submission of online bids due to connectivity problem or non-availability of site and/or other documents/instruments to be submitted in physical form due to postal delay. No claims on this account shall be entertained.
12. Price bid of only those tenderers shall be opened whose techno-commercial bid is found to be acceptable.
13. **DIGITAL SIGNATURE:** The tender documents along with Annexure thereto and Price Bids shall be required to be digitally signed with a **Class II B** or above digital signature by the authorized signatory. The authorized signatory shall be:
 - i. Proprietor in case of proprietary concern.
 - ii. Authorized partner in case of partnership firm.
 - iii. Director, in case of a Limited Company, duly authorized by its Board of Directors to sign.

If for any reason, the proprietor or the authorized partner or director as the case may be, are unable to digitally sign the document, the said document should be digitally signed by the constituted attorney having full authority to sign the tender document and a scanned copy of such authority letter and also the power of attorney (duly signed in the presence of a Notary public) should be uploaded with the tender. *Online submission of the tender under the Digital Signature of the authorized signatory shall be considered as token of having read, understood and totally accepted all the terms and conditions of this tender.*

14. Vendors, on the Black/Holiday List of BPCL/ MoP&NG/ Oil PSE shall not be considered. BPCL reserves the right to accept or reject any or all the Offers at their sole discretion without assigning any reason whatsoever. BPCL's decision on any matter shall be **Final** & any vendor shall not enter into correspondence with BPCL unless asked for. BPCL may call for additional documents if required. BPCL would also consider information already available with them regarding Vendor's credentials.
15. **SUPPORT DESK:** In case of any clarification pertaining to E-Procurement Process, the vendor may contact **ETL** on Contact Numbers and E-Mail Ids, as appended below.

- **All India** : +91 79 4001 6868 support@bpclproc.in
- **CPO(M) Office** : Satyanarayan Behera (90040 14223) satyanarayan@procuretiger.com
: Shyam Kale (77158 14897) mumbai.support@abcprocure.com

16. For clarifications, if any, please feel free to contact us on any working day between 10:00 am to 4:00 pm:

- **PROCUREMENT LEADER:** Sandeep Srivastava - 022-2417 6076; M – 98694 67085 (svivastavan@bharatpetroleum.in)

OR

- **CHIEF MANAGER PROCUREMENT:** Shekhar Bhagat - 022-2417 6467; M – 97698 80656 (bhagats@bharatpetroleum.in)

At

- **OFFICE ADDRESS:** BPCL, Central Procurement Organization (Mktg), 'A' Installation, Sewree-Fort Road, Sewree (E), Mumbai - 400 015

Thanking you,

Yours faithfully,
for Bharat Petroleum Corporation Ltd.

Sandeep Srivastava
Procurement Leader (CPO)

TERMS OF REFERENCE**1. Project Background**

Bharat Petroleum Corporation Ltd, (BPCL) a major Public Sector Undertaking intends to set up a Solar PV Power Project Rooftop and Ground Mounted System at 10 (ten) different locations across India. Detailed feasibility study for this project has been completed.

Now implementation of this project is envisaged to be carried out on Engineering, Procurement and Construction (EPC) Contract basis from designing to commissioning and subsequently Operation and Maintenance (O&M).

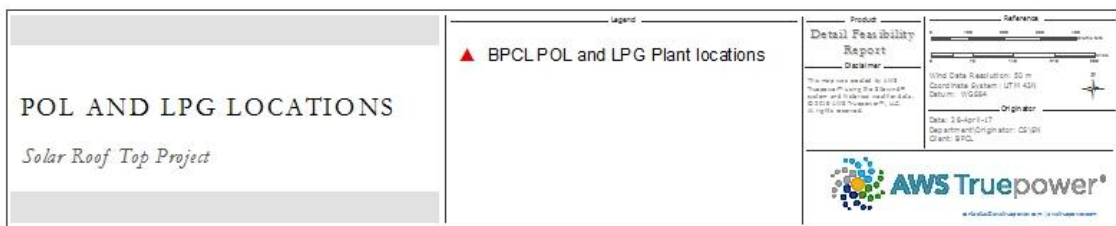
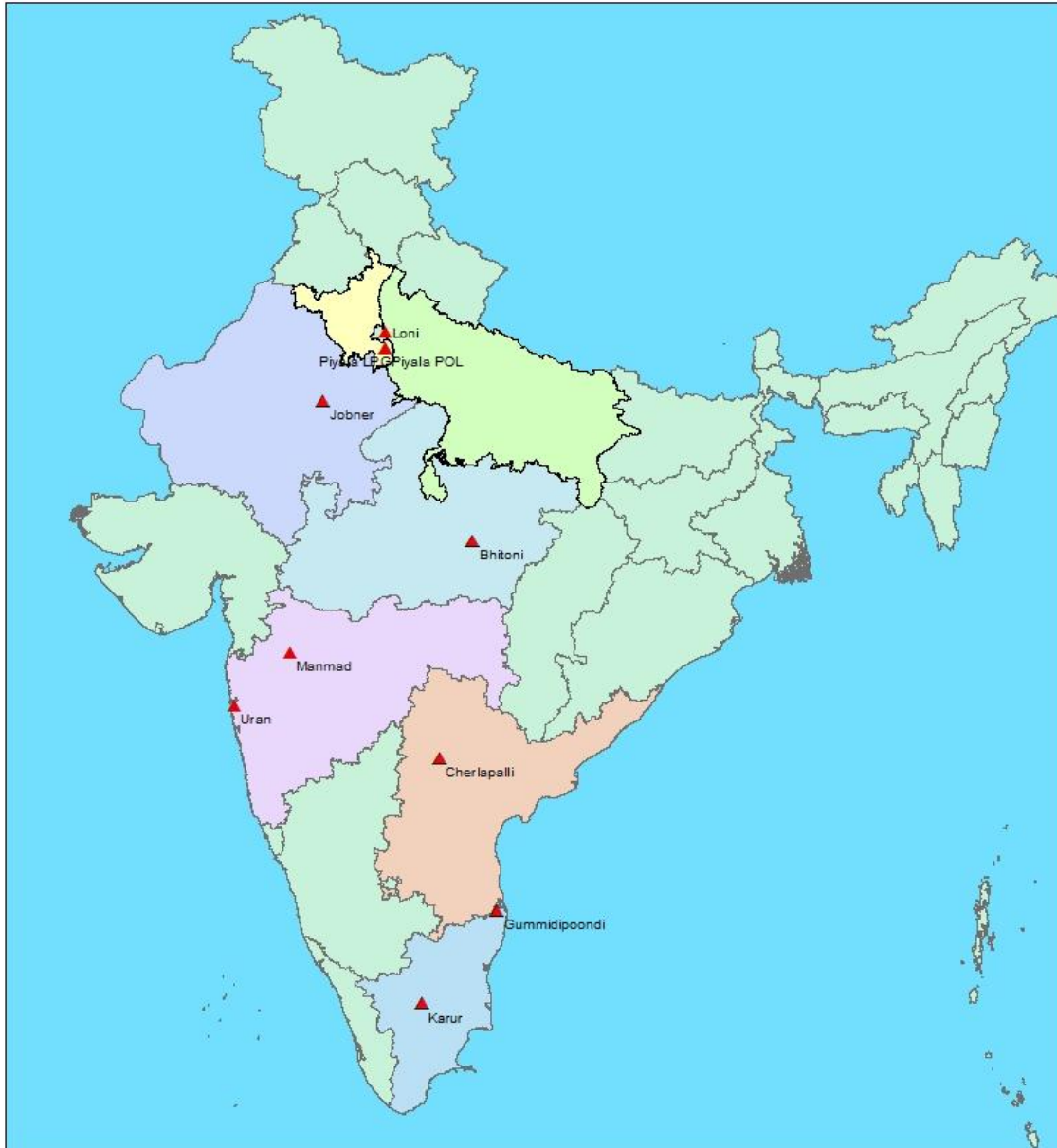
2. Project Location

The project location is within the premises of BPCL POL/LPG plants. The detailed break ups for the cumulative capacity are provided in this document.

Sl. No.	Location	Address	Latitude Longitude
1	Loni LPG Plant	LONI LPG PLANT, VILL- TELASHAH, BAAJPUR, P.O. LONI, GHAZIABAD, pin 201102	28.7° N 77.3° E
2	Manmad POL Plant	BPCL MANMAD INSTALLATION, MANMAD NANDGAON ROAD, PANEWADI, MANMAD, Dist - Nashik, Pin - 423104	20.27° N 74.49° E
3	Piyala LPG Plant	PIYALA LPG PLANT, NEAR ASAUTI RLY STN,, DELHI-FARIDABAD ROAD,, DIST.- BALLARBHGARH, PIYALA, Haryana, Pin - 121102	28.3° N 77.3° E
4	Piyala POL Plant	PIYALA LPG PLANT, NEAR ASAUTI RLY STN,, DELHI-FARIDABAD ROAD,, DIST.- BALLARBHGARH, PIYALA, Haryana, Pin - 121102	28.3° N 77.3° E
5	Uran LPG Plant	LPG URAN TERMINAL, NAVGHAR INDUSTRIAL ESTATE,, BEHIND MSEB GAS TURBINE UNIT, P.B.NO.8, DIST.-RAIGAD, BOKADVIRA, URAN , Pin 400702	18.9° N 73.0° E
6	Bhitoni LPG plant	BHITONI LPG Filling Plant, Bhitoni, P.O.SHAHPURA, DIST - JABALPUR, Pin - 483009	23.14° N 79.68° E
7	Cherlapally POL plant	CHERLAPALLI INSTALLATION, P.O.- HCL, P.B. NO.4, HYDERABAD, Telangana, Pin- 500051	17.45° N 78.60° E
8	Gummidipoondi LPG plant	LPG FILLING PLANT, J-1/J-6, SIPCOT INDUSTRIAL COMPLEX, GUMMIDIPOONDI, Pin - 601201	13.40° N 80.10° E
9	Jobner POL plant	Jobner Terminal, BPCL, VILLAGE ASALPUR,, MAHLA-JOBNER ROAD,, TEHSIL PHULERA, Jaipur Pin - 303331	26.90° N 75.43° E
10	Karur POL plant	KARUR Tap-off Point, KARUR TERRITORY, ATHUR & KADAPARAI VILLAGE,, ERODE ROAD ATHUR POST, Pin - 639002	10.99° N 78.04° E

Note:

1. Details of the Locations are given in Annexure – VII
2. The Location-wise capacities of the solar plant may vary down wards by 20%.



3. Scope of Work/ Service

The Engineering, Procurement and Construction (EPC) contractor shall be engaged by BPCL for detailed design, engineering, procurement & supply of equipment, and materials, testing at manufacturers works, inspection, packing and transporting, supply, unloading at site, associated civil works, services, permits, installation and incidentals, insurance at all stages, erection, testing and commissioning of Grid Connected Solar PV Power Plants under net metering policy aggregating to 4.12 MW, with associated equipments and materials on

turnkey basis at the following locations with its Comprehensive Operation & Maintenance for 5 years thereafter.

Location	Roof top / Ground Mount	No. of Buildings Proposed	Shadow free Area (M ²)	Proposed SPV Size (kWp)
Loni LPG Plant	Rooftop	10	1329	260
	Ground mount		2520	
Manmad POL Plant	Rooftop	12	4313	700
	Ground mount		17000	740
Piyala LPG Plant	Rooftop	7	1286	300
	Ground mount		3265	
Piyala POL Plant	Rooftop	9	2704	510
	Ground mount		4500	
Uran LPG Plant	Rooftop	7	1971	410
	Ground mount		4020	
Bhitoni LPG Plant	Rooftop	4	524	240
	Ground Mount	1	4800	
Cherlapalli POL Plant	Rooftop	9	1201	66
Gummidipoondi LPG plant	Rooftop	4	380	315
	Ground Mount	1	7225	
Jobner POL Plant	Rooftop	5	1871	200
	Ground Mount	2	2250	
Karur POL Plant	Rooftop	5	1077	375
	Ground Mount	1	7040	
				4116 kWp or 4.12MW

Note:

- In case of Manmad POL plant, it has 2 DISCOM connections and potential for 1.4MW (Rooftop potential is 340 kWp and Ground mount potential is 1100 kWp), the total capacity is equally distributed to both DISCOM connections
 - The ground mount system capacity is sub divided into 2 system each of 740kWp and 360kWp.
 - 1 set of SPV system connected to LT side of the DISCOM connection (Installation plant) which is of the capacity 360kWp + 340 kWp (total 700kWp) and the 2nd set of SPV system will be connected at the HT side of the DISCOM (POL plant) which is of capacity 740kWp

4. Scope of Activity

4.1. Scope of supply, erection and commissioning & work

- 4.1.1. Scope of Supply & Work includes all, detailed design, engineering, procurement & supply of equipment, and materials, testing at manufacturers works, inspection, packing and transporting, supply, unloading at site, associated civil works, services, permits from DISCOMs, SNA and other relevant permits for net meter application, detailed engineering system designing, shadow analysis, approvals, installation and incidentals, insurance at all stages, erection, testing and commissioning of 4.12 MW (Cumulative) Grid Connected Solar PV Power Plant at under net metering policy with associated equipment and

- materials on turnkey basis at 10 different locations of BPCL LPG and POL plants with its Comprehensive Operation & Maintenance for 5 years thereafter.
- 4.1.2. The proposed solar power plant shall be feeding the power to respective LT/HT panel within the Premises located at 10 (ten) locations mentioned in the clause 2.
- 4.1.3. Based on the detailed engineering design, shadow analysis and system design, the cumulative capacity at the locations may differ to maximum of 20%. Bidders are requested to get approval from BPCL for the detailed engineering design before the installation process.
- 4.1.4. CEA and any other clearance required for the development of the solar plant shall be taken by the contractor. BPCL will only provide the documentary support to the contractor.
- 4.1.5. The equipment and materials for Grid Connected Solar PV Power Plants with associated system (Typical) shall include but not be limited to the Supply, Erection, and Testing & Commissioning of the following:
- i. Solar PV modules including mounting frames, Mounting structures, foundation, bolts and nuts for holding structures and module inter connection.
 - ii. Array Junction boxes /String combiner Box with surge protection and monitoring system,
 - iii. Distribution boxes and fuse boxes, MCBs, Surge Arrestors, Inverters with Web/ Remote monitoring system.
 - iv. LT (AC) distribution Board, Plant Monitoring system
 - v. Digital Voltage and Ammeter, kWh meters. Metering instrument and protection relays along with battery system.
 - vi. DC cable (Copper) for interconnection between equipments including end terminations and other required accessories for DC portion of plant
 - vii. Control Cables (copper) including end terminations and other required accessories.
 - viii. HT (6.6 kV)/ LT (415 V) Power Cables (Aluminium) (depending on the LT/HT panel capacities in each location) including end terminations and other required accessories for AC side of plant.
 - ix. Internal 415 volts, Step up Transformers 415V/6.6 kV or 415V/11 kV (as per design step Transformers).
 - x. indoor panels have incoming and outgoing feeders with VCBs, CTs, PTs, Bus bars, cables terminals kits for all the transformers, and outdoor feeder, Bus coupler and station Transformer having Main and transfer Bus scheme.
 - xi. Data acquisition system with remote monitoring facilities
 - xii. Lighting arrestors
 - xiii. PVC pipes and accessories/trenches
 - xiv. Tool kit and earthing kit
 - xv. Earthing system for PV Array, DC power system, Lightning protection system
 - xvi. Metering Set with CT- PT Set having accuracy of 0.2s class (Metering Cubicle) with Main.
 - xvii. Transportation of equipments from Works to Site
 - xviii. Unloading, Loading of all supplied Equipments on Foundations at their respective places
 - xix. Training of executive/technicians
 - xx. Control room equipments related to solar system etc
 - xxi. Testing, maintenance and condition monitoring equipments

- xxii. Mandatory spares for 5 years
 - xxiii. Suitable water piping lines to make permanent arrangement for module Cleaning and their drainage
 - xxiv. Big Size Name Board to be fixed at Entry point of Solar Plant of approved design.
 - xxv. Suitable cables from each inverter to the LT/HT panels (Based on the capacity and system design for each location)
 - xxvi. Any other equipment / material required to complete the cumulative 4.12 MW Solar Power Plant on turnkey Basis at each location.
 - xxvii. Receipt, unloading, storage, erection, testing and commissioning of all supplied material
- 4.1.6. Design of Grid Connected Solar Power Plant and its associated electrical & mechanical auxiliary systems includes preparation detailed engineering design, preparation of single line diagrams and installation drawings electrical lay outs, system design, erection key diagrams, electrical and physical clearance diagrams, design calculations for Earth- mat, Bus Bar & Spacers, shadow analysis etc. design memorandum and other relevant drawings and documents required for engineering of all facilities within the fencing to be provided under this contract, are covered under Bidders scope of work.
- 4.1.7. In addition to above clause, the contractor is also required to get the permissions and approvals from DISCOM for Net meter application, installation and proper functioning of the net meter.
- 4.1.8. In addition to above, the contractor is required to measure the Solar Radiation and other climatic conditions through installation of a Standard Solar weather monitoring station at the Manmad POL plant, where the capacity of SPV power plant is 1.4 MW. The major categories of site-specific assessment required are:
- Global Solar Radiation (“GSR”)
 - Diffuse Solar Radiation (“DSR”)
 - Sunshine Duration
 - Atmospheric Turbidity
 - Temperature & Humidity
 - Wind Speed
- 4.1.9. Civil Works shall be performed with respect to the following but not limited to:
- Trimming of tress, and removing the unwanted materials in rooftop
 - In case of ground mounted system site levelling activities like removal of trees and bushes, undertaking blasting related works, disposal of cutting materiality shall be the responsibility of contractor. The area shall be suitably cut and filled to suit the layout requirement. The site levelling and grading scheme incorporating the above aspects shall be submitted to BPCL for approval.
 - Design and construction of foundation for module mounting Structures having modules, all electrical equipments, Transformer platforms and allied equipment foundations.
 - Internal road and pathways and drains for Ground mount system and cable trenches
 - Civil foundation work of for AC Distribution Board, DC distribution Board switchgears, Solar Road lights etc
- 4.1.10. Erection Work shall be performed with respect to the following but not limited to:
- Solar PV Array, Inverters, transformers all associated and allied equipments of solar plant

- HT, LT Power and control Cables
 - Entire GI cable tray inside control room building
 - Fabrication, supply & erection of cable trays, support, brackets and accessories in case of site fabrication cable tray.
 - Galvanized steel rigid/flexible conduits and accessories, Hume pipes, ferrules, lugs, glands, terminal blocks, galvanized sheet steel junction boxes, cable fixing clamps, nuts and bolts etc. as required.
 - Supply of necessary steel materials for field fabrication of cable trays, supports, brackets, grounding system etc.
- 4.1.11. Pre-commissioning & Commissioning of all supplied Equipments. Test running of Grid Connect Solar Power Plant as well as load trials at site, prior to handover and implementation of maintenance contract. During the trial operation, SPV plant shall perform trouble-free operation. During the test-run period, the functionality & Performance ratio of the plant shall be demonstrated.
- 4.1.12. Any other items not specifically mentioned in the specification but which are required for erection, testing and 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.
- 4.1.13. Land development, Design and construction of other civil works for ground mounting system including:
- If required, Pathways shall be provided between each row of MMS (1 m width)
 - Surface drainage system shall be designed based on maximum hourly rainfall intensity and IRC specifications. The drainage scheme shall be designed considering the plot area and nearby catchment area contributing to the plot drains. A network of open drains shall be designed & provided to carry surface run off. The drains shall be trapezoidal or rectangle shape lined with concrete slabs/brick masonry/stone masonry/stone slabs. The minimum thickness of these lining shall be minimum 115mm for brick masonry, min 75mm thick for concrete slab, 150mm thick for stone masonry and minimum 100mm thick for stone masonry. The drains shall also run along the sides of roads and lead to 'integrated drainage scheme' drains. Site grading level shall be fixed with due reference to site drainage of the whole area, existing drainage pattern, maximum flood level and system requirements
 - Site levelling works/scheme shall match with the specific functional requirement of Solar PV optimum generation considering the full utilization of the plot area for the desired capacity
 - A suitable arrangement for water layout (pipeline and accessories) to cater to the day-to-day cleaning requirement of Solar Photovoltaic module after commissioning shall be ensured by the contractor.
 - Bidder shall provide permanent arrangement for the module cleaning in the plant (both rooftop and ground mounted system). This shall include pumps, motor, and requisite laying network of GI pipes. Opening from the GI pipe with manual isolating valves should be provided at regular intervals. Water used for module cleaning shall be provided through the nearest available water line within the plant. Water supply shall be provided free of cost to the O&M contractor.
 - Suitable Communication System for voice and data transfer.

- 4.1.14. Total Operation & Maintenance of Solar Photovoltaic Power Plant for the 5 years' period including deployment of Engineering Personnel, Technicians, and helpers for cleaning modules and their upkeep, as and when required. However during O&M period the insurance of the solar plant shall be in the scope of BPCL.
- 4.1.15. This order is on turnkey basis so all equipment & item which are not specifically mentioned but are required for completion of work including commissioning, operation & maintenance of Solar Photovoltaic Power Plant , in every respect and for safe and efficient operation and guaranteed performance are included in scope of supply without any extra cost .
- 4.1.16. Submission of following documents, drawings, data, design and engineering information to BPCL or its authorized representative for review and approval in three copies.
- Detailed Engineering design of the solar power plant
 - Detailed technical specification of all the equipments
 - Design criteria.
 - Design calculations and shadow analysis
 - General arrangement an assembly drawings
 - Solar Insolation Data
 - Schematic diagram for entire electric system
 - G.A. drawings for, all types of structures
 - Quality assurance plans.
 - Test report (for type, acceptance, and routine tests).
 - Load Analysis in each phase of the existing Panels.
 - Study of existing Control panels and feeders at the BPCL POL/LPG plant location
 - Feasibility study for injection of Solar Power (AC) into the LT/HT panel based on DISCOM norms and design of BPCL control panels and distribution systems.
 - O&M Instruction's manuals
- 4.1.17. All drawings shall be fully corrected to agree with the actual "as built" site conditions and submitted to BPCL after commissioning of the project for record purpose.
- 4.1.18. The contractor shall forward to BPCL:
- The Schedule for various activities in the form of PERT Chart within a week from the date of detailed work order
 - Fortnightly site work progress report during construction period and Monthly O&M reports after commissioning of the project
- 4.1.19. Preparation and supply of detailed operation, system and maintenance manual
- 4.1.20. Establishing a system to maintain an inventory of spare parts and tools, equipments, consumables and supplies for the facility's and operation
- 4.1.21. Employ and coordinate the training of personnel who will be qualified and experienced to operate and monitor the facility and to coordinate operations of the facility with the grid system.
- 4.1.22. Weather monitoring station shall be installed at site and operated by the contractor for Manmad POL plant (1.4 MW). During the O&M period, the Contractor shall keep the measured daily data at regular interval and provide the same to BPCL in electronic form. The right use of the data shall remain with BPCL.

4.2. Scope of Operation and Maintenance Work

BPCL entrust the total O&M activities of the Solar Photovoltaic Power Plant to the contractor on turnkey basis for the 5 (five) years. The Turnkey contractor shall be responsible for all the required activities for the successful running, optimum energy generation & maintenance of the Solar Photovoltaic Power Plant covering:

- 4.2.1. Successful running of Solar Power Plant for optimum energy generation
- 4.2.2. Monitoring controlling, troubleshooting maintaining of records, registers
- 4.2.3. Supply of all spares, consumables and fixing / application, invertors/PCU, step up transformers (as per Bidder's engineering), LT/HT indoor panels , VCBs ,CTs, PTs, Bus bars, cables terminals kits, Isolators with earth switch, Las, Flood lights, Street Lights along with battery replacement and all other associated equipment of solar plant etc , for a period of 5 (five) years. Cost of these items (including Cost of spares) shall be included in the price quoted for O&M. Please note BPCL will pay only O&M charges.
- 4.2.4. Supply & use of consumables throughout the maintenance period as per recommendations of the equipment manufacturers
- 4.2.5. Conducting periodical checking, testing, over hauling and preventive action
- 4.2.6. Submission of periodical reports to BPCL on the energy generation & operating conditions of the solar plant.
- 4.2.7. Back to back warranty from the PV module manufacturer for replacement of PV modules against manufacturing./workmanship defects during the period of 10 years and power output warranty during the period of 25 (twenty five) years. Contractor shall facilitate the replacement of invertors/PCU's and all type of Battery used in solar plant time to time if required, during the first five years of its O&M contract period.
- 4.2.8. Providing Web based monitoring system or Remote monitoring system for the all the plants.
- 4.2.9. Bidder shall be required to carry out the replacement of damaged modules in case required during the 5 (five) years of O&M period.
- 4.2.10. Continuous monitoring the performance of the Solar Power Plant and regular maintenance of the whole system including Modules, PCU's, junction boxes underground cables, outdoor/indoor Distribution Board transformers , VCBs, CT, PTs, Battery and all associated equipment etc. necessary for extracting and maintaining the maximum energy output from the Solar Power Plant.
- 4.2.11. Operation and Maintenance of the Solar Photovoltaic Power Plant is required for a period of 5(five) years from the date of commissioning of the project which shall be carried out at fixed cost. The period of Operation and Maintenance will be deemed to commence from the date of commissioning of solar Photovoltaic Power Plant.
- 4.2.12. Bidder shall provide permanent arrangement for the module cleaning in the plant. This shall include pumps, motor, and requisite laying network of GI pipes. Water used for module cleaning shall be provided through the nearest available water line within the premises. Water supply shall be provided free of cost to the contractor during the O&M period.
- 4.2.13. The Water & power required for the construction & commissioning shall have to be managed by the contractor at his own cost.
- 4.2.14. It will be responsibility of the bidder to make arrangement for treatment of water for cleaning purpose as per the recommendations of module manufacturer and if necessary the bidder

shall install a suitable water treatment plant for this purpose. Bidder shall provide the single line diagram of water cleaning arrangement with location of pump(s) to BPCL for approval during detailed engineering. Bidder shall also install a boosting pump to meet appropriate requirement of water pressure for module cleaning. O&M Contractor shall clean the modules and maintain the schedule in its records for the cleaning cycle.

4.2.15. Performance Monitoring

a. Contractor shall clean the modules twice in a month or weekly once based on the soiling loss and maintain this schedule in its records for the cleaning cycle.

b. Providing web based monitoring system /.Remote monitoring system

4.2.16. Maintenance

a. The contractor shall carry out the periodical/plant maintenance as given in the manufacturer's service manual and perform at least minimum requirement.

b. Regular periodic checks of the Modules, PCU's shall be carried out as a part of routine preventive maintenance.

c. In order to meet the maintenance requirements stock of consumables are to be maintained as well as various spare as recommended by the manufacturer at least for 5 years to be kept for usage.

d. Particular care shall be taken for outdoor equipment to prevent corrosion. Cleaning of the junction boxes, cable joints, insulators etc shall also be carried out at every six month interval.

e. Resistance of the earthing system as well as individual earthing is to be measured and recorded every six month interval. If the earth resistance is more than 3 ohm, suitable action is to be taken to bring down the same.

f. According to the recommendations stock of special tools and tackles shall be maintained for Modules, PCU's and other major electrical equipment.

g. A maintenance record is to be maintained by the contractor to record the regular maintenance work carried out as well as any breakdown maintenance along with the date of maintenance reasons for the breakdowns steps have taken to attend the breakdown duration of the breakdown etc.

h. The Schedules will be drawn such that some of the jobs other than breakdown, which may require comparatively long stoppage of the Power Plant, shall be carried out preferably during the non sun period.

i. The Contractor will attend to any breakdown jobs immediately for repair/replacement /adjustments and complete at the earliest working round the clock. During breakdowns (not attributable to normal wear and tear) at O&M period, the Contractor shall immediately report the accidents, if any, to the Engineer In Charge at site of BPCL showing the circumstances under which it happened and the extent of damage and or injury caused.

j. If any jobs covered in O&M Scope are not carried out by the contractor during the O&M period pro-rata deduction will be made based on the quantum of work from the O&M contract bills.

k. Quality Spares & Consumables: In order to ensure longevity & safety of the core equipment and optimum performance of the system the contractor should use only genuine spares of the materials meeting at least the original technical specifications of the components specified in the tender document.

4.2.17. Tools and Tackles:

- a. The Contractor shall arrange for all the necessary tools and tackles for carrying out all the maintenance work covered under this contract. List of such tools and tackles has to be furnished by the bidder along with Bid.
 - b. The Contractor shall Check growth of vegetation and trim or de-fertilize areas with vegetation that could eventually create shade on the arrays or increase the risk of fire.
- 4.2.18. Procurement for spares parts, overhaul parts, tools, equipments, consumables, etc. required to operate and maintain the project in accordance with the prudent utility practices and having regarded to warranty recommendations.
- 4.2.19. After initial 5 year O&M contract period, BPCL may it its discretion decide to extend the existing O&M contract on mutually expectable terms and conditions or undertake the O&M of the SPV plant on its own.

4.3. Detailed Technical specifications

- 4.3.1. The proposed solar power plant shall be feeding AC power to the LT/HT bus bar within the BPCL POL/LPG plant, in compliance with the net meter specifications and requirements of respective DISCOMs.
- 4.3.2. The bidder shall design the solar power system in such a way that System controller of Invertors has ability to harvest the maximum possible Solar Power generation to be exported to the internal distribution network of the plant.
- 4.3.3. The main objective is the high availability and reliability of the plant. In order to achieve the main objective, the following principles shall be adopted while designing system.
- 4.3.4. Technology: The Bidder is free to choose any Solar PV power generation Technology of Crystalline Silicon Solar Cell Modules manufactured in India.
- 4.3.5. The Stabilized output of solar Power plant shall be as per the capacity mentioned in the Annexure VII for each location. The capacity may be differed to a maximum of 20% based on the detailed engineering drawing and system design of the bidder. Thus bidder shall choose optimized/suitable capacity of SPV module, PCUs, Junction boxes etc to ensure generation of power as per design estimates.
- 4.3.6. This is to be done by applying liberal de-rating factors for the array and recognizing the efficiency parameters of PCUs, transformers, etc. The output at Invertors (s) will be considered for verification purpose. Bidder should indicate procedure and details of software or formula for demonstration of capacity of plant in tender itself. For other purpose the meter reading will be considered.
- 4.3.7. Use of equipment and systems with proven design and performance that have a high availability track record under similar service conditions.
- 4.3.8. Selection of the equipment and adoption of a plant layout to ensure ease of maintenance.
- 4.3.9. Strict compliance with the approved and proven quality assurance norms and procedures during the different phases of the project.
- 4.3.10. Ripple content must not exceed 3% on DC side
- 4.3.11. Limits for harmonics as per CEA technical standard on Grid connectivity are as follows:
- i. Individual voltage harmonics distortion not more than 3 %
 - ii. The power plant has to operate in parallel with the grid system which is infinite electrical system. Any faults not taken care will result in damage of only SPV power plant without

effecting STU/DISCOMS infinite system. Thus the Solar Power Plant design should be equipped with requisite protective measures/ relays / breakers so as to protect equipment in solar power plant against any of possible fault or other disturbances from the grid.

iii. Very fast microprocessor based Directional and Reverse power flow protection should be provided to insure isolation of the solar power plant from the grid at the time of any fault or/and any additional suitable protection.

4.3.12. The basic and detailed engineering of the plant will aim at achieving high standards of operational performance especially considering following:

i. Optimum availability of modules during the day time.

ii. Ensuring module layout to prevent shading.

iii. Selection of PCUs/Invertors with high track record and with readily availability of requisite spares.

iv. Careful logging of operation data / historical information from the Data Monitoring Systems, and periodically processing it to determine abnormal or slowly deteriorating conditions.

v. SPV power plant should be designed to operate satisfactorily in parallel with the BPCL existing electrical network within permissible limits of high or Low voltage and frequency fluctuation conditions, so as to utilize the maximum possible units to the load and excess to the grid. The voltage and frequency tolerance limits should within. +/- 5%.

vi. Flat plate arrays shall be held fixed at a tilted angle and face towards the equator (south). The angle of tilt should be approximately equal to the angle of latitude for the site. A steeper angle increases the output in winter; while a shallower angle more output in summer. It should be arranged in such a manner that optimize generation is achieved.

vii. Based on the Solar Insolation data, the solar PV system should be so designed that it shall take into account the mean energy output after allowing for various losses, temperature corrections, on an average day for each month of the year.

viii. The offered Grid Connected Solar Power Plant should be able to generate power through solar energy and supply clean and green electricity to the grid.

4.3.13. The specification provided with this bid document is a functional one; the design provided in this document is only meant as an example. The Bidder/ must submit a proposal based upon their own design with basic requirement mentioned in this Bid documents. In order to win the Contract the Bidder must optimize their own design for Solar Photovoltaic (SPV) proven technology so that it best meets the evaluation criteria given in this bid document. The bidders are advised to visit the site before designing the plant and offer their bid. The bidders are also required to incorporate all the system required for efficient operation of solar Plant in parallel with BPCL supply. The supplier/manufacturer shall submit the detailed design of the complete solar generating system by using their software to optimize the combination of modules considering the specific location, isolation, nature of load etc.

4.4. Technical specification: SPV Crystalline Modules

4.4.1. SPV Poly / Mono crystalline modules (Manufactured in India or abroad) to be supplied should have minimum declared output of 240 Watt peak or more. Number of modules to be supplied shall be worked out accordingly.

- 4.4.2. Peak power point voltage and the peak power point current of any supplied module and/or any module string (series connected module) shall not be more than 3% from the respective arithmetic means for all modules and/or for all module strings, as the case may be.
- 4.4.3. PV modules should be PID free. The PV Module should be of positive tolerance (+3%). The PV module should be sorted (current/voltage sorting) before supply.
- 4.4.4. Each module shall have low iron tempered glass front for strength & superior light transmission. It shall also have tough multi-layered polymer back sheet for environmental protection against moisture & provide high voltage electrical insulation.
- 4.4.5. The module frame shall be made of aluminium or corrosion resistant material, which shall be electrically compatible with the structural material used for mounting the modules.
- 4.4.6. Solar modules offered shall be certified as per IEC 61215 and qualify IEC 61730 and IEC61701 amended up to date or equivalent Standard.
- 4.4.7. SPV module shall contain mono/poly crystalline high power silicon solar cells. The solar cell shall have surface anti-reflective coating to help to absorb more light in all weather conditions.
- 4.4.8. Solar module shall be laminated using lamination technology using established polymer (EVA) and Tedlar/Polyester laminate.
- 4.4.9. The solar modules shall have suitable encapsulation and sealing arrangements to protect the silicon cells from the environment. The arrangement and the material of encapsulation shall be compatible with the thermal expansion properties of the Silicon cells and the module framing arrangement/material. The encapsulation arrangement shall ensure complete moisture proofing during life of the solar modules.
- 4.4.10. Photon conversion efficiency of SPV Module should be greater than 17%. Module shall be made of high transmittance glass front surface giving high encapsulation gain.
- 4.4.11. Cells used in offered module should of reputed make. The bidder should specify the make in Bid itself. Cells to be used and before supply same should be got approved from BPCL.
- 4.4.12. Module rating is considered under standard test conditions, however Solar Modules shall be designed to operate and perform under site condition including high temperature & dust (sometimes).
- 4.4.13. All materials used shall be having a proven history of reliable, light weight and stable operation in external outdoor applications and shall have service life of 25 years.
- 4.4.14. Solar PV Module design shall conform to following requirement:
- i. Weather proof DC rated MC4 connector and a lead cable coming out as a part of the module, making connections easier and secure, not allowing for any loose connections.
 - ii. Resistant of water, abrasion, hail impact, humidity & other environment factor for the worst situation at site.
 - iii. Modules should be of efficiency more than 17% (applicable to C-Si technology only).
 - iv. The fill factor of module shall not be less than 0.70 (typical).
 - v. The I-V curve of each PV module with SI. Nos. should be submitted along with Modules meeting the required specifications.
 - vi. Identification and Traceability: Each PV module used in any solar power project must use a RF identification tag. The following information must be mentioned in the RFID used on each module. This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions.
 - Name of the manufacturer of PV module
 - Name of the manufacturer of Solar cells

- Month and year of the manufacturer (Separately for Solar cell and module)
- Country of origin (Separately for Solar cell and module)
- I-V curve for the module
- Wattage, I_m , V_m and FF for the module
- Unique Serial No and Model No of the module
- Date and year of obtaining IEC PV module qualification certificate
- Name of the test lab issuing IEC certificate
- Other relevant information on traceability of Solar cell and module as per ISO 9000 series.

4.5. Other Conditions

- 4.5.1. Solar PV module shall be highly reliable, light weight and shall have a service life of more than 25 years.
- 4.5.2. The rated output of any supplied module shall not vary by more than 3% from the average power rating of all ratings. Each module, therefore, has to be tested and the contractor has to supply the flash reports of all the modules provided by the module manufacturer.
- 4.5.3. It shall perform satisfactorily in relative humidity up to >85% and temperature between -10°C and 85°C . It shall be able to withstand wind pressure as per site conditions.
- 4.5.4. The solar modules should have suitable encapsulation & sealing arrangements to protect it from the environment. The encapsulation arrangement shall ensure complete moisture proofing for the entire life of solar modules.
- 4.5.5. Bidder must consider Shading Losses as per the relevant Industry Standard & Practice while designing the proposed power plant. The shadow analysis of the plant shall be submitted to the Engineer In charge for the approval. The inter row distance and tilt angle between the array shall be designed on the basis of getting maximum yield in the array layout.
- 4.5.6. The offered module shall have a Power warranty of 25 years with degradation of power generated not exceeding 20% of the minimum rated power over the 25 years period. Guarantee on power output of solar module will be as follows:
 - a. First year degradation max up to 3% i.e. (guaranteed power output at least 97%)
 - b. Subsequent years degradation factor: 0.7% every year (linear degradation)
- 4.5.7. Marking: Each PV module used in any solar power project must use a RF identification tag. The following information must be mentioned in the RF ID used on each module (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions.) and also in clear and indelible markings:
 - Name, monogram or symbol of manufacturer of PV module;
 - Name, monogram or symbol of manufacturer of Solar cells;
 - Unique Serial number and model number of the module;
 - Polarity of terminals or leads (colour coding is permissible)
 - Maximum system voltage for which the module is suitable;
 - Date & place (country of origin) of manufacture (separately for PV module and solar cell)
 - I-V Curve for the module;
 - Wattage, I_m , V_m & FF for the module;
 - Name of the test lab issuing IEC certificate ;

- Other relevant information on traceability of solar cells and module as per ISO 9000
- 4.5.8. The Solar PV power plants shall continuously measure solar radiation, ambient temperature, wind speed and other weather parameters, generation of DC power as well as AC power generated from the plant the plant.
- 4.5.9. Bidder shall provide data sheet for Solar PV Module (Under Standard Testing Condition) along with their offer as per Guarantee Technical Particular.
- 4.5.10. Entire drawings, detailed test reports of the offered modules should be submitted for approval of BPCL within 15 days from the date of placement of detailed order or 21 days from Letter of Award whichever is less and supply should start thereafter.
- 4.5.11. Module manufacturer should be a profit making entity.
- 4.5.12. Module manufacturer must have supplied more than 1000 MW globally and at least 100 MW in India. These modules should be up and running for more than 3 years.
- 4.5.13. Third party insurance from Powerguard or Munich Re. or from reputed insurance agency.

4.6. Module Mounting Structure (Fixed)

- 4.6.1. PV Array/String Configurations: The Solar array/string shall be configured in multiple numbers of sub-arrays/string, providing optimum DC power to auditable number of sub arrays/string. The bidder shall submit their own design indicating configuration of Invertors respective sub arrays/string and bill of material.
- 4.6.2. The Module structure design shall be appropriate and innovative and must follow the existing structure and profile. The bidder may choose to offer module mounting structure as per their design/ economics.
- 4.6.3. The module alignment & tilt angle shall be calculated to provide the maximum annual energy output. This shall be decided based on the location of array installation.
- 4.6.4. The structure shall be designed to allow easy replacement of any module and shall be in line with site requirement
- 4.6.5. The mounting structure shall be designed for simple mechanical and electrical installation. It shall support SPV modules at a given orientation, absorb and transfer the mechanical loads to the base properly.
- 4.6.6. The mounting steel structure shall be as per latest BIS 2062 (amended up to date) and galvanization of mounting structure shall be in compliance of BIS 4759 (amended up to date).
- 4.6.7. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from SPV panels at the same time.
- 4.6.8. Nut & bolts, supporting structures including Module Mounting Structures shall have to be adequately protected from atmosphere and weather prevailing in the area.
- 4.6.9. All fasteners shall be of stainless steel of grade SS 304. All fasteners shall be of Stainless steel - SS 304. Nut & bolts, supporting structures including module Mounting Structures shall have to be adequately protected against all climatic condition.
- 4.6.10. The Mounting structure shall be grounded properly using maintenance free earthing kit.
- 4.6.11. The array structure shall be made of hot dip galvanized MS angles. Minimum thickness of MMS column shall be 3.15 mm, and minimum thickness of light gauge member shall be of 2 mm.
- 4.6.12. Design calculation shall be done through STADD analysis and contractor shall submit the design review and approval of engineering in-charge.

- 4.6.13. The minimum thickness of galvanization shall be at least 80 microns. All nuts & bolts shall be made of very good quality galvanized stainless steel. The minimum clearance of the lowest part of the module structure and the developed ground level shall not be less than 500 mm. The structure shall be fixed tilt type to give maximum output from the plant.
- 4.6.14. Leg assembly of module mounting structure made of different diameter galvanized tubes may be accepted. The work should be completed with supply, fitting fixing of clamps, saddles, nuts & bolts etc. All nuts & bolts shall be made of very good quality stainless steel.
- 4.6.15. The structure shall be designed to allow easy replacement of any module and shall be in line with site requirements.
- 4.6.16. The structure shall be designed for simple mechanical and electrical installation. It shall support PV modules at a given orientation, absorb and transfer the mechanical loads to the ground properly. There shall be no requirement of welding or complex machinery at site.
- 4.6.17. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from PV panels. The array structure should withstand wind speed up to maximum 170 km/h.
- 4.6.18. IS 800-2007 shall be followed for structural design. Contractor shall submit the DBR and STADD calculations along with the structural design within 10 days for approval of BPCL.
- 4.6.19. SPV module mounting structure
- Azimuth: 0 degree True south
 - Tilt Angle: optimized as per max energy yield
- 4.6.20. Hot dipped Galvanized Steel Structural must be considered for all type of structural steel proposed for the power plant.
- 4.6.21. Design drawings with material selected shall be submitted for prior approval of engineer in-charge, BPCL within 10 days of detailed order. The bidder/manufacture shall specify installation details of the PV modules and the support structures with appropriate diagram and drawings. The drawings along with detailed structure design and material selected and their standards shall be submitted in four sets to engineer incharge, BPCL for approval before starting the execution work. The work will be carried out as per design approved by engineer in-charge.
- 4.6.22. The minimum clearance between the lower edge of the modules and the developed ground level shall be 500 mm
- 4.6.23. Top of concrete collar height for MMS foundation above the ground level shall be of minimum 250 mm height.

4.7. Combiner Box (CB)

- 4.7.1. The door shall be secured with a fixing system to protect the operator in case of wind during service.
- 4.7.2. The bottom of the enclosure shall be arranged to allow the passing of the cables while ensuring the IP and the isolation of the enclosure.
- 4.7.3. CB shall be mounted and attached either by the bottom on a plinth or by the back on a support bracket. Attachment shall be made in four points to ensure the stability of the assembly.

- 4.7.4. The plinth shall be made of isolating material, UV resistant, ensuring the protection of the entering cables. The brackets shall be made of stainless steel with the right protection for outdoor and burial use.
- 4.7.5. The combiner box/ junction box shall be dust, vermin, and waterproof and made of FRP/ABS Plastic.
- 4.7.6. The terminal will be connected to copper bus-bar arrangement of proper size to be provided. The junction boxes shall have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming and outgoing cables.
- 4.7.7. Suitable markings shall be provided on the bus-bars for easy identification and cable ferrules will be fitted at the cable termination points for identification.
- 4.7.8. The combiner box/ junction box shall be with protection class IP 65 for mounting outside in Open weather condition.
- 4.7.9. Each combiner box/ junction box will have suitable Reverse Blocking Diodes of maximum DC blocking voltage of 1000 V with suitable arrangement for its connecting.
- 4.7.10. The combiner box/ Array junction Box will also have suitable surge protection device.

4.8. Inverter / Power Conditioning Unit (PCU)

- 4.8.1. Inverter/ Power Conditioning Unit (PCU), grid interactive in nature, shall consist of MPPT controller, inverter of suitable rating in array design/suitable rating in case of string design, associated control and protection devices etc all integrated into PCU. It shall provide necessary protections for Grid Synchronization and Data Logging/Monitoring. The Invertors should convert DC power produced by SPV modules in to AC power and must synchronize automatically its AC output to the exact AC Voltage and frequency of Grid. The bidder may choose the inverter as string/Central as per their Design/ Project Philosophy.
- 4.8.2. Power Conditioning Unit (PCU) consists of an electronic inverter along with associated control, protection and data logging devices. The system shall incorporate a uni-directional inverter designed to supply the AC power to the grid at load without any disturbance. The power conditioning unit shall automatically adjust the voltage & frequency levels to suit the Grid. All three phases shall be supervised with respect to rise/fall in programmable threshold values of frequency. The model offered should be in operational condition in India.
- 4.8.3. The offered PCU must be as per manufacturer's standard global product offer for which the PCU is designed, tested and validated. If customization required as per inverter specification mentioned in tender document the same should be again tested and validated by the manufacturer as per relevant IEC/EN/BIS standard.
- 4.8.4. The offered PCUs required should be equivalent or higher than the operating capacity.
- 4.8.5. The inverter shall be capable of operation between (-)10 degree C to +50 degree C ambient temperature
- 4.8.6. Maximum power point tracker shall be integrated in the power conditioner unit to maximize energy drawn from the Solar PV array. The MPPT should be microprocessor based to minimize power losses. The details of working mechanism of MPPT shall be mentioned by the contractor in his offer. The MPPT must have provision for constant voltage operation.

- 4.8.7. PCU shall be conforming to IEC 61727 or equivalent standard. Rating of each PCU shall be greater than DC capacity of each power plant and the combined kVA rating of all PCUs shall not be less than proposed capacity at standard temperature.
- 4.8.8. The DC energy produced has to be utilized to maximum and supplied to the bus for inverting to AC voltage to extract maximum energy from solar array and provides 3-ph, 400V AC/ 300 V (AC) with (-15%to +10%), 50+/-1.5 Hz with total harmonic voltage distortion less than 3% to synchronize with local grid. DC voltage ripple content shall be not more than 3%.
- 4.8.9. The Inverters shall be of very high quality having efficiency not less than 97% and shall be capable of running in integrated mode. The efficiency of the PCU shall be equal to or more than 97 % at 75% load as per IEC 61683 or equivalent standard.
- 4.8.10. The PCU shall have internal protection arrangement against any sustained fault in the feeder line and against lightning in the feeder line.
- 4.8.11. The PCU shall have the required protection arrangements against earth leakage faults. Specifically, the PCU should be three phase power conditioning unit using static solid state components. DC lines shall have suitably rated isolators to allow safe start up and shut down of the system. DC lines side of PCU should have isolator of suitable rating.
- 4.8.12. Each Array Junction Box will have suitably rated fuse with suitable rating for its connecting. Electrical surge protection shall be provided with surge protection device (SPD). SPD shall consist of three Metal Oxide Varistor (MOV) type arrestors connected from positive and negative to earth with inbuilt fuse or thermal disconnecter. During earth fault condition SPD shall safely disconnect the healthy system. The PCU should be suitably designed for parallel operation. Each solid state electronic device shall have to be protected to ensure long life of the inverter as well as smooth functioning of the inverter.
- 4.8.13. The PCU shall have anti islanding protection. The PCU must have the feature to work in tandem with other similar PCU's and be able to be successively switched "ON" and "OFF" automatically based on solar radiation variations during the day.
- 4.8.14. The system shall tend to balance unequal phase voltage (with 3-phase systems) with reference to the red phase (line-1).
- 4.8.15. The PCU front panel shall be provided with a display (LCD or equivalent) of all important parameter such as DC input voltage, DC input current, AC input voltage, AC input current, AC output power, frequency etc.
- 4.8.16. Nuts & bolts and the PCU enclosure shall have to be adequately protected taking into consideration the atmosphere and weather prevailing in the area.
- 4.8.17. The PCU shall include appropriate self-protective and self-diagnostic feature to protect itself and the PV array from damage in the event of PCU component failure or from parameters beyond the PCU's safe operating range due to internal or external causes. The self-protective features shall not allow signals from the PCU front panel to cause the PCU to be operated in a manner which may be unsafe or damaging.
- 4.8.18. Faults due to malfunctioning within the PCU, including commutation failure, shall be cleared by the PCU protective devices.
- 4.8.19. It should have local LCD (Liquid Control Display) and keypad for system control, monitoring instantaneous system data, event logs, data logs and changing set points. Control and read-out should be provided on an indicating panel integral to the Inverter. Display should be simple and self explanatory display to show all the relevant parameter relating to PCU operational data and fault condition in form of front Panel meters / LED's or two line LCD Display.

- 4.8.20. The PCU shall have required protection arrangements against reverse polarity of DC connection and remains in standby mode.
- 4.8.21. The PCU shall have its suitable protection arrangement against any sustained fault in the internal & external associated circuit. The inverter should have proper protection against lightning.
- 4.8.22. Inverters shall be capable of detecting ground fault currents. Ground fault current detection shall lead to isolating the inverter from that ground fault. Inverters shall also be capable of reporting ground faults to the power plant monitoring and control system. Inverters shall be equipped with line to line and line to ground overvoltage protection schemes included on the DC input bus, AC output terminals and all external control, communication and auxiliary power terminations.
- 4.8.23. Operating Mode PCU
- Low Power Mode: The control system shall continuously monitor the output of the solar arrays connected to the inverter until preset value is exceeded & begins to export power provided there is sufficient solar energy and grid voltage and frequency are in specified range.
 - Active Maximum Power point tracking (MPPT) mode: When solar radiations increases further, the PCU shall enter Maximum Power Point Tracking (MPPT) mode and adjust the voltage of SPV arrays to maximize solar energy fed into the grid. When the solar power from arrays falls below threshold level, the PCU shall enter into low power mode.
 - Sleep mode: Automatic 'sleep' mode shall be provided so that unnecessary losses are minimized at night.
 - Maximum power tracking: Maximum power point tracker shall be integrated in the power conditioner unit to maximize energy drawn from the Solar PV array. The MPPT should be microprocessor based to minimize power losses. The details of working mechanism of MPPT shall be mentioned by the contractor in his offer.
 - The inverter output shall always follow the grid in terms of voltage and frequency. This shall be achieved by sensing the grid voltage and phase and feeding this information to the feedback loop of the inverter. Thus control variable shall then control the output voltage and frequency of the inverter, so that inverter is always synchronized with the grid. The inverter shall be use self- commutated with pulse width modulation technology.

Output frequency	50 Hz (Inverter to follow grid frequency upto +/- 3% of the nominal output frequency during normal operation)
Power Factor Control Range	>0.85 lead or lag
Maximum Input voltage	1000 V DC
THD	Less than 3 % (at rated power)
Ambient temperature	(-) 10 °C to +50 °C
Humidity	0-95 %, non- condensing
Enclosure(type)	IP 20 (Indoor rated)
	IP 54 (Outdoor rated)
Output voltage tolerance	-15% to +10% of Nominal O/P voltage

- 4.8.24. The Inverter shall have following features:
- No load loss <1% of rated power and maximum loss in sleep mode shall be less than 0.05%
 - Sinusoidal current modulation with excellent dynamic response.

- Unit wise & integrated Data logging.
 - Dedicated open protocol modbus / RS 485 networking
 - Protection against
 - Over current
 - over voltage & under voltage
 - over & under frequency
 - Sync loss
 - Over temp.
 - short circuit
 - protection against lightning(if required)
 - surge voltage induced at output due to external source
 - DC bus over voltage
 - Cooling fan failure
 - Power regulation in the event of thermal overloading. Set point pre-selection for VAR control
- 4.8.25. The power conditioner must be entirely self-managing and stable in operation. A self diagnostic system check should occur on start up. Functions should include a test of key parameters on start
- 4.8.26. The PCU shall be capable of complete automatic operation, including wake-up, synchronization & shut down.
- 4.8.27. Typical failure analysis report of PCUs and recommended list of critical components shall be provided by the bidder while submitting their offer.
- 4.8.28. The Inverter shall go to shutdown/standby mode, with its contacts open, under the following conditions before attempting an automatic restart after an appropriate time delay.
- When the power available from the PV array is insufficient to supply the losses of the PCU, the PCU shall go to standby/shutdown mode.
 - The PCU control shall prevent excessive cycling of shut down during insufficient solar radiance.
- 4.8.29. Operation outside the limits of power quality as described in the technical data sheet should cause the power conditioner to disconnect the grid. Additional parameters requiring automatic disconnection are
- Neutral voltage displacement
 - Over current
 - Earth fault
 - And reverse power
- In each of the above cases, tripping time should be very less.
- 4.8.30. Detailed technical description of the complete unit of offered Inverter should be furnished with bid document
- 4.8.31. The Bidder shall provide data sheet for Inverter/ Power Conditioning Unit along with their offer as per Guaranteed Technical Particular
- 4.8.32. Standards Compliance: The system and equipment shall be designed, built, tested and installed to the latest revisions of the following applicable standards. In the event of other standards being applicable they will be compared for specific requirement and specifically approved during detailed engineering for the purpose:

1.	IEC 61727	Photovoltaic(PV) System – Characteristics of utility interface
2.	IEC 61683	Photovoltaic systems – Power conditioners – Procedure for measuring efficiency
3.	EN 50530	MPPT accuracy of grid connected photovoltaic inverters
4.	IEC 61000 series- relevant parts	Electromagnetic compatibility (EMC)
5.	EN50178 or equivalent	Electronic equipment for use in power installations

4.9. DC Distribution Board (DCDB)

DC distribution board shall be provided in between solar array and PCU. It shall have suitable rated fuse for connection and disconnection of array section. It shall have meters for measuring the array voltage and array current. DCDB can also be integrated into PCU for space saving.

4.10. AC Distribution Board (ACDB)

- 4.10.1. Power conditioning unit installed in a room converts DC energy produced by the solar array to AC energy. The AC power output of the inverter shall be fed to the ACDB (metering panel & isolation panel) which also houses energy meter and the energy is then synchronized with the Grid load.
- 4.10.2. All the power cables shall be taken through top/ Bottom of the panel as per site requirement.
- 4.10.3. The ACDB shall fitted with suitable rating & size copper bus, MCCB, HRC fuses/circuit breaker/isolator, indicators for all incomer and outgoing terminals, LED voltmeter & Ammeter with suitable selector switches to monitor & measure the power to be evacuated.
- 4.10.4. Nut & bolts including metallic shall have to be adequately protected against atmosphere and weather prevailing in the area.
- 4.10.5. The overall dimension, weight, sheet thickness, painting etc. should be indicated by the Contractor.

4.11. Electrical Work

The Contractor has to accordingly organize the cable lengths as per the site requirements. Contractor to submit the Single line diagram and layout diagram of the electrical system to BPCL for approval during detailed engineering.

4.12. CONTROL PANELS

- 4.12.1. Each Control panel shall have of minimum
 - a) Earth fault relay
 - b) Over current relay
 - c) Under voltage relay
 - d) Over voltage relay.

4.13. Standards and Service Conditions:

- 4.13.1. Bidder should follow the guidelines of CEA, PESO , OISD and BPLC safety standards during the system design and installation
- 4.13.2. The PESO/ CEA and any other clearance required for the development of the solar plant shall be taken by the contractor. BPCL will only provide the documentary support to the contractor.

4.14. Technical Specifications of Total Plant Earthing and Lightning Protection

- 4.14.1. Each array structure of the PV yard shall be grounded properly as per IS 3043 - 1987. All metal casing/ shielding of the plant shall be thoroughly grounded in accordance with Indian electricity act/ IE Rules.
- 4.14.2. Total Earthing system installation shall be in strict accordance with the latest editions of Indian Electricity Rules, relevant Indian Standards and code of practices and the local statutory authority regulations.

4.15. Lightning & Over Voltage Protection

- 4.15.1. The SPV Power Plant should be provided with Lightning and over voltage protection connected to proper earth mats. The main aim of over voltage protection is to reduce the over voltage to a tolerable level before it reaches the PV or other subsystem components. The source of over voltage can be lightning or other atmospheric disturbance.
- 4.15.2. The bidder shall ensure adequate lightning and over voltage protection to provide and acceptable degree of protection as per IS standard.

4.16. Warranty

- 4.16.1. The mechanical structures, electrical works including power conditioners/ inverters /charge controllers/ maximum power point tracker units/Transformers HT ,ACDB/, LT DB, distribution boards/digital meters/ switchgear/ storage batteries, all equipments etc. and overall workmanship of the SPV power plants/ systems must be warranted against any manufacturing/ design/ installation defects for a minimum period of 5 years.
- 4.16.2. PV modules used in solar power plants/ systems 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.
- 4.16.3. Other relevant information on traceability of solar cells and module as per ISO 9000 series.

4.17. Erection, Testing & Commissioning

- 4.17.1. The installation shall be carried out by an electrical contractor holding a valid license as required by the State Government Authorities.
- 4.17.2. The contractor shall provide necessary drawings and documents required by statutory authorities and obtain the approval before taking up erection. It shall be the sole responsibility of the contractor in obtaining safety certificate / approval from local statutory authorities.
- 4.17.3. Any modification in the equipment or installation that may be demanded by the inspecting authorities shall be carried out by the contractor at no additional cost to the BPCL

- 4.17.4. In accordance with the specific installation instruction as per the manufacturers drawings or as directed by the BPCL, the successful Bidder shall unload, assemble, erect, install test, commission and hand over all electrical equipments included in this contract.
- 4.17.5. Erection materials including all consumables, tools, testing instruments or any other equipment required for successful commissioning shall be arranged by the successful Bidder in a timely manner.
- 4.17.6. Clearing the site after completion, of erection as well as regular clearance of unwanted materials from site, returning excess materials supplied by the BPCL back to BPCL's stores shall also be included under this scope of work.
- 4.17.7. All equipment and instruments, indoor and outdoor, shall be marked with Numbers and provided with suitable danger boards as per Indian electricity Rules/code etc before commissioning.
- 4.17.8. The contractor shall touch up the surface with paint of same shade for equipments, which are scratched and / or damaged during transportation and erection before commissioning.
- 4.17.9. The contractor shall employ skilled and semi-skilled labourers for erection, testing and commissioning as required. All the electricians, cable jointers, wiremen, welders and others employed shall possess valid certificates / license recognized by competent authorities.
- 4.17.10. The contractor shall set up his own facilities at site at allocated place to undertake fabrication/assembly jobs etc.
- 4.17.11. The Contractor shall carry out major civil engineering works as called for in scope of work pertaining to electrical equipment's like foundation for modules structures etc as per the latest relevant drawings. For this they may carry out minor civil works such as foundation bolts, cutting holes in walls, chipping of floor and ceiling etc. making good the same after installation of the equipment and any other minor civil works advised by BPCL for completion of the work has to be carried out without any extra charges.
- 4.17.12. During erection, care is to be taken to see that painting does not peel off at any place and if so, it has to be given a 'Touch-up' after erection by the contract.

4.18. Specification For Testing & Commissioning

The testing and commissioning for all electrical equipment at site shall be according to the procedures listed below:

- 4.18.1. All electrical equipment shall be tested, installed and commissioned in accordance with the latest relevant standards and code of practices published by Indian Standards Institution wherever applicable and stipulations made in relevant general specifications.
- 4.18.2. The testing of all electrical equipment as well as the system as a whole shall be carried out to ensure that the equipment and its components are in satisfactory condition and will successfully perform its functional operations. The inspection of the equipment shall be carried out to ensure that all materials, workmanship and installations conform to the accepted design, engineering and construction standards, as well as accepted code of practices and stipulations made in the relevant general specifications.
- 4.18.3. The contractor in the presence of representative / Consultant of BPCL shall carry out all tests using his own calibrated instruments, testing equipment as well as qualified testing personnel.

4.18.4. The results of all tests shall conform to the specification requirements as well as any specific performance data, guaranteed during finalisation of the contract.

4.19. Preparation of the Equipment for Commissioning:

4.19.1. After completion of the installation at site and for the preparation of plant commissioning, the contractor shall check all the equipment and installation in accordance with the agreed standards, latest relevant code of practices of Indian Standards and specific instructions furnished by the particular equipment suppliers as well as purchaser.

4.19.2. Checking required to be made on all equipment and installations at site shall comprise, but not limited to, the following:

- Physical inspection Modules for removal of any foreign bodies, external defects, such as damaged, loose connection in Junction Boxes & PCU etc., loose foundation bolts etc.
- Check for the free movement of mechanism for the circuit – breaker, rotating parts of the rotating machines and devices.
- Check for tightness of all cable joints and busbar termination ends as well as earth connections in the main earthing network.
- Check for clearance of live bus bars and connectors from the metal enclosure.
- Check for proper alignment of all the modules etc.
- Continuity checks in case of power and control cables.
- Checking of all mechanical and electrical interlocks including tripping of breakers using manual operation of relay.
- Checking of alarm and annunciation circuits by manual actuation of relevant relays.
- Check and calibrate devices requiring field adjustment/calibration like adjustment of relay setting etc.
- Check for proper connection to earth network of all non-current carrying parts of the equipment and installation.

4.19.3. The relevant tests shall be carried out in accordance with relevant IS of latest issue. The tests which are to be carried out on the equipment shall include, but not be limited to, the following:

- Check for completeness of installation.
- Each pole to earth insulation resistance test.

4.19.4. Cables commissioning shall be checked as follows

- Insulation resistance test shall be conducted by Mager for cables rated up to 1.1kV grade.
- All 1.1 kV cables shall be subjected to high voltage test after joining and terminating but before commissioning as per relevant standards.
- In each test, the metallic sheath / screen / armour should be connected to earth.
- Continuity of all the cores, correctness of all connections as per wiring diagram, correctness of polarity and phasing of power cables and proper earth connection of cable glands, cable boxes, armour and metallic sheath, shall be checked.

4.19.5. Earthing commissioning shall be checked as follows

- Tests to ensure continuity of all earth connections.

- Tests to obtain earth resistance of the complete network by using earth tester. The test values obtained shall be within the limits

4.20. Civil Works

- Soil Investigation of the Site

The turnkey contractor shall be responsible for detailed soil investigation, testing and contour survey at required locations for the purposes of foundation design.

4.21. Land Development for site activities

The turnkey contractor is responsible for making the site ready by clearing of bushes, felling of trees (if required), levelling of ground (wherever required) etc. for commencing the project.

4.22. Water supply

- GI pipes of Medium quality conforming to IS 1239 (Part I) and IS 1795 for Mild Steel pipes shall be used for all water supply and plumbing works.

4.23. Roads within Solar Power Plant

- Suitable approach road and internal Solar Photovoltaic plant path /road, as per approved Design (BPCL norms) , to carry safe and easy transportation of equipment and material shall be made within the complex boundary of BPCL.

5. Quality Issues

- 5.1. Contractor will submit and get finalized detailed comprehensive Standard Field Quality Plan (SFQP) within 30 days from date of issue of the order for bought out items and items manufactured by them. The Standard Field Quality Plan shall relate to the specific and objective erection practices right from storage of equipment till final inspection and testing to be followed for bought out items and items manufactured by Contractor. Accordingly, the Manufacturing Quality Plan shall be submitted broadly under following sub-heads:-
 - Raw material/Bought Out items and Components
 - In process inspection and test/checks to establish successful completion/ accomplishment of the process
 - Final tests/checks in accordance with relevant national/ international standards/specification
- 5.2. The quantum of check for each and every inspection/test items shall be based on an established sampling method and the quantum of check indicated in the SFQP should be designed adequate quality protection.
- 5.3. In case reference documents/acceptance norms are indicated as per plant standards then the same shall be duly substantiated/properly explained by well-established and proven engineering practices. All submissions will be in English language only.
- 5.4. Bidder will to allow BPCL to carry out Quality/Audit/Quality surveillance on bidders and our sub-vendor's work with reference to contractual obligations to ensure that the quality management practices/norms as detailed out in the Quality Manual are adhered to. To facilitate this activity, the Bidder shall keep BPCL informed all progress of work in this contract on monthly basis.

- 5.5. Contractor will associate/fully witness in each inspection being carried out at their/their sub-vendor's works by our authorized inspection engineer(s).
- 5.6. BPCL shall also carry out quality audit and quality surveillance of your systems, procedures and quality control activities. However, this shall not relive you of any of your contractual responsibilities under the contract.
- 5.7. A detailed 'QAP' for Manufacturing and Inspection shall be submitted by the Bidder for approval of BPCL
- 5.8. The shop test shall be carried out to prove the performance parameters of the offered model. The testing shall be done in the presence of the representatives of the department.
- 5.9. Manufacturer has to submit procedure for Test carried out at their Factory.

6. Project Implementation Schedule

The project commissioning is to be completed within five (5) months of the award of contract. Bidders are to provide their own commissioning schedule accordingly to meet the commissioning requirement.

7. Procedure for Testing, Commissioning and Assessment of performance guarantees

7.1. Testing & Commissioning procedure

- 7.1.1. PV module checks
 - (a) Check the correct inclination and orientation of the PV modules
 - (b) Visual inspection of status (damage and correct installation according to module manufacturer) of all modules installed in the plant.
- 7.1.2. String and Inverter check
 - (a) The inverter supervision system hourly generated production data is checked:
 - (i) Input and output Power;
 - (ii) Input and output Voltage;
 - (iii) Input and output Current;
 - (iv) Measure the inside Inverter working temperature in order to compare with the manual specification;
 - (b) Check the power meters
 - (c) Measurement of string voltage in the strings/connection box;
 - (d) Measurement of string current in the strings/connection box;
- 7.1.3. Verification of correspondence between circuit board labels, terminals and cables, with project documentation.
 - (a) Measurement of the DC cable losses that have to be less than 2%;
 - (b) Measurement of the AC cable losses that have to be less than 1%;
- 7.1.4. Security electrical check
 - (a) DC side
 - (i) Check the status of the of the plugs (Multicontact);
 - (ii) Check the polarity of the strings open circuit voltage;
 - (iii) Measurement of the cable insulation;
 - (iv) Measurement of the value of the ground resistance;
 - (v) Measurement of DC voltage drop
 - (b) AC side

- (i) Measurement of the cable insulation;
 - (ii) Meggering of the MV cables;
 - (iii) Check the electrical connection to the transformer;
 - (ii) Check of the status of connection to MV switchgear;
 - (iii) Measurement of the ground resistance of transformation
 - (iv) Measurement of AC voltage drop
 - (v) MV switchgear operation
- 7.1.5. Functional test on the supervision system
- (a) Check that at least the following equipment are been monitored:
 - (i) String box;
 - (ii) Inverter;
 - (iii) Meteorological station;
 - (b) Check the properly remote access to the control system;

In addition to the abovementioned, the plant testing would be carried out according to the Quality Assurance Plan. The contractor shall submit the quality assurance plan to the engineer in-charge for the approval

7.2. Calculation of PR (Performance ratio):

The Contractor guarantees that the actual achieved PR for the PV Plant for the period of first five years shall be minimum equal to the following specified values. Guaranteed PR (calculated at the end of each year) The period of calculation shall be from the date of commissioning:

Year 1 75.00%
 Year 2 74.25%
 Year 3 73.50%
 Year 4 72.77%
 Year 5 72.04%

PR will be monitored plant-wise.

Sample PR Calculations

Formula for PR calculation is as follows:

$$PR = \frac{\text{Plant Yield}}{\text{Net POA Insolation} \times \text{Plant nominal DC capacity}}$$

Where

Plant Yield = Annual (Export energy of plant + plant generated auxiliary) in kWh

Net POA Insolation = Annual plane of array (POA) insolation in kWh/m².

Plant nominal DC capacity = xxx kWp

100% grid availability is considered for the calculations.

If there is a grid outage, loss of generation due to grid outage shall be calculated on annual basis

Sample calculations (Annual PR)

If the *Plant Yield* is XXXXX kWh for a day, and *POA Insolation* on annual basis is yyy kWh/m², loss of *POA Insolation* due to grid outage is zz kWh/m², then

Net POA Insolation = sss kWh/m²

$$PR = \frac{XXXX}{sss \times xxx} = AA\%$$

Loss of Generation due to grid outage

Loss of generation due to grid outage = $\frac{XXXX \times zz}{ss} = BBB \text{ kWh}$

Actual Plant Yield considering grid outage for the day =

$$XXXX + BBB = PPP \text{ kWh}$$

Cumulative Actual Plant Yield considering grid outage for all the days of the year is equal to **Actual Annual Plant Yield Considering Grid Outage.**

Annual Plant Yield to meet the guaranteed PR of ___% in year 1:

$$PR = __% = \frac{\text{Annual expected yield}}{sss \times xxx}$$

$$= GGGG \text{ kWh}$$

As per contract, Guaranteed Annual Plant Yield is GGGGG kWh for the First year of operation. So the plant is under-performing than the guaranteed generation.

As the plant is underperforming than the guaranteed PR, the contractor is liable to pay loss of revenue calculated @ Rs. 7/kWh.

Penalty on the contractor due to loss of generation for underperformance = = (GGGG – PPPP)*7

Net penalty payable by the contractor = Rs. ____

In case the minimum guaranteed performance ratio is not achieved by the contractor, he can add further DC capacity in the plant to achieve the minimum guaranteed performance ratio.

BID QUALIFICATION CRITERION**CRITERIA 1: TECHNICAL CAPABILITY**

A. **SIMILAR WORKS COMPLETED:** The Bidder shall have experience of having successfully carried out and completed Solar PV Plants as mentioned below during any continuous 12 months period in the last 7 years from the due date of bid submission. The Total capacity (sum total of capacities of various projects completed during given period) of the projects/works completed (proof of completion to be submitted) should be as follows:

- a. The similar completed works of Solar PV Plants of Total Capacity not less than **3290 kWp (3.29 MW)**

(Note: The sum total of the capacities of various Solar PV Plants completed during any continuous 12 months period in the last 7 years, should be 3290 kWp [3.29 MW] or above)

- B. At least one Solar PV Power Project of not less than **740 kWp** capacity for which EPC has provided should be working successfully.
- C. Bidder should have completed at least one **Renewable Energy Project** of capacity not less than **412 kWp** capacity in a Central / State Govt. / Public Sector Undertaking (PSU).

Definition of SIMILAR WORK: Similar works shall be defined as Construction of **Solar PV Plant**.

Documents Required:

- a) Signed Agreement/PO copy/Work order/LOI or any other document which shows **Solar PV Plant peak capacity** in kW of awarded works.
- b) Completion Certificate/Final Bill certified by the client showing reference number of Work Order/ Agreement, date of completion of the work or any other document which conclusively proves completion of the awarded work.
- c) Certificate regarding successful operation of a **Solar PV Power Project** of not less than **740 kWp** capacity for which EPC has been provided, that is successfully working.
- d) Documentary evidence of at least one completed **Renewable Energy Project** of at least **412 kWp** capacity with Central / State Govt. / public sector undertaking

CRITERIA 2: FINANCIAL CAPACITY

A. The bidder should have achieved a **Minimum Average Annual Financial Turnover** of **INR 1114 Lacs** as per the Audited Financial Statements (including Balance sheet and Profit and Loss Account), during the last **THREE** consecutive Accounting Years.

“Turnover shall mean Consolidated Turnover in case of a Bidder having wholly owned subsidiaries”.

B. Net worth of the bidder should be **positive** as per the Audited Financial Statements of **latest** of the last available three consecutive accounting years. The Net worth is defined as **TOTAL ASSETS MINUS TOTAL LIABILITIES** or **SHARE CAPITAL PLUS RESERVES & SURPLUS**.

Documents Required:

Annual Reports, Audited Balance Sheets and Profit & Loss Accounts (English language only) of the vendor for the previous available Three Consecutive Accounting Years prior to the due date of bid submission.

NOTES:

1. In case, Bidder is a Group Company, then credential of Parent/ Group companies shall be considered to establish the Bid qualification criteria.

Group companies can either be Parent company, Direct Subsidiaries & Indirect Subsidiaries:

i) **Group Company - Parent Company and Direct Subsidiaries**

If the Parent Company directly holds 51% or more of the equity share capital in their subsidiary companies, then such subsidiary companies are called direct subsidiaries and shall be considered as part of group companies.

OR

ii) **Group Company - Parent Company and Indirect Subsidiaries**

If 100% subsidiary of the Parent Company holds 100 % of the equity share capital in their subsidiary companies (including 100 % subsidiary companies of 100% subsidiary companies), then such subsidiary companies are called indirect subsidiaries and shall be considered as part of group companies.

INSTRUCTIONS TO BIDDERS

1. Interested parties may download the tender from BPCl website (<http://www.bharatpetroleum.in>) or the CPP portal (<http://eprocure.gov.in>) or from the e-tendering website (<https://bpcleproc.in>) and participate in the tender as per the instructions given therein, on or before the due date of the tender. The tender available on the BPCl website and the CPP portal can be downloaded for reading purpose only. For participation in the tender, please fill up the tender online on the e-tender system available on <https://bpcleproc.in>.
2. **Corrigendum/ Amendment**, if any, shall be notified on the site <https://bpcleproc.in>. In case any Corrigendum/ Amendment is issued after the submission of the bid, then such vendors who have submitted their bids, shall be intimated about the Corrigendum/ Amendment by a system-generated email. It shall be assumed that the information contained therein has been taken into account by the vendor. They have the choice of making changes in their bid before the due date and time.
3. To maintain secrecy and security of bids and the data exchanged, the system operates with the "Digitally signed Certificate" from buyer as well as seller. Data exchanged in the system shall have double encryption which is enabled by a "Digitally signed Certificate". This ensures maximum possible security and the bids can be viewed only after the tender opening by BPCl / Service provider / participating vendors.
4. As a pre-requisite for participation in the tender, vendors are required to obtain a valid Digital Certificate of **Class IIB** and above (having both signing and encryption certificates) as per Indian IT Act from the Licensed Certifying Authorities operating under the Root Certifying Authority of India (RCIA), Controller of Certifying Authorities (CCA). **The cost of obtaining the digital certificate shall be borne by the vendor.**
5. In case any vendor so desires, he may contact our e-procurement service provider M/s. **E-Procurement Technologies Ltd.**, Ahmedabad (Contact no. Tel: +91 79 4001 6868) for obtaining the **Digital Signature Certificate**.
6. Directions for submitting online offers, electronically, against e-procurement tenders directly through internet:
 - (i) Vendors are advised to log on to the website (<https://bpcleproc.in>) and arrange to register themselves at the earliest.
 - (ii) The system time (IST) that will be displayed on e-Procurement web page shall be the time considered for determining the expiry of due date and time of the tender and no other time shall be taken into cognizance.
 - (iii) Bidders are advised in their own interest to ensure that their bids are submitted in e-Procurement system well **before the closing date and time of bid**. If the bidder intends to change/revise the bid already entered, he may do so any number of times till the due date and time of submission deadline. However, no bid can be modified after the deadline for submission of bids.

- (iv) Bids/ Offers shall not be permitted in e-procurement system after the due date/ time of tender. Hence, no bid can be submitted after the due date and time of submission has elapsed.
- (v) No manual bids/ offers along with electronic bids/ offers shall be permitted.
7. The entire tender document along with Annexure, Bid Qualification Criteria (if any), Techno-commercial and other Details, Price Bid as well as all the uploaded documents shall form the part of the tender. Offers should strictly be in accordance with the tender terms & conditions and our Terms of Reference (ToR). Tenderers are requested to carefully study all the documents/ annexure and understand the conditions, specifications etc, before submitting the tender and quoting rates. In case of doubt, written clarifications should be obtained, but this shall not be a justification for request for extension of due date for submission of bids.

8. Bid Security:

- a) The bidders shall submit an interest-free Bid Security of Rs.10 Lakhs (Rupees Ten Lakhs only) by crossed account payee Demand Draft drawn on any nationalised/ scheduled bank in favour of "BHARAT PETROLEUM CORPORATION LTD" payable at Mumbai.
- b) Bid Security should be submitted in physical form in a sealed cover addressed to Procurement Leader (CPO) boldly super-scribed on the outer cover –
- CRFQ number: 1000286552
 - Item: EPC for putting up Solar Plant
 - Closing date/Time: 04.09.2017

It should be dropped in the tender box or sent by Registered Post/Courier to the following address so as to reach on or before the due date & time of the tender:

**Bharat Petroleum Corporation Limited,
Central Procurement Organization (Marketing),
'A' Installation, Sewree Fort Road,
Sewree, Mumbai-400015**

BPCL will not be responsible for non-receipt of instrument(s) due to postal delay/loss in transit etc.

- c) Cheques, cash, Money Orders, Fixed deposit Receipts, Bank guarantees etc. towards bid security are not acceptable. Similarly, request for adjustment against any previously deposited bid security/Pending Dues/Bills/Security Deposits of other contracts etc. will not be accepted towards bid security.
- d) Bid received without the Bid Security is liable to be rejected.
- e) Units registered with National Small Industries Corporation (NSIC) and/or Micro or Small Enterprises (MSE) are exempted from payment of Bid Security, subject to:
- The unit being registered with NSIC for the item tendered.
 - Registration certificate being valid as on date of quotation.

Such bidders must upload a photocopy of valid NSIC Registration Certificate/ Review certificate duly attested by a gazetted officer/notorised, (photocopy of application for registration as NSIC or for renewal will not be acceptable) and/or a valid MSE registration with any notified body specified by Ministry of Micro, Small and Medium Enterprises, failing which such bid will be treated as bid received without bid security and liable to be rejected.

- f) Registration with DGS&D will not entitle the bidder to claim exemption from payment of Bid Security.
- g) Bid Security is liable to be forfeited and/or bidder is liable to be put on a holiday list of up to 1 (one) years in the event of:
 - i. Withdrawal of offers during the validity period of the offer. (Refer clause no. 25 of this Annexure)
 - ii. Non-acceptance of LOI/order, if and when placed.
 - iii. Any unilateral revision in the offer made by the bidder during the validity of the offer.
 - iv. Non-submission of Performance Bank Guarantee against Lol and/or non execution of the Contract Agreement (in the prescribed format) within the stipulated period of 15 days from date of Lol/Order.
- h) Bid Security shall be refunded to the successful bidder after he submits the Performance Bank Guarantee.

Bid Security shall be refunded to all the unsuccessful bidders after finalization of order on the successful bidder.

9. Bidders are required to **complete the following process online** on or before the due date of closing of the tender:

A. Techno-Commercial bid:

- a. Accept the contents of the following annexure barring deviations notified in the form provided for this purpose:

(i) Terms of Reference	- Annexure I
(ii) General Conditions of Contract	- Annexure IV
(iii) Special Conditions of Contract	- Annexure V
- b. Accept the contents of the following annexure in toto by clicking on the button provided on the screen below each one of them:

(i) Instructions to Bidders	- Annexure III
(ii) POL and LPG Locations	- Annexure VII
- c. Online fill in information in the following annexure and upload documents as required:

(i) Bid Qualification Criteria	- Annexure II
(ii) Credential Information	- Annexure VIII

- d. Proforma of **Integrity Pact (IP)** has been uploaded as Annexure **VI** of tender documents **duly signed on all its pages by BPCL "FOR THE PRINCIPAL"**. Bidder shall be required to download and print it such that it is legible. All pages of the printed copy of IP should be duly signed by the authorized signatory and stamped all the pages, with two witnesses name, address & signature and place & date. Thereafter, that copy should be scanned and uploaded by bidder along with other bid documents. **This document is essential and binding.**
- e. Upload the following documents:
- (i) Copy of Agreement or PO copy or Work order or LOI or any other document which shows **Solar PV Plant peak capacity in kW** of awarded works.
 - (ii) Completion Certificate &/or Final Bill certified by the client showing reference number of Work Order/ Agreement, date of completion of the work or any other document which conclusively proves completion of Solar PV Plants of Total Capacity not less than **3290 kWp (3.29 MW)**
 - (iii) Performance Certificate from the user regarding successful operation of a **Solar PV Power Project** of not less than **740 kWp** capacity for which EPC has been provided.
 - (iv) Copy of Agreement or PO copy or Work order or LOI or any other document issued by Central / State Govt. / Public Sector Undertaking, showing award of EPC job for **Renewable Energy Project** of at least **412 kWp** capacity.
 - (v) Copy of Completion Certificate showing reference no. of work order / agreement, date of completion of the afore-mentioned **Renewable Energy Project** of at least **412 kWp** capacity.
 - (vi) Copies of Annual Reports, Audited Balance Sheet and Profit & Loss Account statements for the last available three (3) consecutive Accounting Years prior to the due date of bid submission.
 - (vii) Integrity Pact duly signed and witnessed.
 - (viii) The activity chart to meet the proposed project implementation schedule
 - (ix) A valid NSIC Registration Certificate [if applicable]
 - (x) Copy of the certificate stating that the bidder is a Micro and Small Enterprises (MSEs) [if applicable]
 - (xi) Copy of PAN Card
 - (xii) Certified copies of Partnership Deed/ Memorandum & Articles of Association and Certificate of registration with the Registrar of Companies' (if applicable).
 - (xiii) Certificate of Registration certificate under GST
 - (xiv) Authority letter and power of attorney in favor of constituted attorney (if applicable).
 - (xv) All the supporting documents should be legible and duly signed and stamped before uploading them online.
- f. Additionally, bid security [if applicable] has to be submitted in physical form.

B. Price bid

Online fill in the quotes in the price bid form provided. Please ensure to quote all the price-components specified therein failing which your bid shall be summarily rejected.

Note: Bidder has to work out rates both ground mount system and roof top system separately for each location (bidder shall refer the annexure VII and given table in clause no. 3 in TOR to know the capacity of each system) and quote their per kW price for roof top and ground mount system for each location.

10. If the vendor intends to change/ revise the bid already submitted, they shall have to withdraw their bid already submitted, change/ revise the bid and submit once again. However, if the vendor is not able to complete the submission of the changed/ revised bid within due date & time, the system would consider it as no bid has been received from the vendor against the tender and consequently the vendor will be out of contention. The process of change/ revise may do so any number of times till the due date and time of submission deadline. However, no bid can be modified after the deadline for submission of bids. Once the entire process of online bid submission is complete, bidders will get an auto mail from the system stating they have successfully submitted their bid in the following tender with tender details.
11. No responsibility will be taken by BPCL and/or the e-procurement service provider for any delay due to connectivity and availability of website. They shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause. Vendors are advised to start filling up the tenders much before the due date/ time so that sufficient time is available with him/ her to get acquainted with all the steps and seek help if they so require. It should be noted that the bids become viewable only after opening of the bids on/ after the due date/ time. Please be reassured that your bid will be viewable only to you and nobody else (including E-Tendering Service Provider as well as BPCL Officials) till the tender is opened. BPCL and/or the E-Procurement Service Provider shall not be responsible for any direct or indirect loss or damages and or consequential damages, arising out of the bidding process including but not limited to systems problems, inability to use the system, loss of electronic information etc. No claims on this account shall be entertained.
12. **Bid Validity:** Tender submitted by bidders shall remain valid for acceptance for a period of **four months** from the date of opening of the tender (Technical Bid in the case of two bid). The bidder shall not be entitled during the said period of four months, without the consent in writing of the Owner, to revoke, or cancel his tender or vary the tender given or any term thereof. In case of bidder revoking or canceling his tender, varying any terms in regard thereof without the consent of Owner in writing, appropriate penal action will be taken by BPCL as deemed fit including putting the bidder/contractor on 'Holiday listing'/'Delisting' barring the bidder/contractor from participating in future tenders for an appropriate period from the date of revocation/cancellation/varying the terms. Further in the case of contractors who are not registered with BPCL, the earnest money deposited by him will be forfeited. Once the quotation is accepted the rates quoted shall be firm till the entire work is completed.
- 13. ACCEPTANCE OF BIDS BY THE CORPORATION:**
- Based on the information and documents submitted, all bidders meeting the following criterion qualify in the bid:
 - (i) BPCL should have received their Bid Security or proof of exemption thereof.
 - (ii) They should meet bid qualification criterion
 - (iii) They should have submitted the Integrity Pact duly signed and witnessed.
 - (iv) They should not have been debarred or black listed by BPCL and/or Oil PSEs and/or MOP&NG for a period that is not over as on the due date of this tender.

Additionally, the technical solution being offered by the bidder should meet our technical parameters and the deviations notified by the bidder should be acceptable to BPCL.

- To facilitate examination, evaluation and comparison of bids the Company may, at its discretion, ask the Bidder for clarifications of its bid. The request for clarification and the response shall be in writing and no change in the price or substance of the bid shall be sought, offered or permitted.

Price bid of only those bidders shall be opened who qualify in the Techno-commercial bid.

14. BPCL reserves the right to accept any offer in whole or part or reject any or all offers without assigning any reason. We are also not bound to accept the lowest Bid. Corporation reserves the right to reject any offer which in the opinion of the Corporation is below the normal cost of Containers based on the current cost of inputs.
15. No counter terms and conditions shall be acceptable to us.
16. It shall be understood that every endeavor has been made to avoid error which can materially affect the basis of Tender and the successful Vendor shall take upon himself and provide for risk of any error which may subsequently be discovered and shall make no subsequent claim on account thereof. No advantage is to be taken either by the Corporation or the Vendor of any clerical error or mistake may occur in the general specification, schedules and plans.
17. If any of the information submitted by the tenderer is found to be incorrect at any time including the contract period, BPCL reserves the right to reject the tender/ terminate the contract and reserves all rights and remedies available.
18. Vendors are advised not to enclose unwanted and unasked documents with the tender. Any such documents if received shall not be considered.
19. A tender may not be considered, if BPCL is unable to evaluate that offer for want of any Information.

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GENERAL CONDITIONS OF CONTRACT

Section	Details
I	DEFINITION OF TERMS
II	GENERAL INFORMATION ABOUT SITE
III	GENERAL INSTRUCTION FOR THE TENDERER (omitted)
IV	INTERPRETATION OF CONTRACT DOCUMENTS
V	PERFORMANCE OF WORK
VI	BILLS / MEASUREMENT / PAYMENT
VII	TAXES AND DUTIES
VIII	LABOUR LAWS AND OTHER REGULATIONS
IX	VARIOUS PROFORMA

GENERAL CONDITIONS OF CONTRACT
SECTION - I**DEFINITION OF TERMS**

In the contract documents as herein defined where the context so admits, the following words and expressions will have following meanings:

- 1) "The Owner/Company/BPCL" means the Bharat Petroleum Corporation Limited, incorporated in India having its registered office at 4 & 6, Currimbhoy Road, Ballard Estate, Mumbai - 400 038 or their successors or assigns
- 2) "The Contractor" means the person or the persons, firm or Company whose tender has been accepted by the Owner and includes the Contractor's legal representative, his successor and permitted assigns.
- 3) The "Managing Director" shall mean the Chairman and Managing Director of the Bharat Petroleum Corporation Limited or his successor in office designated by the Owner.
- 4) The "Engineer-in-Charge" shall mean the person designated as such by the Owner and shall include those who are expressly authorised by the Owner to act for and on his behalf for operation of this contract.
- 5) The "Work" shall mean the works to be executed in accordance with the contract or part thereof as the case may be and shall include extra, additional, altered or substituted works as required for purpose of the contract.
- 6) The "Permanent Work" means and includes works which will be incorporated in and form a part of the work to be handed over to the Owner by the Contractor on completion of the contract.
- 7) The "Construction Equipment" means all appliances, Tools/Tackles and equipment of whatsoever nature for the use in or for the execution, completion, operation or maintenance of the work unless intended to form part of the Permanent work.
- 8) The "Site" means the areas on which the permanent works are to be executed or carried out and any other places provided by the Owner for purpose of the contract.
- 9) The "Contract Document" means collectively the Tender Document, Designs, Drawings or Specifications, agreed variations, if any, and such other document constituting the tender and acceptance thereof.
- 10) The "Consultant" means the consulting engineers Nominated/appointed by the Owner for this Project / job.
- 11) The "Sub-Contractor" means any person or firm or Company (other than the Contractor) to whom any part of the work has been entrusted by the Contractor, with the written consent of the Engineer-in-Charge, and the legal personal representatives, successors and permitted assigns of such person, firm or company.

12) The “Contract” shall mean the Agreement between the Owner and the Contractor for the execution of the works including therein all contract documents.

13) The “Specification” shall mean the various technical specifications attached and referred to in the tender documents. It shall also include the latest editions, including all addenda/corrigenda, of relevant Indian Standard Specification, specifications of the other country published before entering into Contract.

14) The “Drawings” shall include maps, plans and tracings or prints thereof with any modifications approved in writing by the Engineer-in-Charge and such other drawings as may, from time to time, furnished or approved in writing by the Engineer-in-Charge.

15) The “Tender” means the tender submitted by the Contractor for acceptance by the Owner.

16) The “Alteration Order” means an order given in writing by the Engineer-in-Charge to effect additions to or deletion from and alterations in the works.

17) The “Completion Certificate” shall mean the certificate to be issued by the Engineer-in-Charge to the contractor when the works have been completed to his satisfaction.

18) The “Final Certificate” in relation to a work means the certificate issued by the Engineer-in-Charge after the period of liability is over for releasing the retention money/PBG.

19) The “Period of Liability” in relation to a work means the specified period during which the Contractor stands responsible for rectifying all defects that may appear in the works.

SECTION - II

GENERAL INFORMATION ABOUT SITE

1.1 LOCATION OF SITE & ACCESSIBILITY:

The site location is described in the Special Conditions of Contract. The intending tenderer should inspect the site and make himself familiar with site conditions and available facilities. Entry into the BPCL areas is restricted depending on location/site. Only pass holders as also vehicles with special permits are permitted in such restricted areas. Inside the premises access to various work spots is also further regulated by permits issued for each area. Non-availability of access roads or permits for entry of vehicles/equipment to any specific area shall in no case be the cause to condone any delay in execution of works or be the cause for any claims or extra compensations.

1.2 SCOPE OF WORK

The scope of work is defined in the Special Conditions of Contract and specifications. The Contractor shall provide all necessary materials, equipments / Tools and Tackles / Supervision / labour etc., for the execution and maintenance of the work till completion unless otherwise mentioned in these tender documents. All materials that go with the work shall be approved by Engineer-in-Charge prior to procurement and use.

1.3 LAND FOR CONTRACTOR'S FIELD GODOWN AND WORKSHOP:

The bidder should visit the site and acquaint himself with site conditions, availability of water, electricity, approach roads, construction materials as per specifications, shelter for his staff, etc., since these are to be provided / arranged by the bidder (unless otherwise specified) at his cost.

The owner will, at his discretion and convenience based on availability for the duration of the execution of the work, make available, land for construction of contractor's field office, go-downs, workshop and fabrication yard required for the execution of the contract. The contractor shall at his own cost construct all these temporary buildings and provide suitable water supply and sanitary arrangement approved by the Engineer-in-Charge.

On completion of the works undertaken by the Contractor, he shall remove all temporary works/ shed erected by him and have the site cleaned as directed by Engineer-in-Charge if the contractor shall fail to comply with these requirements, the Engineer-in-charge may at the expenses of the Contractor remove such surplus and rubbish material, dispose off the same as he deems fit and get the site cleared as aforesaid; and the contractor shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such surplus materials disposed off as aforesaid. But the Owner reserves the right to ask the Contractor any time during the pendency of the contract to vacate the land by giving seven days notice on security reasons or on material interest otherwise.

1.4 SAFETY STANDARDS FOR TEMPORARY BUILDINGS

All temporary buildings, sheds, workshops, field stations etc. shall be constructed in conformation with the safety and security regulations of the owner as regards location and type of structure.

SECTION - IV
INTERPRETATION OF CONTRACT DOCUMENTS

- 4. INTERPRETATION OF CONTRACT DOCUMENT:**
- 4.1. Except if and to the extent otherwise provided by the Contract, the provisions of the General Conditions of Contract and special conditions shall prevail over those of any other documents forming part of the contract. Several documents forming the contract are to be taken as mutually explanatory. Should there be any discrepancy, inconsistency, error or omission in the contract or any of the matter may be referred to Engineer-in-Charge, who shall give his decisions and issue to the Contractor instructions directing in what manner the work is to be carried out. The decision of the Engineer-in-Charge shall be final and conclusive and the contractor shall carry out work in accordance with this decision.
- 4.2. Works shown upon the drawing but not mentioned in the specifications or described in the specification without being shown on the drawings shall nevertheless be held to be included in the same manner as if they had been specifically shown upon the drawings and described in the specifications.
- 4.3. Headings and marginal notes to the clauses of these General Conditions of Contract or to specifications or to any other tender document are solely for the purpose of giving a concise indication and not a summary of the content thereof, and they shall never be deemed to be part thereof or be used in the interpretation or construction thereof of the Contract.
- 4.4. Singular and Plural:
In these contract documents unless otherwise stated specifically, the singular shall include the plural and vice-versa wherever the context so requires. Words indicating persons shall include relevant incorporated companies/ registered as associations/ body of individual/ firm or partnership.
- 5. SPECIAL CONDITIONS OF CONTRACT:**
- 5.1. Special Conditions of contract shall be read in conjunction with the General Conditions of Contracts, specification of work, Drawings and any other documents forming part of this contract wherever the context so requires.
- 5.2. Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the contract so far as it may be practicable to do so.
- 5.3. Where any portion of the General Conditions of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract then, unless a different intention appears the provisions of the Special Conditions of Contract shall be deemed to over-ride the provision of the General Conditions of Contract and shall to the extent of such repugnance or variations, prevail.
- 5.4. Wherever it is mentioned in the specifications that the Contractor shall perform certain work or provide certain facilities, it is understood that the contractor shall do so at his own cost.
- 5.5. The materials, designs and workmanship shall satisfy the relevant Indian Standards, the Job specifications contained herein and codes referred to. Where the job specifications stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.
- 6. CONTRACTOR TO OBTAIN HIS OWN INFORMATION:**
- 6.1. The contractor in fixing rate shall for all purposes whatsoever be deemed to have himself independently obtained all necessary information for the purpose of preparing his tender. The contractor shall be deemed to have examined the Contract Documents, to have generally obtained his own information in all matters whatsoever that might affect the

carrying out the works at the scheduled rates and to have satisfied himself to the sufficiency to his tender. Any error description of quantity or omission there from shall not vitiate the contract or release the Contractor from executing the work comprised in the contract according to drawing and specifications at the scheduled rates. He is deemed to have known the scope, nature and magnitude of the works and the requirements of materials and labour involved etc. and as to what all works he has to complete in accordance with the contract documents whatever be the defects, omissions or errors that may be found in the Contract Documents. The Contractor shall be deemed to have visited surrounding to have satisfied himself to the nature of all existing structures, if any, and also as to the nature and the conditions of the Railways, roads, bridges and culverts means of transport and communications, whether by land, water or air, and as to possible interruptions thereto and the access to and regress from the site, to have made enquiries, examined and satisfied himself as to the sites for obtaining sand, stones, bricks and other materials, the sites for disposal of surplus materials the available accommodation as to whatever required, depots and such other building as may be necessary for executing and completing the works, to have made local independent enquiries as to the sub-soil water and variations thereof, storms, prevailing winds, climate conditions and all other similar matters affecting these works. He is deemed to have acquainted himself as to his liability for payment of Government taxes, customs duty and other charges. Any neglect or failure on the part of the Contractor in obtaining necessary and reliable information upon the foregoing or any other matters affecting the contract shall not relieve him from any risk or liabilities or the entire responsibility from completion of the works at the scheduled rates and time in strict accordance with the contract documents.

No verbal agreement or inference from conversation with any officer or employee of the owner either before or after the execution of the contract agreement shall in any way affect or modify any of the terms or obligations herein contained.

7. PERFORMANCE SECURITY DEPOSIT/RETENTION MONEY:

- 7.1. To ensure performance of the contract and due discharge of the contractual obligations, the successful contractor will have to provide security deposit of 10% of the contract value unless otherwise specified in the Special Conditions of Contract.

This Security deposit may be furnished in the form of an Account payee Demand Draft payable to BPCL or Bank Guarantee in the prescribed format. The contractor shall have the option to adjust any Earnest Money Deposit- (EMD) if paid by demand draft towards security deposit if he so desires or otherwise if submitted by way of bank guarantee the validity of the same to be extended suitably as advised by BPCL.

In the case of security deposit submitted in the form of Bank guarantee, the Bank Guarantee shall be valid and remain in force till the contractual completion period (expiry of the defect liability period- refer clause-61, if applicable) and with a claim period of six months thereafter. The Bank Guarantee shall be in the form prescribed.

In case the successful contractor is not furnishing the performance security deposit as referred above on award of the job, the same shall be deducted from each running account bills at the rate of 10% of bill value till overall security deposit of 10% as mentioned above is collected.

The security deposit will be retained till the successful completion of the work and thereafter till the expiry of the defect liability period (refer clause-61), if applicable. This retention money/Bank guarantee held shall be released after the expiry of the defect liability period provided that any defects appearing during that period are corrected by the contractor and subject to Clause 7.2 below.

In the case of value/rate/quantity contracts, the security deposit shall be based on individual release orders issued.

- 7.2. If the contractor/sub-contractor or their employees shall break, deface or destroy any property belonging to the Owner or other agency during the execution of the contract, the same shall be made good by the Contractor at his own expenses and in default thereof, the Engineer-in-Charge may cause the same to be made good by other agencies and recover expenses from the contractor (for which the certificate of the Engineer-in-Charge shall be final). These expenses can be recovered from the security deposit/retention money if recovery from other sources is not possible.
- 7.3. All the compensation or other sums of money payable by the contractor to the Owner under terms of this contract may be deducted from his security deposit/retention money or from any sums which may be or may become due to the contractor by the Owner on any account whatsoever and in the event of his security deposit/retention money being reduced by reasons of any such deductions. The contractor shall within ten days thereafter make good any sum or sums, which may have been deducted from his security Deposit/retention money. No interest shall be payable by the Owner from sum deposited as security deposit/retention money.
- 7.4. The security deposit shall be held by the owner, as security for the due performance of the Contractor's obligations under the contract, provided that nothing herein stated shall make it incumbent upon the Owner to utilize the security deposit/retention money in preference to any other remedy which the Owner may have, nor shall be construed as confining the claims of the Owner against the contractor to the quantum of the Security Deposit/retention money.
- 7.5. The Bank guarantee if submitted shall be from any Indian scheduled bank or an international bank of repute having a branch in India or a corresponding banking relationship with an Indian scheduled bank. The security deposit/retention money shall be in Indian Rupee in the case of domestic bidders and in US Dollars in the case of foreign bidders.

8. TIME OF PERFORMANCE:

- 8.1. The work covered by this contract shall be commenced as detailed in the purchase order or as per the instructions of the Engineer in charge and be completed in stages on or before the dates as mentioned in the time schedule of completion of work. The contractor should bear in mind that time is the essence of this agreement unless such time is extended pursuant to the provision of clause No. 10. Request for revision of Completion time after tenders are opened will not receive consideration.
- 8.2. Time schedule of completion: the general time schedule of completion is given in the tender document. Contractor should prepare a detailed monthly and weekly execution programme, jointly with the Engineer-in-Charge within two weeks of receipt of Letter of Intent or acceptance of tender. The work shall be executed strictly as per the time schedule given in this document. The period of completion given includes the time required for testing,

rectifications, if any, retesting and completion in all respects to the entire satisfaction of the Engineer-in-Charge.

9. FORCE MAJEURE:

Any delays in or failure of the performance of either part hereto shall not constitute default here under or give rise to any claims for damages, if any, to the extent such delays or failure of performance is caused by occurrences such as Acts of God or the public enemy expropriation or confiscation of facilities by Govt./authorities, compliances with any order or request of any Government authorities, acts of war, rebellion or sabotage or fires, floods, explosions, riots or strikes. The contractor shall keep records of the circumstances referred to above and bring these to the notice of Engineer-in-Charge in writing immediately on such occurrences.

10. EXTENSION OF TIME:

If the contractor shall desire an extension of the time for completion of the work on the grounds of his having been unavoidably hindered in its execution or on any other grounds, he shall apply in writing to the Engineer-in-Charge within two weeks of the date of hindrance on account of which he desires such extension as aforesaid, and the Engineer-in-Charge shall if in his opinion (which shall be final), reasonable grounds have been shown thereof, authorize such extension of time as may in his opinion be necessary or proper.

In the event of extension of Time of the contract, if granted, the contractor shall be required to suitably extend the period of Bank Guarantee if submitted, towards security Deposit/retention money suitably.

11. LIQUIDATED DAMAGES FOR DELAY:

11.1. Time is the essence of the contract. In case the contractor fails to complete the whole work within the stipulated period, he shall be liable to pay liquidated damages of 0.5% of the value of contract per week and or part thereof of the delay subject to a maximum of 5% of the value of the contract. The parties agree that this is a genuine pre- estimate of the loss/damage which will be suffered by the owner on account of delay on the part of the contractor and the said amount will be payable on demand without there being any proof of the actual loss or damages having been caused by such delay/breach. The owner shall be at liberty to adjust or deduct the said amount of liquidated damages from any amount due to the contractor including Security Deposit.

11.2. The owner shall be at liberty to deduct or retain from any amount payable to the contractor periodically, the proportionate or full amount of liquidated damages as the case may be for the delay periodically caused by the contractor.

12. SUM PAYABLE BY WAY OF COMPENSATION TO BE CONSIDERED AS REASONABLE COMPENSATION WITHOUT REFERENCE TO ACTUAL LOSS:

All sums payable by way of compensation under any of the conditions shall be considered as reasonable compensation without reference to the actual loss or damage, which shall have been sustained by the Owner.

13. TERMINATION/ OFFLOADING:

13.1. The contractor fully understand that timely completion of the work as per the schedule is of paramount necessity as otherwise it would lead to adversely affecting the schedules of other works/project with resultant financial and other losses to the Company/owner. In view of this, the contractor unconditionally agrees and binds himself to be liable for all the consequences for non-completion of the work within the stipulated time.

13.2. In case a situation is brought about by the contractor warranting termination/off-loading of the whole or any part of the work for any reason whatsoever, the Company/owner shall have the liberty and right to entrust/engage/award the work so terminated/off loaded at the risk and cost of the contractor to any other agency/contractor by adopting any mode of inviting tenders, i.e. open/limited/single party/negotiation basis etc., in order to ensure completion of the work as per the schedule or at the quickest possible time.

14. FORFEITURE OF SECURITY DEPOSIT:

Whenever any claim against the Contractor for the payment of a sum of money arises out of or under the contract, the Owner shall be entitled to recover such sum by appropriating in part or whole, security deposit of the contractor, forming whole or part of such security being insufficient or if no security has been taken from the Contractor then the balance or the total sum recoverable, as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor. The contractor shall pay to the owner on demand any balance remaining due.

15. ACTION WHEN WHOLE OF SECURITY DEPOSIT IS FORFEITED:

In any case in which, under any clause or clauses of this contract, the contractor shall have forfeited the whole of his security deposit (whether paid in one sum or deducted by installment) or have committed a breach of any of the terms contained in this contract the owner shall have power to adopt any of the following courses as he may deem best suited to his interest.

a) To rescind the contract (of which rescission notice in writing to the contractor under the hand of the owner shall be conclusive evidence) in which case the security deposit of the contractor shall stand forfeited and be absolutely at the disposal of the Owner.

b) To employ labour paid by the owner and to supply materials to carry out the work any part of the work, debiting contractor with the labour cost of tools and plants and equipment charges, the cost of the materials for which a certificate of the Engineer-in-Charge shall be final and conclusive against the Contractor and 10% of costs as above to cover all departmental charges and crediting him with the value of the work done in all respects in the manner and at the same rates as if it had been carried out by the Contractor under the term of his contract. The certificate of Engineer-in-Charge as to the value of the work done shall be final and conclusive against the contractor.

c) To measure up the work of the contractor and to take such part thereof as shall be unexecuted out of his hand to give it to another contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (of the amount of which excess, the certificate in writing of the Engineer-in-Charge shall be final and conclusive) shall be borne and paid by the original contractor and may be deducted from any money due to him by the Owner under the contract or otherwise or from his security deposit or from the proceeds of sale thereof, of a sufficient part thereof.

In the event of any of the above course being adopted by the Owner, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any agreements or made any advances on account of or with a view to the execution of the work of the performance of the contract. In case the Contractor shall not be entitled to recover or be paid any sum for any work actually performed under this contract unless the Engineer-in- Charge will certify in

writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

16. CONTRACTOR REMAINS LIABLE TO PAY COMPENSATION IF ACTION NOT TAKEN UNDER CLAUSE 15:

In any case in which any of the powers conferred upon the owner by clause 15 thereof shall have become exercisable and the same had not been exercised, the non exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercised in the event of any further case of default by the contractor for which any clause of hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected. In the event of the Owner putting in force the power under sub-clause (a), (b) or (c) vested in him under the proceeding clause he may, if he so desires takes possession of all or any tools and plants materials and stores in or upon the works or the site thereof belonging to the contractor or procured by him and intended to be used for the execution of the work or any part thereof paying or allowing for the same in account at the contract rates or in case of these not being applicable at current market rates to be certified by the Engineer-in-Charge whose certificate thereof shall be final otherwise the Engineer-in-Charge may give notice in writing to the contractor or his clerk of the works, supervisor or other authorized agent, requiring him to remove such tools, plant, materials or stores from the premises (within a time to be specified in such notice) and in the event of the contractor failing to comply with any such requisition, the Engineer-in-Charge may remove them at the contractors expense or sell them by auction or private sale on account of the contractor and at his risk in, all respects without any further notice as to the date, time or place of sale and the certificate of the Engineer-in-Charge as to the expense of any such removal and the amount of proceeds and any expenses of any such sale shall be final and conclusive against the contractor.

17. NO COMPENSATION FOR ALTERATION IN OR RESTRICTION OF WORK:

If at any time from the commencement of the work the owner shall for any reasons whatsoever, not require the whole or part thereof as specified in the tender to be carried out, the Engineer-in-Charge shall give notice in writing of the fact to the contractor, who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out, neither shall he have any claim for compensation by reason of any alterations having been made in the original specifications, drawings, designs and instructions which shall involve any curtailment of the work as originally contemplated.

18. CHANGES IN CONSTITUTION:

Where the contractor is a partnership firm, the prior approval, in writing, of the Owner shall be obtained before any change is made in the constitution of the firm, where the contractor is an individual or a Hindu undivided family business concern, such approval as aforesaid shall likewise be obtained before sub-contractor enters into any agreement with other parties, where under the reconstituted firm would have the right to carryout the work hereby undertaken by the contractor. In either case if prior approval as aforesaid is not obtained, the contract shall be deemed to have been allotted in contravention of clauses 24 hereof and the same action may be taken and, the same consequence shall ensure as provided in the said clause.

19. IF THE CONTRACTOR DIES:

Without prejudice to any of the rights or remedies under his contract, if the contractor dies, the Owner shall have the option of terminating the contract without compensation to the contractor.

20. EMPLOYEES OF THE OWNER NOT INDIVIDUALLY LIABLE:

No director or official or employee of the Owner shall in any way be personally bound or liable for the acts or obligations of the Owner under the contract or answerable for any default or omission in the observance or performance of any of the acts, matters or things which are herein contained.

21. OWNER NOT BOUND BY PERSONAL REPRESENTATIONS:

The contractor shall not be entitled to any increase on the item rates of the contract or any other right or claim whatsoever by reason of representation, explanation or statement or alleged representation, promise or guarantees given or alleged to have been given to him by any person.

22. CONTRACTOR'S OFFICE AT SITE:

The contractor shall provide and maintain an office at the site, if space provided by the owner, for the accommodation of his agent and staff and such office shall be open at all reasonable hours to receive instruction, notices, or other communications.

23. CONTRACTOR'S SUBORDINATE STAFF AND THEIR CONDUCTS:

- 23.1. The contractor, on or after award of the work shall name and depute a qualified personnel having sufficient experience in carrying out work of similar nature to whom the equipments materials, if any, shall be issued and instructions for works given. The contractor shall also provide to the satisfaction of the Engineer-in-Charge sufficient and qualified staff to supervise the execution of the-works, competent sub-agents, supervisor and leading hands including those specially qualified by previous experience to supervise the type of works comprised in the contract in such manner as will ensure work of the best quality, expeditious working. Whenever in the opinion of the Engineer-in-Charge, additional properly qualified supervision staff is considered necessary, they shall be employed by the contractor without additional charges on account thereof. The Contractor shall ensure to the satisfaction of the Engineer-in- Charge that sub-contractors, if any shall provide competent and efficient supervision over the work entrusted to them.
- 23.2. If and whenever any of the Contractor's or sub-contractor's agents, sub-agents, assistants supervisor or other employees shall in the opinion of Engineer-in-Charge be guilty of any misconduct or be incompetent or insufficiently qualified or negligent in the performance of their duties or that in the opinion of the owner or Engineer-in-Charge, it is undesirable for administrative or any other reason for such person or persons to be employed in the works, the contractor, if so directed by the Engineer-in-Charge, shall at once remove such person or persons from employment thereon. Any person or persons so removed from the works shall not again be employed in connection with the works without the written permission of the Engineer-in-Charge. Any person so removed from the works shall be immediately replaced at the expense of the contractor by a qualified and competent substitute. Should the contractor be requested to repatriate any person removed from the works he shall do so and shall bear all costs in connection herewith.
- 23.3. The contractor shall be responsible for the proper behaviour of all the staff, supervisor, workmen and others and shall exercise a proper degree of control over them and in

particular, and without prejudice to the said generality, the contractor shall be bound to prohibit and prevent any employees from trespassing or acting in any way detrimental or prejudicial to the interest of the community or of the properties or occupiers of land and properties in the neighborhood and in the event of such employee so trespassing, the contractor shall be responsible therefore and relieve the Owner of all consequent claims or actions for damages or injury or any other grounds whatsoever. The decision of the Engineer-in-Charge upon any matter arising under this clause shall be final. Contractor shall ensure that none of their employees are ever engaged in any anti-national activities.

23.4. All contractor's personnel entering upon the Owner's premises shall be properly identified by badges issued by owner which must be worn all times on Owner's premises.

24. SUB-LETTING OF WORK:

Sub letting of contracts shall not be generally permitted. However owner may permit sub letting of work on specific cases subject to the following:-

i. No part of the contract or any share of interest there shall in any manner or degree be transferred assigned sublet by the contractor directly or indirectly to any firm or corporation whosoever except as provided for in the succeeding sub-clause, without the consent in writing of the Owner.

ii. Sub Contractors for Temporary Works Etc.:- The Owner may give written consent to sub-contract for execution of any part of the works at the site, being entered into by the contractor provided each individual sub-contract is submitted to the Engineer-in-Charge before being entered into and is approved by him.

iii. List of Sub-Contractors to be supplied: - At the commencement of every month the contractor shall furnish to the Engineer-in-Charge list of all sub-contractors or firms engaged by the contractor and working at the site during the previous month with particulars of the general nature of the sub-contract or works.

iv. Contractor's Liability Not Limited By Sub-Contractors:- Notwithstanding any sub-letting with such approval as aforesaid and notwithstanding that the Engineer-in-Charge shall have received copies of any sub-contracts, the contractor shall be and shall remain solely responsible for the quality and proper and expeditious execution of the works and the performance of all the conditions of the contract in all respects as if such sub-letting or sub-contracting had not taken place and as if such work had been done directly by the Contractor.

v. Owner may Terminate Sub-Contracts:- If any sub-contractor engaged upon the works at the site executes any work which in the opinion of the Engineer-in-Charge is not in accordance with the Contract documents, the owner may by written notice to the contractor request him to terminate such sub-contract and the contractor upon the receipt of such notice shall terminate such sub contract and the latter shall forthwith leave the works, failing which the owner shall have right to remove such sub-contractors from the Site.

vi. No Remedy For Action Taken Under This Clause:- No action taken by the owner under the clause shall relieve the contractor of any of his liabilities under the contract or give rise to any right to compensation, extension of time or otherwise failing which, the owner shall have right to remove such sub-contractors from the Site.

25. POWER OF ENTRY:

If the contractor shall not commence the work in the manner previously described in the contract document or if he shall, at any time in the opinion of the Engineer-in-Charge.

- i. Fail to carryout the works in conformity with the contract documents, or
- ii. Fail to carryout the works in accordance with the time schedule, or
- iii. Substantially suspend work or the works for a period of Fourteen days without authority from the
- iv. Engineer-in-Charge, or
- v. Fail to carryout and execute the works to the satisfactions of the Engineer-in-Charge, or
- vi. Fail to supply sufficient or suitable constructional equipments, temporary works, labour materials or things, or
- vii. Commit or suffer or permit any other breach of any of the provisions of the contract on his part to be performed or observed or persist in any of the above mentioned breaches of the contract for the fourteen days, after notice in writing shall have been given to the Contractor by the Engineer-in-Charge requiring such breach to be remedied, or
- viii. Abandon the works, or
- ix. During the continuance of the contract, become bankrupt, make any arrangement or composition with his creditors, or permit any execution to be levied or go into liquidation whether compulsory or voluntary not being merely a voluntary liquidation for the purpose of amalgamation or reconstruction.

Then in any such case, the Owner shall have the power to enter upon the works and take possession thereof and of the materials, temporary works, constructional equipment, and stock thereon, and to revoke the contractor's license to use the same, and to complete the works, by his agents, other contractor or workmen, or to re-let the same upon any terms and to such other person firm or corporation as the Owner in his absolute discretion may think proper to employ and for the purpose aforesaid to use or authorize the use of any materials, temporary works constructional equipment, and stock as aforesaid without making payment or allowances to the contractor for the said materials other than such as may be certified in writing by the Engineer-in-Charge to be reasonable, and without making any payment or allowance to the contractor for the use of the temporary said works, constructional equipments and stock or being liable for any loss of damage thereto, and if the Owner shall by reason of his taking possession of the works or of the works being completed by other contractors (due account being taken of any such extra work or works which may be omitted) then the amount of such excess as certified by the Engineer-in- Charge shall be deducted from any money which may be due for work done by the contractor under the contract and not paid for. Any deficiency shall forthwith be made good and paid to the Owner by the contractor and the Owner shall have power to sell in such manner and for such price as he may think fit all or any of the constructional equipment, materials etc. belonging to and to recoup and retain the said deficiency or any part thereof out of the proceeds of the sale.

26. CONTRACTORS RESPONSIBILITY WITH OTHER AGENCIES:

Without repugnance to any other condition, it shall be the responsibility of the contractor executing the work of civil construction, to work in close co-operation and co-ordinate the works with other contractors or their authorized representatives and the contractor will put up a joint scheme, showing the arrangements, with other contractors / agencies for carrying his portion of work to the Engineer-in-Charge, and get the approval. The contractor before finally submitting the schemes to the Engineer-in-Charge shall have the written agreement of the other agencies. The Engineer-in-Charge before communicating his approval of the

scheme, with any required modifications shall get the final agreement of all the agencies, which shall be binding. No claim shall be entertained on account of the above.

The contractor shall conform in all respects with the provisions of any statutory regulations, ordinances or by laws of any local or duly constituted authorities or public bodies which may be applicable from time to time to the works or any temporary works. The contractor shall keep the Owner Indemnified against all penalties and liabilities of every kind arising out of non-adherence to such statutes ordinances, laws, rules, regulations, etc.

27. OTHER AGENTS AT SITE:

The contractor shall have to execute the work in such place and condition where other agencies might also be engaged for other works such as site grading, filling and leveling, electrical and mechanical engineering works etc. No claim shall be entertained to works being executed in the above circumstances.

28. NOTICES:

Any notice hereunder may be served on the contractor or his duly authorized representative at the job site or may be served by registered mail direct to the address furnished by the Contractor. Proof of issue of any such notice could be conclusive of the contractor having been duly informed of all contents therein.

29. RIGHTS OF VARIOUS INTERESTS:

i. The owner reserves the right to distribute the work between more than one contractor. The contractor shall co- operate and afford other contractors reasonable opportunity for access to the works for the carriage and storage of materials and execution of their works.

ii. Whenever the work is being done by any department of the Owner or by other contractors employed by the Owner is contingent upon work covered by the contract, the respective rights of the various interests involved shall be determined by the Engineer-in-Charge to secure the completion of the various portions of the work in general harmony.

30. RIGHT OF OWNER TO DETERMINE/TERMINATE CONTRACT

i. Owner shall, at any time be entitled to determine and terminate the contract, if in the opinion of the Owner the cessation of the work becomes necessary owing to paucity of funds or for any other cause whatsoever, in which case, the cost of approved materials at the site at current market rates as verified and approved by Engineer-in-Charge and of the value of the work done to date by the contractor shall be paid for in full at the rates specified in the contract. A notice in writing from the Owner to the contractor of such determination and termination and the reason thereof, shall be the conclusive proof of the fact that the contract has been so determined and terminated by the Owner.

ii. Should the contract be determined under sub-clause (i) of this clause and the contractor claims payments to compensate expenditure incurred by him in the expectation of completing the whole of the work, the Owner shall consider and admit such claim as are deemed fair and reasonable and are supported by vouchers to the satisfaction of the Engineer-in-Charge. The Owner's decision on the necessity and propriety of any such expenditure shall be final and conclusive and binding on the contractor.

31. PATENTS AND ROYALTIES:

31.1. The contractor, if licensed under any patent covering equipment, machinery, materials or compositions of matter to be used or supplied or methods and process to be practiced or

employed in the performance of this contract, agrees to pay all royalties and licence fees which may be due with respect thereto. If any equipment, machinery, materials or composition matters, to be used or supplied or methods and process to be practised or employed in the performance of this contract, is covered by a patent under which contractor is not licensed then the contractor before supplying or using the equipment, machinery, materials, compositions method or processes shall obtain such licences, and pay such royalties and licence fees as may be necessary for performance of the contract. In the event, the contractor fails to pay any such royalties or obtain any such licence, any suit for infringement of such patents which is brought against the contractor or the Owner as a result of such failure will be defended by the contractor at his own expenses and the contractor will pay any damages and costs awarded in such suit. The contractor shall promptly notify the owner if the contractor has acquired knowledge of any patent under which a suit for infringement could be reasonably brought because of the use by the Owner of any equipment, machinery, materials, and process methods to be supplied hereunder. The contractor agrees to and does hereby grant to Owner, together with the right to extend the same to any of the subsidiaries of the Owner as irrevocable, royalty-free licence to use in any country, any invention made by the contractor or his employee in or as a result of the performance of the work under the contract.

The Owner shall indemnify and save harmless the contractor from any loss on account of claims on contractor for the contributory infringement of patent rights arising out and based upon the claim that the use by the Owner of the process included in the design prepared by the Owner and used in the operation of the plant infringes on any patent right with respect to any sub-contract entered into by contractor pursuant to the provisions of sub-contractor an undertaking to provide the Owner with the same patent protection that contractor is required to provide under the provisions of this clause.

- 31.2. All drawings, blue prints, traings, reproducible, models, plans, specification and copies thereof, furnished by the Owner as well as drawings, tracings, reproducible, plans specifications, design, calculations etc. prepared by the contractor for the purpose of execution of works covered in or connected with this contract shall be the property of Owner and shall not be used for any other work but are to be delivered to the Owner at the completion of the contract.
- 31.3. Where so desired by Engineer-in-charge, the contractor agrees to respect the secrecy of any document, drawings etc. issued to him for the execution of this contract, and restrict access to such documents, drawing etc. to the minimum and further, the contractor agrees to execute an individual SECRECY agreement from each or any person employed by contractor having access to such documents, drawings and to any other agency or individual, without the written approval by Engineer-in-Charge.

32. LIENS:

- 32.1. If, at any time, there should be evidence or any lien or claim for which the Owner might have become liable and which is chargeable to the contractor, the Owner shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify the owner against such lien or claim and if such lien or claim be valid the Owner may pay and discharge the same and deduct the amount so paid from any money which may be or may become due and payable to the Contractor. If any lien or claim remain unsettled after all payments are made, the contractor shall refund or pay to the Owner all moneys that the latter may be compelled to pay in discharging such lien or claim including all costs and reasonable expenses.

- 32.2. Contractor will not disclose details of the work to any person or persons except those engaged in its performance, and only to the extent required for the particular portion of the work being done.
- 32.3. Contractor will not give any items concerning details of the work to the press or a news disseminating agency without prior written approval from Engineer-in-Charge. Contractor shall not take any pictures on site without written approval of Engineer-in-Charge

33. OPERATION OF CONTRACT:

33.1. Law Governing:

Regardless of the place of contracting, place of performance or otherwise, this Agreement, and all amendments, modifications, alterations, or supplements, thereto shall be governed by the laws of India and respective state laws for the nature, validity and interpretation thereof.

33.2. Non-Waiver of Default

Any failure by the Owner or Contractor at any time, or from time to time, to enforce or require the strict keeping and performance of any of the terms or conditions of this agreement, or to exercise a right hereunder, shall not constitute a waiver of such terms, conditions or rights, and shall not affect or impair same, or the right of the Owner or the Contractor, as the case may be at any time to avail itself of same.

SECTION - V
PERFORMANCE OF WORK

34. EXECUTION OF WORKS:

- 34.1. All the works shall be executed in strict conformity with the provisions of the contract documents and with such explanatory detailed drawings, specifications, and instructions as may be furnished from time to time to the contractor by the Engineer-in-Charge whether mentioned in the contract or not. The contractor shall be responsible for ensuring that works throughout are executed in the most substantial, proper and workman like manner with the quality of material and workmanship in strict accordance with the specifications following all safety requirements of BPCL and as stipulated in work permits as per the directions and to the entire satisfaction of the Engineer-in-Charge.
- 34.2. Wherever, it is mentioned in the specifications that the Contractor shall perform certain work or provide certain facilities/materials, it is understood that the contractor shall do, so at his cost unless otherwise specified.
- 34.3. The materials, design and workmanship shall satisfy the relevant Indian Standards, the Job specification contained herein and codes referred to. Where the job specification stipulate requirements in addition to those contained in the standards codes and specifications, these additional requirements shall also be satisfied.

35. COORDINATION AND INSPECTION OF WORK:

The coordination and inspection of the day-to-day work under the contract shall be the responsibility of the Engineer-in-Charge. The written instructions regarding any particular job will be normally be passed by the Engineer-in-Charge or his authorized representative. A work order book / logbook will be maintained by the Contractor for each job in which the aforesaid written instructions will be entered. These will be signed by the contractor or his authorized representative by way of acknowledgment within 12 hours. The non-maintaining of the order book or non-signing by the contractor shall not preclude the contractor from complying with the instructions.

36. WORK IN MONSOON AND DEWATERING:

- 36.1. The completion of the work may entail working in the monsoon also. The contractor must maintain a minimum labour force as may be required for the job and plan and execute the construction and erection according to the prescribed schedule. No extra rate will be considered for such work in monsoon.
- 36.2. During monsoon and other period, it shall be the responsibility of the contractor to keep the construction work site free from water at his own cost.

37. WORK ON SUNDAYS AND HOLIDAYS:

For carrying out work on Sundays and Holidays if needed, the contractor will approach the Engineer-in-Charge or his representative at least two days in advance and obtain permission in writing. No special compensation on this account will be payable.

38. GENERAL CONDITIONS FOR CONSTRUCTION AND ERECTION WORK:

- 38.1. Place of Work:
The work has to be executed at specified premises as per the tender. Contractor should apprise himself of all the conditions prevailing in such location and the restrictions placed on

movement of personnel and equipment, types of equipment and tools permitted, working methods allowed etc. in the light of security and safety regulations operative in the area. The safety regulations to be complied with, by the contractor will also be provided along with the tender. No idle time wages or compensation for temporary stoppage of work or restrictions would be paid, and the rate quoted for the various items of work should cover the cost of all such contingencies and eventualities. Substantial structures and utilities exist both above ground and underground, adjacent to the work site. (The construction activity gets restrained by the existence of such structures and utilities). Special care is necessary in transportation, storage, working on equipments and other construction activities to protect the existing features and prevent damage to any facility. Necessary protective structures barricades etc. have to be erected at various places as directed by Engineer-in-Charge. No extra payment of such protective works will be made unless specially provided in the tender.

- 38.2. The working time or the time of work is 48 hours per week normally. Overtime work is permitted in cases of need and the Owner will not compensate the same. Shift working at 2 or 3 shifts per day may become necessary and the contractor should take this aspect into consideration for formulating his rates for quotation. No extra claims will be entertained by the Owner on this account.
- 38.3. The contractor must arrange for the placement of in such a way that the delayed completing of the work or any part thereof for any reasons whatsoever will not affect their proper employment. The Owner will not entertain any claim for idle time payment whatsoever.
- 38.4. The contractor shall submit to the Owner reports at regular intervals regarding the state and progress of work. The details and preforma of the report will mutually be agreed after the award of contract.

39. DRAWINGS TO BE SUPPLIED BY THE OWNER:

- 39.1. Where drawings are attached with tender, these shall be for the general guidance of the contractor to enable him to visualize the type of work contemplated and scope of work involved. The contractor will be deemed to have studied the drawings and formed an idea about the work involved.
- 39.2. Detailed working drawings on the basis of which actual execution of the work is to proceed will be furnished from time to time during the progress of the work. The contractor shall be deemed to have gone through the drawings supplied to him thoroughly and carefully and in conjunction with all other connected drawings and bring to the notice of the Engineer-in-Charge, discrepancies, if any, therein before actually carrying out the work.
- 39.3. Copies of all detailed working drawings relating to the works shall be kept at the contractor's office of the site and shall be made available to the Engineer-in-Charge at any time during the contract. The drawings and other documents issued by the Owner shall be returned to the Owner on completion of the works. Reference is also invited to clause 31.2 and 31.3 above regarding drawings and other documents.

40. DRAWINGS TO BE SUPPLIED BY THE CONTRACTOR:

- 40.1. Where drawings/data are to be furnished by the contractor, they shall be as enumerated in the special conditions of contract, and shall be furnished within the specified time.

40.2. Where approval of drawings before manufacture / construction / fabrication has been specified, it shall be contractor's responsibility to have these drawings prepared as per the directions of Engineer-in-Charge and got approved before proceeding with manufacture construction / fabrication, as the case may be. Any changes that may have become necessary in these drawings during the execution of the work shall have to be carried out by the contractor to the satisfaction of Engineer-in-Charge at no extra cost. All final drawings shall bear the certification stamps duly signed by both the contractor and the Engineer-in-Charge.

40.3. A period of 3 weeks from the date of receipt shall be required normally for approval of drawings by the Engineer-in-Charge.

41. SETTING OUT WORKS:

41.1. The Engineer-in-Charge shall furnish the contractor with only the four corners of the work site and a level bench mark and the contractor shall set out the works and shall provide efficient staff for the purpose and shall be solely responsible for the accuracy of such setting out.

41.2. The contractor shall provide, fix and be responsible for the maintenance of all stacks, templates, level marks, profiles and other similar things and shall take all necessary precaution to prevent their removal or disturbance and shall be responsible for the consequence of such removal or disturbance should the same take place and for their efficient and timely reinstatement. The contractor shall also be responsible for the maintenance of all existing survey marks, boundary marks, distance marks and centre line marks, either existing or supplied and fixed by the contractor. The work shall be set out to the satisfaction of the Engineer-in-Charge. The approval thereof or joining in setting out the work shall not relieve the contractor of any of his responsibilities.

41.3. Before beginning the works, the contractor shall at his own cost, provide all necessary reference and level posts, pegs, bamboos, flags, ranging rods, strings and other materials for proper layout of the work in accordance with the scheme, for bearing marks acceptable to the Engineer-in-Charge. The centre, longitudinal or face lines and cross lines shall be marked by means of small masonry pillars. Each pillar shall have distinct marks at the centre to enable theodolite to be set over it. No work shall be started until all these points are checked and approved by the Engineer-in-Charge in writing but such approval shall not relieve the contractor of any of his responsibilities. The contractor shall also provide all labour, material and other facilities, as necessary, for the proper checking of layout and inspection of the points during construction.

41.4. Pillars bearing geodetic marks located at the site of work under construction should be protected and fenced by the contractor.

41.5. On completion of works, the contractor must submit the geodetic documents according to which the work was carried out.

42. RESPONSIBILITY FOR LEVEL AND ALIGNMENT:

The contractor shall be entirely and exclusively responsible for the horizontal and vertical alignment, the levels and correctness of every part of the work and shall rectify effectually any errors or imperfections therein. Such rectifications shall be carried out by the contractor, at his own cost, when instructions are issued to that effect by the Engineer-in-Charge.

43. MATERIALS TO BE SUPPLIED BY CONTRACTOR:

- 43.1. The contractor shall procure and provide the whole of the materials required for construction including tools, tackles, construction plant and equipment for the completion and maintenance of the works except the materials which will be issued by Owner and shall make his own arrangement for procuring such materials and for the transport thereof. The materials procured by the contractor shall be BPCL approved/specified quality.
- 43.2. All materials procured should meet the specifications given in the tender document. The Engineer-in-Charge may, at his discretion, ask for samples and test certificates for any batch of any material procured. Before procuring, the contractor should get the approval of Engineer-in-Charge for any material to be used for the works.
- 43.3. Manufacturer's certificate shall be submitted for all materials supplied by the contractor. If, however, in the opinion of the Engineer-in-Charge any tests are required to be conducted on the materials supplied by the contractor, these will be arranged by the contractor promptly at his own cost.

44. MATERIALS SUPPLIED BY OWNER:

- 44.1. If the specifications of the work provides for the use of any materials of special description to be supplied from the Owner's stores, price for such material to be charged therefore as herein after mentioned being so far as practicable for the convenience of the contractor but not so as in any way to control the meaning or effect of the contract. The contractor shall be bound to purchase and shall be supplied such materials as are from time to time required to be used by him for the purpose of the contract only. The sums due from the contractor for the value of the actual materials supplied by the Owner will be recovered from the running account bill on the basis of the actual consumption of materials in the work covered and for which the running account bill has been prepared. After the completion of the works, however, the contractor has to account for the full quantity of materials supplied to him as per relevant clauses in this document.
- 44.2. The value of the materials as may be supplied to the contractor by the Owner will be debited to the contractor's account at the rates shown in the schedule of chargeable materials and if they are not entered in the schedule, they will be debited at cost price, which for the purpose of the contract shall include the cost of carriage and all other expenses whatsoever such as normal storage supervision charges which shall have been incurred in obtaining the same at the Owner's stores. All materials so supplied to the contractor shall remain the absolute property of the Owner and shall not be removed on any account from the site of the work, and shall be at all times open for inspection to the Engineer-in-Charge. Any such materials remaining unused at the time of completion or termination of the contract shall be returned to the Owner's stores or at a place as directed by the Engineer-in-Charge in perfectly good condition, at contractor's cost.

45. CONDITIONS FOR ISSUE OF MATERIALS:

- i) Materials specified to be issued by the Owner will be supplied to the contractor by the Owner from his stores/location. It shall be the responsibility of the contractor to take delivery of the materials and arrange for its loading, transport and unloading at the site of work at his own cost. The materials shall be issued between the working hours and as per the rules of the Owner framed from time to time.
- ii) The contractor shall bear all incidental charges for the storage and safe custody of materials at site after these have been issued to him.

iii) Materials specified to be issued by the Owner shall be issued in standard sizes as obtained from the manufacturer.

iv) The contractor shall construct suitable godown at the site of work for storing the materials safe against damage by rain, dampness, fire, theft etc. He shall also employ necessary watch and ward establishment for the purpose.

v) It shall be duty of the contractor to inspect the material supplied to him at the time of taking delivery and satisfy himself that they are in good condition. After the materials have been delivered by the Owner, it shall be the responsibility of the contractor to keep them in good condition and if the materials are damaged or lost, at any time, they shall be repaired and/ or replaced by him at his own cost, according to the directions of the Engineer-in-Charge.

vi) The Owner shall not be liable for delay in supply or non-supply of any materials which the Owner has undertaken to supply where such failure or delay is due to natural calamities, act of enemies, transport and procurement difficulties and any circumstances beyond the control of the Owner. In no case, the contractor shall be entitled to claim any compensation or loss suffered by him on this account.

vii) It shall be the responsibility of the contractor to arrange in time all materials required for the works other than those to be supplied by the Owner. If, however, in the opinion of the Engineer-in-Charge the execution of the work is likely to be delayed due to the contractor's inability to make arrangements for supply of materials which normally he has to arrange for, the Engineer-in-Charge shall have the right, at his own discretion, to Issue such materials if available with the Owner or procure the materials from the market or elsewhere and the contractor will be bound to take such materials at the rates decided by the Engineer-in-Charge. This, however, does not in any way absolve the contractor from responsibility of making arrangements for the supply of such materials in part or in full, should such a situation occur, nor shall this, constitute a reason for the delay in the execution of the work.

viii) None of the materials supplied to the contractor will be utilized by the contractor for manufacturing item, which can be obtained from standard manufacturer in finished form.

ix) The contractor shall, if desired by the Engineer-in-Charge, be required to execute an indemnity bond for safe custody and accounting of all materials issued by the Owner.

x) The contractor shall furnish to the Engineer-in-Charge sufficiently in advance a statement showing his requirements of the quantities of the materials to be supplied by the Owner and the time when the same will be required by him for the works, so as to enable the Engineer-in-Charge to make necessary arrangement for procurement and supply of the material.

xi) A daily account of the materials issued by the Owner shall be maintained by the contractor indicating the daily receipt, consumption and balance in hand. This account shall be maintained in a manner prescribed by the Engineer-in-Charge along with all connected papers viz. requisition, issues etc. and shall be always available for inspection in the contractor's office at site.

xii) The contractor should see that only the required quantities of materials are got issued. The contractor shall not be entitled to cartage and incidental charges for returning the

surplus materials, if any, to the stores/location where from they were issued or to the place as directed by the Engineer-in-Charge.

xiii) Materilas/Equipments supplied by Owner shall not be utilized for any other purpose(s) than issued for.

46. MATERIALS PROCURED WITH ASSISTANCE OF OWNER:

Notwithstanding anything contained to the contrary in any or all the clause of this document where any materials for the execution of the contract are procured with the assistance of Owner either by issue from Owner's stock or purchase made under orders or permits or licences issued by Government, the contractor shall hold the said materials as trustee for the Owner and use such materials economically and solely for the purpose of the contract and not dispose them off without the permission of the owner and return, if required by the Engineer-in-Charge, all surplus or unserviceable materials that may be left with him after the completion of the contract or at its termination for any reason, whatsoever on his being paid or credited such prices as the Engineer in-Charge shall determine having due regard to the condition of the materials. The price allowed to the contractor however, shall not exceed the amount charged to him excluding the storage charges if any. The decision of the Engineer-in-Charge shall be final and conclusive in such matters. In the event of breach of the aforesaid condition, the contractor shall in terms of the licenses or permits, and/or for criminal breach of trust, be liable to compensate the Owner a double rate or high rate, in the event of those materials at that time having higher rate or not being available in the market, then any other rate to be determined by the Engineer-in-Charge and his decision shall be final and conclusive.

47. MATERIALS OBTAINED FROM DISMANTLING:

If the contractor in the course of execution of the work is called upon to dismantle any part for reasons other than those stipulated in clauses 53 & 57 hereunder, the materials obtained in the work of dismantling etc., will be considered as the Owner's property and will be disposed off to the best advantage of the Owner.

48. ARTICLES OF VALUE FOUND:

All gold, silver and other materials, of any description and all precious stones, coins, treasure relies, antiquities and other similar things which shall be found in, under or upon the site, shall be property of the Owner and the contractor shall duly preserve the same to the satisfaction of the Engineer-in-Charge and shall from time to time deliver the same to such person or person indicated by the Owner.

49. DISCREPANCIS BETWEEN INSTRUCTIONS:

Should any discrepancy occur between the various instructions furnished to the contractor, his agents or staff or any doubt, arise as to the meaning of any such instructions or should there be any misunderstanding between the contractor's staff and the Engineer-in-Charge's staff, the contractor shall refer the matter immediately in writing to the Engineer-in-Charge whose decision thereon shall be final and conclusive and no claim for losses alleged to have been caused by such discrepancies between instructions, or doubts, or misunderstanding shall in any event be admissible.

50. ALTERATIONS IN SPECIFICATIONS AND DESIGNS AND EXTRA WORK:

A) The Engineer-in-charge shall have power to make any alterations in, omissions from, additions to of substitutions for, the schedule of rates, the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the

progress of the work and the contractor shall be bound to carry out such altered / extra / new items of work in accordance with any instructions which may be given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall not invalidate the contract and any altered additional or substituted work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respect on which he agree to do the main work. The time for completion of work may be extended for the part of the particular job at the discretions of the Engineer-in-Charge, for only such alteration, additions or substitutions of the work, as he may consider as just and reasonable. The rates for such additional, altered or substituted work under this clause shall be worked out in accordance with the following provisions:

- a) If the rates for the additional, altered or substituted work are specified in the contract for the work, the contractor is bound to carry out the additional, altered or substituted work at the same rates as are specified in the contract.
 - b) If the rates for the additional, altered or substituted work are not specifically provided in the contract for the work, the rates will be derived from the rates for similar class of works as specified in the contract for the work. The opinion of the Engineer-in-Charge as to whether the rates can be reasonably so derived from items in the contracts will be final and binding on the contractor.
 - c) If the rates of the altered, additional or substituted work cannot be determined in the manner specified in sub-clause (a) and (b) above, then the contractor shall inform the Engineer-in-Charge of the rate which is his intension to charge for such class of work supported by analysis of the rate or rates claimed, and the Engineer-in-Charge shall determine the rates on the basis of the prevailing market rates of materials, labour cost at schedule of labour plus 10% to cover contractor's supervision, overheads and profit and pay the contractor accordingly. The opinion of the Engineer-in-Charge as to the current market rates of materials and the quantum of labour involved per unit of measurement will be final and binding on the contractor.
 - d) Provisions, constained in sub-clause (a) to (c) above shall not, however, apply:
Where the value of alteration / additions / deletions or substitutions exceeds beyond plus or minus 25% of the estimated contract value (i.e. quoted item rates of contractor shall hold good for variations etc. within plus or minus 25% of estimated contract value)
- B) In the event and result of such alternatives / additions / substitutions / deletion, the scope of contract work exceed the value stipulated in the contract by more than the limits given in clause (d) above, the Contractor shall claim revision of the rates supported by the proper analysis in respect of such items for quantities in excess of the above limits, notwithstanding the fact that the rates for such items exist in the tender for the main work or can be derived in accordance with the provision of sub-clause (b) of Clause 50 A, and the Engineer-in-Charge may revise their rates having regard to the prevailing market rates, and the contractor shall be paid in accordance with the rates so fixed. But, under no circumstances the contractor shall suspend / stop / slowdown the work on the plea of non-settlement of rates of items falling under this clause.

51. ACTION WHERE NO SPECIFICATIONS ISSUED:

In case of any class of work for which there is no such specification given by the Owner in the tender documents, such work shall be carried out in accordance with Indian Standard

Specifications and if the Indian Standard Specifications do not cover the same the work should be carried out as per standard Engineering Practice subject to the approval of the Engineer-in-Charge.

52. ABNORMAL RATES:

The contractor is expected to quote rate for each item after analysis of cost involved for the completion of item/work, considering all specifications and conditions of contract. This will avoid loss of profit or gain, in case of curtailment or change of specification for any item. In case it is noticed that the rates for any item, quoted by the tenderer unusually are high or unusually low it will be sufficient cause for the rejection of the tender unless the Owner is convinced about the reasonableness of the rates on scrutiny of the analysis for such rate to be furnished by the tenderer on demand.

53. INSPECTION OF WORK:

The Engineer-in-charge will have full power and authority to inspect the works at any time wherever in progress either on the Site or at the contractor's premises / workshop where situated premises /workshops of any person, firm or corporation where work in connect with the contract may be in hand or where materials are being or are to be supplied, and the contractor shall afford or procure for the Engineer-in-Charge every facility and assistance to carry out such Inspection. The contractor shall at all time during the usual working hours and at all other time for which reasonable notice of the intention of the Engineer in-Charge or his representative to visit the works have been given to the contractor, either himself be present to receive order and instructions or post a responsible agent duly accredited in writing for the purpose. Orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself. The contractor shall give not less than seven days, notice in writing to the Engineer-in-Charge before covering up or placing any work beyond reach of inspection and measurement any work in order that the same may be inspected and measured. In the event of breach of above the same shall be uncovered at contractor's expense carrying out such measurement or inspection.

No materials shall be dispatched by the contractor before obtaining the approval of Engineer-in-Charge in writing. The contractor is to provide at all times during the progress of the work and the maintenance period, proper means of access with ladders, gangways, etc. and the necessary attendance to move and adopt as directed for inspection or measurement of the works by the Engine in-Charge.

54. ASSISTANCE TO THE ENGINEERS:

The contractor shall make available to the Engineer-in-Charge, free of cost necessary instruments and assistance in checking of setting out of works and taking measurement of work.

55. TESTS FOR QUALITY OF WORKS:

- 55.1. All workmanship shall be of the respective kinds described in the contract documents and in accordance with the instructions of the Engineer-in-Charge and shall be subjected from time to time to such test at contractor's cost as the Engineer-in-Charge may direct at place of manufacture or fabrication or on the site or at all or any such places. The contractor shall provide assistance, instruments, labour and materials as are normally required for examining, measuring and testing any workmanship as may be selected and required the Engineer-in-Charge.

55.2. All the tests necessary in connection with the execution of the work as decided by Engineer-in-Charge shall be carried out at the field testing laboratory of the Owner by paying the charges as decided by the Owner from time to time. In case of non-availability of test facility with the Owner, the required test shall be carried out at the cost of contractor at government or any other testing laboratory as directed by Engineer-in-Charge.

55.3. If any tests are required to be carried out in connection with the work or materials workmanship not supplied by the contractor, such tests shall be carried out by the contractor as per the instructions of Engineer-in-Charge and cost of such tests shall be reimbursed by the Owner.

56. SAMPLES:

The contractor shall furnish to the Engineer-in-charge for approval when requested or if required by the specifications, adequate samples of all materials and finishes to be used in the work. Such samples shall be submitted before the work is commenced and in ample time to permit tests and examinations thereof. All materials furnished and finishing applied in actual work shall be fully identical to the approval samples.

57. ACTION AND COMPENSATION IN CASE OF BAD WORK:

If it shall appear to the Engineer-in-charge that any work has been executed with unsound, imperfect or unskilled workmanship or with materials of any inferior description, or that any materials or articles provided by the contractor for the execution of the work are unsound or of a quality inferior to that contracted for, or otherwise not in accordance with the contract, the contractor shall on demand in writing from the Engineer-in-Charge or his authorised representative, specifying the work, materials or articles complained of, notwithstanding that the same have been inadvertently passed, certified and paid for forthwith shall rectify or remove and reconstruct the works specified and provide other proper and suitable materials or articles at his own charge and cost, and in the event of failure to do so within a period to be specified by the Engineer-in-Charge in his demand aforesaid, the contractor shall be liable to pay compensation at the rate of one percentage of the estimated cost of the whole work, for every week limited to a maximum of 10 per cent of the estimated cost of the whole work, while his failure to do so shall continue and in the case of any such failure the Engineer-in-Charge may on expiry of notice period rectify or remove and re-execute the work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expenses of the contractors in all respects. The decision of the Engineer-in-Charge as to any question arising under this clause shall be final and conclusive.

58. SUSPENSION OF WORKS:

The contractor shall, if ordered in writing by the Engineer-in-Charge or his representative, temporarily suspend the works or any part thereof for such period and such time as so ordered and shall not, after receiving such written order, proceed with the work therein ordered to be suspended, until he shall have received a written order to proceed therewith. The contractor shall not be entitled to claim/ compensation for any loss or damage sustained by him by reason of temporary suspension of the works aforesaid. An extension of time for completion, corresponding with the delay caused by any such suspension of the works as aforesaid will be granted to the contractor, should he apply for the same, provided that suspension was not consequent to any default or failure on the part of the contractor.

59. OWNER MAY DO PART OF WORK:

Upon failure of the contractor to comply with any instructions given in accordance with the provisions of the contract, the owner has the alternative right, instead of assuming charge for entire work to place additional labour force, tools, equipments and materials on such parts of the work, as the owner may designate or also engage another contractor to carry out the work. In such cases, the owner shall deduct from the amount which otherwise might become due to the contractor, the cost of such work and materials with ten percent added to cover all departmental charges and should the total amount thereof exceed the amount due to the contractor, the contractor shall pay the difference to the owner.

60. POSSESSION PRIOR TO COMPLETION:

The Engineer-in-Charge shall have the right to take possession of or use any completed or partially completed work or part of the work. Such possessions or use shall not be deemed to be an acceptance of any work completed in accordance with the contract agreement. If such prior possession or use by the Engineer-in-Charge delays the progress of work, suitable adjustment in the time of completion will be made and contract agreement shall be deemed to be modified accordingly.

61. PERIOD OF LIABILITY FROM THE DATE OF COMPLETION OF WORK:

- 61.1. The contractor shall guarantee the installation/site work for a period of 06 (six) Months from the date of completion of work, unless otherwise specified. Any damage that may lie undiscovered at the time of issue of completion certificate, connected in any way with the equipment or materials supplied by him or in the workmanship shall be rectified or replaced by the contractor at his own expense as deemed necessary by the Engineer-in-Charge or in default, the Engineer-in-Charge may cause the same made good by other workmen and deduct expenses (for which the certificate of Engineer-in-Charge shall be final) from any sums that may be then or at any time thereafter, become due to the contractor or from his security deposit.
- 61.2. If the contractor feels that any variation in work or in quality of materials or proportions would be beneficial or necessary to fulfill the guarantee called for, he shall bring this to the notice of the Engineer-in-Charge in writing. The work will not be considered as complete and taken over by the Owner until all the temporary works etc., constructed by the contractor is removed and work site cleaned to the satisfaction of Engineer-in-Charge.
- 61.3. Care of Works:
From the commencement to completion of works, the contractor shall take full responsibility for the care of all works including all temporary works, and in case any damage, loss or injury happens to the works or to any part thereof or to any temporary work, from any cause whatsoever, he shall at own cost repair and make good the same, so that at completion, the work shall be in good order and in conformity in every respect with the requirements of the contract and the Engineer-in-Charge's instructions.
- 61.4. Effects prior to taking over:
If at any time, before the work is taken over, the Engineer-in-Charge shall
- a) Decide that any work done or materials used by the contractor or any sub-contractor is defective or not in accordance with the contract or that the works or any portion thereof are defective or do not fulfill the requirements of contract (all such matters being herein after called 'Defects' in this clause) and

b) As soon as reasonably practicable, notice given to the contractor in writing of the said decisions specifying particulars of the defects alleged to exist or to have occurred, then the contractor shall at his own expenses and with all speed make good the defects so specified.

In the case contractor shall fail to do so, the Owner may take, at the cost of the contractor, such steps as may in all circumstances, be reasonable to make good such defects. The expenditure, so incurred by the Owner shall be recovered from the amount due to the contractor. The decision of the Engineer-in-Charge with regard to the amount to be recovered from the contractor will be final and binding on the contractor. As soon as the works have been completed in accordance with the contract (except in minor respects that do not affect their use for the purpose for which they are intended and except for maintenance thereof provided in clause 61.1) and have passed the tests on completion, the Engineer-in-Charge shall issue a certificate (hereinafter called completion certificate) in which he shall certify the date on which the work have been so completed and have passed the said tests and the Owner shall be deemed to have taken over the works on the date so certified. If the works have been divided into various groups in the contract, the Owner shall be entitled to take over any group or groups before the other or others and thereupon the Engineer-in-Charge shall issue a completion certificate which will however, be for such group or groups as taken over only.

61.5. Defects after taking over:

In order that the contractor could obtain a completion certificate, he shall make good with all possible speed, any defect arising from the defective materials supplied by the Contractor or workmanship or any act of omission of the contract that may have been noticed or developed after the works or group of the works has been taken over. The period allowed for carrying out such work will be normally one month. If any defect be not remedied within a reasonable time, the Owner may proceed to do the work at the contractor's risk and expense and deduct from the final bill such amount as may be decided by the Owner. If by reason of any default on the part of the contractor a completion certificate has not been issued in respect of every portion of the work within one month after the date fixed by the contract for the completion of the works, the Owner shall be at his liberty to use the works or any portion thereof in respect of which a completion certificate has been issued provided that the works or the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completing these works for the issue of completion certificate.

61.6. The Security Deposit/retention money deducted / furnished as per clause 7 of GCC shall be retained for the period of liability as given in clause 61.1 above. This Retention amount or Bank Guarantee furnished against Security Deposit/retention money shall be released only on expiry of the period of liability and also based on the certification of the Engineer-in-charge that no defect/damage has been reported / observed during the stipulated period of liability for the contract.

61.7. Performance of contractor shall be evaluated on each job by Engineer-in-Charge and recorded. Review of performance will be carried out at appropriate intervals by BPCL.

SECTION VI
BILLS / MEASUREMENT / PAYMENT

62. SCHEDULE OF RATES AND PAYMENTS:

i) Contractor's Remuneration

The price to be paid by the Owner to contractor for the whole of the work to be done and the performance of all the obligations undertaken by the contractor under the contract documents shall be ascertained by the application of the respective item rates (the inclusive nature of which is more particularly defined by way of application but not of limitation, with the succeeding sub-clause of this clause) and payment to be made accordingly for the work actually executed and approved by the Engineer-in-Charge. The sum so ascertained shall (excepting only as and to the extent expressly provided herein) constitute the sole and inclusive remuneration of the contractor under the contract and no further payment whatsoever shall be or become due or payable to the contractor under the contract.

ii) Schedule of rates to be inclusive:

The prices/rates quoted by the contractor shall remain firm till the issue of final completion certificate and shall not be subject to escalation. Schedule of rates shall be deemed to include and cover all costs, expense and liabilities of every description and all risk of every kind to be taken in executing, completing and handing over the work to the Owner by the Contractor. The Contractor shall be deemed to have known the nature, scope, magnitude and the extent of the works and materials required, though the contract document may not fully and precisely furnish them. He shall make such provision in the item rates as he may consider necessary to cover the cost of such items of work and materials as may be reasonable and necessary to complete the works. The opinion of the Engineer-in-Charge as to the items of work which are necessary and reasonable for completion of work shall be final and binding on the contractor, although the same may not be shown on or described specially in contract documents.

Generality of this present provision shall not be deemed to cut down or limit in any way because in certain cases it may and in other cases it may not be expressly stated that the contractor shall do or perform a work or supply articles or perform services at his own cost or without addition of payment or without extra charges or words to the same effect or that it may be stated or not stated that the same are included in and covered by the schedule of rates.

iii) Schedule of Rates to Cover Constructional Equipments, Materials, Labour etc.

Without in any way limiting the provisions of the preceding sub-clause the schedule of rates shall be deemed to include and cover the cost of all constructional equipment, temporary work (except as provided for herein), pumps, materials, labour, the insurance, fuel, stores and appliances to be supplied by the contractor and other matters in connection with each item in the schedule of rates and the execution of the works or any portion thereof, finished, complete in every respect and maintained as shown or described in the contract documents or may be ordered in writing during the continuance of this contract.

iv) Schedule of Rates to cover Royalties, Rents and Claims:

The Schedule of Rates shall be deemed to include and cover the cost of all royalties and fees for the articles and processes, protected by letters, or otherwise incorporated in or used in connection with the works, also all royalties, rents and other payments in connection with obtaining materials of whatsoever kind for the works and shall include an indemnity to the Owner which the contractor hereby gives against all actions, proceedings, claims damages, costs and expenses arising from the incorporation in or use on the works of a such articles, processes or materials, Octroi or other municipal or local Board charges levied on materials, equipment or machineries to be brought to site for use on work shall be borne by the contractor.

v) Schedule of Rates to Cover Taxes and Duties:

No claim or exemption or reduction of customs duties, excise duties, sales tax, quarry or any port dues, transport charges, stamp duties or Central or States Government or Local Body or Municipal Taxes or duties, taxes or charges (from or of any other body), whatsoever, will be granted or obtained, all of which expenses shall be deemed to be included in and covered by the Schedule of Rates. Contractor shall also obtain and pay for all permits, or other privileges necessary to complete work.

vi) Schedule of Rates to cover Risk of Delay:

The schedule of Rates shall be deemed to include and cover the risk of all possibilities of delay and interference with the contractors conduct of work which occur from any cause including orders of owner in the exercises of his powers and on account of extension of time granted due to various reasons and for all other possible or probable cause of delay.

vii) Schedule of Rates cannot be altered:

For work under unit rate basis, no alteration will be allowed in the schedule of Rates by reason of work or any part of them being modified, altered, extended, diminished or omitted. The schedule of Rates are fully Inclusive rates which have been fixed by the contractor and agreed to the Owner and cannot be altered. For lumpsum contract, the payment will be made according to the work actually carried out for which purpose an item wise or workwise, Schedule of rates shall be furnished, suitable for evaluating the value of work done and preparing running account bills.

63. PROCEDURE FOR MEASUREMENT / BILLING OF WORK IN PROGRESS:

i) Measurements:

All measurements shall be in metric system. All the works in progress will be jointly measured by the representative of the Engineer-in-Charge and the Contractor's authorised agent progressively. Such measurement will be got recorded in the measurement book by the Engineer-in-Charge or his authorised representative and signed in token of accepted by the contractor or his authorised representative.

For the purpose of taking joint measurement the contractor's representative shall be bound to be present whenever required by the Engineer-in-Charge. If, however, he absents for any reason whatsoever the measurement will be taken by the Engineer-in-Charge or his representative and this will be deemed to be correct and binding on the contractor.

ii) Billing:

The contractor will submit a bill to the Engineer-in-Charge of the work giving abstract and detailed measurements for the various items executed during a month, before the expiry of the 1st week of the succeeding month. The Engineer-in-Charge shall take or cause to be taken the requisite measurements for the purpose of having the same verified and the claim, as far as admissible, adjusted, if possible, before the expiry of 10 days from presentation of the bill.

iii) Dispute in Mode of Measurements:

In case of any dispute as to the mode of measurement not covered by the contract to be adopted for any item of work, mode of measurement as per latest Indian Standard Specifications shall be followed.

64. LUMPSUMS IN TENDER:

For the items in tender where it includes lumpsum in respect of parts of work, the contractor shall be entitled to payment in respect of the items at the same rates as are payable under this contract for such items, or if part of the work in question is not in the opinion of the Engineer-in-Charge capable of measurement of determination, the owner may at his discretion pay the lumpsum amount entered in the tender or a percentage thereof and the certificate in writing of the Engineer-in-Charge shall be final and conclusive against the contractor with regards to any sum or sums payable to him under the provisions of the clause.

65. RUNNING ACCOUNT PAYMENTS TO BE REGARDED AS ADVANCES:

All running account payments shall be regarded as payment by way of advance against the final payment only and not as payments for work actually done and completed and shall not preclude the requiring of bad, unsound and imperfect, or unskilled work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the due performance of the contract, or any part thereof in this respect, or of the accruing of any claim by the contractor, nor shall it conclude, determine or affect in any way the powers of the Owner under these conditions or any of them as to the final settlement and the adjustments of the accounts or otherwise, or in any other way vary or affect the contract.

The final bill shall be submitted by the contractor within one month of the date of physical completion of the work, and settled immediately but not later than 60 days otherwise the Engineer-in-charge's certificate of the measurement and of total amount payable for the work accordingly shall be final and binding on all parties. The final bill shall be presented by the contractor along with 'No claim certificate' in a format acceptable to the owner or such other documents as directed by the owner.

66. EXTRA WORK:

Should the contractor consider that he is entitled to any extra payment for extra job carried out whatsoever in respect of the works, he shall forthwith give notice in writing to the Engineer-in-Charge that he claims extra payment for the extra work. Such notice shall be given to the Engineer-in-Charge within one week from the ordering of any extra work or happening of any event, upon which the contractor bases such claims, and such notice shall contain full particulars of the nature of such claim with full details and amount claimed. Failure on part of the contractor to put forward any claim with the necessary particulars as above within the time above specified shall be an absolute waiver thereof. No

omission by the owner to reject any such claim and no delay in dealing therewith shall be waiver by the owner of any rights in respect thereof.

67. PAYMENT OF CONTRACTOR'S BILL:

Generally no payment shall be made for works estimated to cost less than Rs. 50,000/- till the whole of the work shall have been completed. But in case of works estimate to cost more than Rs. 50,000/- the contractor on submitting the bill thereof be entitled to receive a monthly payment proportion to the part thereof approved and passed by the Engineer-in-Charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. This payment will be made after making necessary deductions as stipulated elsewhere in the contract document for materials, security deposit or any moneys due to the Owner etc.

68. MODE OF PAYMENT:

Payment will be made to the contractor normally through NEFT mode.

69. COMPLETION CERTIFICATE:

69.1. Application for Completion Certificate:

When the contractor fulfills his obligation under clause 61.4, he shall be eligible to apply for completion certificate. The contractor may apply for separate completion certificate respect of each such portion of the work by submitting the completion documents along with such application for completion certificate. The Engineer-in-Charge shall normally issue to the contractor the completion certificate within one month after receiving an application therefore from the contractor after verifying from the completion documents and satisfying himself that the work has been completed in accordance with and as set out in the construction and erection drawings and the contract documents.

The contractor, after obtaining the completion certificate is eligible to present the final bill for the work executed by him under the terms of contract.

69.2. Completion Certificate:

The contractor shall be furnished with a certificate by the Engineer-in-Charge of such completion, but no certificate shall be given nor shall the work be deemed to have been executed until all scaffolding surplus materials and rubbish is cleared off the site completely or until the work shall have been measured by the Engineer-in-Charge whose measurement shall be binding and conclusive. The work will not be considered complete and taken over by the Owner, until all the temporary works, labour and staff colonies etc. constructed are removed and the work site cleaned of all debris etc., as described in clause in 69.3 below and to the satisfaction of the Engineer-in-Charge.

If the contractor shall fail to comply with the requirements of this clause on or before the date fixed for the completion of the work, the Engineer-in-Charge may at the expenses of the contractor remove such scaffolding, surplus materials and rubbish and dispose off the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realised by the sale thereof.

69.3. Clearing the site:

Cart away all debris generated from the work and dispose it off without giving rise to any complaints from local, municipal or government authorities. Metal scraps or any other scrap including wooden packing materials shall be disposed as instructed by the Engineer-in-Charge or as follows:

a) All unused scrap steel bar/ structural steel sections/pipe materials etc., (Free issue by owner) shall be the property of the owner and the same shall be returned by the contractor category-wise at their own cost to Owner's store. The weightment slip issued by the Warehouse (in original) is required to be attached along with the final bill/ material reconciliation statement. In case, the material is supplied by the contractor, as per their scope of work, the scrap material generated out of the same should be taken out at their own cost before the settlement of the final bill.

b) Insulation material (either issued by owner to the contractor or supplied by contractor) shall be kept in the area allocated by owner. During the insulation activities, the contractor should keep the work area clean on day-to-day basis. On completion of insulation job, all debris/packing should be taken out to the designated location or as directed by the Engineer in charge for disposal at their own cost before the settlement of the final bill.

69.4. The financial implication of above, if any, should be taken care of in the quoted rates; and no separate claim shall be entertained on this account. The final bill of the contractor shall be linked with the area cleaning in all respects, including removal of shuttering material, disposal of debris/scrap etc. to the entire satisfaction of Engineer-in-Charge.

70. FINAL DECISION AND FINAL CERTIFICATE:

Upon Expiry of the period of liability and subject to the Engineer-in-Charge being satisfied that the works have been duly maintained by the contractor during monsoon or such period as herein before provided in clause 61 and that the contractor has in all respect duly made up any subsidence and performed all his obligations under the contract, the Engineer-in-Charge shall (without prejudice to the rights of the Owner to retain the provisions of relevant clause hereof) give a certificate herein referred to as the final certificate to that effect. The contractor shall not be considered to have fulfilled the whole of his obligations under the contract until Final Certificate have been given by the Engineer-in-Charge notwithstanding any previous entry upon the work and taking possession, working or using of the same or any part thereof by the owner.

71. CERTIFICATE FOR PAYMENTS AND EVIDENCE OF COMPLETION:

Except the final certificate, no other certificate or payments against a certificate or on general account shall be taken to be an admission by the Owner of the due performance of the contract or any part thereof or occupancy or validity of any claim by the contractor.

SECTION VII
TAXES/DUTIES/ INSURANCE**72. TAXES & DUTIES :**

The contractor agrees to and does hereby accept full and exclusive liability for the payment of any and all taxes, duties, now in force or hereafter Imposed, increased or modified, from time to time in respect of work and materials and all contributions and taxes for unemployment compensation, insurance and old age pensions or annuities now or hereafter imposed by any Central or State Government authorities which are imposed with respect to or covered by the wages, salaries, or other compensations paid to the persons employed by the contractor and the contractor shall be responsible for the compliance with all obligations and restrictions imposed by the Labour Law or any other law affecting employer - employee relationship and the contractor further agrees to comply and secure the compliance by all sub-contractors, with all applicable Central, State, Municipal and local laws and regulations and requirements of any Central, State or Local Government agency or authority. Contractor further agrees to defend, indemnify and hold harmless from any liability or penalty which may be Imposed by the Central, State of Local Authority by reason of any violation by contractor or sub-contractor of such laws, regulations or requirements and also from all claims, suits or proceeding that may be brought against the Owner arising under, growing out of, or by reason of the work provided for by this contract by third parties, or by Central or State Government authority or any administrative sub-division thereof.

72.1. Goods and Services Tax (GST) :

All Vendors shall have GST registration in the concerned State from where he intends to supply the goods. Vendor shall declare the source location of supply and shall provide their GSTN number in the quotation.

Vendor shall provide HSN/SAC code of the goods/services and corresponding GST rate for the same.

In case GST is not applicable to the vendor currently, as per turnover criteria, GST due to change in turnover is not payable. If applicable in future, the same will be borne by vendor.

GST as applicable by the Vendor at the time of delivery within scheduled delivery period will be payable by BPCL.

Vendor shall submit the TAX Invoice, for BPCL to claim the Input Tax Credit of the GST paid by the Vendor, wherever applicable.

The Vendor shall take steps viz uploading invoice in GSTR 1, payment of the tax liability on the said invoices and filing of Returns etc. and comply with all the requirements of applicable laws including GST laws for the time being in force, to enable the OWNER to avail tax credit/s including input tax credit. Any loss or non-availability of input tax credit by the OWNER due to non-compliance of applicable tax laws including but not limited to GST laws in force or otherwise, on the part of VENDOR, an amount equivalent to any tax liability accruing to the OWNER and/or to the extent of any loss accrued to the OWNER shall be deducted from the payment due to the VENDOR or shall be reimbursed by the VENDOR, as the case may be, till such default is either rectified or made good by the VENDOR and the OWNER is satisfied that it is in a position to claim valid input tax credit within the time-lines as per applicable laws.

Any cost, liability, dues, penalty, fees, interest as the case may be, which accrues to the OWNER at any point of time on account of non-compliance of applicable tax laws or rules or regulations thereof or otherwise due to default on the part of VENDOR shall be borne by the VENDOR. An amount equivalent to such cost, liability, dues, penalty, fees, interest as the case may be, shall be reimbursed by the VENDOR within 30 days. Any GST as may be applicable on such recovery of amount shall also be borne by VENDOR and same shall be collected by the OWNER.

Any increase/decrease in statutory levies within contractual delivery period shall be on BPCL's account. Any upward variation in statutory levies after contractual delivery period shall be on the bidder's account.

73. **INSURANCE:**

Contractor shall at his own expenses carry and maintain insurance with reputable insurance companies to the satisfaction of the Owner as follows:

i. Employees State Insurance Act:

The Contractor agrees to and does hereby accept full and exclusive liability for the compliance with all obligations imposed by the Employees State Insurance Act, 1948, and the contractor further agrees to defend, indemnify and hold Owner harmless from any liability or penalty which may be imposed by the Central, State or Local Authority by reason of any asserted violation by contractor or sub-contractor, of the Employee State Act, 1948 and also from all claims suits or proceedings that may be brought against the Owner arising under, growing out of or by reason of the work provided for by this contract whether brought by employees of the contractor, by third parties or by Central or State Government authority or any political sub-division thereof.

The contractor agrees to filing, with the Employees State Insurance Corporation, the Declaration Forms and all forms which may be required in respect of the contractor's or sub-contractor's employees whose aggregate remuneration as fixed by the concerned authorities and who are employed in the work provided for or those covered by ESI Act under any amendment to the Act from time to time. The contractor shall deduct and secure the agreement of the sub-contractor to deduct the employee's contribution as per the first schedule of the Employee State Insurance Act from wages and affix the

Employee's contribution Cards at Wages payment intervals. The contractor shall remit and secure the agreement of the sub-contractor to remit to the authorized bank, Employee's State Insurance Corporation Account, the Employee's contribution as required by the Act. The contractor agrees to maintain all Cards and records as required under the Act in respect of employees and the payments and the contractor shall secure the agreement of the subcontractor to maintain such records. Any expenses incurred for the contribution, making contribution or maintaining records shall be to the contractor's or sub-contractor account.

The Owner shall retain such sum as may necessary, from the total contract value until contractor shall furnish satisfactory proof that all contributions as required by the Employees State Insurance Act, 1948, have been paid.

ii. Workman's Compensation and employee's Liability Insurance:

Insurance shall be effected for all the Contractor's employees engaged in the performs of this contract, if any of the work is sublet, the contractor shall require the sub-contractor to

provide workman's compensation and employer's liability Insurance for the latter's employees if such employees are not covered under the contractors insurance.

iii. Any other Insurance Required under Law or Regulations or by Owner:

Owner shall cover Project Material and Equipments under and over all Marine-cum-Erection Insurance Policies. Contractor shall carry and maintain any and all other insurance which be required under any law or regulation from time to time. He shall also carry and main any other insurance which may be required by the Owner.

iv. Automobile Liability Insurance:

Contractor shall take out an Automobile Liability Insurance to cover all risks to Owner for each of his vehicles plying on works of this contract and these insurance shall be valid for the total contract period. No extra payments will be made for this insurance. Owner shall not be liable for any damage or loss not made good by the insurance company, should such damage or toss result from unauthorised use of the vehicle.

74. DAMAGE TO PROPERTY:

i) Contractor shall be responsible for making good, to the satisfaction of the Owner any loss of and any damage to all structures and properties belonging to the Owner or being executed or procured or being procured by the Owner or of other agencies within the premise all the work of the Owner, if such loss or damage is due to fault and/or the negligence willful acts or omission of contractor, his employees, agents, representative or \ sub-contractor.

ii) The contractor shall indemnify and keep the Owner harmless of all claims for damage to property other than Owner's property arising under or by reason of this agreement if such claims results from the fault and/or negligence or willful acts or omission of contractor, his employees, agents, representatives or sub-contractors.

SECTION VIII
LABOUR LAWS AND OTHER REGULATIONS

75. LABOUR LAWS:

- i. No labour below the age of eighteen years shall be employed on the work.
- ii. The contractor shall not pay less than what is provided under the Minimum Wages Act for the applicable trade or category of workman to the worker engaged by him on the work and also ensure that any sub-contractors engaged by him also pay not below the applicable minimum wages under the Act and hold the company, indemnified in respect of any claims that may arise in respect or non-compliance with this requirements.
- iii. The contractor shall observe all the formalities required under the provisions of the contract labour (Regulation and abolition) Act 1970 and the rules made thereunder and as may be amended from time to time. He shall pay the required deposit under the Act Appropriate to the number of workmen to be employed by him or through sub-contractor and get him self registered under the Act. He shall produce the certificate of registration granted by the Govt. authority under the Act to the company before commencement of work. The company recognises only the contractor and not his sub-contractors under the provisions of the Act. The contractor will have to submit daily a list of his employees, who will be entering the Company's premises for the work awarded. He will also keep his wage register available at all times as close to the work site as possible and produce the same for inspection whenever required by designated Company officials. If the company so desires, a deposit may be taken from the Contractor to be refunded only after the Company is satisfied that all the workmen employed by the contractor have been fully paid for the period of work in Company's premises at least at rates equal to or better than wages provided for under the Minimum Wages Act.
- iv. The Contractor will comply with the provisions of the employee's Provident Fund Act and the Family Pension Fund Act as may be applicable and as amended from time to time. Contractor shall obtain their own provident fund account number. Offer of the contractor who does not have provident fund account will be liable for rejection.
- v. The Contractor will comply with the provisions of the Payment of Gratuity Act 1972 as may be applicable and as amended from time to time.

76. IMPLEMENTATION OF APPRENTICES ACT 1961:

The Contractor shall comply with provisions of the Apprentices Act 1961 and the Rules/orders issued thereunder from time to time. If he fails to do so, his failure will be breach of the contract and the Engineer-in-Charge may, at his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provision of the act.

77. CONTRACTOR TO INDEMNIFY THE OWNER:

- i. The contractor shall indemnify the owner and every member, officer and employee of the Owner, also the Engineer-in-Charge and his staff against all actions,

proceedings, claims, demands, costs, and expenses whatsoever arising out of or in connection with the matters referred to in clause 73 and all actions/ proceedings, claims, demands, costs and expenses which may be made against the Owner for or in respect of or arising out of any failure by the contractor in the performance of his obligations under the contract documents. The Owner shall not be liable for or in respect of any demand or compensation payable by law in respect of or in consequence of any accident or injury to any workmen or other person in the employment of the contractor or his sub-contractor and contractor shall indemnify and keep indemnified the Owner against all such damages and compensations and against all claims, damage, proceedings, costs, charges and expenses whatsoever, thereof or in relation thereto.

ii. Payment of Claims and Damages:

Should the Owner have to pay any money in respect of such claims or demands as aforesaid the amount so paid and the costs incurred by the Owner shall be charged to and paid the Contractor and the contractor shall not be at liberty to dispute or question the rig of the Owner to make such payments notwithstanding the same may have been made without his consent or authority or in law or otherwise to the country.

In every case to which by virtue of the provisions of Section 12, sub-section (I) of workmen's compensation Act 1923 or other applicable provisions of workmen's Compensation Act any other Act, the Owner is obliged to pay compensation to a workmen employed by contractor in execution of the works, the Owner will recover from the contractor the amount of compensation so paid and without prejudice to the rights of Owner under Section 12 sub-section (2) of the said Act. Owner shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due to the contractor whether under the contract or otherwise. The Owner shall not be bound to contest any clime made under Section 12, sub-section (I) of the said Act except on the written request of contractor and upon his giving to the Owner full security for all costs for which the Owner might become liable on consequence of contesting such claims.

iii. Employment Liability:

- a. The contractor shall be solely and exclusively responsible for engaging or employing persons for the execution of work. All employees engaged by the contractor shall be on his/ their payroll and paid by him/ them. All disputes or differences between the contractor and his/ their employees shall be settled by him/ them. Owner has absolutely no liability whatsoever concerning the employees of the contractor. The contractor shall indemnify owner against all loss or damage or liability arising out of or in the course of his/ their employees. The contractor shall make regular and full payment of wages without giving any complaint by any employee of the contractor or his sub-contractor regarding non-payment of wages/ salaries or other dues. Owner reserves the right to make such payments directly, to such employee or sub-contractor of the contractor and recover the amount in full from the bills of Contractor, and the contractor shall not claim any compensation or reimbursement thereof. The Contractor shall comply with the Minimum Wages Act applicable to the area with regard to payment of wages of his employees and also of employees of his sub-contractor.

- b. The Contractor shall advise in writing to all of his employees and the employees of his sub-contractor as follows:

It is fully understood that your appointment and/ or deployment is only in connection with the owner and it does not give you any right of claim for employment by owner.

78. HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS:

In respect of all labour directly employed in the works for performance of the contractor's part this agreement, the contractor shall comply with or cause to be complied with all the rules and regulations of the local sanitary and other authorities or as framed by the Owner from time to time for the protection of health and sanitary arrangements for all workers.

79. SAFETY REGULATIONS:

- i. In respect of all labour, directly or indirectly employed In the work for the performance of contractor's part of this agreement, the contractor shall at his own expenses arrange for all safety provisions as per safety codes of C.P.W.D. Indian Standard Institution, the Electricity Act, The Mines Act and any such other acts as applicable.
- ii. The Contractor shall ensure that he, his sub-contractor and his, or their personnel or representatives shall comply with all Fire / Safety regulations issued from time to time by the Company or otherwise howsoever and should any injury resulting in death or not or loss / or damage due to Fire to any property or a portion thereof, occurred as a result of failure to comply with such regulations, the contractor shall be held responsible for the consequences thereof and shall keep the company harmless and indemnified.

80. ARBITRATION:

- a) Any dispute or difference of any nature whatsoever, any claim, cross-claim, counter-claim or set off of BPCL against the Contractor or regarding any right, liability, act, omission on account of any of the parties hereto arising out of or in relation to this agreement shall be referred to the sole Arbitration of the concerned Director (herein after named as Director) of the BPCL or of some officer of the BPCL who may be nominated by the concerned Director. The Contractor will not be entitled to raise any objection to any such arbitrator on the ground that the arbitrator is an Officer of the BPCL or that he has dealt with the matters to which the contract relates or that in the course of his duties as an Officer of the BPCL he had expressed views on all or any other matters in dispute or difference. In the event of the arbitrator to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason, the Director as aforesaid at the time of such transfer, vacation of office Or inability to act may in the discretion of the Director designate another person to act as arbitrator in accordance with the terms of the agreement to the end and intent that the original Arbitrator shall be entitled to continue the arbitration proceedings notwithstanding his transfer or vacation or office as an Officer of the BPCL if the Director does not designate another person to act as arbitrator on such transfer, vacation of office or inability of original arbitrator. Such persons shall be entitled to proceed with the reference from the point at which it was left by his predecessor. It is also a term of this contract that no person other than the Director or a person nominated by such Director of the BPCL as aforesaid shall act as arbitrator, hereunder. The award of the arbitrator so appointed shall be final conclusive

and binding on all parties to the agreement subject to the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rules made thereunder for the time being in force shall apply to the arbitration proceedings under this clause.

- b) The arbitrator shall have power to order and direct either of the parties to abide by, observe and perform all such directions as the arbitrator may think fit having regard to the matters in difference i.e. dispute before him. The arbitrator shall have all summary powers and may take such evidence oral and/ or documentary, as the arbitrator in his absolute discretion thinks fit and shall be entitled to exercise all powers under the Arbitration and Conciliation Act, 1996 including admission of any affidavit as evidence concerning the matter in difference i.e. dispute before him.
- c) The parties against whom the arbitration proceedings have been initiated, that is to say the Respondents in the proceedings, shall be entitled to prefer a cross-claim, counter-claim or set off before the Arbitrator in respect of any matter an issue arising out of or in relation to the Agreement, without seeking a formal reference of arbitration to the Director for such counter-claim, cross or set off and the Arbitrator shall be entitled to consider and deal with the same as if the matters arising therefrom has been referred to him originally, and deemed to form part of the reference made by the Director.
- d) The arbitrator shall be at liberty to appoint, if necessary, any accountant or engineering or other technical person to assist him and to act by the opinion so taken.
- e) The arbitrator shall have power to make one or more awards whether interim or otherwise, in respect of the dispute and difference and in particular will be entitled to make separate awards in respect of claims or cross-claims of the parties.
- f) The arbitrator shall be entitled to direct any one of the parties to pay the costs of the other party in such manner and to such extent as the arbitrator may in his discretion determine and shall also be entitled to require one or both the parties to deposit funds in such proportion to meet the arbitrators' expenses whenever called upon to do so.
- g) The parties hereby agree that the courts in the city of Mumbai/(Ernakulam-in the case of Kochi Refinery), alone shall have jurisdiction to entertain any application or other proceedings in respect of anything arising under this agreement and any award or awards made by the Sole Arbitrator hereunder shall be filed in the concerned courts in the city of Mumbai/(Ernakulam-in the case of Kochi Refinery), only.

81. JURISDICTION:

The contractor shall be governed by the Laws in force in INDIA. The contractor hereby submits to the jurisdiction of the Courts situated at Mumbai/(Ernakulam-in the case of Kochi Refinery), for the purpose of actions and proceedings arising out of the contract and the courts at Mumbai/(Ernakulam-in the case of Kochi Refinery), only will have jurisdiction to hear and decide such actions and proceedings.

SECTION - IX
MEMORANDUM OF AGREEMENT

An agreement made this ____ day ____ of _____ 20__ between BHARAT PETROLEUM CORPORATION LIMITED a Company Incorporated in India and having its registered office at Ballard Estate, Mumbai, (herein after referred to as 'the Company' which expression shall include its heirs, legal representatives, successors and permitted assignees) of the one part, and

(herein after referred to as "The Contractor" which expression shall include its heirs, legal representatives, successors and permitted assignees) of the other part, whereby it is agreed:-

1. The Contractor shall carry out and complete the work as mentioned in the Purchase order/Contract No. _____ dated _____, (hereinafter referred to as "the work") for the Company at its specified site to its complete satisfaction in accordance with the specifications, schedule of rates and plans attached as per Purchase order/Contract and with the instructions given from time to time, by the Company's authorized engineer under whose supervision the work shall be-executed. The parties hereto agree that this agreement shall be effective from the date of the aforesaid Purchase Order/Contract.
2. Inspection of site: The Contractor has been given an opportunity before or at the time of the entrusting of the work to him of making an inspection of the site to set at rest any doubt he may have had about the difficulties attending his offer, and any difficulties which may be met with by him in the course of the execution of the work shall neither relieve him from fulfilling the terms of this Agreement, nor entitled him to claim extra payment or an extension of the period stipulated for the completion of the work, except where it will be agreed by the Company's authorized Engineer that such difficulties could not have been foreseen.
3. Supply of Labour and Materials: The Contractor shall furnish all labour, materials, equipment or tools necessary for the construction of the work, except such materials, equipment or tools as will be supplied by the Company and are detailed in Purchase order/Contract. The contractor will assume full responsibility for the protection and safety of the work during its construction. The details and dimensions shown on the said plans referred to in the Purchase order/Contract shall be strictly adhered to by the contractor and no alterations shall be made therein unless previous sanction thereto has been given in writing by the Company.
 - (a) The Contractor shall prepare detailed and shop drawings and any other data required.
 - (b) All materials supplied by the Contractor shall be of the best quality. The Contractor shall at his own cost arrange for and/or carry out any test of materials, which the Company's authorized Engineer may require.
 - (c) The Contractor shall at the request of the Company's authorized Engineer immediately dismiss from the work any person employed thereon who, in the opinion of the Company's authorized Engineer, is unsuitable or incompetent or who, has been guilty of misconduct, and

such person shall not again be employed or allowed on the works without the permission of the Company, in writing.

4. E. & O. E. No advantage is to be taken either by the Company or the Contractor of any clerical error or mistake, which may occur in the specification, schedule of rates, plans, tender or any other papers supplied to or by the contractor in connection with the work.
5. Damage on account of incomplete work: The Contractor shall commence the work and shall complete the work as mentioned in Purchase order/Contract failing which the Contractor shall pay or allow to the Company to recover as liquidated damages, at the rate of minimum 0.5% per week of delay or part thereof up to a maximum of 5% of the total contract value, if Liquidated damages clause is made applicable in the contract. Such damages may be deducted by the Company from any amount due to the contractor; otherwise they shall be recoverable by lawful means.
6. a) Determination of the Agreement: The company shall, at any time, be entitled to determine and terminate the contract, if in the opinion of the company, the cessation of the work becomes necessary owing to paucity of funds or for any other cause whatsoever. On such determination / termination, the cost of approved materials, brought by the contractor and lying at the site, at current market rates as verified and approved by company's engineer and of the value of the work done to date by the contractor shall be paid for in full at the rate specified in the contract. A notice in writing from the company to the contractor of such determination and termination and reasons therefore shall be the conclusive proof of the fact that the contract has been so determined and terminated by the company. Should the contract be determined as above and the contractor claims payment to compensate expenditure incurred by him in the expectation of completing the work, the company shall consider and admit such claim as are deemed fair and reasonable and are supported by the vouchers to satisfaction of the engineer-in-charge. The company's decision on the necessity and propriety of such expenditure shall be final and conclusive and binding on the contractor.
The contractor shall not be entitled to get any possible loss of profit that he could have earned had the contract been not determined / terminated under the above clauses of this article.

b) Termination/Offloading: The contractor fully understands that timely completion of the work as per the schedule is of paramount necessity as otherwise it would lead to adversely affecting the schedules of other works/project with resultant financial and other losses to the Company. In view of this, the contractor unconditionally agrees and binds himself to be liable for all the consequences for non-completion of the work within the stipulated time. In case a situation is brought about by the contractor warranting termination/off-loading of the whole or any part of the work for any reason whatsoever, the Company shall have the liberty and right to entrust/engage/award the work so terminated off loaded at the risk and cost of the contractor to any other agency/contractor by adopting any mode of inviting tenders, i.e. open/limited/single party/negotiation basis etc. in order to ensure completion of the work as per the schedule or at the quickest possible time.
7. Defective Work / Materials: If the work done by the Contractor or any part thereof shall be found defective in workmanship or by reason of bad or inferior materials used, then in such case he shall at his own risk and cost without delay, demolish all such defective work and rebuild or replace the same in a satisfactory manner. The Company may, if necessary, at the cost and risk of the Contractor, temporarily stop all other activities by the Contractor in

connection with the work until such time as the defective work has been rebuilt or replaced at the Contractor's cost. In case of default on the part of the contractor to remove defectives work and rebuild or replace the same without delay and in a manner satisfactory to the Company, the Company shall be entitled to employ another Contractor or its own workman to carry out the removal and rebuilding or replacing at the risk and cost of the contractor.

8. Substitution of Contractor : If the Company finds it necessary to employ a person or persons for the purposes provided in clauses 6 (b) and 7 above, then the Company may deduct and retain from out of the sums due to the contractor all such amounts as they may require to pay or to reimburse themselves there from in respect of the costs and expenses which they have incurred in completing the work and or in removing defective work and rebuilding or replacing the same in a manner satisfactory to the Company and if such amounts be more than the sums due or thereafter becoming due to the Contractor, than the balance, shall be a debt recoverable from the Contractor by the Company. The Contractor shall not in any manner do or cause to be done any act, matter or things whatsoever to prevent the person or persons so employed by the Company from removing defective work and re-building or replacing the same in a manner satisfactory to the Company and/or from, completing the work in the manner aforesaid.
9. Removal of Material: On the Determination of the Agreement as referred to in Clause 6, the Contractor shall at his own risk and cost remove from site within Seven days all his materials, equipment and tools. It is agreed that in case of such determination the company shall be entitled to purchase from the Contractor such materials as will be approved by the Authorized Engineer of the Company at the prices then current. If the Contractor does not remove the other materials, equipment and tools which he has been asked to remove within the time prescribed as aforesaid, the Company may remove and sell the same holding the proceeds less the cost of storage, removal and sale to the credit of the Contractor. Should Company incur any loss in respect of the sale, it shall be entitled to recover same from the Contractor.
10. Inspection of work: Inspection will be made periodically during the progress of the work by the authorized Engineer of the Company and all work performed must be of acceptable quality of which the said Engineer-in-Charge will be the sole judge.
11. Supervision: The Contractor shall during the whole time the work is in progress, employ one or more competent and technical English speaking Supervisors acceptable to the Company's authorized Engineer, one of whom at least shall be in constant attendance at the site while persons are at work there. Any directions, explanations, instructions, or notices in connection with the work given by the Company's authorized Engineer to these Supervisors shall be deemed to have been given to the Contractor.
12. Payment: The Company, in consideration of the contractor carrying out and completing the said work at the Company's said site, to the satisfaction of the Company, shall pay the contractor as per the said schedule of Rates, subject to deductions, retentions and abatements, if any to be made therefrom in accordance with the provisions of this Agreement. During the progress of the work and provided the work is progressing according to the time-table laid down to the contractor, the contractor shall be entitled once a month to receive advance payment on the above mentioned sum proportionate to such part of the work as shall have been executed during the preceding month but only after such part of the work as has been executed has been inspected and approved by the Company's authorized Engineer. From such interim payments each time 10% will be withheld as Security deposit and

this 10% will be paid to the Contractor after the defect liability period, provided that any defects appearing during that period are corrected by him. OR

100% payment will be made on the basis of actual executed quantities after satisfactory completion and due certification by BPCL Engineer-in-charge. In lieu of 10% Retention money towards Security deposit, contractor shall submit bank guarantee of equivalent amount of retention money (10% of contract value) before submission of 1st Running Account (RA) bill valid for defects liability period specified. Further, the Bank Guarantee shall have a claim period of six months beyond the date of expiry, and the same shall be mentioned clearly in the Bank Guarantee.

13. Defects after Completion: Any defects which may appear within the defect liability period specified shall, upon the directions in writing of the Company and within such reasonable time as shall be specified therein be amended and made good by the Contractor, at his own cost unless the Company shall decide that the Contractor will be paid for such amending and making good, and in case of default on the Contractor's part, the Company may amend and make good or have amended and made good such defects and all damages, losses and expenses consequent thereon, incidental to those shall be borne by the Contractor and such damages, losses and expenses shall be recoverable from him by the Company or may be deducted by the Company from any moneys due to or thereafter becoming due to the Contractor. Alternatively, the Company may, in lieu of such amending and making good by the Contractor elect to deduct from any moneys due or thereafter becoming due to the Contractor a sum to be determined by the Company sufficient to cover the cost of amending and making good such defects, and in the event of the amount withheld in accordance with Clause 12 being insufficient, recover the balance from the Contractor together with any expenses the Company may have incurred in connection with such recovery. Should any defective work have been done or bad inferior materials supplied by any Sub-Contractor employed on the work, has been approved by the Company as provided in Clause 15, the Contractor shall be liable to amend and make good in the same manner as if such work or materials had been done or supplied by the Contractor. The Contractor shall remain liable under this Clause notwithstanding the signing by the Company's authorized Engineer of any certificate or the passing of any account.
14. Alterations: The Company reserves the right at any time to alter any quantities of any item indicated in the Purchase order/Contract, in which case the total amount payable to the Contractor shall be less or higher, proportionate with the reduction or increase in quantity of such item, allowance for which will be made at the Contractor's agreed rates.
15. Subletting Agreement: The Contractor shall not sublet or assign the work or any part thereof to another party without the written consent of the company and no such subletting or assignment shall relieve the contractor from the full and entire responsibility of his obligation under this Agreement.
16. Cancellation: The Company shall at any and all times during the period stipulated for the work, has the right forthwith to cancel this agreement by giving written notice thereof to the Contractor and in such case the Contractor shall be paid for such part of the work as has been executed by him up to the date of cancellation, on the basis of schedule of rates as per Purchase order/Contract and shall be reimbursed by the Company for the cost and expenses incurred by him but which would now be wasted as a direct consequence of the cancellation of the Agreement.

17. **Workmen's Compensation Liability:** The Contractor shall hold the Company harmless and indemnified from and against all claims, costs and charges for which the Company shall be liable under the Workmen's Compensation Act, 1923 and any amendments thereof and the expenses to which it shall be put thereunder, both in respect of personal injuries (within the meaning of the said Act) to the employees and servants of the Contractor or Sub-Contractors, (if any), arising out of, or occasioned during the currency of this agreement through the acts or omissions, whether due to negligence or not of the Contractor, Sub-Contractor and/or Company and/or their respective servants and employees and also in respect of the personal injuries (within the meaning of the said Act) to the servants and employees of the Company arising out of, or occasioned through the acts and omissions whether due to negligence or not of the Contractor, Sub-Contractor and or their servants and employees in carrying out any of the provisions of this Agreement. This indemnity shall be in addition to and not in lieu of any indemnity to which the Company shall be entitled in law. The Contractor shall at his own expense effect and maintain, until the completion of the work, with an approved office a Policy of Insurance in the joint names of the Company and the Contractor, against such risks and deposit such Policy or policies with the Company from time to time during the currency of this Agreement. The Contractor shall be responsible for anything not included in the Insurance Policies above referred to and also for all other damage to person or property arising out of or incidental to the negligent or defective carrying out of this agreement and shall keep the Company harmless and indemnified. He shall also indemnify the Company in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any award of compensation or damages arising therefrom. The Company shall be entitled to deduct the amount of any damages compensation costs, charges and expenses arising or accruing from or in respect of any such claim or damages from any sum or sums due or thereafter becoming due to the Contractor.
18. **Safety Regulation:** The Contractor shall ensure that he/his Sub-Contractor and his, or their personnel or representatives shall comply with all safety regulations issued from time to time by the Company or otherwise howsoever and should any injury resulting in death or not or damage to any property occur as result of failure to comply with such regulations the Contractor shall be held responsible for the consequences thereof, shall keep the Company harmless and indemnified.
19. **Arbitration**
- a) Any dispute or difference of any nature whatsoever, any claim, cross-claim, counter-claim or set off of BPCL against the Contractor or regarding any right, liability, act, omission on account of any of the parties hereto arising out of or in relation to this agreement shall be referred to the sole Arbitration of the concerned Director (herein after named as Director) of the BPCL or of some officer of the BPCL who may be nominated by the concerned Director. The Contractor will not be entitled to raise any objection to any such arbitrator on the ground that the arbitrator is an Officer of the BPCL or that he has dealt with the matters to which the contract relates or that in the course of his duties as an Officer of the BPCL he had expressed views on all or any other matters in dispute or difference. In the event of the arbitrator to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason, the Director as aforesaid at the time of such transfer, vacation of office Or inability to act may in the discretion of the Director designate another person to act as arbitrator in accordance with the terms of the agreement to the end and intent that the original Arbitrator shall be entitled to continue the arbitration proceedings notwithstanding his transfer or vacation or office as an Officer of the BPCL if the Director does not designate another person to act as arbitrator on such transfer, vacation of office or

inability of original arbitrator. Such persons shall be entitled to proceed with the reference from the point at which it was left by his predecessor. It is also a term of this contract that no person other than the Director or a person nominated by such Director of the BPCL as aforesaid shall act as arbitrator, hereunder. The award of the arbitrator so appointed shall be final conclusive and binding on all parties to the agreement subject to the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rules made thereunder for the time being in force shall apply to the arbitration proceedings under this clause.

b) The arbitrator shall have power to order and direct either of the parties to abide by, observe and perform all such directions as the arbitrator may think fit having regard to the matters in difference i.e. dispute before him. The arbitrator shall have all summary powers and may take such evidence oral and/ or documentary, as the arbitrator in his absolute discretion thinks fit and shall be entitled to exercise all powers under the Arbitration and Conciliation Act, 1996 including admission of any affidavit as evidence concerning the matter in difference i.e. dispute before him.

c) The parties against whom the arbitration proceedings have been initiated, that is to say the Respondents in the proceedings, shall be entitled to prefer a cross-claim, counter-claim or set off before the Arbitrator in respect of any matter an issue arising out of or in relation to the Agreement, without seeking a formal reference of arbitration to the Director for such counter-claim, cross or set off and the Arbitrator shall be entitled to consider and deal with the same as if the matters arising therefrom has been referred to him originally, and deemed to form part of the reference made by the Director.

d) The arbitrator shall be at liberty to appoint, if necessary, any accountant or engineering or other technical person to assist him and to act by the opinion so taken.

e) The arbitrator shall have power to make one or more awards whether interim or otherwise, in respect of the dispute and difference and in particular will be entitled to make separate awards in respect of claims or cross-claims of the parties.

f) The arbitrator shall be entitled to direct any one of the parties to pay the costs of the other party in such manner and to such extent as the arbitrator may in his discretion determine and shall also be entitled to require one or both the parties to deposit funds in such proportion to meet the arbitrators' expenses whenever called upon to do so.

g) The parties hereby agree that the courts in the city of Mumbai/(Ernakulam-in the case of Kochi Refinery), alone shall have jurisdiction to entertain any application or other proceedings in respect of anything arising under this agreement and any award or awards made by the Sole Arbitrator hereunder shall be filed in the concerned courts in the city of Mumbai/(Ernakulam-in the case of Kochi Refinery), only.

20. Jurisdiction:

The contractor shall be governed by the Laws in force in INDIA. The contractor hereby submits to the jurisdiction of the Courts situated at Mumbai/(Ernakulam-in the case of Kochi Refinery), for the purpose of actions and proceedings arising out of the contract and the courts at Mumbai/(Ernakulam-in the case of Kochi Refinery), only will have jurisdiction to hear and decide such actions and proceedings.

21. Minimum Wages:

The Contractor, his executors and administrators (and in the case of a Limited Company, its successors and assigns) shall hold the Company harmless and indemnified from and against all claims, costs and charges, for which the Company shall be liable under the Minimum Wages Act, 1948, the Contract Labour (Regulation and Abolition) Act, 1970 and any amendments or modifications thereof, and all expenses it shall be put thereunder through the acts or omissions whether willful or not on the part of the Contractor. This indemnity shall be in addition to and not in lieu of, any indemnity to which the Company shall be entitled in law.

22. Employees State Insurance: This Contractor hereby admits that he is fully aware of his responsibilities under the Employees State Insurance Act, 1948, as an immediate employer of the employees engaged by him for the execution of this contract which he agrees to discharge. The Contractor acknowledge the statutory right of the company (as a Principle Employer) to recover the amount of the contributions, paid by it in the first instance in respect of the employees employed by or through him (the Contractor), as well as the employee's contribution, if any, either by deduction from any amount payable to him by the Company under any contract or as debt payable by him to the Company.

In witness where of the said contracting parties have set their hands.

Witness _____

For Bharat Petroleum Corporation Ltd.

For Bharat Petroleum Corporation Ltd.

Witness _____

Contractor's witness - Signature
Name & Address:-

Contractor's Signature
Name & Address:-

####

PROFQRMA OF BANK GUARANTEE

(On non-judicial paper of appropriate value)

FOR EARNEST MONEY / SECURITY DEPOSIT TOWARDS PERFORMANCE

To
Bharat Petroleum Corporation Ltd.

Dear Sirs,

M/s. _____ have taken tender for the work _____ CRFQ No/PO No. _____ for Bharat Petroleum Corporation Ltd.

The tender Conditions of Contract provide that the Contractor shall pay a sum of Rs. _____ (Rupees _____) as earnest money/security deposit in the form therein mentioned. The form of payment of earnest money/ security deposit includes guarantee executed by Scheduled Bank,

undertaking full responsibility to indemnify Bharat Petroleum Corporation Ltd. in case of default.

The said _____ have approached us and at their request and in consideration of the premises we _____ having our office at _____ have agreed to give such guarantee as hereinafter mentioned.

1. We _____ hereby undertake and agree with you that if default shall be made by M/s. _____ in performing any of the terms and conditions of the tender or in payment of any money payable to Bharat Petroleum Corporation Ltd. We shall on demand pay to you in such matter as to you may direct the said amount of Rupees _____ only or such portion thereof not exceeding the said sum as you may from time to time require.

2. You will have the full liberty without reference to us and without effecting this guarantee postpones for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said _____ and to enforce or to for bear from endorsing any power of rights or by reason of time being given to the said which under law relating to the sureties would but for provision have the effect of releasing us.

3. Your right to recover the said sum of Rs. _____ (Rupees _____) from us in manner aforesaid will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s. _____ and/or that any dispute or disputes are pending before any officer, tribunal or court.

4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up, dissolution or change of constitution or insolvency of the said _____ but shall in all respects and for all purposes be binding operative units payment of all money due to you in respect of such liabilities is paid.

5. Our liability under this guarantee is restricted to Rupees _____. Our guarantees shall remain in force until _____ unless a suit or action to enforce a claim under _____ Guarantee is filed against us within six months from _____ (which is date of expiry of guarantee) all our rights under the said guarantee shall be forfeited and shall be relieved and discharged from all liabilities thereunder.

6. We have power to issue this guarantee in your favour under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney dated _____ granted to him by the Bank.

Yours faithfully

_____ Bank by its Constituted Attorney Signature of a person duly authorized to sign on behalf of the bank.

SPECIAL CONDITIONS OF CONTRACT**1. LOCATION OF SITE AND SCOPE OF WORK**

Location of Site and Scope of Work has been given in Annexure I (Terms of Reference) and in Annexure VII

2. PAYMENTS

Payments shall be released location-wise and based on the actual capacity of the Solar PV Plant installed in that location, in the following manner after furnishing of Security cum Performance Bank Guarantee by the bidder and signing of Agreement as per provisions of bidding document:

Considering the above condition, the following payment terms will be applicable for the respective scope:-

2.1. For supply and erection of solar plant at each location:

- a) 60% of the total payable barring O&M Cost shall be paid on receipt of all the equipment, materials, maintenance tools and tackles & spares for solar plant at site
 - b) 30% of Total payable barring O&M Cost shall be paid on successful erection and commissioning of the plant at site.
 - c) Balance 10% of Total payable barring O&M Cost shall be paid on obtaining and providing all requisite Certificates/ Approvals.
- If there is any increase or decrease in the capacity, then the payment will be done based on the per kW rate quoted.
 - Payment shall be made based on the location wise progress.
 - Due to uncertain reason if any of the power plant installation is not happened then the payment for the particular location will not be released.

2.2. Payment for O&M

Prorata payment shall be done on quarterly basis at the end of each quarter for each location. The operator shall submit bills in respect of the quarter ended after the end of each period for the payment.

3. Performance Bank Guarantees:

- a) The successful bidder shall submit Security Deposit Cum Performance Bank Guarantee for an amount equivalent to 10% of total Contract Price having validity starting from the award of contract to the end of 5 years O&M period post commissioning of the plant plus an invocation period of 3 months.
- b) Bidder shall submit this security deposit cum performance bank guarantee (PBG) at the time of award of contract.
- c) BPCL shall have the right to invoke the Performance Bank Guarantee, if the Bidder fails in any of his contractual obligation including achieving the guaranteed Performance Ratio (PR) as per the requirement on annual basis mentioned in clause 7 of TOR. Prior to invoking the PBG, BPCL shall give a written notice to the contractor and a reasonable time of 7 business days to respond.

- d) In case there is a shortfall in guaranteed PR in any year of operation (i.e. 5 years of O&M period), the bidder shall undertake preventive and corrective action, at its own cost, to ensure that the guaranteed PR is achieved at the earliest. Further the bidder shall compensate BPCL for the loss of revenue accruing during that year @ Rs. 7/kWh for the deficit in guaranteed performance ratio of the respective year)
- e) If even after corrective action has been undertaken and the guaranteed PR is still not achieved by the end of fifth year of operation, the Bidder shall pay Liquidated Damages of Rs. 1 lakhs for each 0.1 % shortfall in the actual PR achieved (calculated up to 2 decimal places). The Contractor shall pay loss of revenue due to under achievement of Performance Ratio, if any, for any Year within fifteen (15) days of the approval (or deemed approval, of the PR Report for such Year.
- f) BPCL shall have the right to invoke the Performance Bank Guarantee, if the Bidder fails to achieve Scheduled date of commissioning as per the quoted project implementation schedule.

4. Guarantee/Warranties

- a) Contractor must warrant that they shall perform the work in a first class, workmanlike and professional manner and in accordance with the highest degree of quality, efficiency, and with the state of the art technology and in conformity with all specifications, standards and drawings set forth or referred to in the Terms of Reference and with instructions and guidance which BPCL may, from time to time, furnish to the Contractor.
- b) The Contractor guarantees that the Goods or Materials supplied under the Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Contractor further warrants that the goods supplied under this Contract shall have no defect arising from design, materials or workmanship.
- c) No deviation from such specifications or alterations or of these conditions shall be made without agreement with the BPCL in writing, which must be obtained before any work against the order is commenced. All materials supplied by the contractor pursuant to the Contract (irrespective of whether engineering, design data or other information has been furnished, reviewed or approved by Company) are guaranteed to be of the best quality of their respective kinds, (unless otherwise specifically authorized in writing by Company) and shall be free from faulty design, workmanship and materials, and to be of sufficient size and capacity and of proper materials so as to fulfill in all respects operating conditions, if any, specified in the Contract.
- d) In the event that the materials supplied do not meet the specifications and/ or not in accordance with the drawings data sheets or the terms of Contract and rectification is required in site, BPCL shall notify the Contractor giving full details of differences. The Contractor shall attend the site within 3 (three) days of receipt of such notice to meet and agree with representatives of BPCL, the action required to correct the deficiency. Should the Contractor fail to attend meeting at site within the time specified above, BPCL shall immediately rectify the work/ materials and Contractor shall reimburse BPCL all cost and expenses incurred in connection with such trouble or defect. In case the Contractor fails to perform remedial work, the Performance Bank Guarantee shall be invoked.

e) The Solar PV module shall have a Power warranty of 25 years with degradation of power generated not exceeding 20% of the minimum rated power over this 25 years period. Guarantee on power output of solar module will be as follows:

- First year degradation max up to 3% i.e. (guaranteed power output at least 97 %)
- Subsequent years degradation factor: 0.7% every year (linear degradation)

f) The guarantee/warranty for the balance material and/or equipment and/or accessories and/or structures shall be for five years from the date of commissioning.

g) The OEM's guarantee for all supplied items shall be made available to the Owner and shall be valid at least for the entire defect liability period.

h) If OEM's guarantee is not so available to the Owner, the contractor shall guarantee the items supplied for the entire defect liability period. However, in case the OEM's guarantee period is in excess of the defect liability period, such guarantees for such excess period shall be passed on by the contractor to the Owner.

i) Any material and/or equipment and/or accessories which shall prove defective or which shall fail to meet the desired design guarantee or performance guarantee during the defects liability period, the contractor shall replace at his own cost. Manufacturer's/contractor's guarantee for such replaced equipment shall also be made available to the owner and should be kept valid at least for one year from the date of last replacement.

j) Owner reserves their right to call for required guarantee directly by the manufacturer / contractor's consultant/ Associate/ sub-contractor through suitable agreement.

k) Should the BPCL discover at any time during the tenure of the Contract or within the Performance Liability Period of the Contract that the work carried out by the contractor does not conform to and perform as per terms & conditions of the Contract, Contractor shall after receipt of notice from Company, promptly perform all corrective work required to make the services conform to the Warranty. Such corrective work shall be performed entirely at Contractor's own expenses. If such corrective work is not performed within a reasonable time, the Company, at its option, may have such remedial work carried out by others and charge the cost thereof to Contractor, which the Contractor must pay promptly. In case Contractor fails to perform remedial work, the performance security shall be forfeited.

l) The BPCL shall be at liberty to realize and enforce payment of the Performance Guarantee for non-fulfillment and unsatisfactory performance of the Contract without any notice or reference to the Contractor.

m) The BPCL may, at its option, remove such defective materials, at Contractor's expense in which event contractor shall, without cost to BPCL and as promptly as possible, furnish and install proper materials. Repaired or replacement materials shall be similarly guaranteed by the Contractor for a period of no less than 12 months from the date of replacement/ repair or five years from the date of commissioning whichever is later.

5. **REBATES/EXEMPTION IN DUTIES FROM MNRE**

It is the responsibility of the contractor to prepare complete project report and other Performa as per Ministry of New and Renewable Energy (MNRE) guidelines and get the concession/rebate in excise Duty/custom duty etc from MNRE, BPCL will provide necessary document to the contractor.

6. SUB-CONTRACTING OF WORK

Contractor shall not subcontract or assign, in whole or in part, its obligations to perform under this contract, except with Company's prior written consent. In the eventuality of sub-contracting of work, BPCL will be informed in advance. However, the Contractor's liability or obligations will not get altered/ delegated to sub-Contractor. If any sub-Contractor engaged upon the work at the site executes any work which in the opinion of the engineer in-charge is not in accordance with the contract documents, BPCL may give written notice to the Contractor advising him to terminate such sub-contracts and the Contractor on the receipt of such notice shall terminate such contracts.

INTEGRITY PACT**Between**

Bharat Petroleum Corporation Limited (BPCL) hereinafter referred to as "The Principal",

And

M/s.....hereinafter referred to as "The Bidder/Service provider/Supplier"

Preamble

The Principal intends to award, under laid down organization procedures, contract/s **for the job of providing Technology Solution pertaining to Accounts Receivable (O2C) Process in Centralized Shared Services Centre in BPCL and Consultancy services for implementing the same**. The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder/s, Service provider/s and Supplier/s.

In order to achieve these goals, the Principal cooperates with the renowned international Non-Governmental Organization "Transparency international" (TI). Following TI's national and international experience, the Principal will appoint an Independent External Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 - Commitments of the Principal

- (1) The Principal commits itself to take all measures necessary to prevent Corruption and to observe the following principles:
 - a. No employee of the Principal, personally or through family members, will in connection with the tender, or the execution of the contract, demand, take a promise for or accept, for himself/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.
 - b. The Principal will, during the tender process, treat all Bidders with equity and reason. The Principal will, in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential / additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.
 - c. The Principal will exclude from the process all known prejudiced persons.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder / Service provider/Supplier

- (1) The Bidder / Service provider/Supplier commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - (a) The Bidder / Service provider/Supplier will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person, any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange, any advantage of any kind whatsoever during the tender process or during the execution of the contract.
 - (b) The Bidder / Service provider/Supplier will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the bidding process.
 - (c) The Bidder / Service provider/Supplier will not commit any offence under the relevant Anti-Corruption Laws of India; further the Bidder / Service provider/Supplier will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - (d) The Bidder / Service provider/Supplier will, when presenting his bid, disclose any and all payments he has made, is committed to, or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder / Service provider/Supplier will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder, before contract award, has committed a transgression through a Violation of Section 2 or in any other form such as to put his reliability or credibility as Bidder into question, the Principal is entitled to disqualify the Bidder from the tender process or to terminate the contract, if already signed, for such reason.

- (1) If the Bidder/Service provider/Supplier has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Principal is also entitled to exclude the Bidder / Service provider/Supplier from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.
- (2) A transgression is considered to have occurred if the Principal after due consideration of the available evidences, concludes that no reasonable doubt is possible.
- (3) The Bidder accepts and undertakes to respect and uphold the Principal's absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.

- (4) If the Bidder / Service provider/Supplier can prove that he has restored / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.

Section 4 - Compensation for Damages

- (1) a) No employee of the Principal, personally or through family members, will in connection with the tender, or the execution of the contract, demand, take a promise for or accept, for himself/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.
- b) The Principal will, during the tender process, treat all Bidders with equity and reason. The Principal will, in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential / additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.
- (2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Service provider/Supplier liquidated damages equivalent to Security Deposit / Performance Bank Guarantee.
- (3) The Bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder / Service provider/Supplier can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount of the liquidated damages, the Bidder / Service provider/Supplier shall compensate the Principal only to the extent of the damage in the amount proved.

Section 5 - Previous Transgression

- (1) The Bidder declares that no previous transgression occurred in the last 3 years with any other Company in any country conforming to the TI approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders / Service providers / Suppliers / Subcontractors

- (1) The Bidder/Contractor/Supplier undertakes to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
- (2) The Principal will enter into agreements with identical conditions as this one with all Bidders, Service providers/Suppliers and Subcontractors.
- (3) The Principal will disqualify from the tender process all Bidders who do not sign this Pact or violate its provisions.

Section 7 – Punitive Action against violating Bidders / Service providers / Suppliers / Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Service provider, Supplier or Subcontractor, or of an employee or a representative or an associate of a Bidder, Service provider, Supplier or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 - Independent External Monitors

- (1) The Principal has appointed competent and credible Independent External Monitors for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- (2) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal.
- (3) The Bidder/Service provider/Supplier accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Bidder/Service provider/Supplier. The Bidder/Service provider/Supplier will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to this project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Service provider/Supplier/ Subcontractor with confidentiality.
- (4) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Bidder/Service provider/Supplier. The parties offer to the Monitor the option to participate in such meetings.
- (5) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or heal the violation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendation. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action. However, the Independent External Monitor shall give an opportunity to the Bidder/Service provider/Supplier to present its case before making its recommendations to the Principal.
- (6) The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.
- (7) If the Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- (8) The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Service provider/Supplier 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by Chairperson of the Principal.

Section 10 - Other provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. Mumbai. The Arbitration clause provided in the main tender document / contract shall not be applicable for any issue / dispute arising under Integrity Pact.
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- (3) If the Bidder/Service provider/Supplier is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

For the Principal

For the Bidder/Service provider/ Supplier

Place

Witness 1: -----
(Signature/Name/Address)

Date

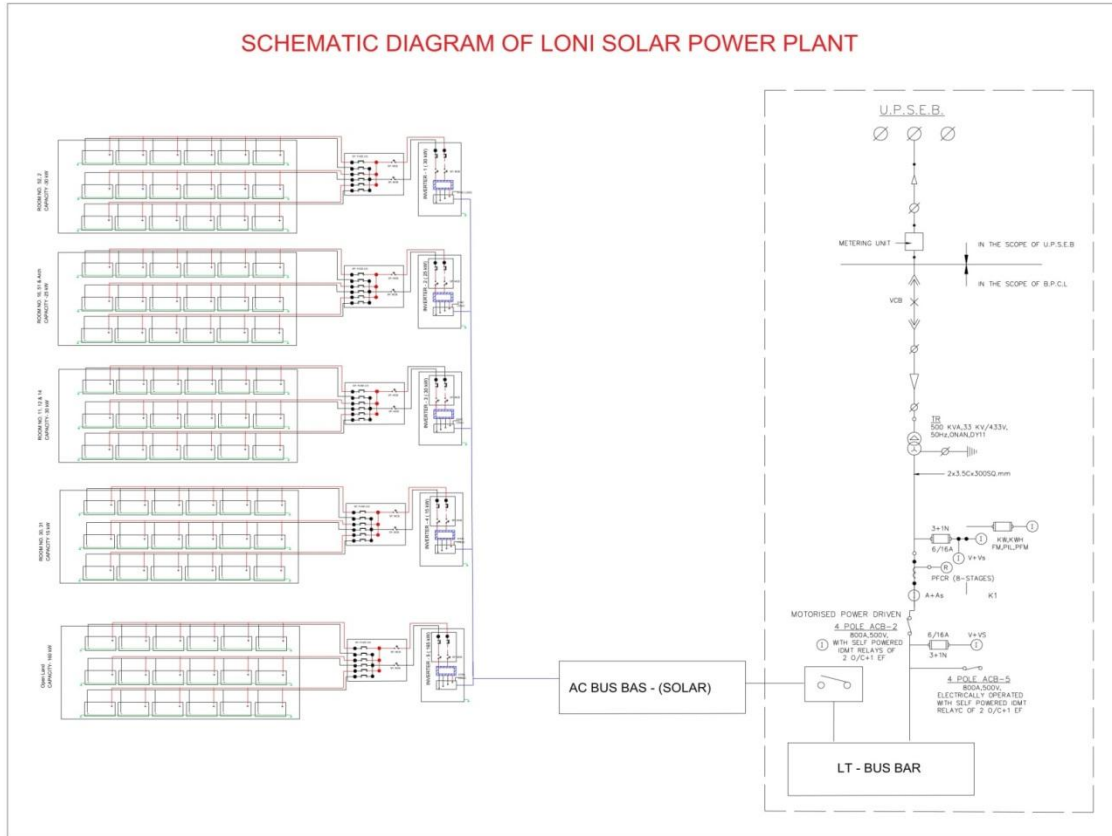
Witness 2: -----
(Signature/Name/Address)

#

1. Loni LPG plant Data

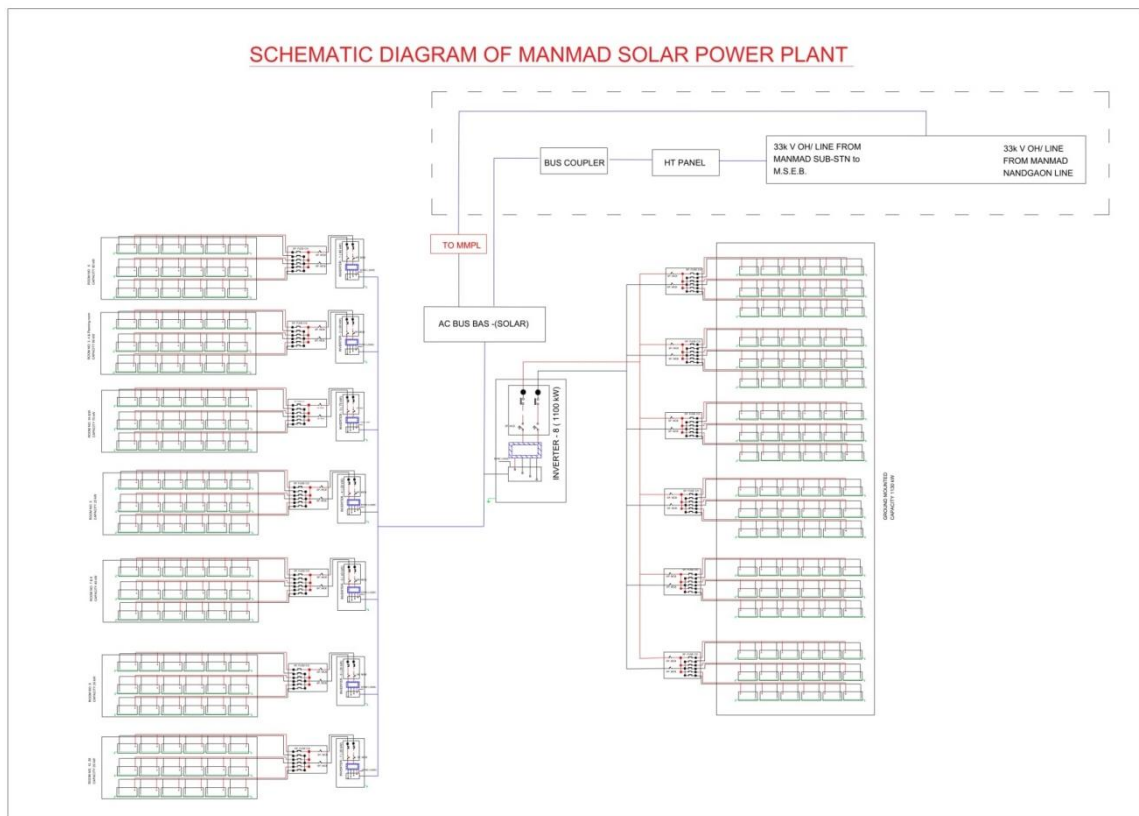
Sl. No	Location of the LPG/POL plant	Roof top/ Ground mount	Reference from layout	Building Roof Structure	Building shadow free rooftop Area (sq.m)	Proposed Rooftop Solar PV power Plant (kW)
1	Loni LPG plant Ghaziabad	Parking shed	2,52	Flat Rcc/ slope asbestos	423	30
2		Time office, Planning room	16	Flat Rcc	120	25
3		Stationary record room	51	Flat Rcc	60	
4		Gate 2 arch		Flat Rcc	126	
5		Elec. Substation and DG set room	11,12	Flat Rcc	272	30
6		Engineering store room	14	Flat Rcc	128	
7		Maintenance room and MCC	30,31	Flat Rcc	200	15
8		Open land				2520
Total					3849	260





2. Manmad POL plant data

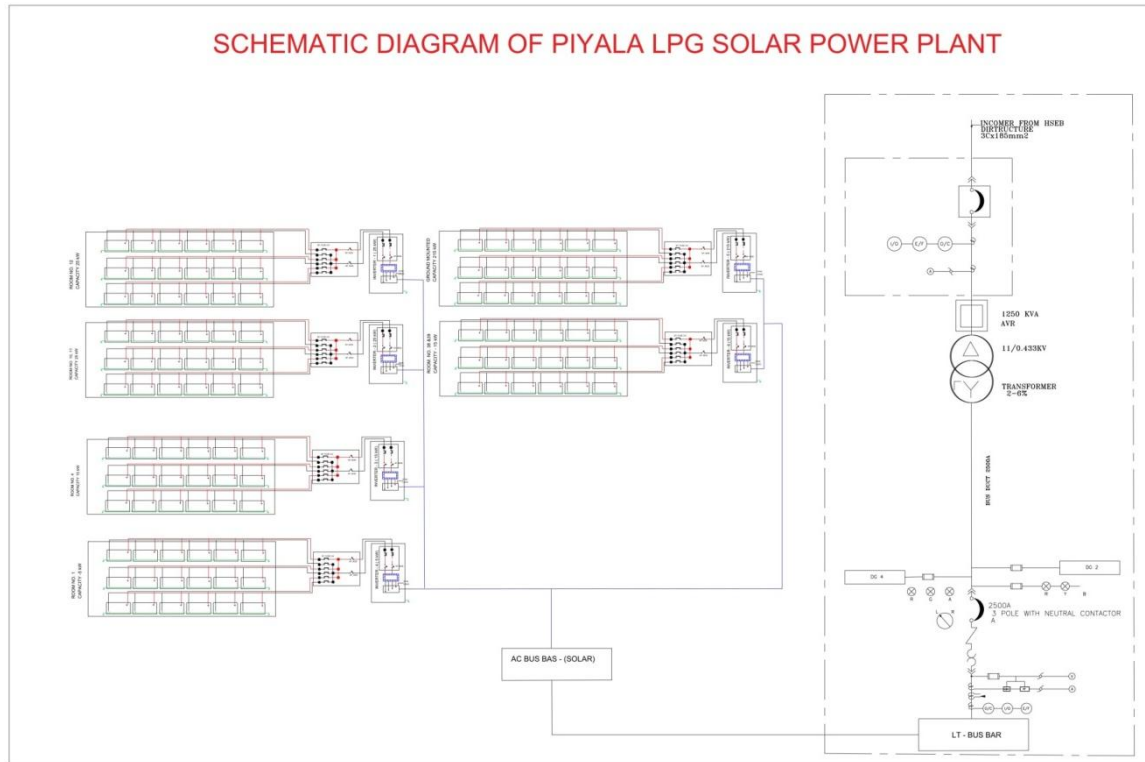
Sl. No	Location of the LPG/POL plant	Roof top/ Ground mount	Reference from layout	Building Roof Structure	Building shadow free rooftop Area (sq.m)	Proposed Rooftop Solar PV power Plant (kW)
1	Manmad POL Plant	Control room	6	Flat Rcc	960	80
2		Lab	7	Flat Rcc	240	40
3		Office block	8	Flat Rcc	300	
4		Amenity block	9	Flat Rcc	340	25
5		Planning room		Flat Rcc	110	80
6		Substation and DG room	3,4	Flat Rcc	883	
7		Parking shed	12	Slope	144	20
8		4Wheeler Parking shed	26	Slope	140	
9		Substation MMBPL	35	Flat Rcc	396	70
10		Control room MMBPL	34	Flat Rcc	480	
11		Fire fighting pump house	5	Flat Rcc	320	25
			Sub -Total			4313
12		Open Area Near the Gate			17000	1100
		Total (subtotal + open area)			21313	1440



3. Piyala LPG Plant Data

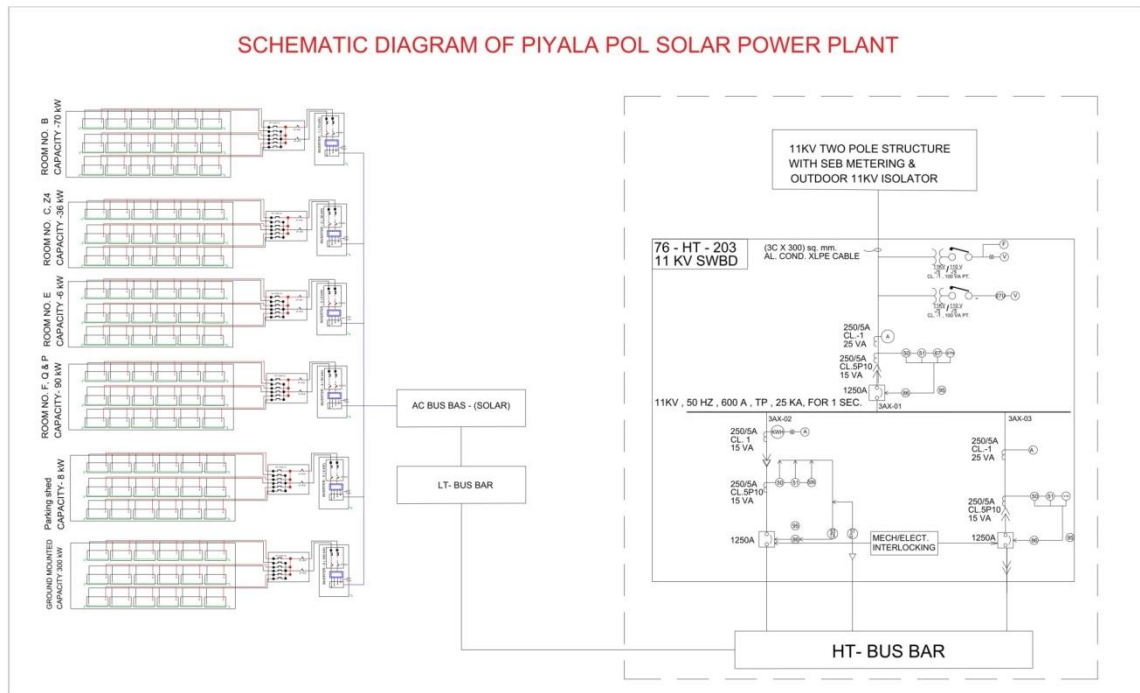
Sl.No	Location of the LPG/POL plant	Roof top/ Ground mount	Reference from layout	Building Roof Structure	Building shadow free rooftop Area (sq.m)	Proposed Rooftop Solar PV power Plant (kW)
1	Piyala LPG plant	Fire water pump house	12	RCC	418	25
2		DG room	10	RCC	152	25
3		Substation	11	RCC	188	
4		Parking shed	4	GI sheets	248	15
5		Admin office Avail space	1	Flat Rcc	72	5
6		Training room and Physical training centre	38,39	Flat Rcc	208	15
7		Open area near parking			1000	215
8		Open area			2265	
Total					4551	300





4. Piyala POL Plant Data

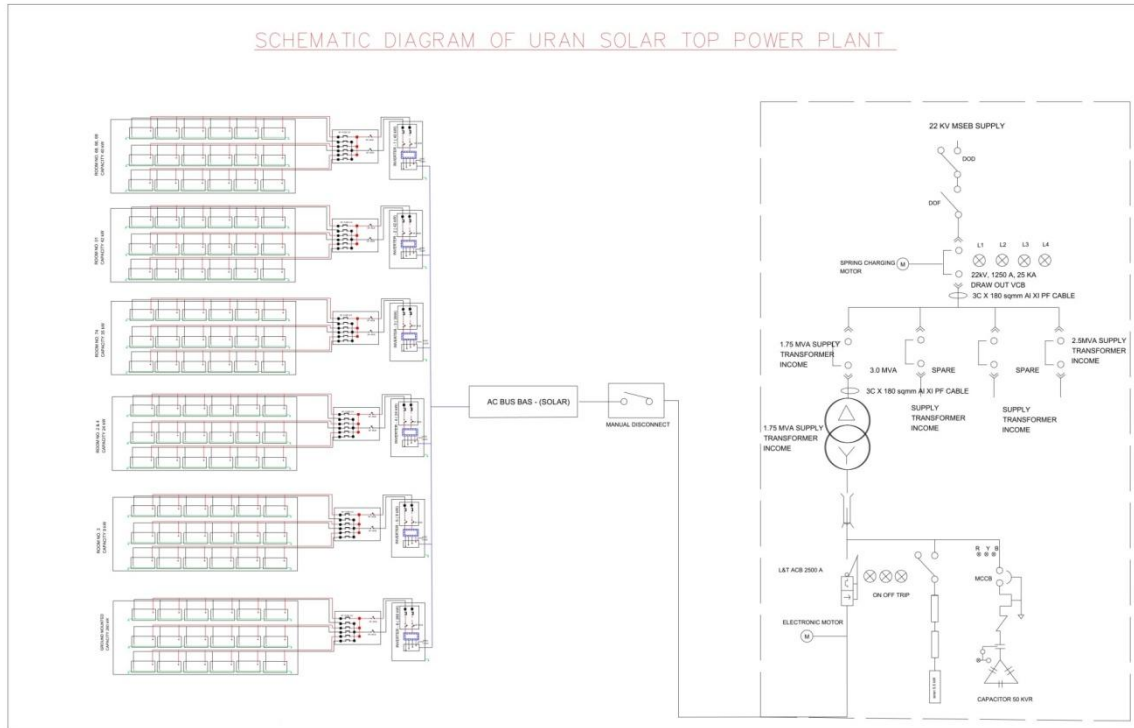
Sl. No	Location of the LPG/POL plant	Roof top/ Ground mount	Reference from layout	Building Roof Structure	Building shadow free rooftop Area (sq.m)	Proposed Rooftop Solar PV power Plant (kW)
1	Piyala POL plant	Admin Building	B	Flat Rcc	880	70
2		Cafeteria	C	Flat Rcc	228	36
3		QC lab	Z4	Flat Rcc	221	
4		Planning room	E	Flat Rcc	72	6
5		MCC/DG/LT room	F	Flat Rcc	320	90
6		DG room	Q	Flat Rcc	264	
7		Substation	O	Flat Rcc	528	
8		Sampling room	P	GI sheet flat	66	8
9		Parking Shed		GI sheet Slope	125	
10		Open Area			4500	300
Total					7204	510



5. Uran LPG plant Data

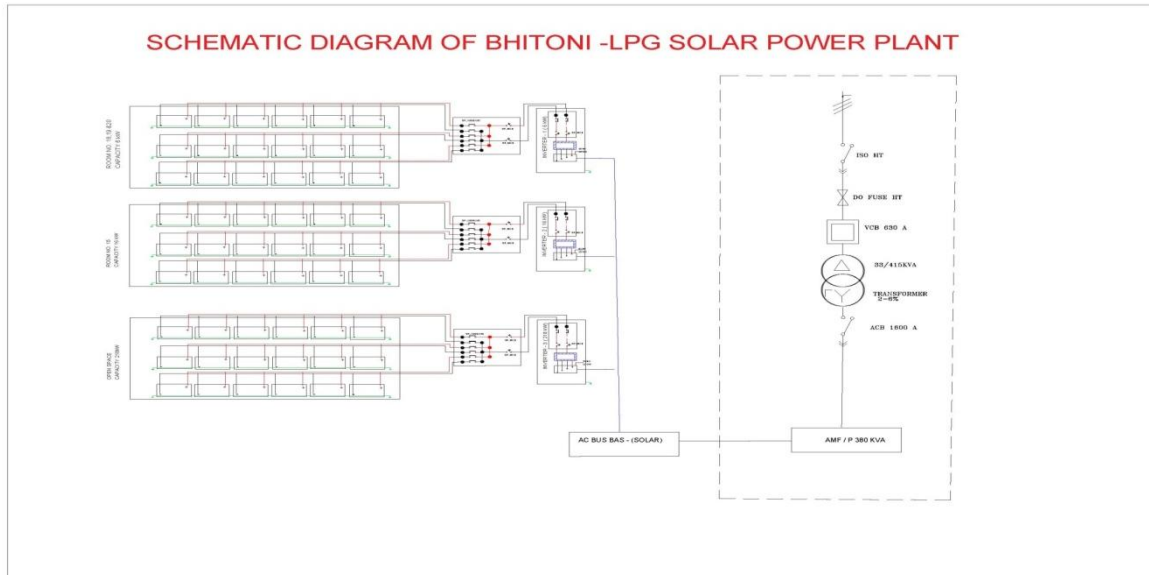
Sl. No	Location of the LPG/POL plant	Roof top/ Ground mount	Reference from layout	Building Roof Structure	Building shadow free rooftop Area (sq.m)	Proposed Rooftop Solar PV power Plant (kW)
1	Uran LPG plant	Transformer bay	68	Flat Rcc	520	40
2		HT room	66	Flat Rcc		
3		LT room	69	Flat Rcc		
4		Admin building	1	Flat Rcc	530	42
5		Security room	3	Asbestos	121	9
6		2 wheeler parking shed	2,4	Asbestos	350	24
7		Fire and Water pump house	74	Flat Rcc	450	35
8		Open area			4020	260
Total					5991	410





6. Bhitoni LPG plant data

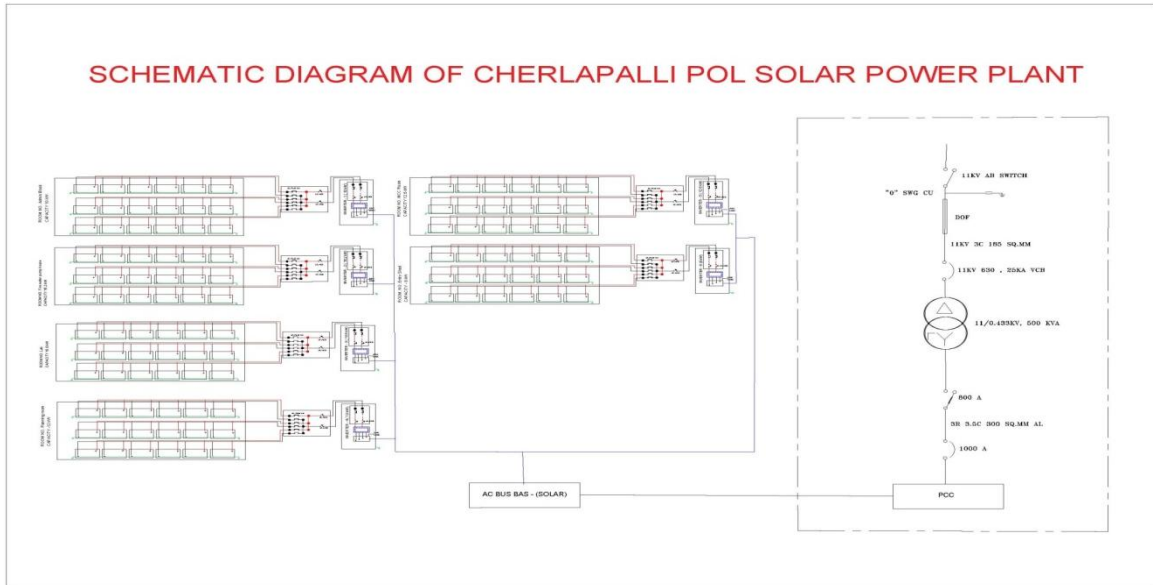
Sl. No	Location of the LPG/POL plant	Roof top/ Ground mount	Reference from layout	Building Roof Structure	Building shadow free rooftop Area (sq.m)	Proposed Rooftop Solar PV power Plant (kW)
1	Bhitoni LPG Pant	DG room, MCC Room & HT breaker room	18, 19 & 20	RCC	144	6
2		Fire water Pump	15	RCC	380	16
3		Open Area Behind Canteen (But in comes licensed area)		Open area	4800	218
Total					5324	240



7. Cherlapally POL plant Data

Sl. No	Location of the LPG/POL plant	Roof top/ Ground mount	Reference from layout	Building Roof Structure	Building shadow free rooftop Area (sq.m)	Proposed Rooftop Solar PV power Plant (kW)
1	Cherlapalli POL Plant	Admin Building		RCC	272	10
2		New fire water pump house		RCC	264	18
3		Restroom (Eng store Newly constructed)		RCC	28	
4		Engg stores (Training room)		RCC	79	
5		Lab		RCC	176	12
6		Planning room		RCC	32	2
7		MCC room		RCC	176	14
8		Engg Stores			55	
9		Entry shed				120
Total					1201	66



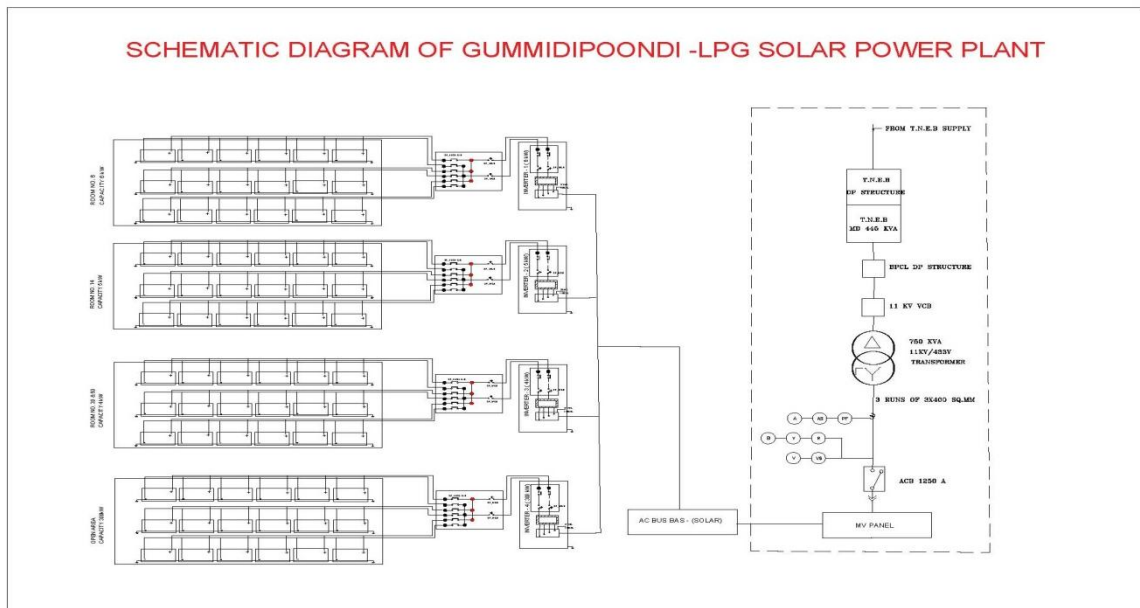


8. Gummidipoondi LPG plant Data

<i>Sl. No</i>	<i>Location of the LPG/POL plant</i>	<i>Roof top/ Ground mount</i>	<i>Reference from layout</i>	<i>Building Roof Structure</i>	<i>Building shadow free rooftop Area (sq.m)</i>	<i>Proposed Rooftop Solar PV power Plant (kW)</i>
1	Gummidipoondi LPG Plant	Fire water pump house	6	RCC	116	6
2		Air compressor CW pump house	14	RCC	113	5
3		Staff dress change room and Planning room	30 & 50	RCC	98	4
4		Open area			7225	300
Total					7551	315

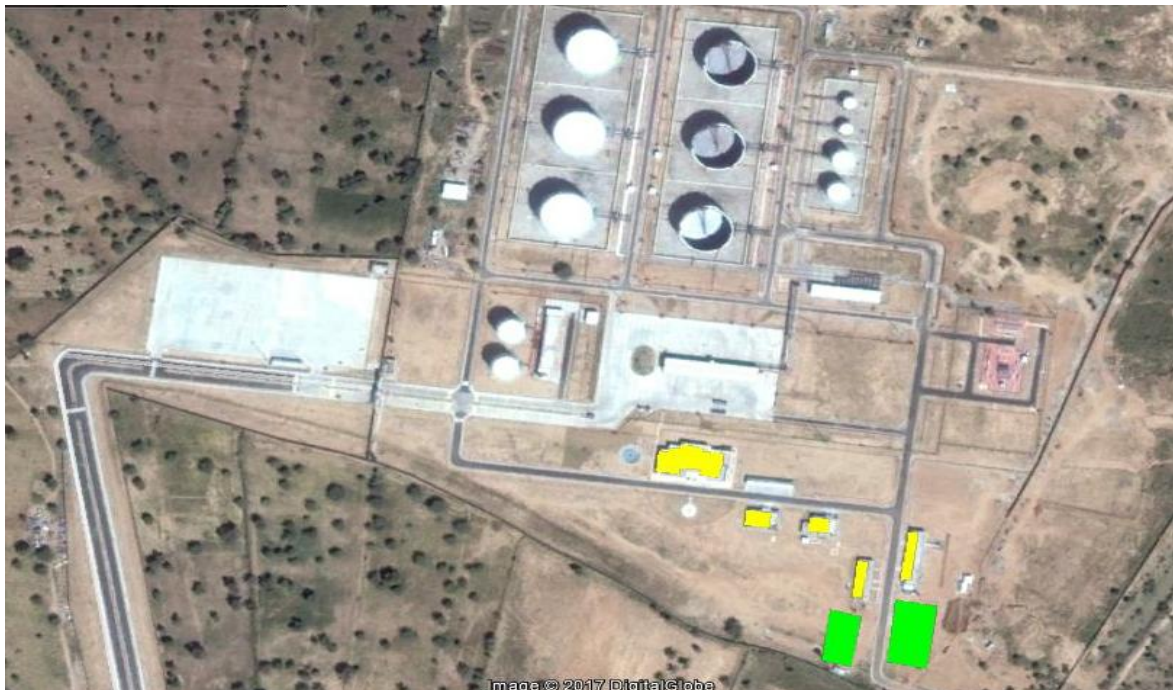


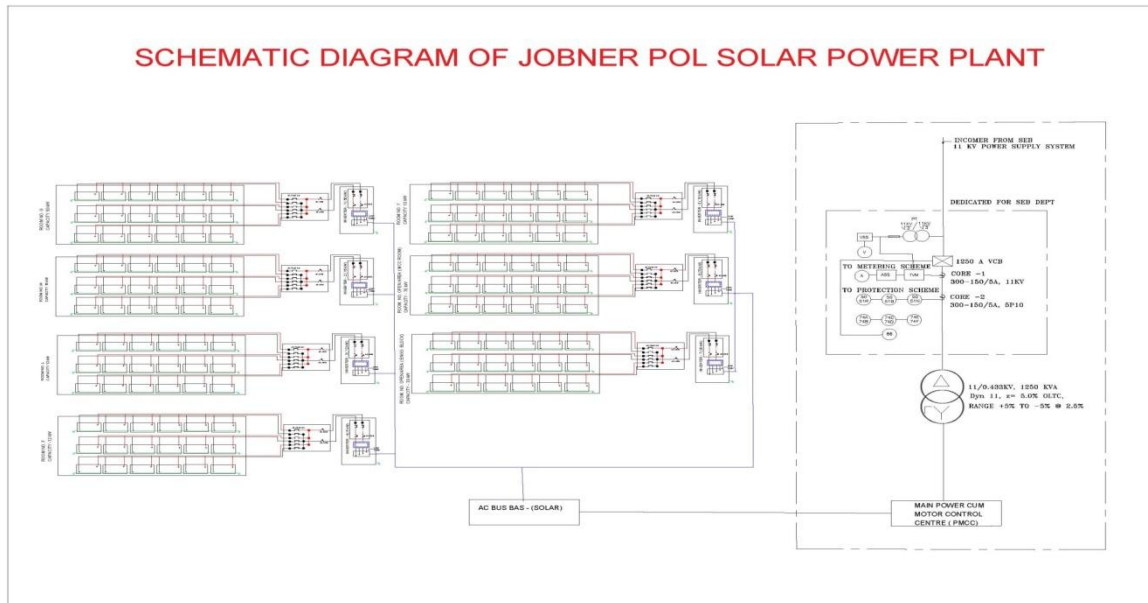
SCHEMATIC DIAGRAM OF GUMMIDIPOONDI -LPG SOLAR POWER PLANT



9. Jobner POL plant Data

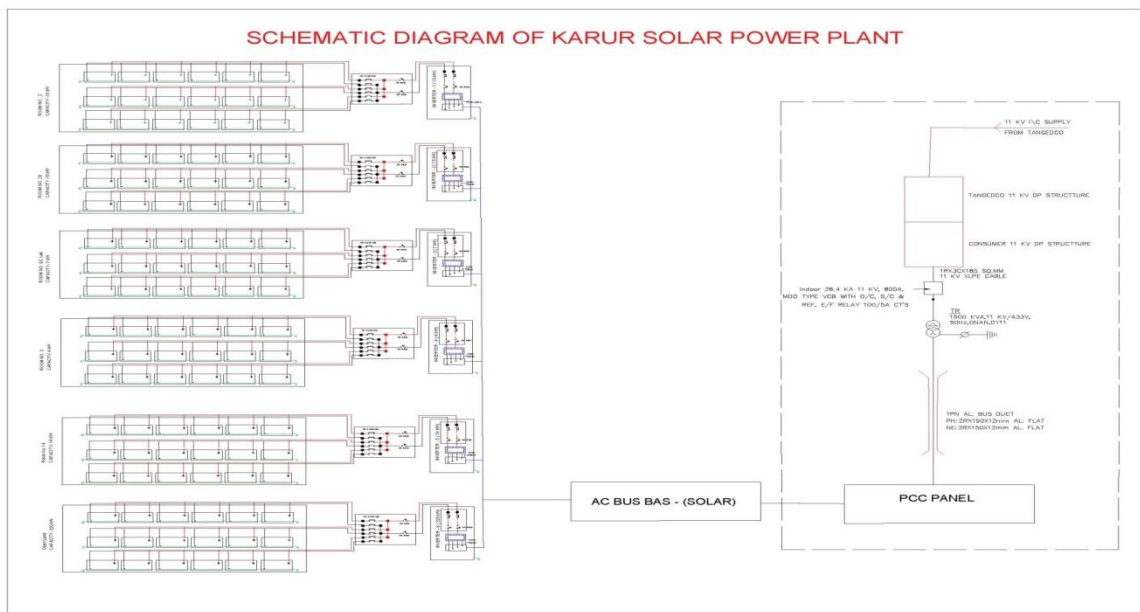
Sl. No	Location of the LPG/POL plant	Roof top/ Ground mount	Reference from layout	Building Roof Structure	Building shadow free rooftop Area (sq.m)	Proposed Rooftop Solar PV power Plant (kW)
1	Jobner POL Plant	Admin Building	G	RCC	912	50
2		MCC Room	M	RCC	309	16
3		Engg Store	L	RCC	224	12
4		Canteen Block	F	RCC	234	12
5		QA Lab	Y	RCC	193	10
6		Open Area Behind MCC Room	-		1250	70
7		Open Area Behind Engineering block	-		1000	30
Total					4121	200





10. Karur POL plant Data

Sl. No	Location of the LPG/POL plant	Roof top/ Ground mount	Reference from layout	Building Roof Structure	Building shadow free rooftop Area (sq.m)	Proposed Rooftop Solar PV power Plant (kW)
1	Karur POL Plant	Air compressor room	2	RCC	275	15
2		Water Pump room	29	RCC	285	15
3		QC Lab		RCC	142	7
4		Engineering stores room	3	RCC	100	4
5		Control room	14	RCC	275	14
6		Open space behind DG room				7040
Total					8117	375



CREDENTIAL INFORMATION

Sr. No.	PARTICULARS	BIDDER'S CONFIRMATION
1	Name of the bidder/ Company:	
2	Status of Firm/ Company: (Proprietorship Firm / Partnership Firm/ Company [Private or public])	
3	Registered Office Address & Contact details:	
4	Operational Address & Contact details: (If different from above)	
5	Number of years in the business	
6	Name & address of the Proprietor/ Partners/ Directors with percentage of share holding	
7	If any of the Proprietor/ Partner(s)/ Director(s) of the Firm/ Company participating in this tender, is also a proprietor/ Partner(s)/ Director(s) in any other Firm/ Company (dealing in Solar PV Projects), then please provide the following details:	(YES/NO)
	a. Name of Common Proprietor/Partner/Director	
	b. Name of the other Unit	
	c. Location	
8	Please confirm, if you are GST registered and if concession is available to the unit.	(YES/NO)
	a. If yes, what is the applicable rate of GST (concessional):	
	b. Provide SAC (Service Accounting Number) for each service	
	c. Please also indicate the current rate of GST without concession:	
9	Permanent Account Number	
10	State whether the Proprietor/ Any of the Partners/ Any of Directors of your Firm/ Company is related to Any of the Directors of BPCL	
11	If YES, state the Name of BPCL Director and Your RELATIONSHIP with Him	
12	State whether the Proprietor/ Any of the Partners/ Any of the Directors of your Firm/ Company is also a Director of BPCL	
13	If YES, state the Name/s of such BPCL Director/s	
14	State whether the Tenderer/ Firm/ Company is a Micro or Small Enterprise (MSE). If YES, please provide Supporting Document.	
14	State whether the Tenderer/ Firm/ Company is a Micro or Small Enterprise (MSE) owned by Scheduled Caste (SC) or the Scheduled Tribe (ST) Entrepreneurs. If YES, please provide Supporting Document.	
15	Confirm that you are not under any 'liquidation', any 'court receivership' or similar proceedings and 'bankruptcy'.	
16	Details and status of dispute in court of law (if any) of any kind which can affect the manufacturing, supply, installation, commissioning of Solar Power Plant's & O&M Contract	
17	Confirm quoted prices will remain firm and fixed (except for Statutory Variation and imposition of new tax/levies) as per Bid document till complete execution of the order.	
18	i) Confirm that all the applicable taxes and duties has been indicated in Price Schedule. Statutory variation in taxes and duties within contractual delivery period shall be to bidders account.	
	iii) Confirm in case of delay on account of bidder, any new or additional taxes and duties imposed after contractual delivery shall be to bidder's account.	
19	Confirm that PBG (10 % of value of engineering, supply, erection etc without O&M as per clause 3 under special condition conditions.	
20	Confirm Documentation & Testing charges as per Technical Specifications/Bid Document are inclusive in your quoted prices.	
21	Confirm all the raw materials & components and those required to be imported for the manufacture and supply of items will be independently procured by you at your cost and expenses. BPCL will not provide any Import License for the same.	

22. Provide performance Credentials in the form below:

Sr. No.	Client Name	Capacity (kW)	Location	Date of Commissioning	Technology Used	Expected Performance Ratio (PR)	Actual Performance Ratio (PR)	State reason(s) if the installed plant is performing below 90% of its expected performance ratio.

PRICE BID FORM

Sl. No.	Particular	Location	Unit	Qty (Capacity)	Unit Rate (Rs.)	Price for the total capacity	GST %	Total in Rs.
A	B	C	D	E	F	G= F x E	H	I = G + H
1.1	For Rooftop system Lumpsum for Detailed design, Engineering, procurement & supply of equipment, and materials, testing at manufacturers works, inspection, packing and transporting, unloading at site, construction, services, permits, erection, testing and commissioning of Grid Connected Solar PV Power Plant under net metering policy with associated equipment's and materials in line with TOR		kW	xx				
1.2	For Ground mount system Lumpsum for Detailed design, Engineering, procurement & supply of equipment, and materials, testing at manufacturers works, inspection, packing and transporting, unloading at site, construction, services, permits, erection, testing and commissioning of Grid Connected Solar PV Power Plant under net metering policy with associated equipment's and materials in line with TOR		kW	yy				
2.1	Remote/Web monitoring system for SPV power plant		set	1				
2.2	Weather Monitoring station	Manmad POL	set	1				
3.1	Annual Operation & Maintenance charges - Year 1		LS	1				
3.2	Annual Operation & Maintenance charges - Year 2		LS	1				
3.3	Annual Operation & Maintenance charges - Year 3		LS	1				
3.4	Annual Operation & Maintenance charges - Year 4		LS	1				
3.5	Annual Operation & Maintenance charges - Year 5		LS	1				

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