



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

4.16.6 Public Sector Enterprises and Central/State Government Department are exempted from furnishing Bank Guarantee against advance payment.

4.17 AUDITS OF CONTRACT

This contract is subjected to inspection by various audit/ vigilance agencies of government of India / HPCL. If any inspection of works is carried out by such agencies, bidder shall extend his full cooperation to these agencies in examining the records. On inspection by such agencies and in their inspection report, if it is pointed out that bidder has not carried out work according to the guidelines laid down in the tender documents and also if any recoveries in some items is pointed out therein, same shall be recovered from bidders running bills / final bill. The item under dispute shall not be paid in full till inspection agency gives their no objection report.

4.18 CANCELLATION OF CONTRACT (IN PART OR FULL)

4.18.1 HPCL reserves the right to carry out any job(s) through another agency at the cost and risk of the bidder if the bidder:

-- commits default in proceeding with the work with due diligence and continues to do so after a notice in writing within 7 days from the Location in Charge.

or

--commits default in complying with the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him by the Location in charge.

or



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

--fails to complete the works or item of works within individual/ particular date of completion on or before the date(s) of completion and does not complete them within the period specified in a notice given in writing by the Location in charge.

4.18.2 HPCL reserve the right to cancel the order / contract with 30 days advance notice.

4.19 HOLIDAY LISTING:

The guidelines for Holiday Listing as adopted and available on HPCL website shall be applicable to all tenders floated and all Purchase Orders/Contracts placed by HPCL.

4.20 DOCUMENTATION

The bidder has to submit the following documents within 21 day from the date of P.O.

4.21 RIGHT OF ACCEPTANCE

4.21.1. HPCL reserves all rights to reject any bid, including bids of those bidders who fail to comply with the instructions, without assigning any reason whatsoever and does not bind itself to accept the lowest or any specific bids. The decision of the HPCL in this regard shall be final and binding.

4.21.2. Any failure on the part of the bidder to observe the prescribed procedure and any attempt to canvass for the work shall render the bidder's bids liable for rejection.



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

4.21.3. HPCL reserves the right to award any or part or full contract to any successful bidder at its discretion and this will be binding on the bidders.

4.21.4. In case of failure to comply with the provisions of the terms and conditions mentioned by the bidder that has been awarded the contract, HPCL reserves the right to award the contract to the next higher bidder or any other outside bidder and the difference of price shall be recovered from the defaulting bidder, which has been awarded the initial contract and this will be binding on the bidders.

4.21.5. HPCL may terminate the contract if it is found that the Bidder is blacklisted on previous occasions by any of the Government Departments / Institutions / Local Bodies / Municipalities / Public Sector Undertakings, etc.



SECTION-5

SPECIAL CONDITIONS OF CONTRACT

SPECIAL CONDITIONS OF CONTRACT

5.1. GENERAL

Special conditions of contract shall be read in conjunction with the General Conditions of Contract, Scope of work, job description and specification of work, drawing and any other documents forming part of contract wherever context requires.



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

Notwithstanding the subdivision of the document into these separate sections, every part of each shall be deemed to be supplementary of every other part and shall be read with and into the contract so far as it may be practicable to do so.

Wherever 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 different intention appear, the provisions of the Special Conditions of Contract shall be deemed to override the provision of General Conditions of Contract only to the extent that such repugnancy or variance cannot be reconciled with the tender conditions of the contract and shall be to the extent of such repugnancy or variances, it is understood that the provisions of General Conditions of Contract shall otherwise prevail.

Wherever it is stated anywhere in this tender document that such and such a supply is to be made or/and such and such work is to be carried out, it shall be understood that the same shall be done by the bidder at his own cost, unless a different intention is specifically and expressly stated herein or otherwise explicit from the contract.

In the absence of any Standard / Specifications / Codes of practice for detailed specifications covering any part of the work covered in this bidding document, the instructions / directions of HPCL will be binding upon the BIDDER.

In case of contradiction between relevant International / Indian standards, GCC, Special Conditions of Contract, Specifications, Drawings and Schedule of Rates, the following shall prevail in order of precedence.

- i) Detailed Purchase Order along with Statement of Agreed Variations, if any, and its enclosures.
- ii) Schedule of Rates with Quantities.
- iii) Fax of Intent (FOI)/Letter of Intent (LOI)
- iv) Scope of Work
- v) Special Conditions of Contract
- vi) General Conditions of Contract



HINDUSTAN PETROLEUM CORPORATION LIMITED

PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

vii) Instructions to Bidders

viii) Relevant Indian / International Standards/ Specifications.

CONTACT PERSON:

Vivek M S Automation and IT Officer: Ph: 8547620784 email: vivek.ms@hpcl.in

SITE VISIT

The Bidder is advised to visit and examine the site of works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a Contract for the required job. The costs of visiting the site shall be borne by the Bidder.

The Bidder or any of its personnel or agents shall be granted permission by the Employer/ Owner to enter upon its premises and land/Area for the purpose of such visits, but only upon the express conditions that the Bidder, its personnel and agents will release and indemnify the Employer/ Owner and its personnel, agents from and against all liabilities in respect thereof, and will be responsible for death or injury, loss or damage to property, and any other loss, damage, costs, and expenses incurred as a result of inspection.

The Bidder shall not be entitled to hold any claim against Employer/ Owner for non-compliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the bid.

5.2. Net Minimum Generation guarantee (NMGG)

Net Minimum Generation Guarantee is minimum requirement of sum total generation from all solar plants (628KW). All internal & external factors such as age, performance of solar plants, annual weather conditions etc. are taken in to consideration for estimation of net minimum generation guarantee. Thus, NMGG should be achieved annually and on prorate monthly/quarterly basis, irrespective of local conditions, solar insolation, wind speed and direction, air temperature & relative humidity, barometric pressure, rainfall, sunshine duration, and losses due to near shading, incidence angle modifier, irradiance



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

level, temperature loss array loss, module quality loss, module array mismatch loss, and various inverter losses etc.

Availability of generation in line with prorated NMGG or lack thereof will be one of the deciding factors on which contract termination clause defined in this tender will be applicable.

Bidder shall be required to quote AMC rate in order to meet the Net Minimum Guaranteed Generation (NMGG), for 3 years period.

NMGG profile is as given below

Solar Plant	AMC Year	Minimum Expected Generation of Solar Plants	Net Minimum Expected Generation (KWh per year)	Net Minimum Generation Guarantee (KWh per year) 95% of the Net Minimum Expected Generation
258 KW Ground Mounted	Year 1	336600	825635	784353
250 KW Ground Mounted	Year 1	343035		
120 KW Roof Top	Year 1	146000		
258 KW Ground Mounted	Year 2	333234	817379	776510
250 KW Ground Mounted	Year 2	339605		



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

120 KW Roof Top	Year 2	144540		
258 KW Ground Mounted	Year 3	329902	809205	768745
250 KW Ground Mounted	Year 3	336209		
120 KW Roof Top	Year 3	143095		

The bidder has to maintain the Solar Plant equipment including full or partial repair, replacement etc. so as to ensure the above provided NMGG, on an annual basis, for which HPCL shall pay the agreed O&M charges only and no other charge/cost is payable by HPCL.

In exceptional cases such as non-availability of grid etc. if the bidder wishes to apply for relaxation in NMGG, the request for the same has to be submitted in the same month, in which the aforementioned exception event has occurred, to the officer in charge with valid reasons and backup data. The request will be reviewed by HPCL management and final decision will be made after scrutiny of the backup data provided and legibility of the claim.

The bidder, if he so wishes to, will be allowed to carry out minor relocation of the solar modules at their own cost for ensuring guaranteed net minimum generation. The entire cost including dismantling and re-erection, etc. will be borne by the bidder. To ensure NMGG, the bidder will be allowed to erect additional number of solar modules without extra cost to HPCL within the originally earmarked area without affecting moving and maintenance spaces.

The bidder shall be responsible for achieving NMGG during the period of 3 years from the date issuance of PO or LOI whichever is earlier. For any shortfall in the net minimum guaranteed generation corresponding to the offer, the compensation shall be recovered from the bidder from the quarterly AMC payment, bank guarantee etc.



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

In case of shortfall, HPCL would recover an amount to compensate for the less power generated, at the rate of Rs.8/- per very unit (KWh) of non-generation.

5.3 SCOPE OF WORK

The scope of work is divided into two sections,

Part 1: Pre AMC Servicing

AND

Part 2: Comprehensive AMC.

The details of solar plant and related equipment for which aforementioned scope of work is applicable is broadly given as under. However, if any other systems or subsystems not given in the below list which are required for the overall working of solar plants or for achieving Net Minimum Generation Gurantee is in vendor's scope.

Details of invertors:

Description	Connected System	Type of mounting	Make	Model	KW	Usage
Inverter 1	258 KW	Ground mounted	SMA/sunny tripower	STP 25000TL-30	25	Export to TNEB
Inverter 2	258 KW	Ground mounted	SMA/sunny tripower	STP 25000TL-30	25	Export to TNEB
Inverter 3	258 KW	Ground mounted	SMA/sunny tripower	STP 25000TL-30	25	Export to TNEB
Inverter 4	258 KW	Ground mounted	SMA/sunny tripower	STP 25000TL-30	25	Export to TNEB
Inverter 5	258 KW	Ground mounted	SMA/sunny tripower	STP 25000TL-30	25	Export to TNEB



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

Inverter 6	258 KW	Ground mounted	SMA/sunny tripower	STP 25000TL-30	20	Export to TNEB
Inverter 7	258 KW	Ground mounted	SMA/sunny tripower	STP 25000TL-30	25	Export to TNEB
Inverter 8	258 KW	Ground mounted	SMA/sunny tripower	STP 25000TL-30	25	Export to TNEB
Inverter 9	258 KW	Ground mounted	SMA/sunny tripower	STP 25000TL-30	25	Export to TNEB
Inverter 1	250 KW	Ground mounted	SMA	SOLID-Q50	50	Connected to Load
Inverter 2	250 KW	Ground mounted	SMA	SOLID-Q50	50	Connected to Load
Inverter 3	250 KW	Ground mounted	SMA	SOLID-Q50	50	Connected to Load
Inverter 4	250 KW	Ground mounted	SMA	SOLID-Q50	50	Connected to Load
Inverter 5	250 KW	Ground mounted	SMA	SOLID-Q50	50	Connected to Load
Inverter 1	120 KW	Roof top mounted	DELTA	RPI-M30A	30	Connected to Load
Inverter 2	120 KW	Roof top mounted	DELTA	RPI-M15A	15	Connected to Load
Inverter 3	120 KW	Roof top mounted	DELTA	RPI-M20A	20	Connected to Load
Inverter 4	120 KW	Roof top mounted	DELTA	RPI-M20A	20	Connected to Load
Inverter 5	120 KW	Roof top mounted	DELTA	RPI-M15A	15	Connected to Load



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

Inverter 6	120 KW	Roof top mounted	DELTA	RPI-M20A	20	Connecte d to Load
------------	--------	------------------	-------	----------	----	--------------------

Details of 11 KV SOLAR Transformer

	Make	Volt/Amp	Date of commissioning	19/02/2016
	KVA	315	REF I.S	2026
no load voltage	HT	11000	max ambient temp	50
	LT	415	max temp rise oil/winding	50/55
current Amp	HT	16.53	impedance voltage	4.52
	LT	438.22	core and winding	650
	phase HT/LT	3	weight of oil	365
	frequency	50	oil quantity	410
	cooling	ONAN	total weight	2015
	serial no jn	45166	year of manufacturing	2015
	vector dig	DYN11	connection dig no	3RD-451660

Details of 11KV VCB

Make	ABB	Date of commission	19-02-2016
KVA	315	operation sequence	0-0.33-co-3 min-co
Rated voltage	12000	short circuit breaker current	25 KA RMS



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

Rated current	800A	short circuit breaker withstand and duration current	25 KA 30 sec
	OVB-SDB 12.12.25	short circuit current	62.5 KA
		mass app	400 kg
phase HT/LT	3	CLOSING COIL SUPPLY VOLT	30 VDC
frequency	50	OPENING COIL SUPPLY VOLT	30 VDC
cooling	ONAN	MOTOR SUPPLY VOLT	230 VAC
serial no jn	1VYN0304150017 1	year of manufacturing	2015
Insulation level	28 KV/75 KV peak	instruction manual	1VYN401090-067

PART 1: PRE AMC SERVICING

Pre-AMC servicing includes all jobs that are required to be done for achieving NMGG and other general maintenance jobs of solar plants.

Pre-AMC servicing jobs are roughly summarized as below. However, any additional jobs that are needed to be done in order to attain NMGG is in bidderscope. Works Involved are, but not limited to the following:

1. Rectification/Servicing of 4 invertors (1 SMA STP 25000TL-30, 2 Nos SMA SOLID-Q50, 1 Nos DELTA RPI-M30A.) associated PV panels, ACDB panel and associated works. Rectification of invertors involves mainly reviving of termination block inside invertors.



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

2. Replacement of OTI & WTI and its indication panel of Solar Step Up transformer with associated wiring.
3. Replacement of damaged string cables (DC Cable - 6Sqmm quantity approximately 1000 meter).
4. Restoration or replacement of 5 Nos IP 65 String Box.
5. Replacement of 4 Radiator Coolant Wings of Solar (258KW) Step Up Transformer (315KV) and subsequent streamline oil filtration of transformer (After oil filtration is completed, test certificate from NABL Accredited lab needs to be provided for Break Down Voltage, Dissolved Gas Analysis and associated parameters (Supply of transformer oil in bidderscope).
6. Supply and installation of Cable legs, glands, terminal blocks, rails, ferrules etc. is in bidderscope.
7. Painting of Solar transformer and associated panels in bidderscope. Painting specs as per tender specs.
8. Supply, Installation & Integration of 1 Nos irradiation sensor for 258 KW solar plant.
9. Supply and installation of online monitoring system for 120 KW Roof top solar with DELTA make inverters.

After Pre-AMC servicing is completed, the solar plant should achieve Net Minimum Generation Guarantee (NMGG) as specified in tender terms and conditions. Once daily prorated NMGG is attained, system will be under monitoring for a period of 1 month. If the prorated NMGG is stable for a month, the AMC period will start at the end of 1 month stabilization period. The pre-AMC servicing will be deemed to be completed only after prorated NMGG stabilization for a month.

All tools, tackle, labor transportation, materials etc. for completion of pre-AMC servicing is in bidderscope.

Service Level Agreement with OEMs



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

The bidder should enter Service level agreement, with the inverter OEMs, M/s SMA and M/s DELTA and the proof the same should be submitted to HPCL before start of CAMC. The said service level agreement should be valid for a period of 3 years from the date of date of start of CAMC. The payment for pre-AMC servicing will be released to the bidder only after the proof of valid service level agreement with OEMs is submitted.

PART-2: CAMC OF SOLAR PLANTS

Scope includes comprehensive maintenance contract for operation and maintenance of 628KW (258KW Ground mounted+250KW Ground mounted+128KW Roof mounted) AC solar photovoltaic (PV) power plants including arrangement of spares, consumables, tools, tackles, testing equipment and instruments, labor for maintenance of solar PV plant on turnkey basis, for a period of 3 years on quarterly visit basis.

All Spares, Consumables, Tools and Tackles, necessary for maintaining NMGG are in the scope of the bidder and no extra cost other than the AMC Cost after applicable deductions should be paid to the bidder for the same.

The CAMC will include 3 type of visits needed to be carried out by bidder to HPCL Chennai new terminal during the PO period. The visits are as follows.

- 1) Weekly cleaning visit.
- 2) Breakdown visits.
- 3) Quarterly AMC visits.

Weekly cleaning visit

Cleaning of all solar panels, both ground and roof mounted, with water to be ensured once in every week after the commencement of CAMC period. Workers, water hoses, cleaning equipment etc. for the same to be deputed on weekly basis at vendor's own cost (Water will be provided by HPCL free of cost).

Breakdown Visits

Definitions of breakdown

- Any instance wherein the solar plants have stopped or have reduction in generation, partially or fully and thereby leading to a reduction in prorated NMGG.



HINDUSTAN PETROLEUM CORPORATION LIMITED

PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

- Any solar related equipment like solar transformer, Vacuum circuit breaker, islanding panel etc. stops working or requires urgent maintenance etc.
- Leaks in solar transformer, cable shorting or any such mishaps which have the potential to a safety concern in terminal.

In case of breakdowns, any visits, additional or supplementary to quarterly AMC visit, required for maintaining the prorated NMGG will be in bidder scope.

For any issues related to operation & maintenance, a Nominated contact person contact details shall be made available by the bidder and contact details are to be shared with HPCL before start of the contract.

Any breakdown related issues are to be resolved within 72 hours from the date of informing of the issue. However, the bidders also required to monitor prorated NMGG via online monitoring or other monitoring means and arrange for visits in case there is loss in generation even without any intimation from HPCL.

If breakdowns are not attended within above mentioned stipulated time of 72 hours, for each such instance, a penalty of Rs. 10,000 shall be imposed. The penalty amount will be deducted from quarterly AMC invoice.

Further, if the outage of the plant is more than 30 days continuously, then the 50% CAMC Performance Bank Guarantee amount shall be encashed by HPCL and if the outage is exceeding more than 60 days then complete CAMC Performance Bank Guarantee amount shall be encashed by HPCL. This CPBG will be applicable till the end of defect liability period as per the attached General terms and condition of this contract.

Quarterly AMC visit

Bidder is required to arrange 4-visits, once in every quarter to check and ensure the preventive maintenance of the solar plants. The reports of and associated with, quarterly AMC visits needs to be accepted and signed by HPCL officer in charge and same needs to be submitted along with respective quarterly invoice.

The scope of quarterly AMC is broadly given as under



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

- Checking of entire installed system
- Necessary Inspection and Maintenance of the contracted system(S) and take necessary corrective action.
- Clean all devices associated to solar plants.
- Check Communication devices and cables.
- Resolve any issues regarding the system and take corrective actions or the problem(s) existing.
- Inventory recording to help identify components for replacement.
- Check connectivity, communication and power supply at all terminals, Junction boxes, etc.

For quarterly AMC visit, the bidder to follow the following checklist format

Solar plant capacity			
Inverter sl no	##		
string no.	(+ve)&(-ve)voltage	(+ve)to ground voltage	(-ve) to ground voltage
1			
2			
...			

Phase to neutral voltage		Phase to phase voltage	
R-N		R-Y	
Y-N		Y-B	
B-N		B-R	
E-N			

CHECKLIST FOR QUARTERLY INSPECTION	
DATE OF INSPECTION	SIGNATURE OF BIDDER



HINDUSTAN PETROLEUM CORPORATION LIMITED

PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

SOLAR PLANT CAPACITY		SIGNATURE OF OFFICER
S1 No:	checks to carried out	remarks
MODULE AND ARRAY INSPECTION		
1	Module condition-[]module cleaning,[]damage of module ,[]dirt accumulation check shading observed on modules	
2	Inspect a subset of array top glass inspection - look for blemishes , spots, bonding of frame to glass and dis colouration	
3	Back sheet inspection - look for spot blisters burn through, discoloration	
4	Check for insulation for module wiring	
5	Proper wire condition and sizing	
6	Check for connectors on array wiring	
7	Inspect module junctions boxes-look for sealants, proper wire management	
8	Check for proper grounding of array and array mount	
9	Inspect module clamping methodology- check for loose fasteners , secured and sealed properly	
10	Note any discrepancies check for proper labelling visually check array-if broken, damaged or loose module, loose racking hardware, wiring and connectors	



HINDUSTAN PETROLEUM CORPORATION LIMITED

PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

11	Visually inspect all supporting part corrosion / evidence of rust, when encountered applied galvanisation spray	
12	Verify proper operation of dc disconnections	
13	Measure output circuit conductor to see if any combiner box is reading low	
14	Measure output circuit current of each combiner box on single string , if low check for all strings visually check all dc connections and combiners corrosion , blown fuses moisture entry heat distortion insect or rodent issues	
15	Check all duct seals, gasket and other sealing methodologies are fully intact and functional repair or replace if necessary	
16	Inspect wire , conduits ,piping tighten all electrical connections and correct if any issue is identified	
17	Check for ground continuity between the frame and racking structures	
18	Check for continuity of cable to electrical earth	
19	Check for corrosion -copper wires PV frame and galvanised steel racking structure for ballasted material is not degrade	
20	For folded rack site verify wind deflector are firmly attached to racking structure	



HINDUSTAN PETROLEUM CORPORATION LIMITED

PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

21	Inspect array for build -up of debris underneath clean whenever necessary	
22	Check for labelling	
Combiner box		
23	Measure the current each string , if found zero then check the fuse (replace if necessary) check for any damage of cabinet or enclosure	
24	Check for deposition of any dirt or dust	
25	Check out for wear out screws or handle of enclosure and support structure	
26	Check for any loose connections or tightness of the terminations	
27	Check for , heating , hardening of cables and change in colour of the component of the combiner box	
28	Proper wire condition , sizing and insulation	
29	Check for proper labelling	
30	Check for proper functioning of MCB , MCCB, other isolators	
Inverters		
31	Visually inspect inverter for external damage	
32	Check the functionality of inverter	
33	Check nthe insulation is neat and permanent	
34	Check inverter display and record all input and output voltages	
35	Clean area around inverter and verify base is sealed	



HINDUSTAN PETROLEUM CORPORATION LIMITED

PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

36	Shutdown ac /dc breakers to inverter , power down the inverter	
37	Wait for inverter to discharge	
38	Install safety lock out if necessary	
39	Check for conduit and wire sizes installed properly .check area around inverter is cleaned and verify base is sealed	
40	Vacuum all debris from inverter	
41	Visually inspect for moisture intrusions	
42	Clean or replace air filters and clean air returns	
43	Check the tightness of cable terminations	
44	Check for proper wire conditions , sizing and insulation	
45	Check for proper labelling of cables	
46	Inspect air filters	
47	Visually inspect inverters for external damage	
48	Check for functionality of inverter	
49	Check that insulation is neat and permeant	
50	Check inverter display and record all input and output voltages	
51	Clean area around inverter and verify base is sealed	
52	Shutdown ac /dc breakers to inverter , power down the inverter	



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

53	Wait for inverter to discharge	
54	Check for conduit and wire sizes installed properly .check area around inverter	
55	Inverter is cleaned and verify base is sealed	
56	Check for abnormal operating temperature	
57	Check for faulty fuses	
58	Check the system is properly opertaing	
59	Record inverter and meter power reding and meter power reading	
60	Check for noise level of inverter	
61	Torquing of terminal and fasteners	
62	Check for proper grounding levels	
63	Check for inverter ground fault interruptions	

5.4 TERMINATION CLAUSE

Termination for failure to meet NMGG requirements are as follows:

If net yearly generation is less than 90% of the yearly NMGG requirements

OR

If net quarterly generation is less than 20% of the yearly NMGG requirement

OR

If net monthly generation for 2 consecutive months is less than 12% of the yearly NMGG requirement, then HPCL reserves the right to terminate the contract and to recover an amount equivalent to the loss in total unit of generation.



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

However, in case eventualities, where in external factors, beyond the control of the bidder, contributes or causes delay in services, which leads to non-generation, the bidder can apply for a waiver of termination to HPCL management. This said waiver of termination application will be reviewed by HPCL management and suitable waiver may be provided if the case seems reasonable by HPCL.

Termination for Convenience

HPCL shall, in addition to any other right enabling it to terminate the Contract, have the right to terminate the Contract at any time by giving prior written notice of at least 14 (fourteen) days to the Bidder. Such termination shall be without prejudice to the rights of the Parties that have accrued on or before the date of termination of the Contract.

Termination Due to Bidder's Default

HPCL, at its sole and absolute discretion, upon the occurrence of any of the following events/acts committed by the Bidder (each a "Bidder's Event of Default") by may issue a notice to the Bidder, stating the intention of HPCL to terminate the Contract:

- Commits a material breach of its obligations under the Contract
- Abandons or repudiates the Contract or suspends the execution of the Works during
- The subsistence of any Dispute under the Contract; fails to adhere to the Specifications and/or Variations in terms of the Contract;
- A petition for the winding up of the Bidder has been admitted and a liquidator or provisional liquidator has been appointed or an order of bankruptcy or an order for the winding up or dissolution of the Bidder has been made by a Court of competent jurisdiction, except voluntary change in partnership/ constitution of Bidder's organization (if a partnership/ Company) or liquidation for the purpose of amalgamation or



HINDUSTAN PETROLEUM CORPORATION LIMITED

PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

reconstruction subject to HPCL's acceptance to continue the Contract with the re-constituted firm/company;

- Gives any warranty or makes any representation under the Contract which is found to be false or misleading;
- Fails to furnish or renew the Contract Performance Bank Guarantee;
- Commits any default under any Applicable Law.

5.4 LIMITATION OF LIABILITY

The aggregate total liability of the Bidder to HPCL under the Contract shall not exceed the total Contract Price, except that this Clause shall not limit the liability of the Bidder for following:

- i. In the event of breach of any Applicable Law;
- ii. In the event of fraud, wilful misconduct or illegal or unlawful acts, or gross negligence of the Bidder or any person acting on behalf of the Bidder, or in the event of acts or omissions of the Bidder which are contrary to the most elementary rules of diligence which a conscientious Bidder would have followed in similar circumstances; or
- iii. In the event of any claim or loss or damage arising out of infringement of intellectual property rights of any third party; or v. For any damage to any third party, including death or injury of any third party caused by the Bidder or any person or firm acting on behalf of the Bidder in executing the Works

Neither Party shall be liable to the other Party for any kind of indirect or consequential loss or damage including, loss of use, loss of profit, loss of production or business interruption, which is connected with any claim arising under the Contract.

Notwithstanding anything in the Contract to the contrary, no liabilities owed by the Bidder to HPCL that are covered by insurance obtained by the Bidder or HPCL shall be deemed to be included in the Bidder's aggregate liability for the purpose of determining the limit of the Bidder's liability under the Contract.

5.5. COMPOSITE PERFORMANCE BANK GUARANTEE FOR CAMC.



HINDUSTAN PETROLEUM CORPORATION LIMITED
PRE-AMC SERVICING & CAMC OF SOLAR PLANTS CHENNAI NEW TERMINAL

The bidder should submit an irrevocable Performance bank guarantee before the start of CAMC period for an amount equivalent to Rs 4,00,000/- (Rupees Four Lakhs Only) to guarantee for CAMC of 3 years including Net Minimum Energy Generation guarantee as specified in Scope of Job. The Bank Guarantee shall be valid for 3 years from the date of start of CAMC Period, with an additional claim period of 3 months.

5.6. PAYMENT TERMS:

Payment will be done through E-payment mode, within 15 days from the date submission of invoice and service reports duly signed by HPCL officer in charge.

The Invoice needs to be updated in HPCL Bill tracking system portal and originals needs to be submitted to our south zone office as per instruction in BTS portal.

Applicable deductions will be made from the quarterly payments or from performance bank guarantee, in the event where net minimum generation guarantee is not met.

- **Payment for Pre-AMC servicing**

For pre-AMC servicing payment will done only after NMGG is attained and stabilized for a month and proof of submission service level agreement with OEM as defined in the tender.

- **Payment Quarterly AMC Visit payment**

Payment for quarterly visit can be claimed once visit is completed within the stipulated quarter. Service reports of quarterly visit, duly accepted and signed by HPCL officer in charge, should be submitted along with the invoice.