

Form F-9

BIDDER'S EXPERIENCE

(To be submitted on the Letter Head of the Bidding Company)

Ref.No. _____

Date: _____

From: _____ (Insert name and address of Bidding Company)

Tel.#: _____

Fax#: _____

E-mail address# _____

To

Solar Energy Corporation of India Limited
(A Government of India Enterprise)
6th Floor, Plate - B, NBCC Office Block Tower - 2
East Kidwai Nagar, New Delhi - 110 023

Sub: Bid for "Operation & Maintenance for 05 (Five) Years of Existing 01 MW Grid Connected Rooftop Solar PV Power Project at Port Blair, UT of Andaman & Nicobar, Island, India".

Dear Sir / Madam,

Sl. No	Description of the Services	LOA /WO No. and date	Full Address & phone nos. of Client. Name, designation and address of Engineer/ Officer-in-Charge (for cases other than purchase)	Postal Address	Value of Contract /Order (Specify Currency Amount)	Date of Commencement of Services	Scheduled Completion Time (Months)	Date of Actual Completion	Reasons for delay in execution, if any
(1)	(2)	(3)	(5)	(6)	(7)	(8)	(9)	(10)	

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal

O&M Service of 01 MW Grid Connected Rooftop Solar PV Power Project at Andaman & Nicobar, India

Tender No
SECI/C&P/O&M/2021/A&N/01

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Signature
of Bidder

Form F-10

FORMAT OF CHARTERED ACCOUNTANT CERTIFICATE
FOR FINANCIAL CAPABILITY OF THE BIDDER
(To be submitted on the Letter Head of the Chartered Accountant)

Ref.No. _____

Date:

To

Solar Energy Corporation of India Limited
(A Government of India Enterprise)
6th Floor, Plate - B, NBCC Office Block Tower - 2
East Kidwai Nagar, New Delhi - 110 023

Sub: Bid for "Operation & Maintenance for 05 (Five) Years of Existing 01 MW Grid Connected Rooftop Solar PV Power Project at Port Blair, UT of Andaman & Nicobar, Island, India".

Dear Sir / Madam,

We have verified the Annual Accounts and other relevant records of M/s.....
(Name of the bidder) and certify the following

Further, we certify that the Financially Evaluated Entity (ies) had an Annual Turnover

A. ANNUAL TURNOVER OF LAST 3 YEARS:

Year	Amount (Currency)
Year 1:	
Year 2:	
Year 3:	

And

Net worth (strike out whichever is not applicable) of INR.....Crore computed as per instructions provided in this tender based on unconsolidated audited annual accounts as per last FY.

**O&M Service of 01 MW Grid Connected
Rooftop Solar PV Power Project at
Andaman & Nicobar, India**

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Signature
of Bidder

B. FINANCIAL DATA FOR LAST AUDITED FINANCIAL YEAR:

Description	Year _____
	Amount (Currency)
1. Current Assets	
2. Current Liabilities	
3. Working Capital (Current Assets- Current liabilities)	
4. Net Worth (As mentioned under Annexure to BDS)	

Yours faithfully

(Signature and stamp (on each page) of Authorized Signatory of Bidding Company.

Name:

Date:

Place:

Signature and stamp (on each page) of Chartered Accountant/Statutory Auditors of Bidding Company.

Name:

Date:

Place:

Notes:

Audited consolidated annual accounts of the Bidder may also be used for the purpose of financial criteria provided the Bidder has at least 50% equity in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Bid.

Form F-11**e-BANKING FORMAT****(To be submitted on the Letter Head of the Bidder)**

1. Bidder/ Customer Name :
2. Bidder/ Customer Code :
3. Bidder/ Customer Address :
4. Bidder/ Customer E-mail ID :
5. Particulars of Bank Account
 - a) Name of Bank :
 - b) Name of Branch :
 - c) Branch Code :
 - d) Address :
 - e) Telephone Number :
 - f) Type of Account :
 - g) Account Number :
 - h) RTGS IFSC Code :
 - i) NEFT IFSC Code :
 - j) 9 digit MICR code :

I/ We hereby authorize Solar Energy Corporation of India Limited to release any amount due to me/ us in the bank account as mentioned above. I/ We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, we would not hold the Solar Energy Corporation of India Limited responsible.

(Signature of Vendor/ Customer)

BANK CERTIFICATE

We certify that ----- has an Account no. ----- with us and we confirm that the details given above are correct as per our records.

Bank stamp

Date

(Signature of authorized officer of bank)

**O&M Service of 01 MW Grid Connected
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**Signature
of Bidder**

Form F-12

LIST OF BANKS

(For Reference Purpose)

SBI AND ASSOCIATES	OTHER PUBLIC SECTOR BANKS
1. State Bank of India	1. IDBI Bank Limited
2. State Bank of Indore	FOREIGN BANKS
	1. Bank of America NA
	2. Bank of Tokyo Mitsubishi UFJ Ltd.
	3. BNP Paribas
	4. Calyon Bank
	5. Citi Bank N.A.
NATIONALISED BANKS	6. Deutsche Bank A.G
1. Allahabad Bank	7. The HongKong and Shanghai Banking Corpn. (HSBC) Ltd.
2. Andhra Bank	8. Standard Chartered Bank
3. Bank of India	9. Societe Generale
4. Bank of Maharashtra	10. Barclays Bank
5. Canara Bank	11. Royal Bank of Scotland (RBS)
6. Central Bank of India	12. Bank of Nova Scotia
7. Corporation Bank	13. Development Bank of Singapore (DBS)
8. Dena Bank	14. Credit Agricole Corporate and Investment Bank
9. Indian Bank	SCHEDULED PRIVATE BANKS
10. Indian Overseas Bank	1. Federal Bank Limited
11. Oriental Bank of Commerce	2. Kotak Mahindra Bank Limited
12. Punjab National Bank	3. Axis Bank Limited
13. Punjab & Sind Bank	4. ICICI Bank Limited
14. Syndicate Bank	5. HDFC Bank Limited
15. Union Bank of India	6. Yes Bank Limited
16. United Bank of India	7. IDFC Bank Limited
17. UCO Bank	8. IndusInd Bank
18. Vijaya Bank	9. Karur Vysya Bank
19. Bank of Baroda	10. South Indian Bank
	11. RBL

Form F-13

SHAREHOLDING CERTIFICATE
(To be submitted on the Letter Head of the Bidder)

Name of the Equity Holder	Type and Number of Shares Owned	% of Equity Holding	Extent of Voting Rights

Yours faithfully

(Signature and Stamp of Authorized Signatory of Bidder)

Name:

Date:

Place:

(Signature and Stamp of Company Secretary/ Director/ Chartered Accountant)

O&M Service of 01 MW Grid Connected Rooftop Solar PV Power Project at Andaman & Nicobar, India	<u>Tender No</u> <u>SECI/C&P/O&M/2021/A&N/01</u>	<u>IFB</u> <u>Page 168 of 189</u>	<u>Signature</u> <u>of Bidder</u>
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Form F-14

POWER OF ATTORNEY FOR BIDDING COMPANY

(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value should be in the name of the Bidder)

Know all men by these presents, We (name and address of the registered office of the Bidding Company as applicable) do hereby constitute, appoint and authorize Mr./Ms. (name & residential address) who is presently employed with us and holding the position of as our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of our Bid for (insert details of Tender) in response to the Tender No dated issued by Solar Energy Corporation of India Limited (SECI), New Delhi including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the SECI may require us to submit. The aforesaid Attorney is further authorized for making representations to the Solar Energy Corporation of India Limited, New Delhi and providing information/ responses to SECI, New Delhi representing us in all matters before SECI, New Delhi and generally dealing with SECI, New Delhi in all matters in connection with Bid till the completion of the bidding process as per the terms of the above mentioned Tender.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the Tender.

Signed by the within named

..... (Insert the name of the executant company)

through the hand of

Mr.

duly authorized by the Board to issue such Power of Attorney

Dated this day of

Accepted

.....
Signature of Attorney
(Name, designation and address of the Attorney)

Attested

**O&M Service of 01 MW Grid Connected
Rooftop Solar PV Power Project at
Andaman & Nicobar, India**

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**Signature
of Bidder**

.....
(Signature of the executant)
(Name, designation and address of the executant)

.....
Signature and stamp of Notary of the place of execution

Common seal of has been affixed in my/ our presence pursuant to Board of Director's Resolution dated.....

WITNESS

1.
(Signature)

Name.....

Designation

2.
(Signature)

Name.....

Designation

Notes:

The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.

The person authorized under this Power of Attorney, in the case of the Bidding Company/ Lead Member being a public company, or a private company which is a subsidiary of a public company, in terms of the Companies Act, 1956, with a paid-up share capital of more than Indian Rupees Five Crores, should be the Managing Director/ Whole Time Director/ Manager appointed under section 269 of the Companies Act, 1956. In all other cases the person authorized should be a director duly authorized by a board resolution duly passed by the Company.

Also, wherever required, the executant(s) should submit for verification the extract of the chartered documents and documents such as a Board resolution/ power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).



SECTION – VII

SCOPE OF WORKS

Scope of Work for Operation and Maintenance

The O&M Contractor (herein after referred to as contractor) shall be responsible for the smooth day-to-day operation of the 1 MW Rooftop Solar Plant installed at 13 government offices in Port Blair as per list given at Annexure 1. (herein after referred to as Plant Facility)

Contractor shall be responsible for:

- Regarding performance obligation, O&M contractor has to maintain minimum CUF of 13%
- Maximizing plant capacity utilization, (minimum CUF of the Plant facility should be 13%.)
- Reducing plant downtime. The contractor has to ensure the plant availability upto 99%. However, the plant availability due to grid outages will be considered if the same are certified by the competent authority of Electricity Department, A&N Admin (ED-A&N) / DISCOM.
- During O&M contract, the Plant performance will be evaluated based on annual Capacity Utilization Factor. Second year onwards linear degradation of the module output (i.e., 0.75% of DC capacity at STC per year) shall be considered for the calculated CUF every year.
- Optimizing the useful life of the equipment of the power plant.
- The Contractor shall provide necessary routine, breakdown and preventive maintenance schedules of the plant for the Employer's approval and shall carry out all routine, breakdown and preventive maintenance accordingly.
- The Contractor shall perform periodic overhauls and preventive maintenance required for the Plant in accordance with the recommendations of equipment manufacturers and as per the O&M manuals Please refer Annexure 2.
- The Contractor shall prepare the initial Annual Operating Plan for the Plant Facility and shall indicate the proposed resources (manpower, material, tools and tackles) that would be deployed for O&M subject to a minimum of following:

Manpower:

- *Project Manager*: 1 No. (minimum Qualification: A relevant degree in engineering with at least 5 years of experience of working in O&M of Solar PV Plants or A relevant Diploma in engineering with atleast 7 years of experience of working in O&M of solar PV plants)
- 2 Nos. of Electrical Engineers – (minimum Qualification: Diploma in Electrical Engineering)

Tools/ Tackles/ Testing Equipment:

1. Array tester

Parameter	Specification
Display	Backlit LCD or LED display

Functionality	All electrical tests required by IEC 62446-1:2016
Memory	Up to 200 records & USB downloadable to Computer
Accessories	
A set of two, 4mm fused leads for extra protection during installation tests.	
Leads which enable the array tester to connect directly to PV arrays	
1 set of spare battery	

2. Insulation tester

Parameter	Specification
Display	Backlit LCD or LED display
Insulation Test Range	0.1 MΩ to 10 GΩ
Test Voltage	250V, 500V, 1000V, 5000V
Test Voltage accuracy	+20% on positive side only no negative variation is allowed
Insulation Test Current	1 mA nominal
Auto Discharge	Discharge time < 0.5 Second for C = 1
Open Circuit test Voltage	>4 V, <8 V
Accessories	
Heavy duty Test Lead Set – 4 Nos.	
Carry Case with sufficient space for accommodating accessories.	

3. Digital Multimeter

Parameter	Specification
Display	Backlit LCD or LED display; Minimum resolution: 4.5 digits for DC, 3.5 digits for AC
Measuring Category	1000V CAT III as per IEC Standard 61010-1; wave shape independent RMS measurement (True RMS) suitable for operation in the site conditions.
Additional Functions	Resistance (Ω), Temperature (°C), Continuity, Diode, Capacitance, Frequency, Duty cycle measurement
Accessories	

Temperature Probe
Silicon Test Lead
Alligator Clip
Carry Case with sufficient space for accommodating accessories.

4. Clamp meter

Parameter	Specification
Display	Backlit LCD or LED display
Measuring Category	1000V CAT III as per IEC Standard 61010-1; wave shape independent RMS measurement (True RMS) suitable for operation in the site conditions.
Current Range	AC&DC Current up to 1000A/400 A
Voltage range	AC&DC Voltage up to 1000V
Additional Functions	Resistance, continuity, diode and non-contact voltage detection, Active, Reactive and Apparent Power, THD, PF
Accessories	
Test leads	
Electrical test leads	
Probe light & extender	
Carry Case with sufficient space for accommodating accessories.	

5. Infra-red thermal imaging camera

Parameter	Specification
Spectral response	8 μ m to 14 μ m (LW)
Temperature-sensitivity and calibration range	-20 °C to +120 °C
Atmospheric air temperature	-10 °C to +40 °C
Thermal sensitivity	NETD \leq 0.1 K at 30 °C
Geometric resolution	640 x 480 pixels
Photo camera resolution	Approx. 30 times of IR camera resolution
Absolute error of measurement	< \pm 2 K
Adjustable parameters	Emissivity, ambient temperature
Adjustable functions	Focus, temperature level and span

Measurement functions	Measuring spot, measuring area with average and maximum temperature
Calibration	The measuring system (Camera, lens, aperture and filter): The camera has to be traceably calibrated at least every two years. The calibration has to be documented. If the camera is not compliant, it has to be readjusted by the manufacturer.
Documentation	Storing of the infrared picture with the radiometric data

Note: The O&M Contractor shall submit the same to the Employer for Approval.

- The Contractor shall operate and maintain fire protection system and safety equipment for the plant.
- The Contractor shall maintain required spare plant Equipment, Spare Parts, tools and tackles, consumables required for comprehensive operation and maintenance of the plant facility. The Contractor shall make arrangement to procure required spare parts, or equipment/s as required, overhauling of parts, tools and equipment, required to operate and maintain the Plant in accordance with the recommendations of individual original equipment manufacturer at his own cost. Cost of Equipment & spare parts shall be included in the O&M quoted cost. The List of Consumables, Spare Parts, tools and equipment shall be finalised in consultation with the Employer or Employer's representative. List of recommended spare parts shall be submitted by the Contractor at the beginning of services, however the complete recommended spares will be in the scope of contractor only.
- It is the responsibility of the Contractor to store the materials in appropriate stock yard or container at the site so as to ensure timely availability of the materials.
- The Contractor shall employ only such personnel who are adequately qualified and experienced for operating and maintaining such power generating sets.
- The contractor shall adhere to all labour laws which are applicable and as specified in this contract document.
- The Contractor shall maintain all accounting records regarding the facility in accordance with the generally acceptable accounting principles under the Laws of India.
- The Contractor shall maintain accurate and up-to-date operating logs, records and monthly reports regarding operation and maintenance of the Plant facility which shall include details

of power output, other operating data, repairs performed and status of equipment. All such records to be maintained for a minimum of 60 (sixty) months after the creation of such record or data and for any additional length of time required by regulatory agencies with jurisdiction over the Parties. Upon expiry of term, the Contractor shall hand over all such records to Employer. However, Employer shall have access to all such records at any time.

- h. The Contractor shall develop and implement plans and procedures including those for firefighting, maintenance planning, procuring and inventory control of stores and spares, plan to meet emergencies, plant safety and security; and such other facilities and systems as may be necessary to commence Contractor's ongoing responsibilities.
- i. The Contractor shall be responsible for liaisoning with statutory authorities—and local authorities in order to ensure smooth operation of the Power Plant.
- j. Shall co-ordinate with SCADA OEM to implement software updates to control and monitoring systems including SCADA in order to meet the plant facility operating requirement in consonance with the grid operations and in compliance with the grid codes as applicable during the operation.
- k. Duly and timely provide the Employer (or parties designated by the Employer) with all notifications required under the Contract.
- l. Contractor shall provide access to the Employer to all data for the Plant Facility from the SCADA system.
- m. Contractor shall at all times allow and provide Employer all necessary information for the operation of SCADA system (with no notification or approval of access being required unless specifically and otherwise agreed to by the Parties) full, free, unconditional, safe and complete access to the SCADA system. Contractor shall monitor and operate the Plant in accordance with the contract and shall ensure smooth operation of the plant.
- n. The Contractor shall conform to standard industry practices for Health, Safety and Environmental (HSE);
- o. The Contractor shall take necessary steps to prevent sabotage, theft, vandalism and malicious damage of the assets comprising the Plant, and shall also coordinate and liaison with law enforcement authorities. The Contractor shall take all possible measures to keep the plant operational and secure.
- p. Contractor shall Coordinate with **<Electricity Department, A&N Admin. / DISCOM>** and other related entities/departments as required for proper operation of the Plant Facilities. Contractor shall take appropriate approval from Employer, rooftop owner / A&NA before dismantling of any part of plant or any such work is carried out that may affect the roof /

building. Also coordinate with SECI, Electricity Department, A&N Admin, other relevant agencies for monthly Joint Meter Readings, meter testing, and any other requirements such as any audit or inspection by the government agencies or authorities, financiers, any designated third-party agency etc. for the Project operations.

- q. Water requirement for module cleaning arrangement and the cost for the same shall be borne by the Contractor. The Contractor shall arrange for water on it's own, by ensuring environment social impact assessment (ESIA) norms / relevant government norms of South Andaman district administration / A&N Administration for the use of water.
- r. Contractor shall be responsible to comply with all applicable National and International Standards as well as local statutory provisions related to Environmental Protection Regulations, Health and Safety requirement as notified by Govt. of India.
- s. Contractor will be responsible for coordinating with the OEMs for securing warrantee conditions and services from OEMs as per the warrantee of each equipment, as well also for the Plant facility insurance claims.
- t. Contractor shall carry out the performance monitoring for the Plant Facility on continuous basis and in case of any deviation, the Contractor shall perform the due diligence appropriately to find out the actual root cause of such deviation. Any test or inspection required such as thermal imaging, IV characteristics test etc. to analyse such deviation will be the responsibility of the Contractor. Thereafter the corrective action required to mitigate such deviation shall be undertaken by the Contractor without any additional cost.
- u. Co-ordination with EDA&N/Discom as per the requirement on behalf of Employer for Joint Metering Report (JMR), furnishing generations schedules as per requirement, revising schedules as necessary and complying with grid requirements.

Reports and Other Deliverables:

The O&M Contractor shall be required to submit to SECI following Reports and deliverables.

The Formats shall be finalized with SECI at the time of signing of Contract.

S. No.	Reports	Periodicity ¹
1.	Breakdown/Troubleshoot/Downtime Report	Every Month
2.	Failure Analysis/history/trouble shooting details of all the Equipment	Every Month
3.	RCA Report	Within 3 weeks of Breakdown Event

¹ Note: To be updated to align with OEM requirements.

S. No.	Reports	Periodicity ¹
4.	Generation Report including – Roof top Wise	Weekly
5.	Spares Consumption and Inventory Report	Monthly
6.	PV Modules Cleaning Schedules (Scheduled and Actual)	Monthly
7.	PV Modules Thermal Imaging Report	Half Yearly
8.	Preventive Maintenance Schedules (Actuals)	Monthly
9.	Grid Interruptions Report	Monthly
10.	Vegetation Cleaning Report (to clear Shading Objects)	Monthly
11.	Warranty Claim Report	Half Yearly
12.	Preventive Maintenance Schedule for ensuing Month	Monthly

Employer's Responsibility

1. The Employer shall provide the complete set of Plant documentation, drawings, GTPs, Warranty Certificates to the Contractor.
2. Facilitate co-ordination with the Electricity Department, A&N Administration / DISCOM

ANNEXURE 1

Site Details: 1 MWp Grid Connected Rooftop Solar Project at Port Blair, A&N Islands

Sl. No.	Name of the Building	Capacity (kWp)	Number of Modules	Inverter (kWp)	Number of Inverters
1	Netaji Stadium	93	300	108	4
2	Fish Aquarium	62	200	54	2
3	Police Headquarters	27.9	90	27	1
4	SP Office	58.28	188	54	2
5	JNRM college	27.9	90	27	1
6	Bus Terminal, Transport Deptt	55.8	180	54	2
7	Municipal Corporation	109.12	352	108	4
8	Secretariat	27.9	90	27	1
9	Zilla Parishad	60.14	194	54	2
10	Polytechnic College	89.28	288	81	3
11	Science Museum	55.8	180	54	2
12	Electricity Headquarter	18.6	60	27	1
13	Marine Dockyard (3 sites)	314.34	1014	324	12
	Total Capacity (kWp)	1000.06	3226	999	37

ANNEXURE 2

- A. In consideration for the payment of the O&M Price, from the Commencement Date until the end of the Term, the Contractor shall render O&M services as specified in the Scope of Work for Operation and Maintenance on the terms and conditions set forth in this contract.
- B. The Contractor guarantees the schedule of services committed herein over the O&M Period from the date of issue of LOA.
- C. The O&M Contractor shall guarantee to the Owner, minimum Plant Availability of 99%, where Plant Availability refers to the state of Plant injecting power into the grid (subject to grid availability). (unless otherwise agreed / approved by the owner for partial injection due to reasons such as repair of roof etc.)
- D. In case the Project fails to generate any power continuously for 1 month any time during the O&M period, apart from the force majeure and grid outages as certified by competent authority from ED-A&N, it shall be considered as “an event of default”. In the case of default the entire Contract Performance Security will be forfeited.
- E. For the purpose of Clause D above, the PM activities shall be inclusive of, but not limited to, the following PM activities:

Item	Scope of Maintenance Activity	Periodicity
Solar PV Panels	<p>O&M Contractor shall inspect modules for: cracks, discoloration, broken glass, holes, bubbling, delamination, environmental seal deterioration, frame damage, excessive soiling, cord-plate separation/arching, position movement, loose or disconnected wires, proper panel affixation in the tracker or racking system, condition of electrical, grounding and mechanical connections (which should be clean, secure, undamaged, and free of corrosion), animal damage/nesting and vegetation overgrowth causing shading.</p> <p>Modules that are suspected of underperformance shall be inspected using infrared thermography and the results shall be included in the next monthly report.</p>	Once every month

	O&M Contractor shall clean the modules with water, soft sponge, isopropyl alcohol submit the cleaning report to SECI along with the proof of cleaning.	
String	<p>O&M Contractor shall visually inspect all string level wiring and wire management for: strained wires, disconnected/separated connectors, crimped wire radii, unsecured wire harnesses/clips, animal damage/nesting, and grounding.</p> <p>O&M Contractor shall verify that AC and DC disconnects are free of damage, corrosion or arc evidence and open and close freely.</p> <p>O&M Contractor shall test each string for proper open circuit voltage and proper operating current during normal inverter operations, replace fault DC cables (4 SQMM), if any.</p> <p>O&M Contractor shall inspect all conduit to ensure it is structurally supported and secure and that the points where any array wiring enters conduit are secure, properly sealed to prevent the entry of precipitation and moisture, and free of abrasion, breaks or gaps on or in wire insulation.</p> <p>O&M Contractor shall maintain and repair string and harness.</p>	Once every month
String inverters	<p>As per OEM Recommendation.</p> <p>O&M Contractor shall use infrared thermography to inspect inverters during operation when irradiance is above 400 W/m².</p>	As per OEM recommendation.
Environnemental / Corrosive Protective Coatings	White-washing / Application / Re-application of Distemper Epoxy coatings	Once in every 2 years under the O&M Contract period, in consultation with the Employer
Rodent Entry Points	Application/re-application of Anti-rodent protection measures like PUF filling, sealant etc. at Checker/Gland Plates, Cable Entry Points (in PCU, LT Switchgear Panels)	Once every Six Months
All bolted / tightened structures	Tightening / fastening of bolts that are exposed to winds /vibrations like MMS members/foundation bolts	Once every Year before in consultation with the Employer

Enclosures of Equipment requiring Temperature and Dust Controlled environment for Normal Operation	Application/re-application of insulation/Dust-Filters /Temperature-control equipment at Enclosures/Buildings housing Inverter, Switchgear,	Once every 6 months, consultation with the Employer
Earth pits	Test of earth pits	Once in month

F. WARRANTY MANAGEMENT AND SUPPORT

O&M Contractor, on behalf of Employer, shall be responsible for pursuing compliance of all performance obligations owed to Employer pursuant to the Project Hardware Warranties and Balance of System (BoS) Warranty. O&M Contractor's obligations for pursuing such compliance are limited to

- (a) labor for removal and replacement of hardware and equipment, as well as labor for preparing any defective hardware and equipment that needs to be shipped back to an OEM
- (b) timely notification to the warranty provider of all such warranty claims pursuant to the terms of such Project Hardware Warranties and BOS Warranty;
- (c) providing reasonable information to such warranty provider relating to the nature of such warranty claim;
- (d) providing notice to Employer of such claim and requesting Employer support when necessary; provided that the foregoing shall not limit O&M Contractor's obligation to perform any maintenance required with respect to any of the Covered Equipment;

G. SPARE PARTS INVENTORY MANAGEMENT

1. O&M Contractor shall manage the Spare Parts Inventory in accordance with **Annexure 3** of the Tender, including Storage, organization, and inventory tracking.
2. O&M Contractor shall provide an inventory report to the Owner on a monthly basis.
3. The contractor has to use the mandatory spare(s) available at site for replacing

defective part(s) of equipment for minimising system outage temporarily and top up the quantity of spares so that the required quantity of spares shall be made available at site at all the times and same shall be handed over to the Employer at the end of O&M period.

4. Contractor shall supply the Mandatory spares as per the list provided in the Scope of the tender document.
5. Contractor shall handover the list of Mandatory Spares (which are duly tagged and stored) and along with all the mandatory spares to the Employer at the time of completion of O&M contract of the project.
6. If Contractor shall not be able to maintain the required quantity of mandatory spares as mentioned as per spare list at site while handing over the plant to the Employer, then Employer shall be entitled to deduct the cost of respective mandatory spare from the O&M charges.
- 7.

Note: The Contractor shall ensure intimation and submission of requisite Reports to the owner at least 15 days prior to initiation of maintenance action for the activity.

8. **Recovery of Compensation:** The above compensations shall be deducted from Contract Performance Security (CPS) submitted by the developer.

ANNEXURE 3: LIST OF MANDATORY SPARES

Sl. No.	Name of equipment	Qty
1	String Inverters (27 kWp Fronius)	
1.1	Fuses	10 nos.
1.2	All cards such as input / output card, power supply card, processor card etc.	5 nos.
2	SPV Modules (WS-310)	
2.1	MC4 connectors	100 nos.
2.2	MCCBs (Technical specifications are given at Annexure 4) 63amps - 7 nos. 100amps - 5nos. 160amps - 3nos 200amps - 1nos 250amps - 1nos	
2.3	DC Fuses	15amps,1000V—2 box (each box contains 10nos)

Annexure -4

Location	Install Capacity (KWp)	No of modules	MCCB specifications
Netaji stadium	93	300	4 Pole,200 amps,440V
Fisheries aquarium	62	200	4 Pole,63 amps,440V (2 nos.)
Science centre	55.80	180	4 Pole,100 amps,440V
Dbrait	89.20	288	4 Pole,160 amps,440V
Zilla parishad	60.14	194	4 Pole,100 amps,440V
Secretariat	27.90	90	4 Pole,63 amps,440V
SP office	58.28	188	4 Pole,100 amps,440V
PBMC office	109.12	352	4 Pole,160 amps,440V
STS bus stand	55.80	180	4 Pole,100 amps,440V
Police HQ	27.90	90	4 Pole,63 amps,440V
Electrical HQ	18.60	60	4 Pole,63 amps,440V
Marine dockyard workshop	172.98	558	4 Pole,250 amps,440V-1nos
			4 Pole,63 amps,440V-1nos
	57.66	186	4 Pole,100 amps,440V
	83.70	270	4 Pole,160 amps,440V
JNRM college	27.90	90	4 Pole,63 amps,440V

Annexure – 5

The O&M contract shall require to take up the additional work for dismantling & reinstallation of the rooftop solar plants due to relocation (within port blair) or requirement of roof repair and maintenance by rooftop owner during the period of O&M contract.

This additional work shall be on chargeable basis and O&M contractor shall require to submit the price for this additional work in the price bid under additional scope which shall be considered as optional scope.

SECI shall have full rights to accept or reject the price quoted by the O&M contractor for this additional work under optional scope.

This optional scope shall not be considered for bid evaluation.

The price quoted in SOR – 2 for this additional work / optional scope shall remain firm and fix for the period of contract.”



SECTION - VIII

SCHEDULE OF RATES (SOR)

1. **Bidders are required to quote for the Total O&M Contract Price on Lumpsum basis in cognizance with the Tender Terms & Conditions.**
2. Bidder's quoted prices shall be strictly as per various Formats included under this Section [i.e. Section-VIII, Schedule of Rates (SOR)]. Bidder shall quote NPV of O&M Price in SOR – 1 for the entire scope of work as per the Technical Specifications (TS) as defined under Section-VII.
3. All the Columns of quoted items in the Schedule of Rates including currency must be filled with required information, as applicable.
4. Bidder must quote the price in enclosed SOR formats only. The formats shall not be changed and/ or retyped.
5. Bidder to note that breakup of NPV of O&M price is to be provided for assessment of Evaluated Bid Value (EBV), however total price payable under the Contract shall be restricted to the O&M Price/ Contract Price only.
6. The O&M Price for 05 (Five) Years shall be considered as Total O&M Contract Price Which Owner agrees to pay and the Contractor agrees to accept as full compensation for the Contractor's full performance of the Work in accordance with the provisions of the Contract Documents. Contract Price shall not be subjected to any adjustment except in case of Change Order or Statutory Variations in accordance with the provisions of the Contract.
7. The price quoted shall be O&M Price. Unless the basic parameter changes or additional/ extra requirements are made, total payments to be made to the contractor shall be limited to O&M price indicated, irrespective of the progressive payments made during execution based on the split up of price.
8. Obligation of the Contractor is not limited to the quantities that the Contractor may either indicate in the Schedule of Breakup of O&M Prices along with his bid or in further detailed break of O&M prices furnished along with the bid or after award of work. Contractor shall carry entire scope of work/ supplies as detailed in various sections/ volumes of the Tender Document within the quoted O&M Price (Contract Price).
9. O&M Prices quoted by the Bidder shall include cost of any other supplies/ work(s) not specifically mentioned in the Bidding Document but necessary for the efficient, trouble free commissioning & operation of the Plant and to make this package job complete. Quoted price are FIRM and fixed till complete execution of the entire order. Also variation on account of Foreign Exchange rate is not to be payable extra.
10. Spares for start-up and mandatory spares required are in Contractor's Scope and deemed included in the quoted O&M Prices.
11. Bidder shall furnish following Forms of Schedule of Rates: -
 - a) SOR -1 is the comprises of the yearly Breakup of the NPV of O&M price for 05 (Five) years period.

- b) SOR – 2 is the comprises for additional work as mentioned in Annexure – 5 of Section – VII and quoted price under this will not be considered for Financial Evaluation process
- c) Details of Goods & Service Tax (GST) as included in SOR-1
- d) Prices shall be considered for evaluation as per Evaluation Methodology Specified in Section III ITB of the Tender Document.

12. INR = Indian Rupees

13. Bidder confirms that he has noted the contents of the Preamble to the Schedule of Rates, Schedule of Rate, Bid Document and quoted his Prices accordingly without any deviation.

14. O & M Charges on YoY basis must be equal or in ascending order only.