Tender Document

No. SNCM/SOLAR/2024-25/05

9th December, 2024

BID FOR DESIGN, ENGINEERING, SUPPLY & PROCUREMENT, ERECTION, TESTING AND COMMISSIONING INCLUDING FIVE YEARS COMPREHENSIVE MAINTENANCE CONTRACT (CMC) OF ROOFTOP SOLAR POWER PLANT OF TOTAL 170 KW (AC) WITH MINIMUM 190 KWP (DC) ON TURNKEY BASIS AT SHREE NARAYANA CULTURAL MISSION, AHMEDABAD, GUJARAT

SHREE NARAYANA CULTURAL MISSION (SNCM)

Opp. ISRO Ramdevnagar, Jodhpur Tekra, Satellite, Ahmedabad-380015, Gujarat, INDIA.

(M). 9825672756

Website: https://shreenarayanaguru.in
Email: sr.manager@shreenarayanaguru.in

SECTION-1: NOTICE INVITING TENDER (NIT)

BID FOR DESIGN, ENGINEERING, SUPPLY & PROCUREMENT, ERECTION, TESTING AND COMISSIONING INCLUDING FIVE YEARS COMPREHENSIVE MAINTENANCE CONTRACT (CMC) OF ROOFTOP SOLAR POWER PLANT FOR TOTAL 170 kW (AC) WITH MINIMUM 190 kWp (DC) AT SHREE NARAYANA CULTURAL MISSION, AHMEDABAD, GUJARAT

Sr. No.	Name of Premises	Locations	Total minimum Capacity, kWp (in DC)	Total Capacity, kW (in AC)
1	College Building (RCC Roof + Metal Roof)	SNCM building, Satellite, Ahmedabad	48	40
2	Building A (RCC Roof)		38	35
3	Building B (RCC Roof)		44	40
4	Building C (RCC Roof)		45	40
5	Guest House (RCC Roof)		15	15
Total			**190**	**170**

ISSUED BY:

PRESIDENT (P)
SHREE NARAYANA CULTURAL MISSION (SNCM)

ON

9th December, 2024

TABLE A: IMPORTANT DATES

Sr.	Event		Date (and Time)
i.	**Date of issue of Tender Document**	:	9th December, 2024
ii.	**Total Estimated EPC Price (Supply + Work including 5 years CMC) (Approx.)**	:	**Rs.95,00,000/-**
iii.	**Bid Validity**	:	One hundred Twenty (120) days from Bid Due Date
iv.	**Pre-bid Meeting at SNCM, Ahmedabad**	:	16th December, 2024
v.	**Last date of submission of Tender Fees, EMD and Tender/Offer submission last date {This is mandatory}**	:	31th December, 2024 at 1500 Hrs
vi.	**A. Preliminary Stage Opening** **B. Technical Opening**	:	A. 2nd January, 2025 at 1500 Hrs B. 7th January, 2025 at 1500 Hrs
vii.	**Opening of Financial Bid**	:	Will be decided by SNCM and will be intimated to Qualified Bidders.
viii.	**Target date for Commissioning of Project**	:	120 days from date of award of contract
ix.	**Duration of Performance Ratio Test**	:	One (1) month from the date of commissioning of Project
x.	**EMD Validity**	:	60 (Sixty) days from Bid Due Date
xi.	**Defect Liability Period**	:	5 (Five) years from the date of commissioning.

Note: The abovementioned dates are subject to amendment, in which case the amendments shall be publicly intimated.

TABLE B: IMPORTANT AMOUNTS

Sr.	Head		Amount (and Validity)
i.	**Tender Fees* (non-refundable)**	:	Rs. 5000.00 (Rupees Five thousand Only) (Non-refundable) in form of Demand Draft (DD)
ii.	**Earnest Money Deposit* (EMD/Tender security) in the form of DD (Refundable/ adjustable).**	:	Rs. 4,75,000/- (Rupees Four Lakh Seventy Five Thousand Only) with a validity as per Clause No. x of Table A (Important Dates)
iii.	**Security Deposit (SD) in form of DD**	:	5 % of the total EPC Price (Supply & Work), to be submitted within fifteen (15) days, from the date of issuance of LOI/LOA/Work Order, valid for a period of Six (6) months (may be extended if required) from the date of issue of LOI/LOA/Work Order; This DD shall cover the risk against timely commissioning of the Plant, and recovery towards breakdown in solar generation within one (1) month Period after commissioning. The same shall be return only after successful completion of PR Test, submission and approval of PR report after commissioning.

Sr.	Head		Details
1	Tender publisher Name	:	Shree Narayana Cultural Mission (SNCM), Ahmedabad, Gujarat
2	Tender Notice No	:	SNCM/SOLAR/2024-25/05
3	Name of Project	:	Grid Connected Rooftop Solar Power Projects at 5 Nos. buildings of SNCM, Ahmedabad
4	Name of Work	:	Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of total 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC) at Shree Narayana Cultural Mission, Satellite, Ahmedabad, Gujarat
5	Bidding Type	:	Two Bid System
6	Tender Currency Type	:	Indian Rupee (INR)
7	Joint Venture	:	Not Applicable
8	Bid Document Fee Payable To:	:	"Shree Narayana Cultural Mission (SNCM)" payable at Ahmedabad.
9	Bid Security/EMD in favour of:	:	"Shree Narayana Cultural Mission (SNCM)" payable at Ahmedabad.
10	Address of Pre-Bid Meeting	:	Shree Narayana Cultural Mission, Satellite, Ahmedabad and/or Online mode
11	Officer Inviting Bids	:	President (P), SNCM, Ahmedabad
12	Bid Opening Authority	:	President (P), SNCM, Ahmedabad

13	Address	:	Shree Narayana Cultural Mission (SNCM) Opp. ISRO, Ramdevnagar, Jodhpur Tekra, Satellite, Ahmedabad-3800015 Gujarat, INDIA**.**
14	Contact Details of SNCM Concerned person Inviting Bid:	:	Mr. Robin Joseph, (M) 9825672756, sr.manager@shreenarayanaguru.in
15	Contact Details of TPE / TPI Agency	:	Mr. Romil Shah, romil.s@germi.res.in Mr. Maulin Vaghela, maulin.v@germi.res.in

IMPORTANT NOTE TO BIDDERS:

Timely submission of offer to SNCM: All the relevant documents as per requirement of the Tender shall also be submitted offline only. Tender Fee and EMD in sealed cover is to be received in this office on or before the due date and time & it should be strictly submitted by RPAD / speed post in sealed cover only. Please note that all documents including Price Bid to be submitted in physical form as per NIB.

No Tender shall be accepted in any case after due date and time of receipt of the Tender, irrespective of delay due to postal services or any other reasons and SNCM does not assume any responsibility for late receipt of the Tender.

1. All interested parties are requested to understand this Tender in detail in order to comply with SNCM's requirements including but not limited to the fees and deadlines, selection criteria, selection methodology, scope of work, and minimum technical standards. They shall strictly abide by ALL terms prescribed in this Tender and provide accurate information to the best of their knowledge without misleading the Company to be considered for participation in this Project.
2. It is mandatory for all the Bidders to submit BID in one Outer envelope carries three separate envelopes contains their Tender Fees, EMD, Financial Bid (Price Bid) and Technical Bid (Techno-commercial Bid) OFFLINE only via RPAD/ speed post in sealed cover only.

Cover-1	should marked as **"Tender Fees and EMD (Earnest Money Deposit)"**
Cover-2	should marked as **"Technical Bid (PQR document, Appendix, Signed Copy of the Tender Document(s) along with Addendum & Clarifications (if any), etc)"** The submissions in Envelope / Cover – 2 are to be given in spiral / binder book with index, page numbering.
Cover-3	should marked as **"Financial Bid (Price Bid)"**

3. Envelopes shall be wrapped in an outer envelope addressed to: **President (P); Shree Narayana Cultural Mission (SNCM), Opp. ISRO, Ramdevnagar, Jodhpur Tekra, Satellite, Ahmedabad-3800015**. Complete postal address of the Bidder shall appear on

all the envelopes so that it is possible to find out whose Bid it is without opening the envelope.

4. Tender fee (non-refundable) will be accepted by DD drawn in favour of the "Shree Narayana Cultural Mission (SNCM)" payable at Ahmedabad. Tenders submitted without Tender Fee shall not be accepted. Cash or Cheques are not acceptable.
5. Bidder(s) have to pay total EMD of as per **Clause No. ii** of Table B (Important Amounts) above. EMD shall be in the form of DD in favour of "Shree Narayana Cultural Mission (SNCM)" payable at Ahmedabad. The envelope for Tender Fee & EMD should be super scribed as "**Tender Fees and EMD (Earnest Money Deposit)**". Cheques are not acceptable.
6. It is mandatory for all Bidders to submit their Price Bid as per **Appendix 15**. Bidders to note that Price Bid **(Appendix 15)** of only those Bidders shall be opened, who are found technically qualified and are found reasonably responsive to SNCM's Tender terms and conditions and Scope of Work.
7. Any technical/commercial query pertaining to this Tender should be referred to:

   President (P)
   Shree Narayana Cultural Mission (SNCM),
   Opp. ISRO, Ramdevnagar, Jodhpur Tekra,
   Satellite, Ahmedabad-3800015
   Gujarat, INDIA
   Email: sr.manager@shreenarayanaguru.in;
   romil.s@germi.res.in; maulin.v@germi.res.in

8. SNCM reserves the rights to accept/reject any or all Tenders without assigning any reasons thereof. Bidders are requested to be in touch with above-mentioned website till opening of the Price Bid to know the latest status.

Yours faithfully,
For and behalf of Shree Narayana Cultural Mission (SNCM), Ahmedabad.
President (P)
Shree Narayana Cultural Mission (SNCM),
Opp. ISRO, Ramdevnagar, Jodhpur Tekra,
Satellite, Ahmedabad-380015, Gujarat, India.

--- End of Section ---

Document Checklist

[Note: Document Checklist shall be attached with Appendix 1 of the Technical Bid]

Sr.	Document	Attached? (Yes/ No)	For Official Use
1.	Complete sets of Bids (original Set)		
2.	Signed Tender Documents and Amendment with sign and official seal on every page in Cover-I		
3.	Demand Draft of Tender Fees		
4.	Enclosures of the Bid including the Covering Letter as per the format prescribed in Appendix 1: Format for Covering Letter Cover-II		
5.	Details of Bidder as specified in Appendix 2		
6.	EMD in the form of DD		
7.	Attested copy of GST Registration Certificate of Bidder.		
8.	Attested copy of Provident Fund Code of Bidder.		
9.	Attested copy of PAN Card for Bidder.		
10.	Certificate of Commencement of Business issued by the Registrar of Companies for Bidder.		
11.	Power of Attorney by the Bidder in favour of Bidder as per format prescribed in Appendix 12		
12.	Documents as per Clause No. 3.2		
13.	Details of qualified technical staff as per the format in Appendix 8		

14.	Project Plan as mentioned in Appendix 5: Format for Project Execution Plan.		

Disclaimer

A. The information contained in this Tender Document or subsequently provided to Bidder(s), in documentary or in any other form, by or on behalf of SNCM, any of their employees or advisors, is provided to Bidder(s) on the terms and conditions set out in this Tender and such other terms and conditions subject to which such information is provided.

B. This TENDER is not an agreement and is neither an offer nor invitation by SNCM to the prospective Bidders or any other person. The purpose of this TENDER is to provide interested parties with information that may be useful to them in the formulation of their Bid for qualification pursuant to this TENDER. This TENDER includes statements, which reflect various assumptions and assessments arrived at by SNCM or their advisors or employees or agents, in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This TENDER may not be appropriate for all persons, and it is not possible for SNCM, their employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this TENDER.

C. The assumptions, assessments, statements and information contained in this TENDER may not be complete, accurate, adequate or correct. Each Bidder should therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this TENDER and obtain independent advice from appropriate sources.

D. Information provided in this TENDER to the Bidder(s) is on a wide range of matters, some of which depends upon interpretation of law. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. SNCM would not have any responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

E. SNCM, their employees and advisors make no representation or warranty and shall have no liability to any person, including any Bidder or Bidder(s), under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on

account of anything contained in this Bid or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the TENDER and any assessment, assumption, statement or information contained therein or deemed to form part of this TENDER or arising in any way with prequalification of Bidders for participation in the Bidding process.

F. SNCM also accept no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statements contained in this TENDER. SNCM may, in their respective absolute discretion but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this TENDER.

G. The issuance of this TENDER does not imply that SNCM is bound to select and short-list prequalified Bids for Bid Stage (the "Bid Stage") or to appoint the selected Bidder, as the case may be, for the Project[s] and SNCM reserves the right to reject all or any of the Bid or Bids without assigning any reasons whatsoever.

H. The Bidder shall bear all its costs associated with or relating to the preparation and submission of its Bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the SNCM or any other costs incurred in connection with or relating to its Bid proposal. All such costs and expenses will remain with the Bidder and the SNCM shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation or submission of the Bid proposal regardless of the conduct or outcome of the Bidding process.

Table of Contents

1 Definition & Interpretation

1.1 Definitions

The following words and expressions shall have the meanings hereby assigned to them:

1.1.1 "**Associate**" means with respect to any specified Person, any other Person directly or indirectly controlling, controlled by or under common control with such specified Person;

1.1.2 "**Adjudicator**" means the person, who shall be an engineer or a firm of engineers who is appointed by the Company to act as the adjudicator to make a decision on or to settle any dispute or difference between the Company and the Contractor referred to it or her by the parties pursuant to TENDER (Adjudicator) hereof.

1.1.3 "**Applicable Law**" means any statute, law, regulation, ordinance, notification, rule, regulation, judgment, order, decree, bye-law, approval, directive, guideline, policy, requirement or other governmental restriction or any similar form of decision of, or determination by, or any interpretation or administration having the force of law in the Republic of India and the State Government, by any Government Authority or instrumentality thereof, whether in effect as of the date of this Contract or thereafter.

1.1.4 Deleted

1.1.5 "**B.I.S**" shall mean specifications of Bureau of Indian Standards (BIS)

1.1.6 "**Bid**" shall mean the bid submitted by the Bidder in response to the Tender Document No. "SNCM/SOLAR/2024-25/05; 9th December, 2024" issued by the Company.

1.1.7 "**Bidder**" shall mean Bidding Company or a Bidding Individual submitting the Bid. Any reference to the Bidder includes Bidding Company / Bidding Individual including its successors, executors and permitted assigns severally, as the context may require;

1.1.8 "**Bid Security**" shall mean the unconditional and irrevocable bank guarantee to be submitted along with the Bid at the TENDER stage.

1.1.9 "**Bid Capacity**" shall means capacity offered to the bidder in this Bid under invitation.

1.1.10 "**Bid Deadline**" shall mean the last date and time for submission of Bid in response to this TENDER.

1.1.11 "**CEA**" shall mean Central Electricity Authority.

1.1.12 "**Capacity Utilization Factor (CUF)**" means the ratio of the annual output of the plant in kWh versus contracted plant capacity for number of days. CUF = plant output in kWh / (contracted plant capacity in kW * 365X24).

1.1.13 "**Change in Law**" means the occurrence of any of the following after the date of Bid:

i) the enactment of any new Indian law as applicable to the State;

ii) the repeal, modification or re-enactment of any existing Indian law;

iii) the commencement of any Indian law which has not entered into effect until the date of Bid;

iv) a change in the interpretation or application of any Indian law by a judgement of a court of record which has become final, conclusive and binding, as compared to such interpretation or application by a court of record prior to the date of Bid;

1.1.14 "**Competent Authority**'' shall mean President (P) of SNCM, himself and/or a person or group of persons nominated by SNCM for the mentioned purpose herein.

1.1.15 "**Commercial Operation**" with respect to a Unit or the Facility, as the case may be, shall refer to the period after the Commercial Operation Date of such Unit or Facility;

1.1.16 "**Commissioned**" means, in respect of a Unit or the Facility, as the case may be, passing of the Commissioning Test by the Units, as certified by the GEDA/ DISCOM/ Gujarat State Designated Agency or its representative(s) and interconnection of the Unit with the Distribution Grid for receiving the Delivered Energy.

1.1.17 "**Commission**" and "**Commissioning**" means, the satisfactory, continuous and uninterrupted operation of the equipment/system as specified after all necessary statutory approvals, initial tests, checks and adjustments for a period of at least **3 days** to the satisfaction of the Company and necessary certificates are issued by the all concerned/ nodal agencies appointed by appropriate authority/Government.

1.1.18 "**Completion**" means that the Facilities (or a specific part thereof where specific parts are specified in the Scope of Work) have been completed operationally and structurally and put in a tight and clean condition and that all work in respect of Commissioning of the Facilities or such specific part thereof has been completed as per the Scope of Work.

1.1.19 "**Company**" means Shree Narayana Cultural Mission (SNCM), Ahmedabad includes the legal successors or permitted assigns of the Company.

1.1.20 "**Contracted Capacity**" shall mean the Total aggregate capacity in KW, proposed to be allocated by SNCM to the Successful Bidder through this bidding process as per terms and conditions specified therein.

1.1.21 "**Contract**" or "**Contract Agreement** "shall mean the agreement between the SNCM and the successful EPC contractor for the execution of the works including therein all documents such as the invitation to tender, instructions to Bidders, General Conditions

of Contract. Special Conditions of Contract, Job Specifications, General Requirements, Time Schedule of Completion of Job, Drawings, Letter of Award awarding the work, Agreed variations, if any etc.

1.1.22 "**Contract Documents**" means the documents listed in Appendix 18: Contract Agreement.

1.1.23 "**Contractor/ EPC Contractor**" means the person(s) whose bid to perform the Contract has been accepted by the SNCM and is named as such the Contract Agreement, and includes the legal successors or permitted assigns of the Contractor.

1.1.24 "**Contractor's Equipment**" means all plant, facilities, equipment, machinery, tools, apparatus, appliances or things of every kind required in or for installation, completion and maintenance of Facilities that are to be provided by the Contractor, but does not include Plant and Equipment, or other things intended to form or forming part of the Facilities.

1.1.25 "**Construction Period**" means the period from Effective Date till date the project got commissioned.

1.1.26 "**Commissioning Tests**" means the tests to be carried out to determine the Commissioning of the Unit or Facility, as the case may be, in accordance with the Testing and Commissioning Procedures specified and as defined in this TENDER in Timeline (**Clause No. 6.9**);

1.1.27 "**Chartered Accountant**" shall mean a person practicing in India or a firm whereof all the partners practicing in India as a Chartered Accountant(s) within the meaning of the Chartered Accountants Act, 1949.

1.1.28 "**Day**" means calendar day of the Gregorian calendar.

1.1.29 "**Delivery Point**" shall be the interconnection point at which the Successful EPC Contractor shall deliver the power. The metering shall be done at this point of Interconnection. All charges and losses up to the Delivery Point shall be borne by the Successful EPC Contractor;

1.1.30 "**Delivered Energy**" means the Electricity measured by the (Solar meter) at the Delivery Point;

1.1.31 "**Development Period**" means the period starting from Effective date till the project get Commissioned

1.1.32 "**Defect Liability Period**" means the period of validity of the warranties given by the Contractor, during which the Contractor is responsible for defects with respect to the

Facilities (or the relevant part thereof) as provided in **Clause No. 6.13 (Defect Liability)** hereof.

1.1.33 "**Document**" or "**Documentation**" means documentation in printed or written form, or in tapes, discs, drawings, computer programmes, writings, reports, photographs, films, cassettes, or expressed in any other written, electronic, audio or visual form;

1.1.34 "**Drawings**" means all of the drawings (SOFT – AUTOCAD & PDF Format), calculations and documents pertaining to the Project. This shall include both the electrical and civil cum Structure drawing(s);

1.1.35 "**Distribution Utility**" means the local electric distribution owner and operator providing electric distribution and interconnection services to Purchaser at the Premises;

1.1.36 "**Effective Date**" for this Contract shall mean the date of issuance of Letter of Intent (LOI) / Letter of Award (LoA) / Work Order by the Owner.

1.1.37 "**Electricity**" means the electrical energy measured in kilowatt-hours;

1.1.38 "**Emergency**" means a condition or situation that is likely to endanger the safety of the individuals on or about the Project, including Users thereof, or which poses an immediate threat of material damage to any of the Project Assets;

1.1.39 "**EPC**" shall mean Engineering, Procurement & Construction.

1.1.40 "**EPC Contract**" means the engineering, procurement and construction contract or contracts entered into by the SNCM with Successful Contractor for, inter alia, engineering and construction of the Project in accordance with the provisions of this TENDER;

1.1.41 "**EMD**" shall mean Earnest Money Deposit.

1.1.42 "**Engineer**" shall mean the authorized officer of the SNCM /Consultant to act as Engineer to supervise the work for the purpose of the contract.

1.1.43 "**Facilities**" means the Plant and Equipment to be supplied and installed, as well as all the Installation Services to be carried out by the Contractor under the Contract for enabling the installation, construction, testing and commissioning of the Solar System(s).

1.1.44 "**Government Authority**" means Government of India, any central government or state government or any governmental department, commission, board, body, bureau, agency, authority, undertaking, court or other judicial or administrative body or any sub-division or instrumentality thereof, central, state, or local, having jurisdiction over

the Contractor, the Facility, or the performance of all or any of the services, obligations or covenants of Contractor under or pursuant to this Contract or any portion thereof.

1.1.45 Deleted

1.1.46 "**SNCM**" means Shree Narayana Cultural Mission.

1.1.47 "**Good Industry Practice**" means the practices, methods, techniques, designs, standards, skills, diligence, efficiency, reliability and prudence which are generally and reasonably expected from a reasonably skilled and experienced operator engaged in the same type of undertaking as envisaged under this TENDER and which would be expected to result in the performance of its obligations by the Successful Bidder in accordance with this TENDER, Applicable Laws and Applicable Permits in reliable, safe, economical and efficient manner;

1.1.48 "**Installation Services**" means all those services ancillary to the supply of the Plant and Equipment for the Facilities, to be provided by the Contractor under the Contract; e.g., transportation and provision of marine or other similar insurance, inspection, expediting, Site preparation works (including the provision and use of Contractor's Equipment and the supply of all civil, structural and construction materials required), installation, Commissioning, PR test, 5 years CMC, training of Company's personnel etc.

1.1.49 "**Interconnection Facilities**" means all the facilities installed by the EPC Contractor at the Relevant Premises inside site/office to enable SNCM to receive the Delivered Energy from the Project at the Delivery Point, including transformers, and associated equipment, relay and switching equipment, protective devices and safety equipment;

1.1.50 "**Installed Capacity**" means the aggregate capacity of TOTAL 170 kW (AC) as certified after the commissioning test at the generating terminal(s);

1.1.51 "**Installation Work**" means the construction and installation of the System and the start-up, testing and acceptance (but not the operation and maintenance) thereof, all performed by or for the EPC Contractor at the Premises.

1.1.52 "**Insurance Cover**" means the aggregate of the maximum sums insured under the insurances taken out by the Successful Bidder, and includes all insurances required to be taken out by the Successful Bidder but not actually taken, and when used in the context of any act or event, it shall mean the aggregate of the maximum sums insured and payable or deemed to be insured and payable in relation to such act or event;

1.1.53 "**Intellectual Property**" means all patents, trade-marks, service marks, logos, get- up, trade names, internet domain names, rights in designs, blue prints, programmes and manuals, drawings, copyright (including rights in computer software), database rights, semi-conductor, topography rights, utility models, rights in know-how and other intellectual property rights, in each case whether registered or unregistered and including applications for registration, and all rights or forms of protection having equivalent or similar effect anywhere in the world;

1.1.54 "**Law**" shall mean in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule and shall further include without limitation all applicable rules, regulations, orders, notifications by an India Governmental Instrumentality pursuant to or under any of them and shall include without limitation all rules, regulations, decisions and orders of the Appropriate Commission;

1.1.55 **"Letter of Award"** shall mean the official notice issued by the SNCM notifying the contractor that his bid has been accepted. It shall also termed as Letter of Intent (LOI).

1.1.56 "**Losses**" means all losses, liabilities, claims, demands, suits, causes of action, judgments, awards, damages, clean up and remedial obligations, interest, fines, fees, penalties, costs and expenses (including all attorneys' fees and other costs and expenses incurred in defending any such claims or other matters or in asserting or enforcing any indemnity obligation);

1.1.57 "**KW**" means Kilo-watts;

1.1.58 "**kWh**" shall mean Kilo-Watt-hour;

1.1.59 "**kWp**" shall mean Kilo-Watt Peak;

1.1.60 "**Month**" means calendar month of the Gregorian calendar.

1.1.61 "**MNRE**" means Ministry of New and Renewable Energy, Government of India.

1.1.62 "**Main Meter**" means for each Unit, the Metering System which would primarily be used for accounting and billing of electricity generated by Units comprising the Facility to be installed at the Delivery Point and operated and maintained by the Successful Bidder.

1.1.63 Deleted

1.1.64 "**Material Adverse Effect**" means a material adverse effect of any act or event on the ability of either Party to perform any of its obligations under and in accordance with

the provisions of this Agreement and which act or event causes a material financial burden or loss to either Party;

1.1.65 "**Metering System**" means the meters and other applicable devices/instruments installed and used for measurement of electricity, delivered from the Electricity generated by Units comprising the Facility, as per the specifications provided in TENDER and shall comprise of the Main Meter and the Back Up Meter;

1.1.66 "**Metering Date**" means the first Business Day of each calendar month subsequent to the month in which the Solar Power is generated by the EPC Contractor. The billable units shall be equal to the difference between the meter reading on the Metering Date and the meter reading on the previous month's Metering Date;

1.1.67 "**Mobilization of the Contractor**" means performance by the Contractor of that entire thing necessary to be fully ready to execute Work at site satisfying all Work pre-requisites stipulated in the Contract. Mobilization of the Contractor shall include but shall not be limited to providing of all transport from points of origin to Site, all equipment and materials of construction, all personnel, satisfaction of government requirements, all logistical support to the construction operations and setting up at site in a condition of full readiness to execute Work.

1.1.68 "**Month**" means a period of thirty (30) days from (and excluding) the date of the event, where applicable, else a calendar month;

1.1.69 "O&M" means Operations and Maintenance of Solar PV system;

1.1.70 "**Owner**" means Shree Narayana Cultural Mission (SNCM), Ahmedabad, Gujarat.

1.1.71 "**Operation Period**" means the period commencing from COD;

1.1.72 "**Plant Capacity**" is defined as aggregate Total 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC) including five years' comprehensive maintenance contract (CMC) at Shree Narayana Cultural Mission, Ahmedabad, Gujarat, as per the provisions in this Tender including but not limited to its design, engineering, procurement & supply, construction, testing & commissioning.

Note: The type and capacity of solar plant mentioned in the tender are indicative and may liable to change as per current site situation during execution, for which the final decision shall be of SNCM's.

1.1.73 "**Performance Ratio"** (PR) means the ratio of plant output versus installed plant capacity at two instances with respect to the instantaneous radiation measured on site of One (1) month duration.

1.1.74 "**Pre-Commissioning**" includes checking and testing of the equipment, machinery etc. as required by the Contract, and making them ready for use.

1.1.75 "**Project Site**" means the parcels of solar system, rights-of-way, easements and access roads comprised in the Relevant open spaces upon which the Unit(s) comprising the Project will be installed;

1.1.76 "**Project Manager**" means the person appointed by the Company in the manner provided in the TENDER (Project Manager) hereof and named to perform the duties delegated by the Company.

1.1.77 "**Project**" means the development, designing, construction, installation, commissioning, comprehensive maintenance of the Facility;

1.1.78 "**Project Assets**" means all physical and other assets relating to and forming part of the Site including:

i) rights over the Site in the form of licence, Right of Way or otherwise;
ii) tangible assets such as civil works and equipment
iii) Project Facilities situated on the Site;
iv) all rights of the Owner under the Project Agreements;
v) financial assets, such as receivables, security deposits etc;
vi) insurance proceeds; and
vii) Applicable Permits and authorisations relating to or in respect of the Project;

1.1.79 Deleted

1.1.80 "**Prudent Utility Practices**" means those practices, methods, techniques and standards, that are generally accepted for use in electric utility industries taking into account conditions in India, and commonly used in prudent electric utility engineering and operations to design, engineer, construct, test, operate and maintain equipment lawfully, safely, efficiently and economically as applicable to power stations of the size, service and type of the Project, and that generally conform to the manufacturer's operation and maintenance guidelines.

1.1.81 "**Punch list**" means those minor items/jobs relating to works outstanding at the time of issuance of "Certificate of Completion and Acceptance" which do not affect the normal operation of the company and which have been mutually agreed by the Company and the Contractor, to be carried out / further completed (within a fix time period) by the Contractor to the satisfaction of the Company in accordance with the Contract

1.1.82 "**TENDER document**" shall mean the bidding document issued by the Company including all attachments vide TENDER No. SNCM/SOLAR/2024-25/05 "**Relevant Building**" means a Building comprising the Project

1.1.83 "**Relevant Premises**" means the required locations inside the premises for the project implementation, provided by SNCM to the Successful Bidder for the purpose of implementing the Project;

1.1.84 "**Right of Way**" means the access to the site with the intention of using it for installation of Project, including the way from the entry point to the site through the shortest accessible way, easements and other rights of way, howsoever described, necessary for construction, operation and maintenance of the Projects in accordance with this TENDER;

1.1.85 Deleted

1.1.86 "**Solar Power System(s)**" means the solar photovoltaic system(s) to be established at the site specified in the TENDER.

1.1.87 "**Subcontractor**", including vendors, means any person to whom execution of any part of the Facilities, including preparation of any design or supply of any Plant and Equipment, is sub-contracted directly or indirectly by the Contractor, and includes its legal successors or permitted assigns.

1.1.88 "**Successful Bidder**" means the bidder who has been awarded the Contract and described as Contractor for the "Project".

1.1.89 "**Time for Completion**" shall be the date on or before which Commissioning of the Facility has to be achieved to the satisfaction of the Company and such date is specified in NIT.

1.1.90 "**Scheduled COD**" or "**Scheduled Commercial Operation Date**" means the date of commissioning (Date of completion of work+ successful completion of PR test.);

1.1.91 "**Solar Power**" shall mean electricity generated from the solar generation project;

1.1.92 "**Solar System**" includes a solar PV panel power generation facility to be established by the Successful Bidder on the Relevant Premises of SNCM and includes the integrated assembly of photovoltaic panels, mounting assemblies, inverters, converters, metering, lighting fixtures, transformers, ballasts, disconnects, combiners, switches, wiring devices and wiring, and all other material comprising the Installation Work, including protection equipment and the like necessary to deliver the Electricity generated by it to DISCOM at the relevant Delivery Points;

1.1.93 "**Specifications and Standards**" means the specifications and standards relating to the quality, quantity, capacity and other requirements for the Project, as set forth in TENDER, and any modifications thereof, or additions thereto, as included in the design and engineering for the Project submitted by the Successful Bidder to, and expressly approved by, SNCM.

1.1.94 **"Statutory Entity"** means:

In case of a State:

any ministry, department, sub-division, instrumentality or agency under the direct control of the state Government; or

any company, corporation, government undertaking or other authority under the direct control of the state Government; or

any other entity under the direct control of the state Government or established under law; or

State Electricity Regulatory Commission,

AND

In case of any other jurisdiction and the Central Government of the Republic of India, the government of that jurisdiction or the Central Government, any ministry department, sub-division instrumentality or agency or any company corporation government undertaking, commission, or any other entity under the direct or indirect control of such government or Central Government, or a regulatory entity established under law;

1.1.95 "**System Operations**" means the Successful Bidder/EPC Contractor's operation, maintenance and repair of the System performed in accordance the requirements herein;

1.1.96 "**Taxes**" means any Indian taxes including customs duties, GST, local taxes, cess, any other taxes and any impost or surcharge of like nature (whether Central, State or local) on the goods, materials, equipment and services incorporated in and forming part of the Project charged, levied or imposed by any Government Instrumentality, but excluding any interest, penalties and other sums in relation thereto imposed on any account whatsoever. For the avoidance of doubt, Taxes shall not include taxes on corporate income;

1.1.97 "**Tests**" means the tests to be conducted by the Successful Bidder pursuant to the Testing Procedures before the project commissioned.

1.1.98 "**CMC**" means comprehensive maintenance contract.

1.1.99 "**Unit**" means each power generation installation consisting of solar PV panels and auxiliary equipment and facilities forming part of the Facility to be installed on each Relevant Premises and separately connected with the Distribution Grid of DISCOM and all the Units comprising the Facility aggregate to the installed project capacity.

1.2 Interpretations

1.2.1. Language: Unless otherwise agreed by the parties in writing, the parties shall use the English language and the Contract and the other Bid documents, all correspondence and communications to be given, and all other documentation to be prepared and supplied under the Contract shall be written in English, and the Contract shall be construed and interpreted in accordance with that language. If any of the Contract Documents, correspondence or communications are prepared in any language other than English, the English translation of such documents, correspondence or communications shall prevail in matters of interpretation.

1.2.2. Singular and Plural: The singular shall include the plural and the plural the singular, except where the context otherwise requires.

1.2.3. Headings: The headings and marginal notes in the General Conditions of Contract are included for ease of reference and shall neither constitute a part of the Contract nor affect its interpretation.

1.2.4. Persons: Words importing persons or parties shall include firms, corporations and government entities.

1.2.5. Men: The word 'Men' in this TENDER shall mean all genders i.e. male, female and others.

1.2.6. Entire Agreement: The Contract constitutes the entire agreement between the Company and Contractor with respect to the subject matter of Contract and supersedes all communications, negotiations and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract. The various documents forming the Contract are to be taken as mutually explanatory. Should there be any discrepancy, inconsistency, error or omission in the Contract documents, the matter may be referred to the Adjudicator and the Contractor shall carry out work in accordance with the decision of the Adjudicator.

1.2.7. Amendment: No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party hereto.

1.2.8. Independent Contractor: Subject to the provisions of the Contract, the Contractor shall be solely responsible for the manner in which the Contract is performed.

1.2.9. All employees, representatives or Subcontractors engaged by the Contractor in connection with the performance of the Contract shall be under the complete control of the Contractor and shall not be deemed to be employees of the Company and nothing contained in the Contract or in any subcontract awarded by the Contractor shall be construed to create any contractual relationship between any such employees, representatives or Subcontractors and the Company.

1.2.10. Not in any case the sub-contractor shall claim or shall put any binding to the Company and the sub-contractor must be handled by the Contractor and the Company shall not be responsible for any claims at any time by the Contractor in relation to the sub-contractor.

1.2.11. Deleted

1.2.12. Subject to Clause1.2.10 (1.2.13) below, no relaxation, forbearance, delay or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect or restrict the rights of that party under the Contract, nor shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

1.2.13. Any waiver of a party's rights, powers or remedies under the Contract must be in writing, must be dated and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

1.2.14. Severability: If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

1.2.15. Country of Origin: "Origin" means the place where the materials, equipment and other supplies for the Facilities are mined, grown, produced or manufactured, as the case may be, and from which the services are provided. This shall be according to MNRE guidelines.

1.2.16. The words "include" and "including" are to be construed without limitation and shall be deemed to be followed by "without limitation" or "but not limited to" whether or not they are followed by such phrases;

1.2.17. References to "construction" or "building" include, unless the context otherwise requires, investigation, design, developing, engineering, procurement, delivery, transportation, installation, processing, fabrication, testing, commissioning and other activities incidental to the construction, and "construct" or "build" shall be construed accordingly;

1.2.18. References to "development" include, unless the context otherwise requires, construction, renovation, refurbishing, augmentation, up-gradation and other activities incidental thereto, and "develop" shall be construed accordingly;

1.2.19. Any reference to any period of time shall mean a reference to that according to Indian Standard Time;

1.2.20. Any reference to "hour" shall mean a period of 60 (sixty) minutes commencing either on the hour or on the half hour of the clock, which by way of illustration means 5.00 (five), 6.00 (six), 7.00 (seven) and so on being hours on the hour of the clock and 5.30 (five thirty), 6.30 (six thirty), 7.30 (seven thirty) and so on being hours on the half hour of the clock;

1.2.21. Any reference to day shall mean a reference to a calendar day;

1.2.22. References to the "winding-up", "dissolution", "insolvency" or "reorganisation" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganisation, dissolution, arrangement, protection or relief of debtors;

1.2.23. Unless expressly provided otherwise in this TENDER, any Documentation required to be provided or furnished by the Successful EPC Contractor to SNCM shall be provided free of cost and in five copies, and if SNCM is required to return any such Documentation with their comments and/or approval, they shall be entitled to retain two copies thereof.

---End of Section---

2 Introduction

2.1 About the Company

2.1.1 About Shree Narayana Cultural Mission (SNCM)

Shree Narayana Cultural Mission, Ahmedabad is a premier centre of education & the second largest Shree Narayana Center outside Kerala. The Institutions under SNCM are named after the great social reformer, philosopher and saint Shree Narayana Guru (1854-1928). Based on the ancient directives of Universal brotherhood & love, Shree Narayana Guru preached the noble message of "One Caste, One Religion & One God for Man".

2.2 About the Project

The Shree Narayana Cultural Mission (SNCM) based at Ahmedabad in association with Gujarat Energy Research and Management Institute proposes to implement Total 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC) including five years comprehensive maintenance contract (CMC) at Shree Narayana Cultural Mission, Ahmedabad, Gujarat with the objective of generating and supplying green energy to its premises. SNCM has already installed 70 kW Capacity Grid Connected Rooftop Solar Power Plant at Building H of SNCM, Ahmedabad during Year-2022. The generated solar power will be utilized solely by SNCM, Ahmedabad through net metering system. The scheme aims to reduce the fossil fuel-based electricity load on main grid and make SNCM office/school premises self-sustainable from the point of electricity, to the extent possible and as part of this endeavour.

i. SNCM has installed 70 kW Capacity Grid Connected Rooftop Solar Power Plant at Building H of SNCM, Ahmedabad during 2022 Year and SNCM proposes to establish additional 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC) Solar Systems including the development, design, procurement, supply, erection, testing and commissioning of the Power Plant (s) is hereinafter referred to as the (the “Project (s)”). The Company has now decided

to undertake a competitive Bidding process for selection of the EPC Contractor to implement the Project (the "Contractor").

ii. The details of the facilities which the Company requires to be set up in the present instance and for which Bids are hereby invited are described in this Tender. The overall responsibility of complete Scope of Work rests with the Bidder.

--- End of Section---

3 Instruction to Bidders

3.1 General Instructions

3.1.1 The current document is the request for proposal, which is issued to all the potential Bidders, requesting a proposal for implementation of the Project on a fixed price basis. A Contractor would be selected through competitive bidding process for execution of the Project.

3.1.2 The Company expects Bidders to confirm compliance to TENDER terms, conditions and specifications at the time of submission of Bids, failing which the Bids are liable to be rejected. Hence, the Bidders in their own interest are advised to submit their Bids complete in all respects conforming to all terms and conditions of this TENDER.

3.1.3 Before submitting the Tender, the instructions may be read carefully regarding submission of Tender. If any bidder finds discrepancies or omissions in the Tender documents or is in doubt as to the true meaning of any part, he shall clarify same from the Tender issuing office in writing before the due date of submission of the queries.

3.1.4 Site visit and verification of information-

The Site data of the Project is being provided only as a preliminary reference document by way of assistance to the Bidders who are expected to carry out their own surveys, investigations and other detailed examination of the Project before submitting their Bids. Nothing contained in the site data Report shall be binding on the SNCM nor confer any right on the Bidders, and the SNCM shall have no liability whatsoever in relation to or arising out of any or all contents of the site data.

Bidders are encouraged to submit their respective Bid after visiting the Project site and ascertaining for themselves the site conditions, traffic, location, surroundings, climate, availability of power, water and other utilities for construction, access to site, handling and storage of materials, weather data, applicable laws and regulations, and any other matter considered relevant by them.

3.1.5 Bids shall be evaluated based on the information/documents available in the Bid. Hence, Bidders are advised to ensure that they submit appropriate and relevant supporting documentation along with their proposal in the first instance itself. Bids not complying with the requirements of this TENDER are liable to be rejected without any further opportunity.

3.1.6 Bidders need to ensure that in the event the Project is awarded to it, and during execution of the Project, it shall not seek to alter any agreed contractual terms, conditions and specifications.

3.1.7 Bids must be accompanied by a Tender fee and EMD of value as specified in the NIT in the form and manner as specified in the TENDER document and must be delivered.

3.1.8 The specification provided with this TENDER outlines the functional requirement. The Bidder must submit a Proposal based upon their own design, meeting the functional requirements.

3.1.9 Bidders shall deploy the latest state-of-the-art technology and must ensure that the goods supplied are new, unused and of most recent or current models and incorporate all recent improvements in design and materials for the implementation of the Project.

3.1.10 Deleted

3.1.11 Issuance of this TENDER does not construe that the Bidder has been short-listed or qualified.

3.1.12 (A) The Company reserves the right, to accept or reject any Bid and to annul the bidding process and reject all Bids at any time prior to award of the Agreement, without assigning any reason thereof and without thereby incurring any liability to the affected Bidder(s). (B) As the Bid for the said work is invited for execution of grid connected solar PV power project for 5 Nos. of building premises of SNCM,Ahmedabad, the LOA will be placed to the successful bidder on receipt of SNCM Approval.

3.1.13 The Company reserves the right to reject any Bid submitted with deviations beyond the one that is specified and mentioned in the TENDER and no time shall be given in any circumstance after opening of Financial Proposal for submission of documents which are missing with Bid.

3.1.14 Any condition or qualification or any other stipulation contained in the Bid shall render the Bid liable to rejection as a non-responsive Bid.

3.1.15 In case of change in ownership of the Project, all the Agreements and Contracts signed with the Company will stand true and valid with the new Owner of the Project.

3.1.16 Tender Issuing Authority reserves the right to cancel the NIT or to change qualifying requirement or to reject any or all the tenders so received without assigning any reason.

3.1.17 The Site for the work is either available or it shall be made available in the parts in a manner so as not to hamper the progress of work.

3.1.18 Canvassing in connection with Tender is strictly prohibited and the Tender submitted by the Bidders who resort to canvassing will be liable to rejection straight way.

3.1.19 The Bid and all communications in relation to or concerning the Bidding Documents and the Bid shall be in English language.

3.1.20 All rates shall be quoted on the proper form i.e. as per price bid format.

3.1.21 The Shree Narayana Cultural Mission (SNCM) does not bind itself to accept the lowest Bid and reserves to itself the right to accept the whole or any part of the Tender and the Bidder shall be bound to perform the same at the rate quoted in this Tender.

3.2 Pre-Qualifying Requirements (PQRs)/ Eligibility Conditions

3.2.1 GENERAL

i. The Bidder shall be either a body incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto or a Partnership Firm having executed Partnership Deed and registered as per Sections 58 & 59 of the Partnership Act, 1932, as amended or a Limited Liability Partnership (LLP) Firm registered under Section 12 of Limited Liability Partnership Act, 2008, as amended or registered Sole Proprietor under the applicable law. The bidder shall be engaged in the business of Solar PV Power projects.

ii. A copy of Certificate of Incorporation (CoI) or Partnership Deed or LLP or Sole Proprietor Registration (if applicable) and relevant shall be furnished along with the bid in support of above.

3.2.2 TECHNICAL

i. The Bidder shall have designed, engineered, procured, supplied, erected, and commissioned of Grid Connected Solar Photovoltaic Power Plant (s) as EPC Contractor (Sole Bidder) of cumulative installed capacity of 750 kW mentioned in India since last 7 (Seven) financial year as on the Deadline for Submission of Bid (Minimum Capacity of each project should be considered **50 kW** Industrial/Commercial Solar PV Project or above to meet the cumulative capacity), out of which

a. At least one single Solar PV Power Plant should have been of **150 kW capacity or above**

OR

b. At least two (2) single Solar PV Power Plant should have been of **100 kW capacity or above**

OR

c. At least Three (3) single Solar PV Power Plant should have been of **75 kW capacity or above**

ii. Deleted.

iii. Bidder shall submit, in support to the above Point (i), the list of projects commissioned along with their work order/ LOA and the work completion certificates from Authority confirming the completion of the plant. In case the Bidder wants to meet the eligibility criterion through its own power plant, then a certificate from Chartered Accountant and Chartered Engineer to that effect will be required to be submitted along with commissioning certificate from respective government authority.

iv. The Bidder shall have qualified manpower with relevant design, engineering, procurement, supply, project execution expertise and experience for development and 5 years CMC / O&M of Solar PV power Plant.

3.2.3 FINANCIAL

i. The Bidder shall have excellent financial background with business in solar PV projects. The Average annual turnover of the Bidder, in the last three (3) financial years from FY 2021-22 should not be less than Rs.50 lacs

ii. The Net Worth of the Bidder shall be Positive of last three financial years from FY 2021-22, wherein the Net Worth shall be calculated as follows:

Net Worth = (Equity + Reserves) – (Revaluation reserves+ intangible assets + miscellaneous expenses to the extent not written off + carried forward losses).

The Bidder shall provide a copy each of audited annual report to ascertain their turnover & net-worth.CA certificate is mandatory and it shall be submitted as per Appendix-14.

iii. The Bidder shall submit audited annual report of FYs 2021-22, 2022-23 & 2023-24. The Bidder shall submit CA Certificate as per Appendix 14.

iv. The Bidder shall be submitted Solvency Certificate (Liquidity Certificate) of min Rs. 18,00,000/- which is certified by Bank as per Appendix 20 of current calendar year.

v. The Bidder shall not have been blacklisted/banned/de-listed/debarred/Terminated from business by State/Central Govt. departments or Government Under takings or any organizations. Self-declaration in this regard should be submitted along with the techno-commercial bid as per Appendix 21.

Note :- All Above Pre-Qualifying Requirements (PQRs)/ Eligibility Conditions under clause 3.2.1, 3.2.2 and 3.2.3 are mandatory & the bidder not satisfying these criteria will be technically disqualified.

3.2.4 OTHER- The Tender of only those bidders will be considered who will produce documentary proofs, self-attested to meet the following requirements

i. The Bidders to have valid Proof of Permanent EPF account no. and GST no.

ii. The agency should have valid license under contract labour regulation and abolition of the Gujarat state or should give an undertaking that he will get himself registered within one month if work is allotted to him.

iii. The experience list shall include only projects executed by Bidder himself as a turnkey contractor which shall include entire Engineering, Procurement, Supply & Installation and not as a sub-contractor. The list of projects executed shall clearly mention name of the technology partner / licensee agreement company and whether the same is valid as on date with date of expiry.

iv. The Bidder shall ensure that all the information, facts & figures, data provided in the bid are accurate and correct. SNCM reserves the right to confirm / verify any data or information through their own sources. SNCM also may contact directly the references given for the project executed and may also visit the site, manufacturing facilities & sub-vendors works etc., physically to ascertain capabilities of the applicant, if so desire at their own cost. Bidder may have to facilitate SNCM for any such visit.

v. The Bidder shall furnish documentary evidence by way of copies of Contract / Purchase Order, Completion Certificate or any other equivalent document, Audited Balance Sheet and Profit & Loss Account etc., along with the Bid to establish experience / track record and financial capabilities meeting Bid Evaluation Criteria.

vi. The Bidder or its Proprietor / Partner(s) / Director(s) of the Firm should not have been convicted by a Court of Law for an offence involving moral turpitude in relation to business dealings during the past seven (7) financial years.

The Bidder should meet all the above eligibility criteria as on the bid due date. The bids of only those bidders, who meet the Bidder's Eligibility Criteria, will be considered for further evaluation.

The Bidder with poor performance record in SNCM's past projects shall be not considered for evaluation and be out rightly rejected without giving reason thereof.

Notwithstanding anything stated above SNCM reserves the right to verify all statements/information submitted to confirm the Bidders claim on experience and to assess the Bidders capability and capacity to perform the contract should the circumstances warrant such an assessment in the overall interest of the project.

Further, notwithstanding the above, SNCM reserves the right to accept or reject any BID and to annul the process of submission of BID and reject all or any BID, at any time without assigning any reason thereof. SNCM shall not in no way responsible or liable for any loss, damage or inconvenience caused to the rejected Applicants whatsoever. SNCM shall be under no obligation to inform the affected Applicants of the rejection and / or ground for rejection.

3.3 Local Conditions

3.3.1 The Bidder is advised to visit and examine the site conditions, traffic, location, surroundings, climate, availability of power, water and other utilities for construction, access to site, handling and storage of materials, weather data, applicable laws and regulations, and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into the Contract Agreement. The costs of visiting the Site shall be at Bidder's own expense.

3.3.2 The Bidder and any of its personnel or agents shall be granted permission by the Company to enter upon its premises and lands for the purpose of such inspection, but only upon the express condition that the Bidder, its personnel or agents, shall release and indemnify the Company and its personnel and agents from and against all liability

in respect thereof and shall be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused, which, but for the exercise of such permission would not have arisen.

3.3.3 Failure to visit the Site or failure to study the TENDER document shall in no way relieve the successful Bidder from furnishing any material or performing any work in accordance with the TENDER document.

3.3.4 In no case the date of Time for Completion of the project shall be extended, due to the failure of the Bidder to visit the site and it shall be in line with the timeline of Shree Narayana Cultural Mission (SNCM) under the Scheme.

3.3.5 It shall be deemed that by submitting a Bid, the Bidder has:

a) Made a complete and careful examination of the TENDER document;
b) Received all relevant information requested from the Company;
c) Acknowledged and accepted the risk of inadequacy, error or mistake in the information provided in the TENDER documents or furnished by or on behalf of the Company relating to any of the matters referred to in NIT.
d) Satisfied itself about all matters, things and information including matters referred to in the Bid Info at a glance, necessary and required for submitting an informed Bid, execution of the Project in accordance with the TENDER document and performance of all of its obligations there under;
e) Acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in the TENDER document or ignorance of any of the matters referred to in the TENDER herein shall not be a basis for any claim for compensation, damages, extension of time for performance of its obligations, loss of profits etc. from the Company, or a ground for termination of the Contract Agreement; and
f) Agreed to be bound by the undertakings provided by it under and in terms hereof.

3.3.6 The SNCM shall not be liable for any omission, mistake or error on the part of the Bidder in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to the TENDER document or the Bidding Process, including any error or mistake therein or in any information or data given by the Company.

3.4 Local Regulatory Frame Work

3.4.1 It shall be imperative for each Bidder to fully inform itself of all local conditions, laws and factors which may have any effect on the execution of the Contract as described in the Bidding Documents. The Company shall not entertain any request for clarification from the Bidder, regarding such local conditions.

3.4.2 It is the responsibility of the Bidder that such factors have properly been investigated and considered while submitting the Bid proposals and that no claim whatsoever including those for financial adjustment to the Contract awarded under the TENDER document shall be entertained by the Company and that neither any change in the time schedule of the Contract nor any financial adjustments arising thereof shall be permitted by the Company.

3.5 Clarifications to Tender Document

3.5.1 A Bidder requiring any clarification of the Tender documents may notify SNCM in writing or by facsimile or by e-mail to SNCM's contacts mentioned in Table of section-1 of NIT:

President (P)
Shree Narayana Cultural Mission (SNCM),
Opp. ISRO, Ramdevnagar, Jodhpur Tekra,
Satellite, Ahmedabad-380015
Website: https://shreenarayanaguru.in

3.6 Amendments to Tender Document

3.6.1 SNCM may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective Bidder, modify the Tender Documents.

3.6.2 The amendments will be notified on website as mentioned in Notice Inviting Tender.

3.6.3 In order to allow the prospective Bidder(s), reasonable time in which to take the amendment into account in preparing their Bids, SNCM at its discretion, may extend the deadline for the submission of Bids.

3.7 Acceptance of Bids

3.7.1 SNCM neither bind itself to accept the lowest nor to assign any reason for the rejection of any Bid. It is also not binding on SNCM to disclose any analysis report.

3.8 Withdrawal of Invitation to Bid

3.8.1 While SNCM has floated this Tender and has requested Bidders to submit their proposals, SNCM shall always be at the liberty to withdraw this invitation to bid at any time before the acceptance of bid offer.

3.9 Representative/ Agent of Bidder

3.9.1 All the Bidders are requested to mention the name of their authorized representative/ agent, if any, with full address in the Bid. In case the representative is changed during the bidding process such changes shall be notified by the Bidder, failing which, SNCM shall not accept any responsibility.

3.10 Financial Proposal and Currencies

3.10.1 The Bidders shall quote the prices inclusive of all the taxes, while also providing the breakup of taxes as mentioned in Appendix 15 and shall be submitted in separate envelope as mentioned in RFP. The Bidder shall indicate the price in Financial Proposal in Indian National Rupee only.

3.11 EMD

3.11.1 EMD shall be in the form of DD of the bank as specified in NIT and should be in favour of "Shree Narayana Cultural Mission (SNCM)" payable at Ahmedabad.

3.11.2 The validity of EMD shall be as mentioned in NIT.

3.11.3 The EMD shall specifically bind the Bidder to keep its Bid valid for acceptance and to abide by all the conditions of the Tender Documents in the event of SNCM desiring to award the work to the said Bidder. SNCM shall have an unqualified discretion to forfeit the EMD in the event: (i) Bidder fails to keep the Bid valid up to the date specified/ required; or (ii) refuses to unconditionally accept Letter of Award and carry out the work in accordance with the Bid in the event such Bidder is chosen as the Successful Bidder.

3.11.4 The Company shall, however, arrange to release the EMD in respect of unsuccessful Bidders, without any interest, after the acceptance of LOA along with the submission of Security Deposit by successful Bidder.

- The EMD shall be released to bidders in the following manner. The EMD of the Successful Bidder shall be returned after submission of Security Deposit in the form of DD.
- EMD of the unsuccessful bidders shall be released after releasing the EMD of the Successful Bidder.

3.11.5 The EMD shall be forfeited and appropriated by SNCM as per the discretion of SNCM as genuine, pre-estimated compensation and damages payable to SNCM for, inter alia, time, cost and effort of SNCM without prejudice to any other right or remedy that may be available to SNCM hereunder or otherwise, under the following conditions:

a. If a Bidder engages in a corrupt practice, fraudulent practice, coercive practice, or restrictive practice;

b. In the case of Successful Bidder, if it fails within 15 (fifteen) days from the issue of LoA – (a) to sign the Contract Agreement and/ or (b) to furnish the Security Deposit in the form of DD within the period prescribed.

c. In case the Successful Bidder, having signed the Contract Agreement, commits any breach thereof prior to furnishing the Security Deposit in the form of DD.

3.11.6 The Successful Bidder shall furnish the following Bank Guarantees:

i) **Security Deposit (SD)** in form of DD shall be furnished in favour of "Shree Narayana Cultural Mission (SNCM), Ahmedabad". The Successful Bidder shall submit Security Deposit as 5 % of the total EPC Price (Supply & Work), to be submitted within fifteen (15) days, from the date of issuance of LOI/LOA/Work order, valid for a period of six (6) months (may be extended if required) from the date of issue of LOI; This SD shall cover the risk against timely commissioning of the Plant, and recovery towards breakdown in solar generation within one (1) month Period after commissioning. The same shall be return only after successful completion of PR Test, submission and approval of PR report after commissioning.

3.11.7 Contractor shall be responsible for any water leakage or seepage on the roof during the installation of solar plants and also during the operation period of 1 years. In case of leakage during the above-mentioned period, necessary repair by specialized agency approved by SNCM must be carried out by the Contractor immediately without any cost implications to SNCM, failing which, the actual amount will be deducted from the contractor's RA bill.

3.12 Third Party Engineering Services Agency

3.12.1 Third Party Engineering Services (TPE) agency appointed by SNCM, at its sole discretion, to conduct any kind of inspection regarding procurement, fabrication, installation, hook-up, quality, execution, commissioning of the Project. The Contractor shall provide necessary access and coordination to conduct such inspections. The Contractor shall provide all necessary access and cooperation for inspection by National or State agency.

3.13 Right to Accept or Reject any or all Bids

3.13.1 Notwithstanding anything contained in this Tender, SNCM reserves the right to accept or reject any Bid and to annul the bidding process and reject all Bids at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons thereof.

3.13.2 SNCM reserves the right to reject any Bid and appropriate the EMD if:

a. After reviewing the Bid there is doubt that the offered works, materials or equipment are not state of the art and/ or not suitable for the site operating conditions;

b. At any time, a material misrepresentation is made or uncovered, or

c. The Bidder does not provide, within the time specified by the SNCM, the supplemental information sought by SNCM for evaluation of the Bid.

3.13.3 In the event of clause 3.11.3 (ii), SNCM also reserve right to ban the business for the period of one year or whichever deem appropriate by SNCM, which shall liable to circulate to relevant authorities.

3.13.4 Such misrepresentation/ improper response shall lead to the disqualification of the Bidder. If such disqualification / rejection occurs after the Bids have been opened and the Successful Bidder gets disqualified / rejected, then SNCM reserves the right to:

a. Select the next Bidder with the Lowest Evaluated Price Bid Value (in Rs.) as the Successful Bidder; <or>

b. Take any such measure as may be deemed fit in the sole discretion of SNCM, including annulment of the bidding process.

3.13.5 In case it is found during the evaluation or at any time before signing of the Contract or after its execution and during the period of subsistence thereof, that one or more of the pre-qualification conditions have not been met by the Bidder or the Bidder has made material misrepresentation or has given any materially incorrect or false information, the Bidder shall be disqualified forthwith, if not yet appointed as the Contractor either by issue of the LoA or entering into of the Contract Agreement, and if the Successful Bidder has already been issued the LoA or has entered into the Contract Agreement, as the case may be, the same shall, notwithstanding anything to the contrary contained therein or in this Tender, be liable to be terminated, by a communication in writing by SNCM to the Contractor, without SNCM being liable in any manner whatsoever to the Bidder or Contractor, as the case may be. In such an event, SNCM shall forfeit and

appropriate the security deposit without prejudice to any other right or remedy that may be available to SNCM.

3.13.6 SNCM reserves the right to verify all statements, information and documents submitted by the Bidder in response to the Tender Documents. Failure of SNCM to undertake such verification shall not relieve the Bidder of its obligations or liabilities hereunder nor will it affect any rights of SNCM there under.

3.13.7 The SNCM shall not be liable for any omission, mistake or error in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to TENDER, the Bidding Documents or the Bidding Process, including any error or mistake therein or in any information or data given by the SNCM.

4 Submission of Bid

General Terms

4.1 General Terms

4.1.1 A Bidder is eligible to submit only one Bid for the Project. A Bidder shall not be entitled to submit another Bid either individually or in a Consortium, as the case may be.

4.1.2 Notwithstanding anything to the contrary contained in this TENDER, the detailed terms specified in the draft Contract Agreement shall have overriding effect; provided, however, that any conditions or obligations imposed on the Bidder hereunder shall continue to have effect in addition to its obligations under the Contract Agreement.

4.1.3 Deleted

4.1.4 The Bidder shall submit a power of attorney as per the format at "Appendix 12: Format of Power of Attorney as Authorized Signatory" authorizing the signatory of the Bidder to commit to the Bid or as per their Company's format.

4.1.5 Any condition or qualification or any other stipulation contained in the Bid shall render the Bid liable to rejection as a non-responsive Bid. The complete Bid shall be without alterations, interlineations or erasures, except those to accord with instructions issued by the Company, or as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the Bid.

4.1.6 The TENDER documents and all attached documents are and shall remain the property of the Company and are transmitted to the Bidders solely for the purpose of preparation and the submission of a Bid in accordance herewith. Bidders are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their Bid. The Company will not return any Bid or any information provided along therewith.

4.1.7 Deleted

4.1.8 Bidder shall note that the Price Bid of only those Bidders shall be opened who are found technically qualified and responsive to SNCM's Tender terms and conditions including but not limited to Scope of Works.

4.2 Format and Signing of Bid

4.2.1 The Bidder shall provide all the information sought under this TENDER. The Company will evaluate only those Bids that are received in the required formats and complete in all respects.

4.2.2 The Bid shall be typed or written in indelible ink and signed by the authorized signatory of the Bidder who shall also initial each page, in blue ink. All the alterations, omissions, additions or any other amendments made to the Bid shall be initialled by the person (s) signing the Bid.

4.3 Deleted

4.4 Enclosures of the Bid

4.4.1 Deleted

4.4.2 The below mentioned documents are to be submitted in physical form:

a. APPENDIX No 1 to APPENDIX No 26

b. Document as per Pre-Qualification Criteria 3.2.

Note: EPC contractor shall submit all Appendix as per SNCM's prescribed format and SNCM shall have right to revise the format as per future requirement of SNCM.

4.5 Bid Due Date

4.5.1 Bids should be submitted before the Deadline for Submission of Bid as specified in NIT.

4.5.2 SNCM may, in its sole discretion, extend the Bid due date by issuing an Amendment/ Addendum in accordance with **Clause No. 3.6** uniformly for all Bidders.

4.6 Late Bids

4.6.1 Bids received by the Company after the specified time on the bid due date shall not be eligible for consideration and shall be summarily rejected. In case of the unscheduled holiday being declared on the prescribed closing/opening day of the Bid, the next working day shall be treated as the scheduled prescribed day of closing/opening of the Bid.

4.7 Confidentiality

4.7.1 Information relating to the examination, clarification, evaluation and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional advisor advising the Company in relation to or matters arising out of, or concerning the bidding process. The Company will treat all information, submitted as part of the Bid, in confidence and will require all those who have access to such material to treat the same in confidence. The Company may not divulge any such information unless it is directed to do so by any statutory entity

that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or the Company.

4.8 Correspondence with the Bidder

4.8.1 The Company shall not entertain any correspondence with any Bidder in relation to acceptance or rejection of any Bid.

4.9 Bid Opening and Evaluation

4.9.1 The Company shall open, examine and evaluate the Bids in accordance with the provisions set out in this TENDER document.

4.9.2 To facilitate evaluation of Bids, the Company may, at its sole discretion, seek clarifications in writing from any Bidder regarding its Bid.

4.9.3 After the receipt of Bids the Company may at its discretion send a team of engineers if necessary, to inspect the engineering facilities, to ensure suitability and satisfactory working conditions at the Bidder's works/yards(s) and equipment listed to be used by the Bidder for the work. The Bidder shall ensure that the aforesaid team shall at all the times have access to visit and inspect works, equipment etc.

4.10 Tests of Responsiveness

4.10.1 Prior to evaluation of Bids, the Company shall determine whether each Bid is responsive to the requirements of the TENDER. A Bid shall be considered responsive only if:

i. it is received in the manner prescribed in this TENDER
ii. it is accompanied by the requisite Tender Fee and EMD;
iii. it is received with all the Enclosures of the Bid as prescribed in the Clause 4.4
iv. its Enclosures are received as per the formats specified in Appendix as well as the Tender;
v. it contains all the information (complete in all respects) as requested in this Tender (in the same formats as specified);
vi. it complies will all the terms, conditions and provisions specified in this Tender; and
vii. it does not contain any conditions or deviations

4.10.2 The Company reserves the right to reject any Bid which is non-responsive and no request for alteration, modification, substitution or withdrawal shall be entertained by the Company in respect of such Bid.

4.11 Modification and Withdrawal of Bids

4.11.1 In case any clarifications are sought by the Company after opening of Bids then the replies of the Bidder should be restricted to the clarifications sought. Any Bidder who modifies its Bid (including a modification which has the effect of altering the value of its Financial Proposal) after opening of Bid without specific reference by the Company, shall render the Bid liable to be rejected without notice and without further reference to the Bidder and its EMD shall be forfeited.

4.11.2 No Bid may be withdrawn in the interval between the bid due date and the expiration of the validity period of the Bid. Withdrawal or unsolicited modification of a Bid during this interval shall result in the Bidder's forfeiture of its Bid Security.

4.12 Evaluation of Bid and selection of Bidder

4.12.1 SNCM will examine the Bid to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bid is generally in order.

4.12.2 Prior to the detailed evaluation, SNCM will determine the substantial responsiveness of each Bid. A substantially responsive Bid is one which conforms to all the terms and conditions of the Tender Documents without material deviations. Deviations from or objections or reservations to critical provisions such as those concerning EMD, Applicable Law and Taxes and Duties will be deemed to be a material deviation. SNCM's determination of a Bid's responsiveness is to be based on the contents of the Bid itself without recourse to extriexempt evidence.

4.12.3 If the Bid is not substantially responsive, it will be rejected by SNCM and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

4.12.4 SNCM will evaluate and compare Bids which have been determined to be substantially responsive.

4.12.5 A Bidder shall have to quote for entire Grid Connected Solar System altogether.

4.12.6 Following factors shall be required for evaluation of Bid:

a. The Evaluated Price Bid shall be calculated using the following parameters:

i. Engineering Procurement Commissioning (EPC) Contract Price (Supply + Work)

b. The Bid with the Lowest Price Bid Value (in Rs.) shall be considered as L-1 (Rs.) and the Successful Bidder. The Bid with next highest value shall be considered as L-2 and so on.

4.12.7 In no case, a Bidder shall have the right to claim to be the Successful Bidder for its Bid.

4.12.8 Evaluation of both Techno-Commercial (un-priced) bids and priced bids shall be done separately.

4.12.9 Price Bids of only techno-commercial acceptable bids shall be considered for further evaluation.

4.13 Contacts during Bid Evaluation

4.13.1 Bids shall be deemed to be under consideration immediately after they are opened and until such time the Company makes official intimation of award/ rejection to the Bidders. While the Bids are under consideration, Bidders and/ or their representatives or other interested parties are advised to refrain from contacting by any means, the Company and/ or their employees/ representatives on matters related to the Bids under consideration.

4.14 Employment of Officials/ Ex-Official of the Company

4.14.1 Bidders are advised not to employ serving the Company. It is also advised not to employ ex-personnel of the Company within the initial two years period after their retirement/ resignation/severance from the service without specific permission of the Company. The Company may decide not to deal with such firms who fail to comply with the above advice.

4.15 Declaration on Bidder's Relation to SNCM Official

4.15.1 The Bidders are required to certify in prescribed format Appendix 9: Declaration of Compliance, whether he/they is/are related to any of the Directors/Senior Personnel of the Company in any of the ways mentioned in the Certificate. It is clarified that any such affirmative certificate shall not, by itself, prejudice consideration of the Bid. This certificate must accompany the Bid.

4.16 Letter of Award ("LOA") and Notification to Proceed

4.16.1 After selection of the Successful Bidder, a Letter of Award (the "LoA") shall be issued, in duplicate, to the Successful Bidder. The Successful Bidder shall not be entitled to seek any deviation from the Contract, as may have been amended by SNCM prior to the bid submission date.

4.16.2 On issue of the LoA by the Company, authorised representative of the Successful Bidder shall sign the Contract Agreement within 7 (Seven) days and submit the security deposit within the stipulated time.

SNCM will issue NTP after signing of agreement.

4.17 Security Deposit

Security Deposit (SD) in form of DD shall be furnished in favour of "Shree Narayana Cultural Mission (SNCM), Ahmedabad". The Successful Bidder shall submit Security Deposit as 5 % of the total EPC Price (Supply & Work), to be submitted within fifteen (15) days, from the date of issuance of LOI, valid for a period of Six (6) months (may be extended if required) from the date of issue of LOI; This SD shall cover the risk against timely commissioning of the Plant, and recovery towards breakdown in solar generation within one (1) month Period after commissioning. The same shall be return only after successful completion of PR Test, submission and approval of PR report after commissioning.

4.17.1 Deleted

4.18 Fraudulent Practices

4.18.1 The Bidders may please note that the Company shall not entertain any correspondence or queries on the status of the Bids received against this TENDER. Bidders are advised not to depute any of their personnel or agents to visit the Company's office for making such inquiries.

4.18.2 Any effort by a Bidder to influence the Company on the Bid evaluation, Bid comparison or Contract award decision may result in the rejection of the Bidder's Bid.

--- End of Section ---

5 Scope of Work

5.1 GENERAL SCOPE OF WORK

The detailed Scope of Work in accordance with this specification is elaborated below. Scope of Supply & Work includes all design, engineering, manufacture, procurement & supply of equipment's and materials, inspection, testing at works, packing and forwarding, supply, transportation, receipt, unloading and storage at site (indoor and outdoor), associated civil works, Module mounting structure, PV Modules, Cables, Power Conditioning Units/Inverters, ACDB, associated protection system, remote monitoring system, other associated equipment's for Solar PV Plants, permits, licenses, insurance at all stages, erection, testing and commissioning including five years comprehensive maintenance contract (CMC) of Grid Connected Photovoltaic Solar plants and Performance demonstration with associated equipment and materials on EPC basis for cumulative approx. Total 170 kW (AC) Rooftop solar power plant Solar System comprising of 5 Nos. of building premises of SNCM, satellite, Ahmedabad as under

Sr. No.	Name of Premises	Locations	Total minimum Capacity, kWp (in DC)	Total Capacity, kW (in AC)
1	College Building (RCC Roof + Metal Roof)	SNCM, Satellite, Ahmedabad	48	40
2	Building A (RCC Roof)		38	35
3	Building B (RCC Roof)		44	40
4	Building C (RCC Roof)		45	40
5	Guest House (RCC Roof)		15	15
Total			**190**	**170**

In grid-connected solar photo-voltaic (PV) systems, electricity generated is fed into the building as well as existing equipment's loads that are connected to the grid through a service connection with surplus energy being fed into the grid and shortfall being drawn from the grid. Grid-connected solar PV systems have no battery storage and will not work during grid outage. For buildings with grid-connected solar PV systems, the service connection meter needs to be of the bidirectional type, whereby import kWh and export kWh are separately recorded and the Main meter shall be replaced by Net meter with necessary equipment's and structures. All the items in the systems should meet the technical specification and standards mentioned in TENDER.

All materials, fixtures, accessories to be provided shall be of best quality and as per relevant IS standard. For all concrete works, unless and otherwise specified in soil investigation report, 53 grade ordinary Portland cement, TMT reinforcement bar of Fe500(D) and structural steel of approved make to be used however prior approval of the make shall be obtained from SNCM. Structural steel of Hot rolled steel with minimum Yield stress shall be 250 Mpa or Cold form with minimum yield stress shall be 350 MPa is to be used.

The EPC Contractor shall be obligated to perform following Scope of Work in relation to the Project. The Scope of Work of the EPC Contractor includes, but is not limited to, the following:

(A) EPC Scope

i) Solar PV modules.

ii) Components and parts used in Solar System should conform to the BIS or IEC or other international specifications, wherever such specifications are available and applicable.

iii) Module Mounting Structures (MMS), Mounting frames, structures, array foundation (Piles in ground / grouting on terrace / Fabrication on metal shade), earthing grid design, and module inter-connection.

iv) All System Junction boxes.

v) Grid interactive Power Conditioning Unit/Inverters with web based Remote Monitoring System

vi) MPPT – Max power point tracking built in the PCU

vii) Appropriate AC power evacuation panels or inverters, according to Project Site requirements, with bus bars (in-built or otherwise) and circuit breakers.

viii) The nominal steady electrical characteristic of the system are as follows:

a. Single/ Three phase AC at 50 Hertz plus or minus 0.5 Hertz
b. Nominal voltage of 230 V/415V/11KV with +10% to -12.5% variation.

ix) Protection/isolation systems.

x) Power and Control Cables, Cables & connectors of solar grade, which can withstand harsh environment conditions (high temperature, UV Radiation, rain, dirt, microbes etc. for 25 years).

xi) Earthing system for PV Array, DC power system, lightning protection system.

xii) Data monitoring system with remote monitoring facilities (Completely in scope of bidder).

xiii) Transportation, unloading, and loading of all equipment at Project Site.

xiv) Project Management including adherence to all requisite safety practices.

xv) The Project shall be designed and capable of being synchronized and within a frequency range of 47.5 to 52 Hz and voltage of 230V/415V with single/three phase.

xvi) Short circuit rating: As a part of the detailed design process, the Solar Company shall calculate the short circuit rating (minimum and maximum), and supply this information to the Procurer

xvii) Firefighting (fire extinguisher and sand bucket with stand)

xviii) The existing meter room can be utilized after proper designing and approvals of SNCM, Inverters, ACDBs, DCDBs and other equipment's can be kept in the shade type structure.

xix) The Bidder/ EPC Contractor shall also provide fixed / folding staircase to access building's terrace/roof for Solar Panel Installation, cleaning and maintenance.

xx) If existing LT Panel do not have any vacant feeder for solar power feeding or any modification required in existing LT Panel or addition of new LT Panel with suitable breakers/ switchgears shall be in the scope of Bidder/ EPC Contractor.

(B) The existing meter room can be utilized after proper designing and approvals of SNCM/ as Inverters, ACDB's, DCDB's and other equipment's can be kept in the existing building.

(C) Installation and Commissioning of various SPV Systems that includes:

i) Confirm feasibility of mentioned Solar PV System capacity along with site visit report, design and construction of foundations/grouting for holding module mounting structures without puncturing the roof. If also as per site requirement, the roof needs to be punctured, the EPC Contractor shall repair the same as per existing roof design and shall ensure the aestheticity.

ii) SNCM has to initiate tree trimming / Cutting for proposed solar plant space as per the requirement of TPE agency /EPC contractor.

iii) Maintaining proper drainage of rain water over terrace throughout the installation area and ensuring installation of proper piping systems on Solar Systems where there is high probability of water logging. Installation of the same shall be in the scope of the Nodal EPC Contractor.

iv) Cables to be laid over GI/SS trays not obstructing the movement on the terrace as per site requirement, installation of insulated clamps at places where the cables need perfectly horizontal climbing and ensuring that the cables do not run away from the trays by tying the cables along with the tray using UV protected cable tie(s).

v) Before commencement of work, the EPC contractor has to obtain all approvals for related drawings to be obtained from the concerned authorities including GEDA/Gujarat State Designated Agency, CEI, DISCOM, SNCM etc.

vi) All drawings shall conform to relevant IS/IEC standards.

vii) Special care to be taken while designing all structures for modules to cater to heavy rainfall, strong winds and earthquake that may be prevalent in the area.

viii) Serial Number (identification mark) must be permanently marked on all major components of the SPV systems and shall be fixed with strong adhesive on each equipment, as approved by SNCM/ TPE AGENCY.

ix) Undertake Pre-commissioning and Commissioning of all supplied equipment.

x) Test running of the grid-connected solar Facility including load trials at Project Site, prior to handover and commencing energy export for metering.

xi) Grid commissioning; the plant needs to be grid interactive. Interconnection points to be checked and certified by SNCM/ TPE AGENCY for accuracy and safety.

xii) Installation of Main Meter and Back up Meter shall be done by the EPC Contractor and the EPC Contractor shall submit drawings for grid interface for each individual power pack and get approved prior to commencement of work on Project Site. Necessary approvals and testing of all energy meters shall be as per standards of CEIG/ DISCOM.

xiii) Commissioning certificate from GEDA/Gujarat State Designated Agency/ DISCOM/GoG designated authority for the Facility.

(D) General Instructions:

i) Construction water and construction power at rooftop shall be the responsibility of the EPC Contractor which can be facilitated at building premises by the SNCM.

ii) Security, safety, watch, and ward of all materials at sites shall be the responsibility of the EPC Contractor.

iii) The EPC Contractor to obtain comprehensive insurance cover for the Project.

iv) Liaison with statutory authorities as applicable for all the Project approvals.

v) Expenses for any other works, supply of material, and providing services required for the successful commissioning and operation of the Facility, but not specifically mentioned in this document.

vi) "Contractor Safety Management" to be strictly complied with by the EPC Contractor throughout Project activity as per safety rules of concern CEIG.

vii) First-aid medical facilities at the Project Site during construction to be provided by the EPC Contractor.

viii) All local labour, employment, and other issues shall be handled independently by the EPC Contractor.

ix) The entire responsibility and risk relating towards the workforce working at the Project Site, and compliance of different statutory regulations like Workman Compensation Act, ESIC, Factory Act 1948, Contract Labour Regulation, and Abolition Act 1970, Shop and Establishment Act 1948, and other Statutory regulatory bodies shall solely lie with the EPC Contractor. The EPC Contractor shall also be solely responsible for payment of Wages, PF, Bonus, Retrenchment Compensation Leave etc. applicable as per various statutory regulations to their entire workforce.

(E) Statutory Clearances:

The following Statutory Clearances to be obtained by the EPC Contractor from CEIG / DISCOM / GEDA/Gujarat State Designated Agency as directed by SNCM/ TPE AGENCY:

i) Nodel Agency Approval (GEDA / DISCOM Registration/Gujarat State Designated Agency)

ii) Building and Architectural Drawings approvals from relevant authorities, wherever required.

iii) Factory inspector approval for drawings, wherever required.

iv) Electrical system approval (Electrical Inspector) - CEIG

v) Fire System approval, wherever required

vi) DISCOM Approval (Connectivity & Metering- Solar meter, Check meter & Net Meter)

vii) All equipment, accessories, materials, civil construction & erection works should comply with statutory requirements and IS standards.

viii) All statutory requirements for working at the project site like labour registration, workman compensation policy, ESIC etc. to be complied with by the Contractor before deployment of resources at the Project Site.

ix) All Statutory approval and other Charges (Such as GEDA/Gujarat State Designated Agency Registration Charges, Net Meter, Solar Meter & Check Meter

Testing Charges & DISCOM Connectivity Charges, Any CEIG Registration Charges, etc) shall be pay by Successful Bidder.

x) All liaising work shall be in scope of Successful Bidder.

xi) All risks associated with lapses or delays in insurance coverage, during the construction period, shall be at the Total Project Contractor's cost.

xii) The EPC Contractor should not misuse the area and/or assign responsibility for the safety of machinery within the premises.

(F) CMC Undertaking

For the 5 years of Comprehensive Maintenance Contract (CMC) after the commissioning of a grid-connected solar PV system, standard terms and conditions typically cover areas to ensure optimal performance, longevity, and compliance. Here are some recommended terms and conditions for a 5-year CMC:

i) Scope of CMC

(a) The contractor will provide maintenance services, including routine inspections, troubleshooting, and minor repairs and major replacement of any of the solar PV system components.

(b) All preventive and corrective maintenance must align with the manufacturer's guidelines and local standards.

ii) Maintenance Schedule

(a) Regular Inspection: Monthly or quarterly inspections, depending on system requirements, to assess performance, cleanliness, and wear.

(b) Annual Audit: A comprehensive annual inspection and performance audit, including a report on energy output, component health, and potential upgrades.

iii) Spare Parts and Repairs

(a) The contractor should maintain an inventory of critical spare parts and replace faulty components (like inverters, connectors, wiring, JB, etc.) promptly to minimize downtime.

(b) Any replacement parts must meet or exceed the original component specifications and be covered under the CMC at no additional cost to the client.

iv) Performance Monitoring

(a) Continuous performance monitoring to ensure the system operates at optimal efficiency.

(b) Provide remote monitoring software and periodic performance reports (monthly and annual) to the client.

(c) Immediate notification to the client in case of breakdown and/or any drop in energy generation below the expected threshold.

v) Warranty for Replaced Components

(a) Any part replaced under CMC should have a warranty period (minimum up to defect liability period).

(b) If replaced within the last year of the CMC, a warranty extension may be considered.

vi) Response Time and Downtime Allowance

(a) Response Time: Technicians should respond to any issue within 24 hours and resolve major faults within 48–72 hours.

(b) Downtime Allowance: Cumulative downtime of the system due to repairs or maintenance should not exceed 1% of total operational time annually. Penalties may apply if downtime exceeds this limit.

vii) Safety and Compliance

(a) The contractor must adhere to all safety protocols, including protective gear for personnel and safe handling of equipment.

(b) All activities should comply with local and national grid codes, electrical safety standards, and environmental regulations.

viii) Termination Clause

(a) The client reserves the right to terminate the CMC if the contractor fails to meet agreed standards or consistently fails to achieve performance metrics, with a 30-day notice period for rectification.

(b) Early termination by the contractor would require a refund for the remaining CMC period.

ix) Documentation and Reporting

(a) The contractor must provide detailed records of each maintenance activity, listing performed services, parts replaced, system performance, and any issues identified.

(b) A final CMC completion report of each year for the 5-year period, summarizing all maintenance, performance metrics, and any recommendations for future maintenance should be submitted to SNCM.

x) Training of Client's Staff

(a) The contractor should provide basic operational and troubleshooting training to the client's staff, helping them understand the system's basic functionality and indicators.

5.1.1 During the execution of work, Successful Bidder may propose Design & Detailed Project for additional AC Capacity other than mentioned (maximum up to 25%) subject to technical acceptance & administrative approval of SNCM.

5.1.2 Deleted

5.2 KEY COMPONENTS OF SOLAR SYSTEM

The Key components of Solar Systems are as follows: -

5.2.1 Solar Panels - A solar panel (also solar module, photovoltaic module, or photovoltaic panel) is a packaged, connected assembly of photovoltaic cells and it is used as a component of a Solar Systems to generate and supply electricity. Solar panels usually form a part of a large solar array (multiple panels connected together).

5.2.2 Junction box - An electrical junction box is a container for electrical connections, usually intended to conceal them from sight and tampering. A small metal or plastic junction box may form part of an electrical conduit wiring system in a building, or may be buried in the plaster of a wall, concealed behind an access panel or cast into concrete with only the lid showing. It also includes terminals for joining wires.

5.2.3 Inverter / Power Control Unit - A solar inverter converts the variable direct current output of a photovoltaic (PV) solar panel into a utility frequency alternating current that can be fed into a commercial electrical grid or used by a local, off-grid electrical network. It is a critical component in a photovoltaic system, allowing the use of ordinary commercial appliances. Solar inverters have special functions adapted for use with photovoltaic arrays, including maximum power point tracking and anti-islanding protection.

5.2.4 Manual/Automatic disconnect switch - It is an automatically/manually operated electrical switch designed to protect an electrical circuit from damage caused by overload or short circuit. Its basic function is to detect a fault condition and, by interrupting continuity, to immediately discontinue electrical flow.

5.2.5 The proposed Solar Systems be developed across an available roof and Ground Space. Each Solar System shall have an individual solar PV based power plant (also called power pack) and each power plant shall be connected to the grid at an appropriate voltage based on the size of the plant and the availability of the grid.

5.3 GENERAL SYSTEM DESIGN GUIDELINES

Each individual solar PV system shall be developed based on the actual available spaces and convenience of the SNCM. The broad general guidelines for the development of individual plants shall follow the following key points:

i) Each individual plant capacity may vary based on roof sizes or system sizes. Individual plant capacity may vary as per the technical feasibility of the location as per the Solar Policy.

ii) Solar plant on SNCM premises Terrace shall feed AC power to the grid of the SNCM premises as per power evacuation and interconnection requirements.

iii) Each plant shall consist of a solar PV array, a fixed solar PV array support structure, junction box, DC cabling, DC distribution box, inverter and power control unit, AC cabling, AC distribution box, main distribution panel and meters.

iv) The individual junction boxes and DC cabling shall be installed on the existing locations of the installed PV power plants.

v) The individual inverter and the power control units (PCU's) shall be installed either in a control room/closed but air ventilated space provided in the respective buildings or next to the panel arrays in case of large buildings based on considerations like safety, efficiency, sand loss reduction.

vi) Individual DC and AC distribution boxes, DC and AC cabling, energy meters and main distribution panel shall be installed either in the control room or in an appropriate open space provided in the respective building.

vii) If DG is available in premises than EPC contractor has to provide the protection that must be able to isolate the Diesel Generator set and PV power plant in case of Grid unavailability. Necessary arrangement for isolation shall be incorporated in to design as per SNCM/local DISCOM requirement.

5.4 TECHNICAL SPECIFICATIONS AND STANDARDS

5.4.1 Total 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC)

The proposed projects shall be commissioned as per the technical specifications given below.

A Grid-connected Solar System consists of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter, and Controls & Protections, interconnect cables and switches. PV Array is mounted on a suitable structure. Grid tied SPV system is without battery and should be designed with necessary features to supplement the grid power during daytime. Components and parts used in the SPV power plants including the PV modules, metallic structures, cables, junction box, switches, PCUs, Discom approved Energy Meters etc., should conform to the BIS or IEC or international specifications, wherever such specifications are available and applicable. Solar PV system shall consist of following equipments/components.

i) Solar PV modules consisting of required number of **Mono PERC modules** for Solar Systems.
ii) Grid interactive Power Conditioning Unit with web based Remote Monitoring System
iii) Module Mounting Structures (RCC roof and Metalic shade)
iv) Junction Boxes.
v) Earthing and lightening protections.
vi) IR/UV protected PVC Cables, pipes, and accessories.
vii) Civil Works, etc.

1) SOLAR PHOTOVOLTAIC MODULES

a. The Solar PV modules used must qualify to the latest edition of IEC PV module qualification test or equivalent BIS standards Crystalline Silicon Solar Cell Modules IEC 61215 and IS14286. In addition, the modules must conform to latest edition of IEC/IS 61730 Part 1 -requirements for construction & Part 2 – requirements for testing, for safety qualification or equivalent IS.
b. For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC/IS 61701.

c. All modules shall be certified as per the IEC 62804 Certified PV modules should be PID free, documents for the same should be submitted with conditions of the PID test should be for a humidity of 85 % and a cell temperature of 85 °C at 1000 Volts, IEC 61701.
d. The certified Bill of Material (BOM) to be used in the PV Modules should be the same as used during the IEC certification of reference PV Module certified by renowned agency like TUV, UL, etc.
e. Deleted
f. The total solar PV array capacity (kWp) should not be less than allocated capacity (kW) and should comprise of solar **Mono-PERC** modules of **minimum 540 Wp** and above wattage with minimum 144 –cell configuration. Module capacity less than **540 Wp** shall not be accepted.
g. Efficiency of PV Module shall be more than 19% for Mono-PERC.
h. Temperature co-efficient of power (Pmax) shall be -0.40%/°C or better.
i. Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.
j. PV modules must be tested and approved by one of the IEC/MNRE authorized test centers. Bidder shall submit Type test report as mentioned in the Tender from approved IEC / MNRE authorized test lab.
k. The module frame shall be made of corrosion resistant materials, preferably having anodized aluminium.
l. SPV module shall have module safety class-II and should be highly reliable, light weight and must have a service life of more than 25 years.
m. The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid.
n. The rated output power of any supplied module shall have tolerance up to + 3%. No negative tolerance in the rated capacity of solar PV module is allowed.
o. The module mismatch losses for modules connected to an inverter should be less than 1%.
p. The SPV module shall be made up of high transmissivity glass & front surface shall give high encapsulation gain and the module shall consist of impact resistance, low iron and high transmission toughened glass. The module frame shall be made of corrosion resistant material, which shall be electrically compatible with the structural material used for mounting the modules.

q. All materials used for manufacturing solar PV module shall have a proven history of reliability and stable operation in external applications. It shall perform satisfactorily in relative humidity up to 85% with temperature between -40°C to +85°C and shall withstand adverse climatic conditions, such as high-speed wind, blow with dust, sand particles etc for wind speed of 180 km/hr on the surface of the panel as per IEC 61730.

r. Modules only with the same rating and manufacturer shall be connected to inverter. Modules shall compulsorily bear following information in the form of ID encapsulated with solar cell in the manner so as not to cast shadow on the active area and to be clearly visible from the top.

s. The SPV modules shall have suitable encapsulation and sealing arrangements to protect the silicon cells from environment. The encapsulation arrangement shall ensure complete moisture proofing for the entire life of solar modules.

t. The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary by more than 2 (two) per cent from the respective arithmetic means for all modules and/or for all module strings, as the case may be.

u. The module shall be provided with a junction box with provision of sealed type and with arrangement for provision of min. 3 by-pass diode. The box shall have hinged, weather proof lid with captive screws and cable gland entry points or may be of sealed type and IP-67 rated.

v. IV curves at STC for each PV module should be provided by bidder.

w. Plants installed in high dust geographies in Gujarat must have the solar modules tested with relevant dust standards (Applicable standard would be IEC 60068-2 or equivalent).

x. Before finalisation of Solar PV Module Vendor, QAP along with **Grade A PV Cell** shall be approved by SNCM or TPE/TPI Agency.

y. Modules deployed must use a RF identification tag. The following information must be mentioned in the RFID used on each module. RFID tag shall be inside laminate only and must contain following information.

    i. Name of the manufacturer of the PV module

    ii. Name of the manufacturer of Solar Cells.

    iii. Month & year of the manufacture (separate for solar cells and modules)

    iv. Country of origin (separately for solar cells and module)

v. I-V curve for the module Wattage, Im, Vm and FF for the module

vi. Unique Serial No and Model No of the module

vii. Date and year of obtaining IEC PV module qualification certificate.

viii. Name of the test lab issuing IEC certificate.

ix. Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001

z. Warranties

1) Material Warranty:

i. Material Warranty is defined as: The manufacturer should warrant the Solar Module(s) to be free from the defects (including Potential-induced degradation [PID] effect) and/or failures specified below for a period not less than twenty-five (25) years from the date of sale to the original customer ("Customer")

ii. Defects and/or failures due to manufacturing

iii. Defects and/or failures due to quality of materials

iv. Nonconformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owners sole option.

2) Performance Warranty:

i. The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 25-year period and not more than 10% after ten years period of the full rated original output. Degradation in first year shall be allowed up to 3% for mono crystalline and in any subsequent year degradation shall not be more than 0.7 % per annum.

ii. The manufacturer should warrant the output of Solar Module(s) If, Module(s) fail(s) to exhibit such power output in prescribed time span, the Contractor will either deliver additional PV Module(s) to replace the missing power output with no change in area used or repair or replace the PV Module(s) with no change in area of roof used at SNCM’s sole option. Total area available from SNCM

premises is fixed and the bidder shall design the plant so that in this case he has enough space to accommodate additional capacity.

aa. Deleted

bb. Bidder Shall Provide the solar module as per latest circular issued by MNRE (Ministry of New and Renewable Energy) for ALMM (Approved Models & Manufacturer of Solar Photovoltaic Modules).

2) MODULE MOUNTING STRUCTURE (ARRAY STRUCTURE)

Scope of work under this section covers the provision of labour, tools, materials and performance of work necessary for the design, manufacture, quality assurance, quality control, shop assembly, shop testing, delivery at site, and preservation, installation, commissioning, performance and acceptance testing of Module Mounting Structures as per the specifications here under, complete with all auxiliaries, accessories, spare parts and warranting a trouble free safe operation of the installation.

The Module Mounting Structure (MMS) should be designed for an optimum seasonal / fixed tilt angle, so as to meet the maximum solar geneartion. The angle should be systematically optimized for maximum energy generation throughout the year based on location and local weather variables for each module technology. Bidder has to carry out proper shadow analysis of proposed area. MMS structure design is combination of two elements named Substructure (Foundation) and Super structure. Bidder must submit the all the quality test documents and test certificates complying with the requirement of the structure. Suitable provision for mounting DWC pipes for routing DC cable from Array to Inverter must be provided (Separate DWC Pipe for Positive and Negative DC Cables as mentioned elsewhere in this tender document).

Consideration for Solar PV installation on Roof Top - RCC/Metal Shade

a) Below mentioned consideration are to be kept in mind by contractor for design of total roof top installation.

i. Contractor has to consider that maximum permissible load of total proposed installation on the RCC as well as Sheet metal roof shall not be more than 100 kg/sqmtr and 35 kg/Sqmtr respectively.

ii. Contractor can use Precast Reinforced Blocks / concrete foundations such that load mention above shall not exceed. Foundation shall also be fixed with Chemical anchor fasteners for stability of the proposed systems. For using anchor fastener permission from SNCM is required. SNCM has right to reject or accept the proposal of using anchor fastener on RCC roof and it shall be binding to contractor.

iii. In case of using anchor fasteners method, Chemical Fasteners should be used as per clause 5.5 (vendor list).

iv. In case of installation on sheet metal roof, contractor has to ensure that installation is water tight. Contractor has to fill the hole drilled in sheet metal for anchor fastener with proper sealing agent.

v. In case of installation on sheet metal, contractor has to ensure the strength, location and spacing of underlying the structural members.

vi. In case of installation on sheet metal contractor has to follow PPE regulations.

vii. Contractor has to repair all damaged structure after completion of the installations as per existing structure.

viii. Curing of concrete foundations shall be done thrice a day and be maintained for a period of seven days from the date of casting. Concrete foundation is to be painted through White

ix. All design and drawing are to be submitted for approval in Editable, AutoCAD, STAAD file & PDF format to Company or its designated agency before starting the work. The submitted drawing and design shall be certified and stamped by licensed structure designer.

x. Design of the foundation and structure shall be done for 25 years life such that structure strength shall not reduce for designed life.

xi. The Contractor has to ensure and arrange sufficient lighting arrangement for all activities during night time.

xii. Structure shall be earthed separately by maintenance free earthing.

xiii. Factor of safety shall be considered as 1.5 for designing the system.

b) Below mentioned consideration are to be kept in mind by contractor for design of Superstructure for MMS:

i. The MMS should be safe, and designed to allow easy replacement of any module and easy access to the O&M staff. It should be designed for simple mechanical and electrical installation, should support Solar PV modules at a given orientation, absorb and transfer the mechanical loads to the ground properly.

ii. Irrespective of design, none of the components shall be less than 2mm in thickness.

iii. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from Solar PV panels at the same time it will withstand design wind speed as per wind zone of the plant location.

iv. It shall support Solar 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 and is strictly not allowed.

v. The frames and leg assemblies of the array structures shall be made of hot dip galvanized steel per ASTM A123.

vi. All design and drawing are required to be submitted in Editable, AutoCAD, STAAD file & PDF format for approval to Company or its designated agency before starting of work. The submitted drawing and design shall be certified and stamped by licensed structure designer.

vii. Design of the super structure (Mounting steel structure) shall be done for 25 years life such that structure strength shall not reduce for designed life.

viii. In case of galvanization of structures, specific requirement for thickness of galvanization should be at least minimum 80 microns at any point of the galvanized structure. No averaging is allowed for measuring the thickness of galvanization. Inner side galvanization with same specification of any hollow components of module mounting structure is mandatory Galvanised structure is required to be sent to third party laboratory test for confirmation of the mass of zinc applied on structure.

ix. All nuts and bolts (fasteners) shall be made up of very good quality stainless steel of grade SS 304 required for module fixing. Other fasteners shall be of HDG of 8.8 grade.

x. Modules shall be clamped / bolted with the structure properly. The material of construction of clamps/bolts shall be Al / Steel. Clamps / bolts shall be designed in such a way so as not to cast any shadow on the active part of a module.

xi. Module mounting structures shall also be earthed through proper separate earthing

xii. Factor of safety shall not be taken less than 1.5 for all design calculation.

xiii. For multiple module mounting structures located in a single row, the alignment of all modules shall be within an error limit of 10 mm in vertical / horizontal line.

xiv. The Module Mounting Structure design shall be certified by a structural engineer and it is mandatory.

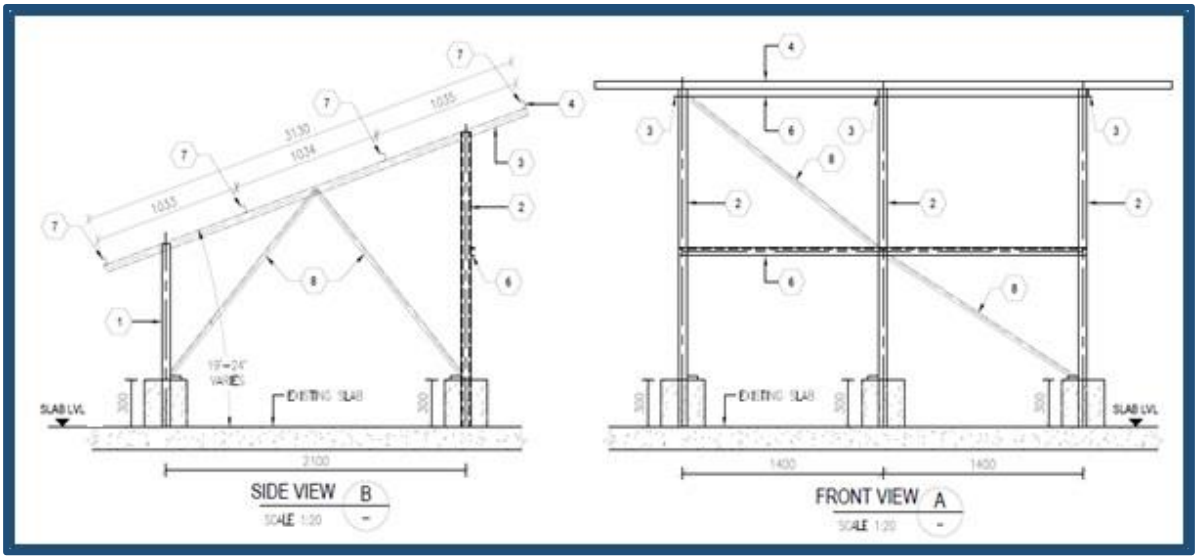
xv. Minimum clearance between RCC roof and lowest edge of module on RCC roof shall be minimum 1800 mm.

xvi. Irrespective of design, none of the components shall be less than 2 mm in thickness

xvii. All the cables were aesthetically tied to module mounting structure

xviii. All AC and DC cables shall be laid in HDG cable tray. All string cables shall be passed from UPVC and DWG pipes.

xix. The Contractor has to ensure and arrange sufficient lighting arrangement for all activities during night time.



Indicative Rooftop Solar PV Module Mounting Structure Design

3) JUNCTION BOXES (JBS)

i) The junction boxes are to be provided in the PV array for termination of connecting cables. The Junction Boxes (JBs) shall be made of GRP/FRP/Powder Coated Aluminium /cast aluminium alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JBs shall be such that input & output termination can be made through suitable cable glands.

ii) Copper bus bars/terminal blocks housed in the junction box with suitable termination threads Conforming to IP67 standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry. Single / double compression cable glands. Provision of earthing's. It should be placed at suitable height or above for ease of accessibility.

iii) The array junction box will also have suitable surge protection devices installed in the AJB.

iv) The junction boxes should be able to combine groups of modules into independent charging sub- arrays.

v) Each Junction Box shall have High quality Suitable Capacity Min. Type -2 SPDs, Fuses and connectors. The Junction Boxes shall have suitable arrangement of monitoring and disconnection for each of the groups. If Inverter having built-in adequate protection such as SPDs, Over Current Protections, Monitoring, DC

Disconnector etc, then DC junction box is not required. ACDB shall be mandatory for all protection mentioned in the Tender except SPD if it is built-in the Inverter.

vi) Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification

vii) All fuses shall have DIN rail mountable fuse holders and shall be housed in thermoplastic IP 67 enclosures with transparent covers.

viii) It should provide a test point for each sub- group for quick fault location to provide group array isolation.

ix) The current carrying rating of the junction box shall be suitable with adequate safety factor to inter connect the Solar PV array.

x) The junction boxes shall have suitable cable entry points fitted with cable glands of appropriate size for both incoming & outgoing cables

xi) Suitable markings shall be provided on the bus bar for easy identification & cable ferules shall be fitted at the cable termination points for identification.

xii) Junction boxes and solar panel terminal boxes shall be of the thermo plastic type with IP 67 protection for outdoor use and IP 64 protection for indoor use.

xiii) Cable terminations shall be taken through thermo-plastic cable glands. Cable ferrules shall be fitted at the cable termination points for identification.

4) DC DISTRIBUTION BOARD

i) DC Distribution panel to receive the DC output from the array field.

ii) DC DPBs shall have sheet from enclosure of dust & vermin proof conform to IP 67 protection. The bus bars are made of copper of desired size. Suitable capacity MCBs/MCCB/ Fuses shall be provided for controlling the DC power output to the PCU along with necessary surge protection devises (SPD's).

5) AC DISTRIBUTION PANEL BOARD

i) AC Distribution Panel Board (DPB) shall control the AC power from PCU/ inverter, and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode, the bus bars are made of copper of desired size.

ii) All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS60947 part I, II and III.

iii) ACDB shall be provided with MCCB, Instrument transformers, Multifunction meters, indication lamps, 5/15A Socket, spare terminal and Disconnectors adequate quantity has to be maintain by EPC contactor to use during CMC period, if required.

iv) The changeover switches, cabling work should be undertaken by the bidder as part of the project.

v) All the Panel's shall be metal clad, totally enclosed, rigid, wall mounted/floor mounted, air - insulated, cubical type suitable for operation on three phase / single phase, 415 or 230 volts, 50 Hz

vi) The panels shall be designed for minimum expected ambient temperature of 50 degrees Celsius, 85 present humidity and dusty weather.

vii) All indoor panels will have protection of IP 54 or better All outdoor panels will have protection of IP 67.

viii) Shall be of Metal Sheet with powder Coating

ix) Should conform to Indian Electricity Act and rules (till last amendment).

x) All the 415 AC or 230 volts devices / equipment like bus support insulators, circuit breakers, SPDs, VTs etc., multifunction meters, mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions;

viii- 1	**Variation in supply voltage**	**+/- 10 %**
Viii- 2	Variation in supply frequency	+/- 3 Hz

xi) Panel shall be totally enclosed dust and vermin proof, best quality synthetic / neoprene rubber gasket shall be provided around doors covers and other cut-outs.

xii) All Cable Entry Shall be from Bottom Only. Gland plate shall be provided on ACDB compartment with required holes and spare holes. Party shall supply best quality grommet to plug the holes.

xiii) Panel shall have excellent aesthetic look and finish.

xiv) Two nos of earthing bolts shall be provided on each side of panel.

xv) Holes on Gland plate shall be provided with proper grommets.

xvi) Finish and Surface Preparation:

a. Surface is to be prepared with Sand / Shot Blasting.

b. Epoxy Power coating (Exterior and interior) after seven tank process with minimum thickness of 70 microns.

c. Exterior – RAL 7035

d. Interior – White (Preferred) or RAL 7035

xvii) All doors shall be provided with adequate number of best quality cam type locking knobs. Concealed Hinges of good quality shall be provided. Location of Hinges (right or left side) shall be as per GA drawing. Doors shall be removal type.

xviii) Case 1: For evacuation of Solar power via solar meter to the nearest evacuation point, individual AC Combiner box with separate solar meter for each building's nearby LT Panel shall be provided as per suitable site condition and as approved by DISCOM.

Case 2: Main AC Combiner box shall be provided of minimum IP65 rating, which carries minimum six (6) nos. of inputs + additional 1 spare and three (3) no. of output. In input connection, all individual building premises solar power cable shall be connected and output supplied to the solar meter via solar isolator switch to LT side of premises.

The best suitable option shall be provided by the EPC contractor as agreed by SNCM and approved by DISCOM.

xix) Labels:

a. All labels shall comprise white letters engraved on Black background.

b. Labels shall be made of 3 ply lamicoid or Anodized Aluminium.

c. Size of lettering shall be minimum 50 mm for panel description and designation. (As shown in GA Drawing)

d. Size of lettering shall be minimum 5 mm for component designation.

e. Live terminal shall be protected with proper insulating front barrier.

f. CAUTION, Name plate “CAUTION LIVE TERMINAL “Shall be provided at all points where the terminals are likely to remain live and isolation is required before opening.

g. 415 V Hazard Board shall be provided on the panel appropriately.

6) PCU/ARRAY SIZE RATIO

i) The combined wattage of all inverters should not be less than rated capacity of power plant under STC. However extra DC capacity can be installed by EPC Contractor to achieve higher CUF within the limit of the land/roofs/terrace of the proposed office premises/buildings.

ii) Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.

7) Power Conditioning Unit (PCU) / Grid-Tied Inverter

The Contractor has to provide sufficient information to the satisfaction of SNCM and approval, before placing the final order for PCU(s)/Inverter(s). Power Conditioning Unit (PCU)/Inverter shall consist of an electronic inverter with latest technology available in the market along with associated control, protection and data logging devices.

As SPV array produce direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. Conversion shall be achieved using an electronic Inverter and the associated control and protection devices. All these components of the system are termed the "Power Conditioning Unit (PCU)". In addition, the PCU shall also house MPPT (Maximum Power Point Tracker), an interface between Solar PV array & the Inverter, to maximize Solar PV array energy input into the System. Inverter output should be compatible with the grid frequency.

Typical technical features of the inverter for **Solar System** shall be as follows:

Sr.	Description	Specification
1	Switching devices	IGBT
2	Control	Microprocessor /DSP

3	Nominal AC output voltage and frequency	415V, 3 Phase, 50 Hz (In case single phase inverters are offered, suitable arrangement for balancing the phases must be made.)
4	Output frequency	50 Hz
5	Grid Frequency Synchronization range	(+) 3 Hz or more
6	Ambient temperature considered	(-) 20° C to (+) 50° C
7	Humidity	95 % Non-condensing
8	Protection of Enclosure	IP-54 (Minimum) for indoor IP-67 (Minimum) for outdoor
9	Grid Frequency Tolerance range	(+) 3 or more
10	Grid Voltage tolerance	(-) 20% & (+) 15 %
11	No-load losses	Less than 1% of rated power
12	Inverter Efficiency (Minimum)	≥ 98%
13	MMPT Efficiency	> 90%
14	THD at rated power	< 3%
15	PF	0.8 lag to 0.8 lead
16	LED/LCD Display: Indications	Display shall indicate system functional parameters and protection functional indicator i.e. Inverter ON, Grid ON, Inverter Under/Overvoltage, Inverter Overload, Inverter Over Temperature, etc.

17	Data monitor and display controls	a) Communication Port for Serial Communication RS-485 using Modbus RTU or Modbus TCP Protocol b) Ethernet Port for Web based remote Monitoring System
18	Protections	i) Input over voltage ii) Low/high frequency iii) AC Short circuit Protection iv) Under/over output voltage v) Over Temperature vi) Grid Input under voltage / over voltage with auto recovery vii) DC disconnect device viii) DC reverse polarity ix) Anti Islanding Protection as per the standard x) Earth fault xi) Surge Protection xii) Insulation Resistance Protectio
19	Standards	i) IEC 62103: Electronic equipment for use in power installations. ii) IEC 62109 Part 1 & 2 iii) Galvanic Isolation at input & output through transformer iv) IEC 61727/ VDE 0126 For Grid Interface v) IEC 61683 for Efficiency of PCU vi) IEC 60068 for Environment Testing vii) IEC 62116 for Anti Islanding viii) IEEE 519-1992 for Harmonic Control in Electric Power Systems
20	Display on Front Panel	i) Instantaneous & cumulative array power (W), ii) Instantaneous &cumulative output power (W) iii) Cumulative energy (Wh),

		iv) DC voltage (V), v) DC current (A), vi) AC voltage (V) (all three phases) vii) AC frequency (Hz), viii) AC current (A), ix) Cumulative hours of operation (h), x) Daily energy produced xi) Power factor, xii) Ambient temperature, xiii) Solar radiation. xiv) Data logging facility

i) Three phase PCU/ inverter shall be used with each power plant system.

ii) PCU/inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown.

iii) The output of power factor of PCU inverter is suitable for all voltage ranges or sink of reactive power; inverter should have internal protection arrangement against any sustainable fault in feeder line and against the lightning on feeder.

iv) Built-in meter and data logger to monitor plant performance through external computer shall be provided.

v) DC Overloading of PCU/inverter is allowed up to as per Inverter OEM of the rated capacity of the inverter provided no loss in efficiency. OEM specification or recommendation for % DC overloading of Inverter shall be submitted by the Contractor.

vi) The up-time of PCU/Inverter should be of 99% in a year, in case of failing to achieve this due to failure of any component of inverter the Contractor shall either replace the inverter or the component at his own cost.

vii) Anti-islanding (Protection against Islanding of grid): The PCU shall have anti islanding protection in conformity to IEEE 1547/UL 1741/ IEC 62116 or equivalent BIS standard.

viii) In PCU/Inverter, there shall be a direct current isolation provided at the output by means of a suitable isolating transformer. If Isolation Transformer is not

incorporated with PCU/Inverter, there shall be a separate Isolation Transformer of suitable rating provided at the output side of PCU/PCU units for capacity more than 100 kW if made mandatory by DISCOM.

ix) The PCU/ inverter generated harmonics, flicker, DC injection limits, Voltage Range, Frequency Range and Anti-Islanding measures at the point of connection to the utility services should follow the latest CEA (Technical Standards for Connectivity Distribution Generation Resources) Guidelines.

x) The power conditioning units / inverters should comply with applicable IEC/ equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683 and IEC 60068- 2 (1,2,14,30) /Equivalent BIS Std.

xi) The MPPT units environmental testing should qualify IEC 60068-2 (1, 2, 14, 30) /Equivalent BIS std. The junction boxes/ enclosures should be IP 67 (for outdoor)/ IP 54(indoor) and as per IEC 529 specifications.

xii) The PCU/ inverters shall be tested from the MNRE approved test centres / NABL /BIS /IEC accredited testing- calibration laboratories. In case of imported power conditioning units, these should be approved by international test houses.

xiii) Grid Connectivity: Relevant CERC/GERC regulations and grid code as amended and revised from time to time shall be complied. The system shall incorporate a uni-directional inverter and should be designed to supply the AC power to the grid at load end. The power-conditioning unit shall adjust the voltage & frequency levels to suit the Grid.

8) INTEGRATION OF PV POWER WITH GRID

The output power from SPV would be fed to the inverters which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization along with existing installed 70 kW Rooftop solar power plant. In case of grid failure, or low or high voltage, solar PV system shall be out of synchronization and shall be disconnected from the grid.

9) DATA ACQUISITION SYSTEM / PLANT MONITORING

i) Data Acquisition System shall be provided for the all types of Solar System. All the generation data shall be accessible remotely. The contractor shall make necessary arrangements for remote monitoring at all the locations where data can be viewed at a single location. Web based Remote Monitoring System shall be provided for monitoring and logging the real time data for each of the Solar PV plants.

ii) Data Logging Provision for plant monitoring, time and date stamped system data logs for analysis on remote PC. Metering and Instrumentation for display of systems parameters and status indication to be provided.

iii) Contractor shall provide the data over remote web-server through appropriate arrangements. The Contractor shall provide all necessary latest Software and hardware (except PC), with active SIM card and appropriate data plan for 1 Year for transmitting the data, so as to make the system complete in all respect.

iv) The Remote Monitoring System shall have capability to log and send data from installed system after commissioning and during CMC Period.

v) The following parameters are accessible via the operating interface display in real time separately for Solar Systems Project.

a. AC Voltage.
b. AC Output current.
c. Output Power
d. Power factor.
e. DC Input Voltage.
f. DC Input Current.
g. Energy Generation Today
h. Energy Generation Totalizer (Since Commissioning)
i. Time Active.
j. Time disabled.
k. Time Idle.
l. Total Harmonic Distortion

m. Protective function limits (Viz-AC Over voltage, AC Under voltage, over frequency, under frequency ground fault, PV starting voltage, PV stopping voltage

vi) All major parameters available on the digital bus and logging facility for energy auditing through the internal microprocessor and read on the digital front panel at any time) and logging facility (the current values, previous values for up to a month and the average values) should be made available for energy auditing through the internal microprocessor and should be read on the digital front panel.

vii) The Remote Monitoring System shall continuously record power output, fault messages, alarms etc. in Indian Standard Time.

viii) All data shall be recorded chronologically date wise. The data file should be MS Excel compatible.

ix) The contractor shall provide all administrative rights/ privileges/ passwords of the RMS system to SNCM.

x) The Contractor shall provide configuration of parameters which are going to monitor as per SNCM Instruction.

xi) It will be added advantage, if Web based remote monitoring system is capable to periodically transfer the selected parameter value over File Transfer Protocol (FTP) to the SNCM selected server or mail.

xii) Additionally, Inverter must provide data on serial communication over RS485 using Modbus RTU or Modbus TCP protocol. Vendor must provide the memory map of all the parameters. Inverter must have feature to connect in "daisy chain configuration" for RS485 Communication.

xiii) PV array energy production: Digital Energy Meters to log the actual value of AC/ DC voltage, Current & Energy generated by the PV system provided. Energy meter along with CT/PT should be of 0.5 accuracy class& better.

xiv) DC String/Array monitoring and AC output monitoring shall be provided as part of the inverter and/or string/array combiner box or separately.

xv) AC energy monitoring shall be in addition to the digital AC energy meter.

xvi) The data shall be recorded in a common work sheet chronologically date wise. The data file shall be MS Excel compatible. The data shall be represented in both tabular and graphical form.

xvii) All instantaneous data shall be shown on the cloud-based platform.

xviii) Software shall be provided for USB download and remote monitoring for analysis of DC and AC parametric data for the plant. Provision for interfacing these data on SNCM server and portal in future shall be kept.

xix) Provision for instantaneous Internet monitoring and download of data shall be also incorporated.

10) METERING & GRID CONNECTIVITY

i) EPC Contractor shall provide an energy meter for accurate periodical readings of AC energy generated and fed to the grid along with all metering arrangement such as instrument transformers and structure. EPC Contractor shall be responsible for inspection, testing and calibration of Bidirectional Meter at the time of installation and also during operation lifetime of Facility.

ii) The Bi-Directional electronic energy meter (0.2S class) shall be installed for the measurement of Import/Export of energy. EPC Contractor has to follow regulations of GERC's (Net Metering Solar PV Grid Interactive Systems) regulations-2016 and its amendments & orders on solar metering and conform to the CEA (Installation and Operation Meters) Regulations, 2006. An energy meter shall be of approved make of the DISCOM and shall conform to the requirements laid down by the CEA's (Installation and Operation of Meters) Regulation, 2010. This shall be inspected, tested and calibrated at the time of installation and also during operation lifetime of power plant.

iii) For accounting of solar generation after inverter/ ACDB from individual feeder solar meter shall be installed. Minimum two no. of solar meter shall be considered for plant. Solar meters shall be installed near ground floor of the building.

iv) The bidder must take approval/NOC from the Concerned DISCOM for the connectivity, technical feasibility, and synchronization of SPV plant with

distribution network and submit the same to SNCM/ TPE AGENCY before commissioning of SPV plant.

v) The Parties agree that the installation, sealing, inspection, calibration, maintenance and testing of Main Meters and the Back Up Meters shall be as per TENDER and shall also conform to the Central Electricity Authority (Installation and Operation Meters) Regulation, 2006 as amended from time to time.

vi) The meters will be sealed in the presence of representatives of the EPC Contractor and DISCOM. Any seal(s) of Main Meter or Backup Meter will be broken only by DISCOM's representative in the presence of the EPC Contractor's representative whenever such Meter is to be inspected, tested, adjusted, repaired or replaced.

vii) In case of any change in the Delivery Point as mutually agreed between SNCM /DISCOM and the EPC Contractor will automatically apply to this Agreement without any further action.

viii) Metering System including CT's (Wherever applicable) shall be as approved by DISCOM and STU. All approval, testing and required Liaison work shall be in the scope of Bidder. Testing Charges of Solar Generation Energy Meter, Net Energy Meter, and Current Transformer shall be carried out and borne by the Bidder. Meter Box shall be as per DISCOM/STU requirement.

11) PROTECTIONS

The system should be provided with all necessary protections like earthing, Lightning, grid islanding, DC Earth Fault, AC Earth fault, AC Under and Over voltage, over current, Short Circuit and over load protection as follows:

i) LIGHTNING PROTECTION

The SPV power plants shall be provided with ESE Type lightning & overvoltage protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. The entire space occupying

the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors.

Lightning protection should be provided as per relevant parts of IEC 62305:2010 standard. Air terminals, down conductors and earth termination system shall be designed as per relevant parts of IS/IEC 62305:2010. Necessary foundation/anchoring for holding the air terminals in position to be made after giving due consideration to shadow on PV array, maximum wind speed and maintenance requirement at site in future. The product of Lightning Protection System shall be warranted for minimum of 3 (Three) years against all material/manufacturing defects and workmanship. Type test reports for Lightning Protection System as per IS/IEC 62305:2010 shall be submitted during detailed engineering for approval.

The protection against induced high voltages shall be provided by the use of SPD's and suitable earthing such that induced transients find an alternate route to earth. Minimum 2 (two) nos. of earth pits are required for lightning arrestors. ESE type lightning arrestors shall be used for the protection of solar system installations. Details Design Calculation shall be submitted for approval.

ii) SURGE PROTECTION

Internal surge protection shall consist of three MOV type surge-arrestors connected from +ve and –ve terminals to earth (via Y arrangement). Both AC and DC side minimum type-II SPD shall be provided.

iii) EARTHING PROTECTION

i) Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-1987. In addition, the lighting arrester/masts should also be earthed inside the array field. Earth Resistance shall be tested in presence of the representative of SNCM / DISCOM as and when required after earthing by calibrated earth tester. PCU, ACDB and DCDB should also be earthed properly.

ii) The PV module structure components shall be electrically interconnected and shall be grounded.

iii) Earthing shall be done as per IEC/IS Norms, provided that earthing conductors shall have a minimum size of 6.0 mm2 copper, 10 mm2 aluminium or 75 mm2

hot dip galvanized steel. Unprotected aluminium or copper-clad aluminium conductors shall not be used for final underground connections to earth electrodes.

iv) A minimum of two separate dedicated and interconnected earth electrodes must be used for the earthing of the solar PV system support structure with a total earth resistance not exceeding 5 Ohm**.** It shall be ensured that all the earthing points are bonded together to make them at the same potential.

v) Earth pit shall be maintenance free chemical earth pit with chemical compound and 16 mm 3-meter copper coated (min 250 micron) electrode. The earth electrodes shall have a brick/RCC/precast concrete enclosure with a removable cast iron for inspection and maintenance. The entire earthing system shall comprise non-corrosive components.

12) GRID ISLANDING

i) In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as "islands." Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Solar PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided.

ii) A manual disconnect 4 pole isolation switch beside automatic disconnection to grid would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.

iii) The following test/Standards can be used for testing the efficacy of the islanding arrangements:

a. IEC 61727- PV system -characteristic of Utility interface

b. IEC 62446-Grid connected photovoltaic system-Minimum requirements for system documentation, commissioning, test and inspection

c. IEC 62116-Test procedure of islanding prevention measure for utility-interconnected photovoltaic inverters

iv) Besides the above measures, certain precautions prescribed the CEA in a solar system technical note shall also be incorporated into the solar PV system design:

a. PV system shall be provided with adequate rating fuses, fuses on inverter input side (DC) as well as output side (AC) side for overload and short circuit protection and disconnecting switches to isolate the DC and AC system for maintenance.

b. Fuses of adequate rating shall also be provided in each solar array module to protect them against short circuit.

13) CABLES

Cables of appropriate size to be used in the system shall have the following characteristics:

i) All DC String cables shall meet EN 50618 standard and AC cable shall meet IS 7098-1-2 standards

ii) Temp. Range: –10 Deg C to +80 Deg C.

iii) Voltage rating: 1,100 V AC, 1,500 V DC

iv) Excellent resistance to heat, cold, water, oil, abrasion, UV radiation

v) Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum (2%).

vi) For the DC cabling, XLPO insulated and sheathed, UV-stabilized single core multi-stranded flexible copper cables shall be used; multi-core cables shall not be used.

vii) For the AC cabling, PVC or, XLPE insulated and PVC sheathed single or, multi-core multi-stranded flexible copper/aluminium cables shall be used; Outdoor AC cables shall have a UV-stabilized outer sheath.

viii) The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use. Outer sheath of cables shall be electron beam cross-linked XLPE type and black in colour.

ix) All the AC power cable for outdoor installation shall be copper/aluminium armoured only and the must be earthed through armoured. Cables for indoor application shall be up to copper/aluminium only and type of insulation shall be as per inverter OEM requirement.

x) The DC cables from the SPV module array shall run through GI/SS cable trays with a minimum thickness as per standard. The DC cables shall be properly dressed by avoiding overlap over one another and shall be tied by using cable tie(s) in order to ensure that the cables do not run away from the tray and thereby maintain aesthecity.

xi) Cables and wires used for the interconnection of solar PV modules shall be provided with solar PV connectors (MC4) and couplers.

xii) All cables and cable trays shall be clamped to the roof walls and ceilings with thermo-plastic clamps at intervals not exceeding 50 cm; the minimum DC cable size shall be 4.0 mm^2 copper; the minimum AC cable size shall be 4.0 mm^2 copper. In three phase systems, the size of the neutral wire size shall be equal to the size of the phase wires. The following colour coding shall be used for cable wires:

a. DC positive: red (the outer PVC sheath can be black with a red line marking)

b. DC negative: black

c. AC single phase: Phase: red; neutral: black

d. AC three phase: Phases: red, yellow, blue; neutral: black

e. Earth wires: green

f. Cables and conduits that have to pass through walls or ceilings shall be taken through a PVC pipe sleeve.

xiii) Cable Routing/ Marking: All cable/wires are to be routed in a GI cable tray and suitably tagged and marked with proper manner by good quality ferrule or by other means so that the cable can be easily identified.

xiv) In addition, cable drum no. / Batch no. to be embossed/ printed at every one meter.

xv) Cable Jacket should also be electron beam cross-linked XLPO, flame retardant, UV resistant. The following particulars shall be properly legible embossed on the cable sheath at the intervals of not exceeding one meter throughout the length of the cable. The cables with poor and illegible embossing shall be liable for rejection.

- Voltage grade Year of manufacture
- Manufactures name
- Successive Length

xvi) All cables and connectors for use for installation of solar field must be of solar grade which can withstand harsh environment conditions including High temperatures, UV radiation, rain, humidity, dirt, salt, burial and attack by moss and microbes for 25 years and voltages as per latest IEC standards.

xvii) The ratings given are approximate. The EPC Contractor to indicate size and length as per system design requirement. All the cables required for the plant provided by the bidder. Any change in cabling sizes if desired by the EPC Contractor/approved after citing appropriate reasons. All cable schedules/layout drawings approved prior to installation.

xviii) EPC contractor shall submit all the details GTP, QAP, VD calculation and type test reports of the cable for the approval from SNCM.

xix) Multi Strand, Annealed high conductivity copper/aluminium conductor XLPO insulation. All cable trays including covers to be provided. All cables conform to latest edition of IEC/ equivalent BIS Standards as specified below: BoS item / component Standard Description Standard Number Cables General Test and Measuring Methods, PVC/XLPE insulated cables for working Voltage up to and including 1100 V, UV resistant for outdoor installation IS /IEC 69947.

xx) The total voltage drop on the cable segments from the solar PV modules to the solar grid inverter shall not exceed 2.0%.

xxi) The total voltage drop on the cable segments from the solar grid inverter to the building distribution board shall not exceed 2.0%.

xxii) Cable conductors shall be terminated with tinned copper end-ferrules to prevent fraying and breaking of individual wire strands. The termination of the DC and AC cables at the Solar Grid Inverter shall be done as per instructions of the manufacturer, which in most cases will include the use of special connectors.

xxiii) All cables shall be from a reputed manufacturer and shall be in line with IEC 60189/IS 1554 IS 694.These also shall meet following standards.

a. **IEC 62208**: - General requirements for empty enclosure for low voltage switch gear and control gear assemblies

b. **IEC 60947: -** Standard test and measurement methods for PVC insulated cables for working voltages up to and including 1100V, UV resistant for outdoor applications.

c. **IEC 60947: -** Connectors for Photovoltaic System-Safety

d. **IEC 50521: -** Connectors for Photovoltaic System-Safety

e. **IEC 60189-1: -**Low frequency cables and wire with PVC insulation and PVC sheath-General test measuring methods.

f. **IEC 60189-2: -** Low frequency cables and wires with PVC insulation and PVC sheath-Cables in pairs triples, quads and quintuples for inside installations

xxiv) The cables (AC and DC) shall be warranted for minimum of 1 (One) year against all material/ manufacturing defects and workmanship.

xxv) All string DC cable shall comply with standards: EN 50618. DC cables shall meet following minimum requirements:

a. All module interconnecting cables and those between solar module and array junction boxes shall be of flexible type. UV protected cables these shall be laid along the module mounting structures.

b. Size of interconnection for modules and from modules to inverter shall be so selected that loss would not be more than 2%.

c. The expected life of cables shall be not less than 30 (thirty) years

d. The cables shall have suitable insulation and outer sheath:

i. No fire propagation/flame retardant

ii. Low smoke emission in case of fire

iii. Halogen-free

iv. High ambient temperature range -40 deg. C and +90 deg. C

v. Withstand conductor temperature of 120 C

e. It shall have high resistance to UV, water, vapour, chemical, corrosion

f. Should have certification of competent Authority

14) CONNECTIVITY

The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the Distribution Code/Supply Code of the State and amended from time to time. Following criteria have been suggested for selection of voltage level in the distribution system for ready reference of the solar suppliers.

Sr. No.	Plant Capacity	Connecting voltage
1	Up to 6 kW	240V-single phase or 415V-three phase at the option of the consumer
2	Above 6kW up to 100 kW	415V – three phase
3	Above 100 kW	At HT level (11kV) as per DISCOM rules

15) TOOLS & TACKLES AND SPARES

i) After completion of installation & commissioning of the power plant, necessary tools & tackles are to be provided free of cost by the bidder for maintenance purpose. List of tools and tackles to be supplied by the EPC Contractor for approval of specifications and make from SNCM/ owner.

ii) A list of requisite spares in case of PCU/inverter comprising of a set of control logic cards, IGBT driver cards etc. Junction Boxes. Fuses, MOVs / arrestors,

MCCBs etc along with spare set of PV modules be indicated, which shall be supplied along with the equipment. A minimum set of spares shall be maintained in the plant itself for the entire period of warranty and Operation & Maintenance which upon its use shall be replenished, if required.

16) DANGER BOARDS AND SIGNAGES

i) Danger boards should be provided as and where necessary as per IE Act. /IE rules as amended up to date/CEIG guideline.

17) FIRE EXTINGUISHERS

The firefighting system for the proposed power plant for fire protection shall be consisting of:

i) Portable fire extinguishers in the control room for fire caused by electrical short circuits

ii) Sand buckets on solar system near electrical installations.

iii) The installation of Fire Extinguishers should confirm to TAC regulations and BIS standards. The fire extinguishers shall be provided in the control room housing PCUs as well as on the Roof or site where the PV arrays have been installed.

iv) Fire extinguisher shall be placed on all solar system installations from protection of fire caused by electrical short circuit/ any other means.

18) DRAWINGS & MANUALS

i) Two sets of Engineering, electrical drawings and Installation and O&M manuals are to be supplied. Bidders shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes in their bid along with basic design of the power plant and power evacuation, synchronization along with protection equipment.

ii) Approved ISI and reputed makes for equipment be used.

iii) For complete electro-mechanical works, bidders shall supply complete design, details, drawings, product specification for approval to SECI/owners before progressing with the installation work.

19) PLANNING AND DESIGNING

i) The bidder should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of space, material and labour. The bidder should submit the array layout drawings along with Shadow Analysis Report to SNCM/ TPE AGENCY for approval.

ii) SNCM reserves the right to modify the design, Layout and specification of sub-systems and components at any stage as per local site conditions/requirements.

iii) The bidder shall submit preliminary drawing for approval & based on any modification or recommendation, if any. The bidder submits five sets of hard copy and soft copy in USB of final drawing for formal approval to proceed with construction work.

20) DRAWINGS TO BE FURNISHED BY BIDDER AFTER AWARD OF CONTRACT

i) General arrangement and dimensioned layout

ii) Schematic drawing showing the requirement of Solar PV Panel, Power Conditioning Unit(s)/ Inverter, All Cables, Junction Boxes, AC and DC Distribution Boards, Meters etc.

iii) Structural Drawing (GA, Detailed Fabrication Drawing, STAAD File in Soft form, etc) along with foundation details for the all-MMS structures (Solar Rooftop: RCC & Metal sheet roof).

iv) Itemized bill of material for complete SPV plant covering all the components and associated accessories.

v) Layout of solar Power Array

vi) Shadow analysis of the roof

21) SAFETY MEASURES

The bidder shall take entire responsibility for electrical safety of the installation(s) including connectivity with the grid and follow all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA guidelines etc.

22) DISPLAY BOARD

The bidder has to display a board at the project site mentioning the following:

i) Plant Name, Capacity, Location, Type of renewable energy plant (Like solar), Date of commissioning, details of tie-up with distribution companies, Power generation and Export FY wise.

ii) The size and type of board and display shall be approved by Engineer-in-charge before site inspection.

23) DELETED

24) IEC STANDARDS

IEC standards It is to be mandatorily adhered are as given below:

Quality Certification, Standards and Testing for Grid-connected Solar System: -

Quality certification and standards for grid-connected Solar PV systems are essential for the successful mass-scale implementation of this technology. It is also imperative to put in place an efficient and rigorous monitoring mechanism, adherence to these standards. Hence, all components of grid-connected solar PV system/ plant must conform to the latest and updated version of relevant standards and certifications given below:

Solar PV Modules/Panels	
IEC 61215/ IS 14286	Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
IEC 61646/ IS 16077	Design Qualification and Type Approval for Thin-Film Terrestrial Photovoltaic (PV) Modules
IEC 62108	Design Qualification and Type Approval for Concentrator Photovoltaic (CPV) Modules and Assemblies
IEC 61701- As applicable	Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
IEC 61853- Part 1/ IS 16170 : Part 1	Photovoltaic (PV) module performance testing and energy rating –: Irradiance and temperature performance measurements, and power rating
IEC 62716	Photovoltaic (PV) Modules – Ammonia (NH3) Corrosion Testing (**Advisory - As per the site condition like dairies, toilets)**

IEC 61730-1,2	Photovoltaic (PV) Module Safety Qualification – Part 1: Requirements for Construction, Part 2: Requirements for Testing
IEC 62804	Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation (PID). IEC TS 62804-1: Part 1: Crystalline silicon (Mandatory for system voltage is more than 600 VDC and advisory for system voltage is less than 600 VDC)
IEC 62759-1	Photovoltaic (PV) modules – Transportation testing, Part 1: Transportation and shipping of module package units
Solar PV Inverters	
IEC 62109-1, IEC 62109-2 / IS:16221	Safety of power converters for use in photovoltaic power systems Safety compliance (Protection degree IP 65 for outdoor mounting, IP 54 for indoor mounting)
IEC/IS 61683	Photovoltaic Systems – Power conditioners: Procedure for Measuring Efficiency (10%, 25%,50%, 75% & 90-100% Loading Conditions)
BS EN 50530 (IEC 62891) **(For Grid Interactive system)**	Overall efficiency of grid-connected photovoltaic inverters: This European Standard provides a procedure for the measurement of the accuracy of the maximum power point tracking (MPPT) of inverters, which are used in grid-connected photovoltaic systems. In that case the inverter energizes a low voltage grid of stable A voltage and constant frequency. Both the static and dynamic MPPT efficiency is considered.
IEC 62116/ UL 1741/ IEEE 1547	Utility-interconnected Photovoltaic Inverters - Test Procedure of Islanding Prevention Measures
IEC 60255-27	Measuring relays and protection equipment - Part 27: Product safety requirements
IEC 60068-2 (1, 2, 14, 27, 30 & 64)	Environmental Testing of PV System – Power Conditioners and Inverters
IEC 61000- 2,3,5	Electromagnetic Interference (EMI), and Electromagnetic Compatibility (EMC) testing of PV Inverters (as applicable)
Fuses	
IS/IEC 60947 (Part 1, 2 & 3), EN 50521	General safety requirements for connectors, switches, circuit breakers (AC/DC)
IEC 60269-6	Low-voltage fused- Part 6: Supplementary requirement for fuse-links for protection of Solar Photovoltaic Energy System
Surge Arrestors	
IEC 61643-11:2011 / IS 15086-5(SPD)	Low-voltage surge protective devices - Part 11: Surge protective devices connected to low- voltage power systems - Requirements and test methods
Cables	
IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1 & 2)/IEC69947	General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, and UV resistant for outdoor installation)

BS EN 50618	Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC cables
Earthing /Lightning	
IEC 62561 Series (Part 1&2) (Chemical earthing)/IEC 60634	IEC62561-1 Lightning protection system components (LPSC) - Part 1: Requirements for connection components IEC62561-2 Lightning protection system components (LPSC) - Part 2: Requirements for conductors and earth electrodes IEC 62561-7 Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds
Junction Boxes	
IEC 60529	Junction boxes and solar panel terminal boxes shall be of the thermo plastic type with IP 65 or better protection for outdoor use, and IP 54 protection for indoor use
Energy Meter	
IS 16444 or as specified by the DISCOMs	A.C. Static direct connected watt-hour Smart Meter Class 1 and 2 — Specification (with Import & Export/Net energy measurements)
Solar PV Mounting Structure	
IS 2062/IS 4759	Material for the structure mounting

25) INTERCONNECTION SCHEME

i) The project aims to develop a replicable model of decentralized power generation using photovoltaic plants that feed energy to the grid. The scope would include design, manufacture, supply, install and commission and operate for 25 years these SPV power packs.

ii) All work must be carried out as per the following:

a. Indian Electricity Act and rules therein

b. Indian Electricity Grid Code

c. Regulations of Chief Electrical Inspector

Besides the above measures, certain precautions prescribed by the CEA shall also be incorporated into the solar PV system design:

a. PV systems shall be provided with adequate rating fuses, fuses on inverter input side (DC) as well as output side (AC) side for overload and short circuit protection as well as disconnecting switches to isolate the DC and AC system for maintenances.

b. Fuses of adequate rating shall also be provided in each solar array module to protect them against short circuit.

iii) Phase Imbalance

a. Phase imbalance can occur due to varied power injected into different phases of the grid. Whenever solar power plants (SPPs) of lower capacities with single phase inverters are used to feed power into the grid using a single-phase injection point, they tend to induce imbalance. This imbalance can be resolved simply by connecting / injecting power to different phases in the same grid.

b. The developer shall have to follow the phase imbalance limits imposed by the Off Taker and shall also have to follow the guidelines before connecting such limits to the grid.

c. The injection phase for each system to be injected into a single phase shall be approved by the Off Taker.

26) TESTING PROCEDURE

Mandatory check before and after connecting the SPV system with DISCOM Network and steps for maintenance of network where such connectivity exists.

27) MANDATORY SAFETY PRECAUTIONS AND FEATURES TO BE TAKEN CARE DURING O&M/CMC & AFTER COMMISSIONING

The following are mandatory safety precautions and features which will be taken care before and after commissioning of grid connected Solar PV system:

i) An inbuilt Inverter relay which trips on Discom supply failure and thus prevents any solar power injection to the Discom when there is no power from Discom. The anti-islanding protection shall be tested by respective EPC contractor.

ii) The Solar PV system should be separately grounded / earthed. A minimum of two Separate dedicated and interconnected earth electrodes must be used for the Earthing of the PV system support structure, with a total earth resistance not exceeding 5 ohms. There must be at least three different earth pits, with minimum distance of 3 meters between any two, for each PV system; one for DC side (panels and structure), second for AC side (also called as neutral earthing) and lightning arrestor earthing. Additionally, inverter body must be earthed as per instructions from inverter manufacturer.

iii) A properly designed Lightning Protection System (including arrestors as necessary) also must be provided for SPV.

iv) Manual isolator switch, at an easily accessible location with locking facility, shall be provided between inverter AC output and grid interconnection.

v) Caution Stickers shall be used with the green background and the text "Solar PV Systems" written in white letters. The size of these stickers shall be 10 CM (width) x 7 CM (height) with the text clearly printed in the center of the sticker.

vi) Deleted

vii) Any such requirement of cutting or trimming parts of a tree or branch of a tree affecting sufficient radiation on the modules or causing shadow on the modules may be done after consent and approval of SNCM.

viii) Proper drainage of rain water should be maintained over terrace throughout the installation area and installation of proper piping systems should be ensured on rooftops where there is high probability of water logging. Installation of the same shall be in the scope of the EPC Contractor.

ix) Deleted

x) Electricity required for running the installed pump for cleaning of modules shall be taken from SNCM on the consent/approval of SNCM's's concerned authority.

xi) Cables to be laid over GI/SS trays not obstructing the movement on the terrace as per site requirement with cables properly dressed over it without overlap, installation of insulated or thermo-plastic clamps at places where the cables need

perfectly horizontal climbing at a minimum gap of 50mm and ensuring that the cables do not run away from the trays by tying the cables along with the tray using cable tie(s).

xii) During planned / forced maintenance work on Discom network, before taking up the work in hand, besides ensuring all other provisions such as line earthing, de-energizing the line section where the work is to carried out as per prevailing norms, it should also be ensured that supply from such small solar roof-top PV power plants are not back-feeding and supply should also be disconnected by manual isolating switch with locking facility installed in the premises of such consumers and ensuring proper earthing.

THE EPC CONTRACTOR SHALL COMPLIANCE THE BELOW MENTIONED CHECK LIST BEFORE RELEASE OF CONNECTION.

i) Component Inspection Checklist :

Sr. No.	Item Type
1	Installation Layout as per approved drawing
2	Inverter IS/ IEC standards qualified
3	PV panel IS / IES standards qualified
4	PV isolators / PV cables IS / IES standards qualified
5	Ac disconnect manual switch provided with locking arrangement
6	Approval of Meter by Authority (as per meter regulations)
7	Any other critical component IS/ IES standards certified

ii) Grid connected Functional Safety Checklist:

Sr. No.	Item Type
1	Check whether solar generation stops automatically when DISCOM supply is turned off
2	Bi-directional flow recorded on DISCOM meter
3	Consumption (Import) only mode, ok?
4	Solar Generation meter Ok?

5	Check all Earthing points as per standard
6	Solar and Bi-directional meter tested & sealed by DISCOM meter testing lab
7	Check whether manual Isolating switch is installed at accessible location with locking arrangement
8	Check whether manual Isolating switch stops feeding supply in Discom network when in OFF position

5.5 Vendor List

The list of acceptable makes for equipment / system for TOTAL 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC) System is as listed below:

Sr.	Description	Vendor Name
1	PCU / Inverter	SMA
		ABB India Ltd.
		Hitachi Hi-Rel Power Electronics Pvt Ltd.
		Delta Electronics
		Schneider Elect. Ltd
		Sungrow
		Solaredge
		Solis
		Growatt
2	PV Modules	Vendor of Solar Module based on latest ALMM order as per clause 5.4.1 (1)(bb)
3	LT Switchgear component& Enclosure (LT switchgear panel shall be CPRI approved vendor)	Lauritz Knudsen (L&T)
		Siemens
		ABB
		Schneider Elect. Ltd
		Hensel Electric Pvt Ltd
		Urja Techniques (I) Pvt Ltd
		Jayesh Electricals Limited
		Havells
		C&S
4	Solar Cable/ DC Cable	M/s LAPP
		M/s Siechem
		M/s KEI Cables
		M/s UniFlex Cables
		M/s Cords Cables
		M/s Apar
		M/s Universal
		M/s KEC
		M/s Leoni
		M/s Suyog Electricals Ltd
		M/s Polycab
5	AC Cable	M/s LAPP
		M/s KEI Cables
		M/s Havells
		M/s Universal

		M/s KEC
		M/s GEMSCAB Industries Ltd,
		M/s Suyog Electricals Ltd
		M/s Apar
		M/s Siechem
		M/s RR Cable
		M/s Polycab
6	Steel Structure for MMS	ESSAR
		TISCO
		SAIL
		JINDAL
7	Chemical Anchors / Chemical Fasteners	Hilti
		Raw Plug
8	Earthing Pit Materials	Ashlok
		ERICO
9	SJB	M/s Hensel Electric Pvt Ltd
		M/s Trinity Solar
		M/s Eaton
		M/s Photon
10	Lugs	Dowell
		Comet
		3D
		HEX
11	Cable Glands	Comet / 3D
12	Optical Fiber Cable	Polycab / RR Cable
13	Lightning Arrestor (ESE type)	Erico
		Nimbus
		AT, Spain
		Ingesco
		Indelec
		Ashlok
14	Bi-Directional Meter/ Solar Meter (subject to approval of DISCOM)	SEMS
		EDMI
		DISCOM Approved Make
15	MCCB	SIEMENS
		ABB
		Schneider
		L & T

NOTES:

(1) The final make selected out of the recommended makes listed above shall be subject to the SNCM's / TPE Agency's approval during detailed Engineering.

(2) Wherever the make is not specified for any other items, the contractor shall submit credential for vendors for relevant items / equipment's, out of which SNCM / TPE shall decide acceptance of vendor based on review of credentials. This shall have no price implication. SNCM reserves the right to reject the proposed vendor without assigning any reason.

--- End of Section---

6 General Terms and Conditions

6.1 Use of Contract Documents & Information

6.1.1 The Contractor shall not, without SNCM's prior written consent, disclose the Contract or any provision thereof or any specification, plan, drawing, pattern therewith to any person other than person employed by the Contractor in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend strictly for purpose of performance only.

6.1.2 The Contractor shall not, without SNCM's prior written consent, make use of any document or information except for purpose of performing the Contract.

6.1.3 Any document other than the Contract itself shall remain the property of SNCM.

6.2 Patent Rights

6.2.1 The Contractor shall indemnify SNCM against third party claims of infringement of patent, trademark or industrial design rights arising from use of goods/design or any part thereof.

6.3 Materials and Workmanship

6.3.1 All materials shall be of the best quality and workmanship capable of satisfactory operation under the operating and climatic conditions as may be specified. Unless otherwise specified, they shall conform in all respect to the latest edition of the relevant Bureau of Indian Standard (BIS) specification wherever Indian specifications apply or British Standard (BS) or International Electro-technical Commission (IEC) or internationally accepted standard.

6.3.2 The Contractor shall supply and deliver all equipment and materials for installation at site. The Contractor shall arrange for transportation, loading and unloading and safe storage of materials at project site at his own cost and risk.

6.3.3 If the Contractor offers equipment manufactured in accordance with other international well recognized standards, he shall, in that case, supply a copy in English of the Standard Specification adopted and shall clearly mention in what respect such standard specification differs from Indian Standard Specifications. The plant, equipment, and materials offered by the Contractor should comply with one consistent set of Standards only as far as possible.

6.3.4 No deviation in foreign exchange rate shall be admissible at any point of time after submission of the Bid.

6.4 Inter-changeability

6.4.1 All the parts shall be made accurately to standard gauges and specifications so as to facilitate replacement and repairs. All corresponding parts of similar apparatus shall be inter-changeable.

6.5 Packing and Marking

6.5.1 The Contractor shall be responsible for securely protecting and packing the plant and equipment as per prescribed standards in force to withstand the journey and ensuring safety of materials and also arrival of materials at destination in original condition and good for contemplated use. Packing case size and weight shall take into consideration the remoteness of the goods' final destination and absence of heavy material handling facilities at all points in transit.

6.5.2 Packing lists of materials shall be provided in each package to facilitate checking up of the contents at the destination.

6.5.3 In order to import any items, associated with the Project, from abroad or from any other state in India, the Contractor shall have to arrange any clearance, permission, if required at his own risk, from any Government (Government of State and Government of India) or any Government (Government of State and Government of India) controlled organization for transportation of materials from manufacturing shop to delivery at any site. Necessary certificates if so required shall be issued by SNCM within reasonable time after getting written request from the Bidder along with the necessary documents substantiating necessity of such approvals. All packing material is the property of SNCM and shall be immediately deposited by the Contractor to SNCM's Store at Project Site.

6.6 Negligence

6.6.1 If the Contractor neglects to manufacture or supply the plant and equipment with due diligence and with expeditiousness or refuses or neglects to comply with any reasonable order given to it in writing by SNCM or contravenes any provisions of the Contract, SNCM may give seven (7) days' notice in writing to the Contractor, to make good the failure, neglect or contravention complained of. If the Contractor fails to comply with the notice within reasonable time from the date of serving thereof, in the event of failure, neglect or contravention capable of being made good within that time, then in such case, if SNCM thinks fit, it shall be lawful for it to take the manufacture or supply of plant wholly or in part, out of the Contractor's hand and give it to another person on Contract at a reasonable price and SNCM shall be entitled to retain any balance which

may be otherwise due on the Contract by it to the Contractor or such part thereof as may be necessary, to the payment of the cost of manufacture or supply of such plant as aforesaid.

6.6.2 If the cost of executing the work as aforesaid shall exceed the balance due to the Contractor and the Contractor fails to make good such deficiency, SNCM shall take action in the manner it may consider deem fit in terms of the Contract.

6.7 Statutory Responsibility

6.7.1 The Contractor shall comply with all applicable laws, by laws, rules, and regulations and shall procure and maintain their validity all necessary Municipal, Panchayat and Government permits & licenses etc. at its own cost.

6.8 Insolvency and Breach of Contract

6.8.1 SNCM may at any time by notice in writing summarily terminate the Contract without compensation to the Contractor in any of the following events:

a. If the Contractor at any time, is adjudged insolvent or have a receiving order or order from administration of its state made against it or shall take any proceeding for compensation under any Insolvency Act for the time being in force or make any conveyance or assignment with its creditors or suspend payment. If the Contractor being a company is wound up voluntarily or by the order of a court or a Receiver, Liquidator or manager on behalf of the Debenture holder is appointed or circumstances have arisen which entitle the Court or debenture holder to appoint a Receiver, Liquidator or Manager.

6.9 Timeline

6.9.1 The Contractor shall provide full programme of the supply in detail and delivery schedule along with work schedule thereto. Strict adherence and guaranteed delivery schedule mentioned in terms and conditions shall be the essence of the Contract and delivery schedule must be maintained.

6.9.2 The work must be completed as per the Timeline below from the date of handing over of site.

Sr.	Stage	Reference from Zero Date (“D”)
1.	Issue of Letter of Award	D
2.	submit Array Layout drawings to SNCM after jointly site visit along with consultant	D+7

3.	Contractor to apply for GEDA registration Letter on the behalf of SNCM with the concerned DISCOM	D+10
4.	Collect all require Electrical and Commercial documents from SNCM for further approval	D+15
5.	Contractor to Submit MMS & Structure Design Basis Reports & Drawings with Interconnections plans to SNCM	D+25
6.	Contractor to Submit Electrical Drawings & Reports to SNCM	D+30
7.	Contractor to Place Work Order of All Equipment to the Vendors & provide Proof details to SNCM	D+45
8.	Contractor to apply for CEIG on the behalf of SNCM with the concerned DISCOM	D+50
	(In case any observations, SNCM to provide written objections within this period.)	
9.	Contractor to identify & finalise all required steps as per the concerned DISCOM	D+60
	Contractor to ensure and avail all requisite approvals towards signing of Net Metering Agreement with the DISCOM (Note: All activities in this reference are to be carries out by the Contractor. SNCM will facilitate signing of the necessary documents/Agreements.)	
10.	Supply of Total MMS Materials (All Types of Solar System)	D+70
11.	Supply of Total PV Modules	D+75
12.	Completion of supply of all major Balance of System (BoS) for (All Types of Solar System)	D + 80
13.	Completion of erection of Total MMS Materials (All Types of Solar System)	D+90
14.	Installation and interconnection of all major equipment	D+100
15.	Interconnection and testing of entire plant	D+107
	i) Intimation by the Contractor to SNCM for system readiness for Testing	7 days prior to the completion of installation and construction

	ii) Testing of the Project by SNCM/TPE and award of approval	Within 7 days of completion of installation and construction
16.	Contractor in consultation with SNCM/ TPE Agency to ensure and discuss the likely date of system inspection by Electrical Inspector and Utility	Before 7 days of Scheduled COD
17.	Vendor should comply all the terms and condition of Work order/Tender & provide all facilities as per mention in Work order/Tender and Submit As built drawing to SNCM	D+107
18.	Commissioning of entire plant	Within 7 days after receiving of approval for charging from competent authority or D + 120 whichever earlier

6.9.3 The Contractor shall also provide a Bar/ PERT Chart indicating completion schedule for various items involved in the work within the stipulated completion period and the Contractor should strictly adhere to that schedule.

6.9.4 The issue of NTP shall be considered as the Zero Date

6.9.5 The Bar/ PERT Chart provided by the Contractor shall submitted to SNCM/ TPE AGENCY for approval prior to commencement of the execution of the Project. All comments and modifications provided by SNCM/ TPE AGENCY shall be incorporated and adhered to by the Contractor in the Timeline, Bar/ PERT Chart, detailed execution plan, etc. for execution of the Project.

6.9.6 This schedule shall be prepared so as to ensure the commissioning of complete plant (All Types of Solar System) within 120 days from issue of NTP.

6.9.7 Partial commissioning of the solar PV plant (All Types of Solar System) shall not be considered.

6.10 Delay in Execution or Failure to Supply

6.10.1 Any delay in completion of the work shall attract liquidated damage/ penalty for late completion as per Liquidated Damage (Clause 6.11) of this Tender.

6.10.2 If the Contractor fails to deliver the plant or fails to start the work within specified time frame after issue of NTP or leaves the work site after partial execution of the work, SNCM shall have the right to get the work done through any other agency at the risk and cost of the Contractor. Further to this, SNCM may, without prejudice to the right of the Contractor to recover damages for breach of trust of the Contract, may impose penalties.

6.10.3 Notwithstanding anything contained in this tender document, bidders to note that Completion time of Project activities as per the prescribed timeline/schedule are the essence of the Contract. It is envisaged that EPC Contractor shall plan and achieve progress of the Project on or before the prescribed timeline/schedule without fail.

If, at any time, the EPC CONTRACTOR's actual progress falls behind or is likely to fall behind the agreed schedule of the break-up/detailed Project activities, the EPC CONTRACTOR shall submit to the OWNER (SNCM), a revised programme with catch up schedule, taking into account the prevailing circumstances and delay in the respective activities / milestones. The EPC CONTRACTOR shall, at the same time/forthwith notify promptly to SNCM of the steps being taken to expedite progress of the Project activities, so as to achieve completion of such activities within the agreed Time schedule for Completion. The Contractor shall in order to overcome the situation, forthwith mobilise required additional resources like manpower, materials, machineries etc. to achieve the prescribed timeline/schedule at his risk and cost.

In case further slippage is observed in the progress of Project activities, as per agreed time schedule or failure by EPC Contractor, at any stage of the Contract, to perform the Contract diligently to fulfil his obligations as per the EPC Contract, SNCM reserves the right to engage any other Contractor(s)/sub-contractor(s) at any time, at the risk and cost of the EPC Contractor to ensure completion of the Project activities in line with the agreed time schedule. Further, SNCM will also deduct Liquidated Damages (LD) arising out of any such delay, if any, as per the terms of this tender document or recover the costs, expenses, losses, damages incurred or suffered by SNCM as per the recourse available under this tender document or any other law for the time being in force.

6.11 Liquidated Damages for Delay and Underperformance

A. Delay in Commissioning

6.11.1 In case the Contractor fails to achieve successful Commissioning of plant by the due date indicated in Timeline Clause 6.9.2, then SNCM shall levy the Liquidated Damages on the Contractor.

6.11.2 In case the EPC Works of solar PV project (COD with GEDA/Gujarat State Designated Agency, with full capacity) is not completed within the stipulated time period (i.e. 120 days from zero date) and the delay is not due to Force Majeure or due to SNCM's default then the Contractor shall pay to the SNCM compensation for delay subject to following:

i) Delay up to 30 days: Amount of Rs. 2,500/Day shall be deducted as penalty for the first 30 days of delay calculated on per day basis and proportionate to the capacity not commissioned as per GEDA/Gujarat State Designated Agency.

ii) Delay of more than 30 days and up to 90 days: Amount of Rs. 5,000/day shall be deducted on per day basis and proportionate to the capacity not commissioned as per GEDA/Gujarat State Designated Agency.

iii) Delay of more than 90 days and up to 180 days: Amount of Rs. 10,000/day shall be deducted on per day basis and proportionate to the capacity not commissioned as per GEDA/Gujarat State Designated Agency

Maximum applicable Liquidated Damages: The upper ceiling for total liquidated damages for delay shall be maximum 10% of the Total Contract Price (Supply + Work Price).

6.11.3 The said right of the SNCM to levy damages on account of delay shall be without prejudice to and in addition to the right of the Company to get the concerned work done from a third party at the complete risk and cost of the Contractor.

6.11.4 The Contractor shall indicate duration of all the activities in activity chart in conformity with the overall schedule of the completion of project. The Contractor shall submit the activity chart in form of Bar Chart which shall be discussed and finalized and shall be a part of Contract.

6.11.5 Any strike / lockouts at works or site of the Contractor or his sub-supplier/sub-contractor shall not be considered as force majeure condition.

6.11.6 For calculation of penalty, the date of NTP shall be the reference date.

B. Underperformance during Instantaneous Performance Ratio Test of Solar System

6.11.1 At the time of the Instantaneous Performance Ratio Test, any shortfall in the Performance Ratio (PR) as determined through the Test Procedure in the Appendix 16A: Procedure for Performance Testing will attract imposition of Liquidated Damages after two (2) unsuccessful chance. For any shortfall in **PR (Instantaneous) below 75%** by the Bidder after second (2) time, a penalty of 0.5% of the Total Final Project Cost of installed capacity of particular plant (including taxes & duties) shall be levied. In any case the, first Test is unsuccessful then penalty shall not be charged but the Contractor has to make the necessary corrections to conduct the test again within the stipulated maximum 10 (Ten) days. After second (2^{nd}) time, a penalty at the rate specified above shall be levied on the Contractor. The penalty shall be deducted from the pending payment and Security Deposite.

6.12 Deleted

6.13 Defect Liability

6.13.1 The Contractor must warrant that the facilities or any part thereof shall be free from defects in the design, engineering, materials and workmanship of the Plant and Equipment supplied and of the work executed.

6.13.2 If it shall appear to the authorized representative of the Company that any supplies have 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 Contract are unsound or otherwise not in accordance with the Contract, the Contractor shall on demand in writing inform the authorized representative of the Company specifying the item, materials or articles complained of, notwithstanding that the same may have been inadvertently or otherwise passed, certified and paid for. The Contractor shall forthwith rectify or remove and replace that item so specified and provide other proper and suitable materials or articles at its own charge and cost, and in the event of failure to do so within a period to be specified by the authorized representative of the Company in its demand aforesaid, the Project Manager may on expiry of notice period rectify or remove and re-execute the time or remove and replace with others, the materials or articles complained of as the case may be at the risk and cost in all respects of the Contractor. The decisions of the authorized representative of the Company as to any question arising under this Clause shall be final and conclusive.

6.13.3 The Defect Liability Period shall be Sixty (60) months from the date of commissioning of Solar project. ("Defects Liability Period").

6.13.4 If during the Defect Liability Period any defect found in the design, engineering, materials and workmanship of the Plant and Equipment supplied or of the work executed by the Contractor, the Contractor shall promptly, in consultation and agreement with SNCM regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good (as the Contractor shall, at its discretion, determine) such defect as well as any damage to the Facilities caused by such defect.

6.13.5 Furthermore, without prejudice to the generality of the foregoing, it is clarified that the Contractor shall also be responsible for the repair, replacement or making good of any defect or of any damage to the Facilities arising out of or resulting from any of the following causes:

a. Improper operation or maintenance of the Facilities by the Contractor during CMC of the Facility; or
b. Operation of the Facilities violating specifications of the Facilities.

6.13.6 SNCM shall give the Contractor a notice stating the nature of any such defect together with all available evidence thereof, promptly following the discovery thereof. SNCM shall afford all reasonable opportunity for the Contractor to inspect any such defect.

6.13.7 SNCM shall provide the Contractor all necessary access to the Facilities and the Site to enable the Contractor to perform its obligations.

6.13.8 The Contractor may, with the consent of the Company, remove from the Site any Plant and Equipment or any part of the Facilities that are defective, if the nature of the defect and/ or any damage to the Facilities caused by the defect is such that repairs cannot be expeditiously carried out at the Site.

6.13.9 If the repair, replacement or making good is of such a nature that it may affect the efficiency of the Facilities or any part thereof, the Company may give to the Contractor a notice requiring that tests of the defective part of the Facilities shall be made by the Contractor immediately upon completion of such remedial work, whereupon the Contractor shall carry out such tests.

6.13.10 If such part fails the tests, the Contractor shall carry out further repair, replacement or making good (as the case may be) until that part of the Facilities passes such tests. The tests, in character, shall in any case be not inferior to what has already been agreed upon by SNCM and the Contractor for the original equipment/part of the Facilities.

6.13.11 If the Contractor fails to commence the work necessary to remedy such defect or any damage to the Facilities caused by such defect within a reasonable time (which shall in no event be considered to be less than seven (7) days), the Company may, following notice to the Contractor, proceed to do such work, and the reasonable costs incurred by SNCM in connection therewith shall be paid to SNCM by the Contractor or may be deducted by the Company from any monies due to the Contractor or claimed under the Performance Guarantee, without prejudice to other rights, which SNCM may have against the Contractor in respect of such defects.

6.13.12 If the Facilities or any part thereof cannot be used by reason of such defect and/ or making good of such defect, the Defect Liability Period of the Facilities or such part, as the case may be, shall be extended by a period equal to the period during which the Facilities or such part cannot be used by the Company because of any of the aforesaid reasons. Upon correction of the defects in the Facilities or any part thereof by repair/ replacement, such repair/ replacement shall have the defect liability period of sixty (60) months from such replacement.

6.13.13 In addition, the Contractor shall also provide an extended warranty for any such component of the Facilities and for the period of time. Such obligation shall be in addition to the Defect Liability Period specified under Clause 6.13.

6.14 Termination for Default

6.14.1 The Company may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Contractor, terminate the Contract in whole or in part if the Contractor fails to deliver or execute any or all of the goods within the time period(s) under the Contract or any extension thereof granted by SNCM pursuant to the clause for Delay in Execution or Failure to Supply or, If the Contractor fails to perform any other obligations(s) under the Contract then SNCM shall not liable for release of any payment of supply, work and CMC of particular project.

6.14.2 In the event the Company terminates the Contract in whole or in part, pursuant to above, the Company may procure, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered, the Contractor shall be liable to the Company for any excess costs for such similar goods. However, the Contractor shall continue the performance of the Contract to the extent not terminated.

6.14.3 Deleted

6.14.4 In case termination of the Contract due to default, the Contractor may be blacklisted by GEDA/Gujarat State Designated Agency, SNCM, DISCOM, GUVNL, TPE Agency and its associate companies, etc. for future work.

6.15 Conditions Precedent to Commissioning

6.15.1 EPC Contractor have to satisfy the conditions precedents to commissioning of the project as per the timeline, Clause No. 6.9. The Conditions Precedent required to be satisfied by SNCM shall be deemed to have been fulfilled when SNCM shall have:

i) Given to the EPC Contractor the Right of Way to the Site.

ii) Provided approval for the general arrangement Drawings submitted by the EPC Contractor along with the notice, to enable the EPC Contractor to install the (All Types of Solar System) in accordance with the Specifications and Standards and subject to the terms and conditions specified in such approval;

iii) Ensure timely clearances and requisite approvals as required from the SNCM (Administrative, Regulatory, and Policy etc.) adhering to the stipulated timeline, Clause No. 6.9.

iv) A Monthly Monitoring Group (MMG) will be formed and MMG shall remain in existence during the construction of the project to monitor monthly progress of the Project. In case of any issue with regards to the infrastructure requirements for accessing the site, Right of Way, Finalisation of Drawing & Interconnection Plan, and any other issues related to project implementation, MMG shall work towards rectifying and finalizing the project within the time frame as highlighted in Timeline (Clause No.6.9). The MMG will monitor the project plan and its implementation and also highlight key issues (both at the SNCM and EPC Contractor level which might cause a delay in the commissioning of the project). These delays / perspective delays shall be captured in the minutes of the meeting along with the responsibilities and timeline for curing these. The MMG and its minutes will also be used to arrive at the party responsible for the delay in commissioning.

v) Authorization for Net Metering to the EPC Contractor and also provide legal, administrative and technical signatory approvals required by the EPC Contractor during the course of entire application process until net metering provisions are not met.

6.15.2 The Conditions Precedent required to be satisfied by the EPC Contractor prior to the Commissioning shall be deemed to have been fulfilled when the EPC Contractor shall have:

i) Provided Performance Security to SNCM;

ii) Provided a notice to SNCM on meeting their conditions precedent along with a set of drawings, interconnection plan and project completion schedule to be approved by SNCM/ TPE AGENCY. The project completion schedule shall be strictly adhering to the timeline.

iii) Ensure timely clearances and requisite approvals as required for project implementation (Administrative, Regulatory, and Policy etc.) adhering to the stipulated timeline (Clause No.6.9)

iv) To apply for and obtain net energy meter (I-E Meter) for the Project and bear all the costs for the same by EPC Contractor;

v) Ensure standard testing conducted before COD as per procedures laid down in Timeline and cross checked with DISCOMs for grant of net metering.

vi) To notify the SNCM/ TPE AGENCY about the date of testing of the system prior to the Commissioning of the Project;

vii) To notify the SNCM/ TPE AGENCY, in writing, about any delay with regards to right of way to the allotted (All Types of Solar System); and

viii) Submit the monthly progress report to the Monthly Monitoring Group

Provided that upon request in writing by the EPC Contractor, SNCM may, in its discretion, waive any of the Conditions Precedent set forth in this Clause 6.15.1. For the avoidance of doubt, SNCM may, in its sole discretion, grant any waiver hereunder with such conditions as it may deem fit.

6.16 Obligations of the EPC Contractor

6.16.1 Make its own arrangement for and take reasonable measures and shall be solely responsible for security of the Facility Installations, including commercially reasonable monitoring of the Site's alarms, if any Comply with the directions of the SNCM/DISCOM in case of emergency to shut down the plant. SNCM/DISCOM will only issues directions to the same in case of the occurrence of a state of Emergency (a state of emergency may be defined as a situation where the safe working of the internal

grid/ grid sanctity of the distribution grid is or is likely to be compromised due to conditions beyond the control of the SNCM/DISCOM). In such a condition, the SNCM/DISCOM reserves the right, in order to ensure safe operation of the Internal Grid in accordance with the applicable Distribution Code, Applicable Law and directions/regulations, to shut down the line and not accept any Electricity from such part of the Facility that is affected by the Emergency. SNCM/DISCOM will exercise such right either through a written notice to the EPC Contractor or in case the written request cannot be made at the time, through a verbal request from the competent authority with the SNCM/DISCOM responsible for network management (and back it up with a written request later), providing as much lead time as would be practicable Upon SNCM/DISCOM exercising such right, the EPC Contractor will suitably back down its generation from the Facility. SNCM/DISCOM will, however, make reasonable endeavours to remedy such Emergency, and bring back normalcy at the earliest. SNCM/DISCOM will have no liability to the EPC Contractor in such circumstances.

6.16.2 Procure that all facilities and amenities within the solar power system are operated and maintained in accordance with Good Industry Practice.

6.16.3 Support, cooperate with and facilitate SNCM in the implementation and operation of the Project in accordance with the provisions of this TENDER; and

6.16.4 . Contractor has to make necessary arrangement for cleaning of the solar panels. In case of water scarcity, the EPC Contractor has to be informed in advance of the same and will have to arrange water, as per its requirements.

6.16.5 Provide Auxiliary Power to the EPC Contractor for the operation and maintenance purposes. The SNCM will have the right to charge the EPC Contractor reasonable charges for the electricity connection and the supply of power which may be provided to the EPC Contractor.

6.16.6 EPC Contractor shall enter into net metering agreement with concerned Distribution licensee.

6.17 Obligations during Construction, Commissioning and Operation

6.17.1 The EPC Contractor will be responsible for the design, implementation, operation and maintenance of the project. The EPC Contractor Will Design, Engineer, Procure, Undertake Civil and Electrical work including Erection, Testing & Commissioning of the solar PV project in accordance with the provisions of the Request for Proposal.

6.17.2 The EPC Contractor will, within the time specified in the Timelines, submit to SNCM/ TPE AGENCY, detailed drawings and interconnection plan of the systems to be developed under the Project for approval to SNCM. If SNCM/ TPE AGENCY has any objection/ recommendation in the Drawings, SNCM/ TPE AGENCY will communicate the same to EPC Contractor as per the timelines in the Timelines. In case of objection/clarification, if any, the EPC Contractor shall submit its response to the objection/clarification as per Timelines.

6.17.3 The EPC Contractor will be required to submit a daily progress report to SNCM/ TPE AGENCY beginning with signing of Contract Agreement till the COD in such form and latest by the seventh (7th) day of the month to SNCM/ TPE AGENCY. This shall be subsequently followed by a meeting to discuss the progress of the project on such date as intimated by the SNCM/ TPE AGENCY. A Monthly Monitoring Group (MMG) /SNCM with representation of at least one (1) member of the EPC Contractor and Sr. Manager/ Sr. Officials of the SNCM and TPE Agency shall be formed for all the projects within seven (7) days of from the Zero (Effective) Date. The group shall monitor the progress of the Projects on daily basis.

6.17.4 The EPC Contractor will notify SNCM/TPE AGENCY as per the Timelines for commissioning of the system. SNCM/TPE AGENCY will nominate one or two representatives to participate in the process of confirming the Commissioning Tests of the Unit / Facility.

6.17.5 The EPC Contractor will bear all costs pertaining to the installation and Commissioning of the systems and these costs will not be recoverable in any form from SNCM.

6.17.6 EPC Contractor will be responsible for achieving the Commercial Operation of the Facility latest by the Scheduled COD.

6.17.7 The EPC Contractor will furnish to SNCM/ TPE AGENCY, by way of a written notice, a proposed interconnection plan, if applicable, together with details of the Relevant Premises pertaining to each phase, and estimated timelines for the Commissioning of the phases as per timelines.

6.17.8 Testing Procedures: The EPC Contractor and SNCM/ TPE AGENCY or its representative(s) shall implement the testing procedures mentioned in the TENDER, within the timeline given in TENDER.

6.17.9 Instantaneous Performance Ratio (PR) test shall be conducted after Plant commissioned as per the GTI levels of the location. Instantaneous Performance Ratio (PR) should be

shown minimum of 75% at the time of inspection for initial commissioning for clearing the System Acceptance Test" Definition of Instantaneous Performance Ratio (PR) to be included in TENDER which is to be read as "Instantaneous Performance Ratio (PR) means the ratio of plant output versus installed plant capacity at any instance with respect to the radiation measured.

The bidder shall bear the lodging, boarding, accommodation and traveling charges of TPE/TPI for all PR Test visits.

6.17.10 The Instantaneous Performance Ratio (IPR) of the SPV System shall be calculated as follows.

PRtc (Instantaneous) = {Pac/ (Instantaneous Irradiance* Module Area * Total Nos of Module) * (Module Efficiency) /100 } * 100

Were,

i) Instantaneous AC Power in Watt at Inverter (Pac)

ii) Instantaneous Irradiance (Watt/m2)

iii) Module Area (m2)

iv) Total number of modules

v) Module Efficiency in %

6.17.11 The EPC Contractor will discuss with SNCM and use the information regarding electricity generated during testing, commissioning, synchronization, testing and start-up and in getting the Net Metering agreements executed.

6.17.12 The EPC Contractor will comply with the provisions of Law including regarding operation and maintenance of the Project and all matters incidental thereto.

6.17.13 The EPC Contractor will submit regular forecasts for availability of the Facility and expected generation from the Facility to SNCM as per applicable regulations of the Commission.

6.17.14 The EPC Contractor will provide and lay down the dedicated electrical cables for transmission of Solar Power from the Project up to the Delivery Point. The Delivery Point will be where the Main Metering System is located. SNCM will be entitled to liquidate damages for delay in achieving the COD by Scheduled Commercial Operation Date if the EPC Contractor fails to Commission the Project on or before the Scheduled

Commercial Operation Date. These damages will be met through the Security Deposit equivalent to the amounts due to it as above.

6.18 Obligations Relating to Medical Aid

6.18.1 For providing emergency medical aid to Users, the EPC Contractor shall, at each Station, set up and operate a medical aid post equipped to render first aid and to assist in accessing emergency medical aid from hospitals in the vicinity.

6.19 Obligations Relating to Aesthetic Quality of the (All Types of Solar System) Project

6.19.1 The EPC Contractor shall maintain a high standard in the appearance and aesthetic quality of the (All Types of Solar System) and achieve integration of the Solar Power System with the character of the surrounding landscape through both appropriate design and sensitive management of all visible elements. The EPC Contractor shall engage professional architects and town planners of repute for ensuring that the design of the (All Types of Solar System) to meets the aforesaid aesthetic standards.

6.20 Obligations Relating to Noise Control

6.20.1 The EPC Contractor shall take all such measures as may be necessary in accordance with Applicable Laws and Good Industry Practice to control and mitigate the noise arising from the solar project and its impact on Users and the neighbourhood.

6.21 Branding of Solar System

6.21.1 The solar system or any part thereof shall not be branded in any manner to advertise, display or reflect the name or identity of the EPC Contractor or its shareholders.

6.22 Obligations relating to Inter-Connection

6.22.1 In consideration of this TENDER and the applicable charges, the covenants and warranties on the part of the EPC Contractor herein contained, SNCM, in accordance with the terms and conditions set forth herein, hereby grants to the EPC Contractor, leave and rights in respect of the land/ roof owned by SNCM for the purpose of connecting the solar systems to [nearest existing evacuation point], and for no other purpose whatsoever, within the Timelines given in TENDER.

6.23 Special/temporary right of way

6.23.1 The EPC Contractor shall bear all costs and charges for any special or temporary right of way required by it in connection with access to the Site. The EPC Contractor shall obtain at its own cost such facilities on or outside the Site as may be required by it for the purposes of Project and the performance of its obligations under this TENDER.

6.24 Access to SNCM Representative

6.24.1 The right of way and right to the Site granted to the EPC Contractor hereunder shall always be subject to the right of access of SNCM representative and their employees/ agencies for regular activities taken up by the SNCM for inspection, viewing and exercise of their rights and performance of their obligations under this TENDER.

6.25 Maintenance obligations

6.25.1 During the Development Period, SNCM shall maintain the roads, pathways and roof along or near the Project, at its own cost and expense, so that its safety are at no time materially inferior as compared to its condition 7 (seven) days prior to the last date for submission of the Bid, and in the event of any material deterioration or damage other than normal wear and tear, undertake repair thereof, or pay to the EPC Contractor the cost and expense, as determined by the SNCM's representative, for undertaking such repair after the Effective Date. For the avoidance of doubt, SNCM shall undertake only routine maintenance during the Construction Period, and it shall undertake special repairs only for ensuring safe operation of the roads, pathways and roof along the solar project, or in the event of excessive deterioration or damage caused due to unforeseen events such as floods or torrential rain.

6.26 Protection of Site from encroachments

6.26.1 During the term of the TENDER, the EPC Contractor shall protect the Site from any and all occupations, encroachments or Encumbrances, and shall not place or create nor permit any Contractor or other person claiming through or under the EPC Contractor to place or create any Encumbrance or security interest over all or any part of the Site or the Project Assets, or on any rights of the EPC Contractor therein or under this TENDER, save and except as otherwise expressly set forth in this TENDER.

6.27 Access to Premises

6.27.1 The EPC Contractor will give the SNCM a schedule and reasonable written notice before any entry onto the Relevant Premises by the EPC Contractor's employees, agents or contractors. SNCM will make available to the EPC Contractor access to the Facility Installation and the Relevant Premises for the purposes set below. Notwithstanding anything to the contrary in this TENDER, the EPC Contractor shall be permitted to access the Relevant Premises twenty-four (24) hours a day, seven (7) days a week for emergency purposes, as reasonably determined by the EPC Contractor. Within twenty-

four (24) hours of such emergency access, the EPC Contractor shall provide the SNCM with a written explanation of the nature of the emergency.

6.28 Installation, Operation and Ownership of the Facility

6.28.1 SNCM will also authorize the EPC Contractor to use the Relevant Premises and the Site only for the purposes of installation, operation and maintenance of the solar power generation facility installation. The EPC Contractor undertakes not to use the Site for any purpose other than as aforesaid.

6.28.2 The EPC Contractor shall be solely responsible for comprehensive maintenance of the Facility Installations (subject, however, to the obligations and responsibilities of the SNCM herein), including without limitation the obligation to promptly make or pay (as determined by the SNCM) for any repairs to any part or all of the Site to the extent directly caused by the EPC Contractor, its employees, agents, contractors or subcontractors, and shall, at all times during the Term, maintain the Facility Installations in good operating condition. The EPC Contractor shall also be responsible for maintaining the structural integrity of the Solar System and ensure that any activity which may result in water seepage occurs.

6.28.3 The EPC Contractor will also undertake cleaning of the solar systems at regular intervals; however, the EPC Contractor will not use water jets/ pressurized hoses for the cleaning as the water may enter the internal circuitry laid down around these premises.

6.28.4 The EPC Contractor shall bear all risk of loss with respect to the Facility Installations and shall have full responsibility for its comprehensive maintenance in compliance with all the Laws and Approvals. The EPC Contractor shall coordinate in advance all such repair and maintenance work with the manager of the relevant buildings comprising the Site or his/her designee so as not to restrict parking access or interfere with scheduled activities on the relevant building comprising the Site. Upon such request for repair and maintenance work, the SNCM shall respond to such request within five (5) Business Days. If the SNCM does not respond to such request within such five (5) Business Days period, such request shall be deemed approved by the SNCM. All such work shall be diligently prosecuted to completion to the end that such work shall not remain in a partly finished condition any long than is necessary for its completion.

6.29 Security

6.29.1 Deleted

6.29.2 The EPC Contractor shall check plant safety and fire protection systems on a monthly basis.

6.29.3 Deleted

6.29.4 Deleted

6.29.5 Deleted

6.29.6 Deleted

6.29.7 Subject to the rights of the EPC Contractor under this Clause 6.29, SNCM or any agency duly authorised by it shall be entitled to inspect and search any person or vehicle entering the Site or departing there from, without unduly or unreasonably disrupting the operations of the SNCM System.

6.29.8 Deleted

6.30 Existing utilities and roads

6.30.1 Notwithstanding anything to the contrary contained herein, the EPC Contractor shall ensure that the respective entities owning the existing roofs, right of way or utilities on, under or above the Site are enabled by it to keep such utilities in continuous satisfactory use, if necessary, by providing suitable measures.

6.30.2 The EPC Contractor shall, subject to Applicable Laws and with assistance of SNCM, undertake shifting of any utility including electric lines, water pipes and telephone cables, to an appropriate location or alignment within or outside the Site if and only if such utility causes or shall cause a material adverse effect on the construction, operation or maintenance of the Project. The cost of such shifting shall be borne by EPC Contractor.

6.31 Breach and Cancellation of the Contract

6.31.1 In case of non-performance in any form or change of the covenant and conditions of the Contract by the Contractor, the Company shall have the power to annul, rescind, cancel or terminate the order and upon its notifying in writing to the Contractor that it has so done, this Contract shall absolutely determine. The decision of the Company in this regard shall be final and binding.

6.31.2 The Company may cancel the order or a portion thereof, and if so purchase or authorize purchase of the plant/equipment not so delivered or order Plant/ Equipment of similar description (opinion of the Company shall be final) at the risk and cost of the Contractor.

6.32 Force Majeure

6.32.1 In the event of either party being rendered unable by Force Majeure to perform any obligation required to be performed by them under this Contract, relative obligation of the party affected by such Force Majeure shall be treated as suspended during which the Force Majeure Clause lasts.

6.32.2 The term "Force Majeure" shall have herein mean riots (other than among the Contractor's employee), Civil commotion, War (whether declared or not), invasion, act of foreign enemies hostilities, civil war, rebellion, revolution, insurrection, military coup, damage from aircraft, nuclear fission, embargoes, quarantines, acts of god such as earthquake (above 7.0 magnitude on Richter scales), lightning, unprecedented floods, fires not caused by the Contractors negligence and other causes which the Contractor has no control and accepted as such by SNCM whose decision shall be final and binding. Normal rainy season and monsoons are not Force Majeure.

6.32.3 Upon occurrence of such causes and upon its termination, the party alleging that it has been rendered unable as aforesaid, thereby, shall notify the other party in writing by registered notice within 24 (twenty-four) hours of the alleged beginning and ending thereof giving full particulars and satisfactory evidence in support of its claim.

6.32.4 Time for performance of the relative obligation suspended by the Force Majeure shall stand extended by the period for which such clause lasts.

6.32.5 If works are suspended by Force Majeure conditions lasting for more than twenty (20) days, SNCM shall have the option of cancelling this Contract in whole or part thereof, at its discretion.

6.32.6 The Contractor shall not claim any compensation for Force Majeure conditions and shall take appropriate steps to ensure men and materials utilized by it under the Contract well in advance.

6.33 Insurance

6.33.1 During the construction period, i.e. before the Commissioning of the Project, all insurance related expenses shall be borne by the Contractor. The goods supplied under the Contract shall be fully insured against the loss or damage incidental to manufacture or acquisition, transportation, storage, delivery, theft, riots, natural or other disaster, etc. in such a manner that the Company shall not incur any financial loss, as long as the construction of the Project continues to remain under the custody of the Contractor.

6.33.2 In case of any loss or damage or pilferage or theft or fire accident or combination of the said incidents etc. under the coverage of insurance, the Contractor shall lodge the claim as per rules of insurance. Any FIR required to be lodged to local Police Station shall be the responsibility of the Contractor.

6.33.3 The Contractor shall arrange to supply/ rectify/ recover the materials even if the claim is unsettled for timely completion of the Project. The final financial settlement with the insurance company shall be rested upon the Contractor.

6.33.4 In case of any delay of the Project attributable to the Contractor, the Contractor himself in consultation with the Company should take the extension of insurance. Any financial implications shall, however, be borne by the Contractor.

6.33.5 The Contractor shall arrange for providing insurance coverage to its workmen under Workmen's Compensation Act or similar Rules and Acts as applicable during execution of work for covering risk against any mishap to its workmen. The Contractor shall also undertake a Third-Party Insurance. The Company shall not be responsible for any such loss or mishap.

6.33.6 The EPC Contractor shall provide or obtain and maintain in force throughout the period of CMC the following Insurance coverage: (i) Insurance to cover third party liability of appropriate value along with an undertaking indemnifying SNCM from any such claim. (ii) Workmen compensation and /or group personal accidents Insurance policy covering all its employees and works including of the sub-contractor. Pilferage, theft, burglary also is also to be covered by the EPC Contractor/CMC operator. (iii) For Fire and allied perils including earthquake, flood, storms, cyclone, tempest, insurance policy shall be taken by the EPC Contractor immediately after COD. In case of any loss/ claim under the policy, EPC Contractor/CMC Operator shall immediately inform the same to the Owner. (iv) It is the responsibility of the EPC contractor /CMC Operator to operate and maintain the solar plant and all the associated equipment's at his own cost for the quoted CMC period for which the Owner shall pay the agreed CMC charges only. (v) Any replacement / repair / modification of any item / equipment shall be carried out by the EPC contractor /CMC Operator at his own cost for the quoted CMC period, so as to have minimum down time. The Owner shall not be responsible for any break down / failure of any equipment to any reason thereof except for Force Majeure / Fire & Allied Perils Events or extraneous reasons. (vi)The scope / type / form of insurance cover

mentioned elsewhere in this tender, for the scope of the project for the quoted CMC period, would be superseded by this Clause

6.33.7 At the end of the term of insurance undertaken by the Contractor, the Contractor shall provide all the necessary documents to the satisfaction of the Company in order to enable the Company to take up the insurance of the Plant.

6.34 Statutory Acts, Rules and Standards

6.34.1 The work shall be executed in conformity with the relevant standard of Bureau of Indian Specification (or equivalent International Standard), Electricity Rules, 2010 (as amended up to date), Indian Electricity Act, BARC/DAE rules, Explosive Act 1948, Petroleum Act 1934, National Building Code and relevant Rules in vogue at the time of execution including CMC period.

6.35 Stoppage of Work

6.35.1 The Company shall not be responsible and not liable to pay any compensation due to stoppage of work as a reaction from local public due to any undue action on the part of the Contractor causing annoyance to local people.

6.36 Hindrance Register

6.36.1 The Contractor may also maintain a Hindrance Register where reasons for delay may be recorded from time to time and at the time of occurrence of the hindrance and get it duly certified by the Project Manager or his authorized representative.

6.37 Responsibility of the Contractor

6.37.1 The Contractor shall provide guarantee and be entirely responsible for the execution of the Contract in accordance with this Tender including but not limited to its specification, schedules, and annexure. The Contractor shall further provide guarantee and be responsible for the quality and workmanship of all materials and completed works, correct designs and drawings, correct delivery of material, erection, testing and commissioning including CMC.

6.38 Governing Language

6.38.1 The Contract shall be written in English Language. All correspondence and documents pertaining to the Contract, which are exchanged by the Company and Contractor, shall be written in English.

6.39 Order Amendments

6.39.1 No variation in or modification of the terms of the contract shall be made except by written amendments issued by the Company.

6.40 Assignments or Subletting of Contract

6.40.1 The Contractor shall not, without the prior consent in writing of the Company, assign or sublet or transfer its Contract in whole or in part, its obligations to perform under the Contract or a substantial part thereof, other than raw materials, or for any part of the work of which makers are named in the Contract, provided that any such consent shall not relieve the Contractor from any obligation, duty or responsibility under the Contract.

6.41 Subcontracts

6.41.1 The Contractor shall notify the Company in writing of all subcontracts awarded under the Contract if not already specified in his Bid. Such notification in its original Bid or later shall not relieve the Contractor from any liability or obligation under the Contract.

6.41.2 Subcontracting a work shall not, under any circumstances, relieve the Contractor from its obligations towards the Project and the Company.

6.41.3 In case, the Contractor engages any Subcontractor to carry out a part of the work, the Subcontractor should have requisite Government License for carrying out such part of the work.

6.42 Authorized Test Centres

6.42.1 The PV modules, inverters, transformers, panels, wires, etc. deployed in the power plants shall have valid test certificates for their qualification as per above specified IEC/ BIS Standards by one of the reputed labs of the respective equipment (preferably NABL Accredited Test Centres) in India. In case of equipment for which such Test facilities may not exist in India, test certificates from reputed ILAC Member Labs abroad will be acceptable.

6.43 Delivery of Equipment

6.43.1 The Contractor shall deliver the equipment of the plant and machineries in accordance with the terms of the Contract at the time(s) to the place(s) and in the manner specified in the Contract. The Contractor shall comply with instructions that may be given by the Company from time to time regarding the transit of the plant and material.

6.43.2 Notification of delivery or dispatch in regard to each and every consignment shall be made to the Company immediately after dispatch or delivery from the manufacturing works. The Contractor shall supply to the consignee Invoice in triplicate and packing account of all stores delivered or dispatched by him.

6.43.3 In case of any occurrence of loss or damage in transit, it shall be the liability of the Contractor to initiate or pursue the claim with the Insurance company. It should take immediate steps to repair the damaged apparatus or replacement there to.

6.44 Liabilities during Transit

6.44.1 The Contractor shall be responsible for loss, damages, or depreciation to goods or of plant, equipment, and machineries up to delivery at the Site.

6.45 Deduction from Contract Price

6.45.1 All costs, claims, damages or expenses, which the Company may have paid for which the Contractor is liable, will be deducted by the Company from deposited security deposit or from any money due or which become due to him under this Contract or any contract are being executed elsewhere with the Company.

6.45.2 Any sum of money due and payable to the Contractor, as per the Contract Agreement, may be appropriated by the Company and set off against any claim of the Company, for the payment of a sum of money arising out of or under any other contract made by the Contractor with the Company. It is an agreed term of the Contract that the sum of money, withheld or obtained under this clause by the Company, will be kept withhold or retained as such by the Company or till this claim arising out of in the same Contract is either mutually settled or determined by the arbitrator, or by competent court, as the case may be, and that the Contractor shall have no claim for interest or damages whatsoever on this account or any other account in respect of any sum of money withheld or retained under this clause and duly notified as such to the Contractor.

6.46 Terms of Payment

6.46.1 SNCM shall pay the Contractor in the following manner for supply of material and at the following time for achieving the respective milestones for the Supply. The Tender is a comprehensive EPC Contract of Supply & Works, however a single LoA shall be provided to the Successful Bidder. The payment terms for Supply & Works are given below.

Sr.	Payment Milestones for Supply	Amount
1.	On Supply of PV Modules & Module Mounting Structure (MMS) for Solar System at site and its verification and acceptance by SNCM: Submission of invoice and receipt of material at site.	40% of Contract value (i.e. total EPC cost (Supply+Work))
2.	On Supply of Inverter & BOS for Solar System at site and its verification and acceptance by SNCM: Submission of invoice and receipt of material at site.	20% of Contract value (i.e. total EPC cost (Supply+Work))
3.	Upon Erection, Testing & Commissioning of entire Plant (Solar System)	30% of Contract value (i.e. total EPC cost (Supply+Work))
4.	After successful PR Test result and submission and approval of PR Test result.	5% of Contract value (i.e. total EPC cost (Supply+Work))
5.	After completion of five (5) years CMC from the date of commissioning.	5% of Contract value (i.e. total EPC cost (Supply+Work)) (1% each will be released on submission and approval of CMC report on yearly basis for 5 years)
	Total	**100%**

Note:

1. All works shall be considered for payment on the basis of payment milestones per approved billing break up to be approved after award of contract.
2. Contract Value of Supply means the Supply part of the Contract Price.
3. Individual Building site shall not be considered, whole project consideration for Each payment milestones.

6.47 Payments Procedure

6.47.1 Subject to any deduction which the Company may be authorized to make under this Contract, and or to any additions or deductions provided for in this Contract, the Contractor shall be entitled to payment as follows:

a. All payments shall be made in Indian Rupees, unless otherwise specified in the LoA /Contract Agreement. All payment shall be made on the basis of actual measurement for the quantified items as per schedule of works.

b. The Contractor shall submit the bill for claim in three copies with all supporting documents as per the Contract condition to SNCM. After due verification and recommendation, SNCM shall process verified bills for release of payment. Payments shall be released in 15 (Fifteen) days by A/c payee cheque / RTGS/ NEFT from date of submission of clear invoice.

- All taxes and deductions shall be applicable as per prevailing income tax and other statutory rules and provisions in force.

- In case Contractor fails to submit the invoice with all the required documents to process payments, SNCM reserves the right to hold the payment of the Contractor against such bills.

6.48 Warranty/ Guarantee

6.48.1 The Plant shall perform as per the Guaranteed Performance indicated by the Bidder in its Financial Proposal.

6.48.2 PV modules used in grid connected solar power plants must be warranted for peak output power at Standard Testing Condition (STC), which shall not be less than 90% at the end of ten (10) years and not less than 80% at the end of twenty-five (25) years. The

first-year degradation shall not be more 3% of the PV Module capacity and in subsequent years it shall not be more than 0.7% per annum.

6.48.3 The mechanical structures, electrical works, all plant equipment and components and overall workmanship of the grid solar power plants shall be warranted up to CMC period.

6.48.4 The Contractor shall ensure that the goods supplied under the Contract are new, unused and of most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.

6.48.5 The Warranty, Guarantee & Defect liability: All plant equipments and components and overall workmanship of the grid solar power plants shall be warranted for a minimum of 5 years except solar PV Modules which product warranty shall be for 10 years and performance warranty shall be for 25 years.

6.48.6 During the period of Warranty/ Guarantee the Contractor shall remain liable to replace/ repair any defective parts, that becomes defective in the Plant, of its own manufacture or that of its Subcontractors, under the conditions provided for by the Contract under and arising solely from faulty design, materials or workmanship, provided such defective parts are not repairable at Site. After replacement the defective parts shall be returned to the Contractors works at the expense of the Contractor unless otherwise arranged.

6.48.7 At the end of Guarantee period, the Contractor's liability shall cease. In respect of goods not covered above, SNCM shall be entitled to the benefit of such Guarantee given to the Contractor by the original Contractor or manufacturer of such goods.

6.48.8 During the Operation and Comprehensive Maintenance and Guarantee period, the Contractor shall be responsible for any defects in the work due to faulty workmanship or due to use of sub-standard materials in the work. Any defects in the work during the guarantee period shall therefore, be rectified by the Contractor without any extra cost to SNCM within a reasonable time as may be considered from the date of receipt of such intimation from SNCM failing which SNCM shall take up rectification work at the risk and cost of the Contractor.

(a) Material Warranty:

Material Warranty is defined as: The manufacturer should warrant the Solar Module(s) to be free from the defects (including Potential-induced degradation

[PID] effect) and/or failures specified below for a period not less than twenty-five (25) years from the date of sale to the SNCM:

- Defects and/or failures due to manufacturing defects and/or failures due to materials, including PID defect
- Non-conformity to specifications due to faulty manufacturing and/or inspection processes.

  If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at SNCM's sole option.

(b) Performance Warranty:

The manufacturer should warrant the output of Solar Module(s) If, Module(s) fail(s) to exhibit such power output in prescribed time span, the Contractor will either deliver additional PV Module(s) to replace the missing power output with no change in area of land used or repair or replace the PV Module(s) with no change in area of land used at SNCM's sole option. Total land available from SNCM is fixed and the bidder shall design the plant so that in this case he has enough space within this land to accommodate additional capacity.

6.49 Arbitration

6.49.1 All matters, questions, disputes, differences and / or claims arising out of and / or concerning, and /or in connection with, and /or in consequence of, and /or relating to this contract which may arise between the parties in connection with the Contract or any matter arising out of or in relation thereto shall be reported to Gujarat Public Work Contract Dispute Arbitration Tribunal and provision of Gujarat Public Work Contract Disputes Arbitration and Tribunal Act 1992 shall be applied as updates time to time.

6.49.2 The Contractor shall ensure that the work under this Contract shall continue during arbitration proceedings and dispute and no payments due from or payment by the Company shall be withheld on account of such proceedings except to the extent which may be in dispute.

6.49.3 Deleted

6.50 Court of Competent Jurisdiction

6.50.1 The Courts of Ahmedabad for SNCM shall have exclusive jurisdiction in all matters arising under the Contract.

6.51 Law and Procedure

6.51.1 The law which is to apply to the Contract and under which the Contract is to be construed shall be Indian Law.

6.51.2 The law governing the procedure and administration of any arbitration instituted under the clause for arbitration shall be the Indian law.

6.52 Construction of Contract

6.52.1 The Contract shall in all respect be construed and operated, as a Contract as defined in the Indian Contracts Act, 1872, and all the payments there under shall be made in Indian Rupees (INR) unless otherwise specified.

6.53 Notices

6.53.1 For all purpose of the Contract, including arbitration there under, the address of the Contractor mentioned in the Bid shall be the address to which all communications addressed to the Contractor shall be sent, unless the Contractor has notified a change by a separate letter containing no other communication and sent by registered post with acknowledgement due to SNCM. The Contractor shall be solely responsible for the consequence of an omission to notify change of address in the manner aforesaid.

6.53.2 Any communication or notice on behalf of the Company in relation to the Contract Agreement may be issued to the Contractor by the Company and all such communication and notice may be served on the Contractor either by registered post or under certificate of posting or by ordinary post or by hand delivery at the option of the official.

6.53.3 Instructions or notices to the Contractor and notices from the Contractor to SNCM recorded in a minute signed by the authorized representatives of both SNCM and the Contractor. Such notice or instruction shall be valid notice of instruction for the purpose of the Contract.

6.54 Final Bill

6.54.1 The Final EPC (Supply + Work) Bill relating to the Contract shall be prepared only after the Performance Guaranteed Test of the plant has been observed as under Clause No. Appendix 16 A: Procedure for Performance Testing and it will include the adjustments of all claims against the Contractor by the Company and awarded in its favour by the arbitrator up to the date of preparation of the final bill.

6.55 Degradation of Solar Modules

6.55.1 The Contractor should warrant for the output of each Solar Module(s) for at least 90% of its actual rated capacity at Standard Testing Condition after initial 10 years and 80% of its rated capacity after 25 years upon commissioning of the Plant.

6.55.2 The derating of module should not be more than 0.7% in any year except for the first year of operation, which should be limited to 2.5%.

6.55.3 If, Module(s) fail(s) to exhibit such power output, the Contractor will either:

a. Deliver additional PV Module(s) to replace the loss of power output with no change in area of land used;

<or>

b. Repair or replace the existing PV Module(s) with no change in area of land used;

6.55.4 The Company will specifically do the audit of solar PV module by third-party at any point of the operation period and in case the Contractor fails to demonstrate the value as per the maximum deration allowed then, the Contractor shall compensate as per the Clause No. 6.55.3.

6.56 Risk Purchase

6.56.1 If the Contractor fails, on receipt of the NTP, to take up the work within a reasonable period or leave the work Site after partial execution of the work, SNCM shall have the liberty to get the work done through other agency at the Contractor's own risk and additional cost if any. If the situation, so warrants, to compel SNCM to cancel the LoA placed on the Contractor, it shall be liable to compensate the loss or damage, which SNCM may sustain due to reasons of failure on Contractor's part to execute the work in time.

6.57 Confidential Information

6.57.1 SNCM and the Contractor shall keep confidential and shall not, without the written consent of the other Party hereto, divulge to any third party any documents, data or other information furnished directly or indirectly by the other Party hereto in connection with the Contract, whether such information has been furnished prior to, during or following termination of the Contract. Notwithstanding the above, the Contractor may furnish to its Subcontractor(s) such documents, data and other information it receives from SNCM to the extent required for the Subcontractor(s) to perform its work under the Contract, in which event the Contractor shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Contractor.

6.57.2 Notwithstanding the generality of the foregoing Clause 6.57.2all maps, plans, drawings, specifications, schemes and the subject matter contained therein and all other information given to the Contractor, by the Company in connection with the performance of the Contract shall be held confidential by the Contractor and shall remain the property of the Company and shall not be used or disclosed to third parties by the Contractor for any purpose other than for which they have been supplied or prepared. The Contractor may disclose to third parties, upon execution of secrecy agreements satisfactory to the Company, such part of the drawings, specifications or information if such disclosure is necessary for the performance of the Contract under this Clause of 6.57.

6.57.3 Maps, layouts and photographs of the unit/integrated plant including its surrounding region's showing vital installation for national security shall not be published or disclosed to the third parties or taken out of the country without prior written approval of the Company and upon execution of secrecy agreements satisfactory to the Company with such third parties prior to disclosure.

6.57.4 Title to secret processes, if any, developed by the Contractor on an exclusive basis and employed in the design of the unit shall remain with the Contractor. The Company shall hold in confidence such process and shall not disclose such processes to the third parties without prior approval of the Contractor and execution by such third parties of secrecy agreements satisfactory to the Contractor prior to disclosure.

6.57.5 Technical specifications, drawings, flow sheets, norms, calculations, diagrams, interpretations of the test results, schematics, layouts and such other information which the Contractor has supplied to the Company under the Contract shall be passed on to the Company. The Company shall have the right to use these for construction erection, start-up, commissioning, operation, maintenance, modifications and/ or expansion of the unit including for the manufacture of spare parts.

6.57.6 The obligation of a party under this Clause 6.57, however, shall not apply to that information which:

a. Now or hereafter enters the public domain through no fault of that Party,

b. Can be proven to have been possessed by that Party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other Party hereto, or

c. Otherwise lawfully becomes available to that Party from a third party that has no obligation of Confidentiality.

6.57.7 The above provisions of this Clause 6.57 shall not in any way modify any undertaking of Confidentiality given by either of the Parties hereto prior to the date of the Contract in respect of the Facilities or any part thereof.

6.57.8 The provisions of this Clause 6.57 shall survive Termination, for whatever reason, of the Contract.

6.58 Limitation of Liability (LLP)

6.58.1 The total liability of the Contractor under or in connection with this Tender and the consequent Contract shall not exceed the full Contract Price inclusive of taxes and duties.

6.58.2 This sub-Clause shall not limit the liability in case of fraud, deliberate default/ negligence, reckless misconduct or illegal or unlawful acts by the Contractor.

--- End of Section ---

7 Special Terms and Condition

7.1 Definition

7.1.1 The General Terms and Conditions as well as the Special Terms and Conditions of the Tender are complementary to each other, and wherever there is a conflict, the Special Terms and Conditions shall prevail.

7.2 Objective of the Project

7.2.1 The main objective of this project is "Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of total 170 kW (AC) Rooftop solar power plant at Shree Narayana Cultural Mission, Satellite, Ahmedabad, Gujarat, on turnkey basis.

7.3 Compliance with GEDA/DISCOM/CEIG/Gujarat State Designated Agency Guidelines

7.3.1 The Bidders and Contractor shall make themselves fully aware of and comply with the norms and guidelines provided by GEDA/DISCOM/CEIG/Gujarat State Designated Agency if any, towards the Project.

7.3.2 The Contractor shall ensure that the Project shall comply with all the norms and guidelines of GEDA/DISCOM/CEIG/Gujarat State Designated Agency if any, and subsequent clarifications or amendments issued from time to time. The Contractor is required to refer the compliance documents of GEDA/DISCOM/CEIG/Gujarat State Designated Agency if any, for necessary compliances of GEDA/DISCOM/CEIG/Gujarat State Designated Agency requirements.

7.3.3 In case of any conflict between the compliance of GEDA/DISCOM/CEIG/Gujarat State Designated Agency and this Tender or any aspect of the Project, the Contractor shall immediately notify SNCM for clarity.

7.4 Project Site

7.4.1 Details of the Project Site will be as per the Appendix 26.

7.5 Scope of Service

7.5.1 The item of work to be performed on all equipment and accessories shall include but not limited to the following:

a. Transportation, unloading, receiving and storage at site.

b. Arranging to repair and/or re-order all damaged or short-supply items.

c. Final check-up of equipment and commissioning and putting the system into successful operation, feeding power to the local internal grid.

7.6 Training of SNCM's Personnel

7.6.1 The Bidder shall provide training on Plant operations and maintenance to One (1) team of 5-10 personnel each (Engineers and Technician/ Operators) of SNCM while handing over time.

7.7 Mode of Execution

7.7.1 The entire work shall be executed on turnkey basis. Any minor item(s) not included in the schedule but required for completion of the work shall have to be carried out/ supplied without any extra cost. Such works, not listed in the schedule of works but elaborately described to perform or to facilitate particular operation(s) required for completion of the project shall be deemed to have been included in the scope of this work and the Contractor shall supply, install the same without any extra cost.

7.8 Programme of Work

7.8.1 The Contractor shall submit the programme of work within 3 days from the date of receipt of Letter of Award. The programme shall include a Bar Chart indicating there in the starting position and completion date of each of the major items of work.

7.9 Starting of Work

7.9.1 The issuance date of NTP should be termed as starting date of work.

7.10 Completion Schedule

7.10.1 The time of completion and Commissioning of the Plant is One hundred and twenty Days (120) from the date of issue of Notice to Proceed (NTP) of award.

7.10.2 The Contractor shall inform SNCM at least seven (7) days advanced final written notice, of the date on which it intends to commissioning of plant.

7.10.3 The Contractor shall prepare the completion schedule accordingly and inconformity with provisions of technical specifications and carry out the work as per this schedule subject to "Force Majeure" conditions. The Contractor shall mobilize resources keeping in view, the above scheduled completion period.

7.10.4 The Contractor shall provide the power evacuation schedule as and when required or asked by any Central or State Government agency(s).

7.11 Site Inspection & Basis of Bid

7.11.1 The volume and quantity of work indicated in schedule of works may vary. The Contractor should visit the Site before quoting rate. After taking in to consideration all aspects of the site, condition of soil etc., the Contractor should quote the works. No extra claim will be entertained at post bidding stage. The foundation design of module

structure and the building shall have to be approved by SNCM. In case of any defects arising in the building during guarantee period, the Contractor shall have to rectify the same at its own cost.

7.12 Price Escalation

7.12.1 The rate(s) quoted against the work shall remain firm during the entire Contract period.

7.13 Taxes and Duties

7.13.1 The price quoted shall be inclusive of all applicable taxes, duties, levies as applicable (as per the format of the Financial Proposal), which shall be paid on production of documentary evidence for the same.

7.13.2 Bidders shall quote the rates as well as taxes and duties based on the concessional exemption in the same that can be availed by the Bidder.

7.13.3 Statutory variations in the tax shall be permitted as under:

(A) Statutory variations from Bid Due Date to the completion of original contractual period:

(i) If any increase takes place in taxes and duties due to statutory variation, then SNCM shall admit the same on production of documentary evidence.

(ii) If any decrease takes place in taxes and duties due to statutory variation, the same shall be passed on to SNCM or SNCM shall admit the decreased rate of taxes and duties while making the payment.

(B) Statutory variations beyond original contractual completion period:

(i) If reasons for extension of contractual completion period is attributable solely to SNCM, the provisions of (A) (i) above shall apply.

(ii) If reasons for extension of contractual completion period is attributable to Bidder, then:

(a) If any increase takes place in GST due to statutory variation, then SNCM shall not admit the same; however, SNCM shall admit the GST at the rate prevailing during payment of last invoice raised during original contract completion period.

(b) If any decrease takes place in GST due to statutory variation, the same shall be passed on to SNCM or SNCM shall admit the decreased rate of GST while making the payment.

7.13.4 Variation on account of exchange rate will not be payable. No statutory variation shall be payable by SNCM on the input items. i.e., Raw Materials etc.

7.14 Procurement of Materials

7.14.1 The Contractor shall procure all necessary material required for the project work and arrange to store them properly. Test certificate in accordance with the specifications are to be furnished by the Contractor to SNCM for approval in respect of the materials procured by the Contractor.

7.15 Samples

7.15.1 Apart from adhering to special provision made in the specification regarding submission of samples, the Contractor shall within ten (10) days of its receipt of Letter of Award, provide to SNCM samples along with detailed literature of all materials it proposes to use irrespective of the fact that specific make/ material might have been stipulated. If certain items proposed to be used are of such nature that samples cannot be presented or prepared at Site, detailed literature / test certificate of the same shall be provided instead. SNCM shall check the samples and give his comments and/or approval to the same.

7.16 Notice of Operation

7.16.1 The Contractor shall not carry out important operation without the consent in writing of SNCM or his representative. For carrying out such important activity, the Contractor shall intimate to SNCM at least Forty-eight (48) hours before starting of the job.

7.17 Rejection of Materials

7.17.1 SNCM's decision in regard to the quality of the material and workmanship will be final. The Contractors at its own cost and risk without any compensation shall immediately remove any material rejected by the Project Manager or Engineer-in-Charge from the Site of work.

7.18 Power and Water Supply during Construction

7.18.1 Construction water and construction power at rooftop shall be the responsibility of the EPC Contractor which can be facilitated at building premises by the SNCM.

7.18.2 SNCM shall not provide accommodation for labours at site. The contractor shall make his own arrangement for same. The contractor shall make.

7.19 Labour Engagement

7.19.1 The Contractor shall be responsible to provide all wages and allied benefits to its labours engaged for execution of the project work and also to carry out CMC service.

The Contractor shall remain liable to the authorities concerned for compliance of the respective existing rules and regulations of the government for this purpose and shall remain liable for any contravention thereof.

7.19.2 Strict adherence of various applicable labour laws like the Factories Act, Minimum Wages Act, ESI Act, Payment of Wages Act, the Workman's Compensation Act, EPF Act, Contractor labour (Regulation & Abolition) Act, 1970 and all other statutory requirements as amended from time to time to the entire satisfaction of Central/State Govt. Authorities, shall be the responsibility of the Contractor and he shall have to make good loss, if any, suffered by SNCM on account of default in this regard by the Contractor.

7.19.3 The contractor is encouraged to use local manpower as per the local statutory (labour) requirement, if any.

7.19.4 The successful Bidder shall obtain license under Contract Labour (Regulation &Abolition) Act 1970, read with rules framed there under and furnish the same to the Company within 15 days of the issue of Detailed order of Contract failing which the detailed order of contract shall be cancelled/terminated without any further notice and its EMD and/ or performance guarantee shall be forfeited.

7.19.5 65% of the jobs that will be created due to the projected in the supervisory and managerial cadres and 80% of the jobs that will be created in other cadres due to the project shall be filled in by employing the local persons. The expression "local person" shall mean a person domicile in Gujarat state for a minimum period of 15 years prior to applying for employment to the Contractor.

7.20 Handing Over –Taking Over

7.20.1 A TOTAL 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC) including five (5) years comprehensive maintenance contract (CMC) at SHREE NARAYANA CULTURAL MISSION (SNCM), AHMEDABAD, GUJARAT shall be taken over by SNCM upon successful completion of all tasks to be performed at Site (s) on equipment supplied, installed, erected and Commissioned by the Contractor in accordance with provision of this Tender. During handing over complete Project work, the Contractor shall submit the following for considering final payment:

a. All as- Built Drawings in soft (PDF & AUTOCAD) as well as two sets of Hard Copy during starting of CMC period.

b. Operation, Maintenance & Safety Instruction Manual and other information about the project.

c. Inventory of spares at projects Site.

d. Copies of all warranties/guarantees.

7.20.2 Prior to the handing over, SNCM shall conduct a plant audit by self or the third party as per SNCM's discretion, and any defects identified during such audits or inspection shall be rectified by the Contractor at its own cost prior to the completion of the CMC period.

7.21 Termination on the death of Contractor

7.21.1 Without prejudice to any of the rights or remedies under this contract, if the Contractor dies, the Engineer-in-Charge on behalf of SNCM shall have the option of terminating the Contract without compensation to the contractor.

7.22 Retired Government servants taking to Contract

7.22.1 No engineer of gazette rank or other gazette officer employed in engineering or administrative duties in the Engineering Department of the Company is allowed to work as contractor for a period of two years of his retirement from Company's service without the previous permission of the Company. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be a person who had not obtained the permission of the Company as aforesaid before submission of the tender or engagement in the contractor's service as the case may be.

7.23 EPF

7.23.1 The contractor will deduct and deposit EPF of his labour staff/worker as applicable from time to time in his own EPF A/c code and then produce a photocopy of documentary evidence of EPF Challan with each R.A. Bill for the concerned period.

7.24 Miscellaneous

7.24.1 The project manager appointed by EPC contractor shall not be replaced without the prior written approval of SNCM.

7.24.2 Any project manager or member of the Contractor at Site shall be replaced within a period of forty-eight (48) hours of intimation by SNCM without assigning any reason thereof.

7.24.3 The Contractor shall take care of all statutory, local clearance, approvals, etc.

7.24.4 All warranties on the equipment shall be in the name of SNCM.

7.24.5 The Contractor shall be responsible for claiming and retaining any subsidy and shall quote only final price and responsibility of Project registration/ applications etc. shall lie with the Bidder only. In no case, SNCM is responsible to provide any additional amount other than the EPC Contract Price.

7.24.6 The Contractor shall provide arrangement for water drainage, which shall be appropriately arranged for dispersion/ evacuation as per the local statutory norms without causing any local inconvenience or hindrance.

7.24.7 The design philosophy and related specifications mentioned in this Tender are to be treated as baseline specifications. The Contractor may further improve the design of the Plant through minor modifications and execute the same contingent on SNCM's approval of the new design or specification.

7.24.8 Based on reviewing the Project, if the progress is below expectation as judged based on SNCM's discretion, then SNCM shall reduce the Scope of the Contractor in part or full and assign the same to other contractor(s) at the risk and cost of the existing Contractor.

7.24.9 The Contractor shall continue to provide all the monitoring services, licenses, software, access to all information (real-time or stored) that were been used during the CMC Contract period by the Contractor to SNCM at the time of hand over at no extra cost to SNCM for the rest of the life of the Plant.

7.24.10 Provision for installing any additional monitoring equipment to facilitate **on-line transfer of data** shall be provided by the Contractor.

--- End of Section ---

Appendix 1: Format for Covering Letter

To,

President (P);

Shree Narayana Cultural Mission (SNCM)
Opp. ISRO, Ramdevnagar, Jodhpur Tekra,
Satellite, Ahmedabad-380015, Gujarat, India

Sub: Submission of the TENDER Document No. SNCM/SOLAR/2024-25/05; 9th December, 2024

Dear Sir,

We, the undersigned, have considered and complied with the "Instructions to Bidders" and have accepted the terms stipulated in the TENDER documents. The scope of work to be offered by the Bidder shall include but not be limited to Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of total 170 kW (AC) Rooftop solar power plant at Shree Narayana Cultural Mission, Satellite, Ahmedabad, Gujarat on turnkey basis in the State of Gujarat. The Successful Bidder shall be required to ensure the continuous running of plant without any interruption during entire 1 Month of PR Test performance period from the date of commissioning of plant. All the above shall be as per TENDER Document No. SNCM/SOLAR/2024-25/05; 9th December, 2024.

Also, we have familiarized ourselves with the, roof, land surface and subsurface, metrological, climatological and environmental conditions which may exist in the installations area. In full cognizance and compliance with these aforesaid conditions and the regulations of local government authorities, we the undersigned do hereby offer for the Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of total 170 kW (AC) rooftop solar power plant at Shree Narayana Cultural Mission, Satellite, Ahmedabad, Gujarat on a turnkey basis in the State of Gujarat for which we have Bid. The work covered under the Bid shall be completed to the entire satisfaction of yourselves or your representative in conformity with the TENDER documents at the prices accompanying this Bid.

It is a term of our Bid that the Project shall be handed over installed, interconnected, tested, commissioned and modified and shall achieve Commissioning not later than 120 (One hundred and twenty) days from the date of NTP. This shall be the essence of the Contract between us.

We further agree and stipulate as follows:

1. Until the final Contract Documents are prepared and executed the TENDER documents with any modifications, additions, deletions agreed with the Company(s) and your written acceptance thereof, shall constitute a binding Contract between us, upon terms contained in aforesaid documents and the Financial Proposal accompanying the Bid.
2. That the Company will not supply any material. In all respects we shall be fully self-sufficient in the performance of the work.
3. I/ We understand that you are not bound to accept the lowest of the Bid you may receive.
4. I/ We shall make available to the Company any additional information it may find necessary or require to supplement or authenticate the qualification statement.
5. I/ We acknowledge the right of the Company to reject our Bid without assigning any reason or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.
6. I/ We understand that you may cancel the bidding process at any time and that you are neither bound to accept any Application that you may receive nor to invite the Applicants to Bid for the Project, without incurring any liability to the Applicants.
7. I/ We further certify that in regard to matters relating to security and integrity of the country, we or any of our Associates have not been charge-sheeted by any agency of the Government or convicted by a Court of Law.
8. I/ We further certify that no investigation by a regulatory authority is pending either against us or against our Associates or against our CEO or any of our directors/ managers/ employees.
9. I/ We undertake that in case due to any change in facts or circumstances during the bidding process, we are attracted by the provisions of disqualification in terms of the provisions of this TENDER; we shall intimate the Company of the same immediately.
10. We understand that the selected Bidder shall either be an existing Company incorporated under the Indian Companies Act, 1956 or Companies Act 2013.
11. I/ We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by

the Company in connection with the selection of Applicants, selection of the Bidder, or in connection with the selection/ bidding process itself, in respect of the above-mentioned Project and the terms and implementation thereof.

12. I/ We agree and undertake to abide by all the terms and conditions of the TENDER document.
13. We agree to keep the bidding valid for acceptance for a period of 120 (One hundred and twenty) days from the date of opening of the Technical Bid (hereinafter referred to as validity period) and the Bid shall not be withdrawn on or after the opening of bidding till the expiration of the validity period or any extension thereof.
14. We also undertake not to vary/modify the Bid during the validity period or any extension thereof.
15. We represent that we have fully satisfied ourselves as to the nature and location of the Project having in mind the general and local conditions and other factors incidental to the performance of the works and the costs thereof.
16. We further represent that from our own investigation of the Site of the Project we have fully satisfied ourselves as to the character, quality and quantity of surface and other conditions to be encountered in the performance of the works and we understand and represent that any failure to acquaint ourselves in respect of these matters and the other factors and conditions as set forth shall not relieve us from any responsibility for estimating properly the difficulty and cost of successfully performing the works.
17. We also acknowledge and accept that you shall not pay for any discontinuance or low performance rate resulting from malfunction of / or inadequacy of our equipment, instruments or personnel.
18. We agree to return to you all reports and technical data provided for our use in preparing this Bid and in the subsequent conduct of the works. We undertake that we will not use the same for any other work/purpose.
19. We further represent that we have familiarized ourselves with all the terms and provisions of the various parts of the bidding documents and that in making our Bid, we do not rely upon any representation made by any agent or employee of yourselves in respect of the terms of the bidding documents or the nature of the performance of the works.
20. We submit this Bid with the full understanding that our Bid fully complies with all the terms and conditions of the TENDER documents including Bid evaluation criteria and

that no deviation/exception to the TENDER documents have been taken by us. We also agree that in case we have taken any exceptions/ deviations to the TENDER documents, the Company will be free to reject our offer on account of such exceptions/deviations.

Dated this _____ day of _____ 2024

Signature: _____

In the capacity of: _____

Duly authorized to sign Tenders for and on behalf of (Name & Address) _____

_____

_____

_____

Witness

_____

Appendix 2: Details of Bidder

1. (a) Name:

   (b) Country of incorporation:

   (c) Address of the corporate headquarters and its branch office(s), if any, in India:

   (d) Date of incorporation and/ or commencement of business:

2. Brief description of company including details of its main lines of business and proposed role and responsibilities in this Project:
3. Details of individual(s) who will serve as the point of contact/ communication for company:

   (a) Name:
   (b) Designation:
   (c) Company:
   (d) Address:
   (e) Telephone Number:
   (f) E-Mail Address:
   (g) Fax Number:

4. Particulars of the Authorised Signatory of the Bidder:

   (a) Name:
   (b) Designation:
   (c) Address:
   (d) Phone Number:
   (e) E-Mail Address:
   (f) Fax Number:

Appendix 3: Format of Details of Similar Technical Experience

INSTRUCTIONS:

A. The Bidder shall indicate similar EPC experience of grid-connected solar photovoltaic projects herein.

B. The Bidder shall duly attach the Letter of Award (LOA) from the Client, Commissioning Certificate, and Certificate of Satisfactory Completion of Work from the Client.

C. Projects without sufficient documentary evidence of execution, commissioning and completion as per the discretion of SNCM shall not be considered towards technical evaluation of the Bidder.

D. The Bidder may indicate more than five (5) projects.

Sr.	**Name of Client (With name and contact information of Contact Person)**	**PV Project AC/ DC Capacity (In KW)**	**Work Order No. & Date**	**Commissioning Certificate (Date)**
1.				
2.				
3.				
4.				
5.				

Appendix 4: Deleted

Appendix5: Format for Project Execution Plan

I. Division of Scope of Work

Discipline/ Equipment	Basic Engineering	Design/ Detailed Engineering	Procurement	Supply	Project Management	Construction/ Fabrication/ Installation	Commissioning

NOTES:

i) Bidder shall clearly indicate the agency which will carry each activity and the location of activity.

ii) In case any activity is proposed with back-up consultant, Bidder shall clearly indicate role of back-up consultant

iii) Bidder to identify major equipment / items and discipline

II. DETAILED PROJECT SCHEDULE

Sr.	Activity	Start Date	End Date
1.	Issue of NTP	Zero Date	
2.			
3.			

NOTES:

1. The Bidder shall ensure that the entire work is completed within 120 days of issue of NTP.
2. All Start Dates and End Dates to be indicated with respect to the Zero Date.
3. The Bidder may use as many lines as required to satisfactorily provide the detailed project schedule.

SIGNATURE OF BIDDER ----------
NAME ----------
DESIGNATION ----------
SEAL DATE ----------

Appendix 6: Evaluated Price Bid Value

The Evaluated Price Bid Value (in Rs.) shall be calculated using the following parameters:

Parameters Quoted by the Bidder:

Quoted Supply & Work (EPC) Price

The Evaluated Price Bid Value (in Rs.) shall be calculated using the abovementioned parameters as follows:

Quote (in INR)		**:**	Quoted Supply Price
Quote (in INR)		:	Quoted Work Price
Quote (in INR)		:	**Total EPC price (supply + work)**

The Bidder with the lowest Price Bid Value in Rs. shall be the Successful Bidder (L-1).

Note: If the bid of the Successful bidder is seriously unbalanced in relation to the estimated cost of the Project Value (i.e. Supply +Work) to be performed under the contract, SNCM may require the bidder to produce detailed rate price analysis for any of all items of the Bids. After evaluation of the rate analysis, the SNCM may require that, the amount of the performance security set forth in "Clause No.3.11.6 (i)" above the contract be increased at the expense of the successful Bidder to a level sufficient to protect the SNCM against financial loss in the event of default of the successful Bidder under the Contract.

Appendix 7: Non- Blacklisting Declaration

(UNDERTAKING IN REGARD TO STOP DEAL / BLACK LIST THEREOF)

Sub: Undertaking in regard to Stop Deal / Black List thereof.

TENDER No.: **SNCM/SOLAR/2024-25/05**

I / We _____

authorized signatory of M/s _____ here by certify that M/S _____ is not stop deal / black listed by GUVNL and or their any subsidiary company viz. SNCM / GETCO / DGVCL / MGVCL / UGVCL / PGVCL/ TORRENT/ GEDA/Gujarat State Designated Agency for the tendered item at the time of bidding.

Date:

Note: Bidders has to reproduce above declaration in the text box area with filling of all blanks.

Appendix 8: Details of qualified technical Staff

Sr. No.	**Name**	**Relevant Qualification**	**Additional Certifications**	**Total Years of Relevant Experience**	**Remarks**
1.					
2.					
3.					
4.					
5.					
6.					

Note:

Kindly submit copies of resumes and appropriate certifications with this sheet.

Additional sheets may be used to provide accurate information.

Appendix 9: Declaration of Compliance

Date:

To,

President (P);

Shree Narayana Cultural Mission (SNCM),

Opp. ISRO, Ramdevnagar, Jodhpur Tekra,

Satellite, Ahmedabad-380015, Gujarat, India

Sub: Declaration of Compliance for the Bid for Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of total 170 kW (AC) Rooftop solar power plant at Shree Narayana Cultural Mission, Satellite, Ahmedabad in the State of Gujarat on EPC basis.

Dear Sir,

This is to certify that I, _____, am the duly authorized signatory appointed on behalf of my organization to submit this Bid. The authorization letter is attached herewith.

I agree to all the terms and conditions set forth in this TENDER Document.

If awarded the job, the job work shall also conform to the terms and conditions, as well as specifications indicated in the TENDER documents and as finally indicated by the Evaluation Committee.

I further certify that all the information provided in this document is accurate to the best of my knowledge.

Signature: _____ Designation: _____

Name: _____ Organization: _____

Address: _____ Phone: _____

Email: _____

Appendix 10: No Deviation Certificate

Date:

To

President (P);

Shree Narayana Cultural Mission (SNCM),

Opp. ISRO, Ramdevnagar, Jodhpur Tekra,

Satellite, Ahmedabad-380015, Gujarat, India

Sub: No Deviation Certificate regarding Bid for Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of total 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC) at Shree Narayana Cultural Mission, Satellite, Ahmedabad in the State of Gujarat on EPC basis.

Dear Sir,

We, _____

(Bidder's name), confirm our acceptance to all terms and conditions mentioned in the TENDER Document, and all subsequent clarifications, in totality and withdraw all deviations raised by us, if any.

_____

SEAL AND SIGNATURE OF BIDDER

Date: _____

Appendix 11: Declaration on Bidder's relation to SNCM Official

Date:

To,

President (P);

Shree Narayana Cultural Mission (SNCM),

Opp. ISRO, Ramdevnagar, Jodhpur Tekra,

Satellite, Ahmedabad-380015, Gujarat, India

Sub: Declaration of relationship with SNCM Official/any other employee/associates.

Dear Sir,

This has reference to our proposed Contract regarding Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of total 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC) at Shree Narayana Cultural Mission, Satellite, Ahmedabad in the State of Gujarat to be entered into Agreement with Shree Narayana Cultural Mission (SNCM), Ahmedabad.

For the purpose of Section 297/299 of the Companies Act, 1956 we certify that to the best of my/our knowledge.

i) I am not a relative of any SNCM Official;
ii) We are not a firm in which a SNCM Official or its relative is a partner;
iii) I am not a partner in a firm in which a SNCM Official or its relative is a partner;
iv) We are not a private company in which a SNCM Official is a member or director;
v) We are not a company in which SNCM Official hold more than 2% of the paid-up share capital of our company or vice-versa.

_____

Authorised Signatory of the Contracting Party

Place: Date:

Appendix 12: Format of Power of Attorney as Authorized Signatory

(On a non-judicial stamp paper of appropriate value)

Know all men by these presents, We, …… (Name of the firm and address of the registered office) do hereby irrevocably constitute, nominate, appoint and authorise Mr. / Ms (Name), son/daughter/wife of …… and presently residing at …….., who is presently employed with us and holding the position of …….., as our true and lawful attorney (hereinafter referred to as the "Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Bid for Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of total 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC) at Shree Narayana Cultural Mission, Satellite, Ahmedabad in the state of Gujarat, pursuant to the TENDER document no. _____ issued by Shree Narayana Cultural Mission ("SNCM"),including but not limited to signing and submission of all applications, Bids and other documents and writings, participate in Bidders' and other conferences and providing information / responses to the Company, representing us in all matters before the Company, signing and execution of all contracts including the Contract Agreement and undertakings consequent to acceptance of our Bid, and generally dealing with the Company in all matters in connection with or relating to or arising out of our Bid for the said Project and/or upon award thereof to us and/or till the entering into of the Contract Agreement with SNCM.

AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, ……., THE ABOVE-NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS …… DAY OF ……., 20. ….

For…….

(Signature, name, designation and address)

Witnesses:

1.

2.

Accepted Notarised

(Signature, name, designation and address of the Attorney)

Notes:

1. *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 when it is so required, the same should be under common seal affixed in accordance with the required procedure.*
2. *Wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders resolution/ power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.*

3. *For a Power of Attorney executed and issued overseas, the document will also have to be legalised by the Indian Embassy and notarised in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention, 1961 are not required to be legalised by the Indian Embassy if it carries a conforming Apostle certificate.*
4. *This format for Power of Attorney is for reference and in case a Bidder has a different format approved by their management then the same can submitted.*

Appendix 13: Deleted

Appendix 14: Format of Summary of Audited Financial Statements

To

President (P);

Shree Narayana Cultural Mission (SNCM),

Opp. ISRO, Ramdevnagar, Jodhpur Tekra,

Satellite, Ahmedabad-380015, Gujarat, India

Sub: Summary of Financial Statement

Ref: Request for Proposal Bid for Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) for Total 170 kW (AC) Rooftop solar power plant with minimum 190 kWp (DC) Solar System at 5 Nos. of building premises of Shree Narayana Cultural Mission (SNCM), Ahmedabad.

Dear Sir,

This is to certify that .....*[Insert name of Bidder]* (the "Bidder") having its Registered Office at ..... *[Insert Registered Address of the Bidder]* with PAN No. ..... *[Insert PAN No. of the Bidder] and GST No. ……*is in the business of..... *[Insert briefly the nature of the business]*, has recorded the following turnovers and net worth:

Financial Year	**Turnover (In INR)**	**Net Worth (In INR)**	**For Official Use Only**
			Audited Statement Attached?
2021-22			Yes / No
2022-23			Yes / No
2023-24			Yes / No

	Average Annual Turnover (In INR)		Yes / No

All figures indicated herein are arrived from the Audit Reports of the Bidder duly submitted to the Income Tax Department.

Sincerely yours,

[Official seal of the Chartered Accountant]

.....

[Insert Name of the Chartered Accountant]

Date: [Insert Date]

[Insert address and contact information of the Chartered Accountant]

Place: [Insert Place]

All figures indicated herein are calculated as per the guidelines mentioned in the Tender.

NOTES:

A. If the Bidder is seeking financial qualification based on the financial standing of the Parent Company, then a similar certificate summarizing the financial statement of the Parent Company shall be attached by the Bidder as a part of the Bid.
B. All audited statements to be attached by the Bidder as a part of the Bid.

Appendix 15: Format of Financial Proposal

To

President (P);

Shree Narayana Cultural Mission (SNCM)

Opp. ISRO, Ramdevnagar, Jodhpur Tekra,

Satellite, Ahmedabad-380015, Gujarat, India

Sub: Financial Proposal for Bid for Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of Total 170 kW (AC) Rooftop solar power plant Solar System at 5 Nos. of building premises of Shree Narayana Cultural Mission (SNCM), Ahmedabad.

Dear Sir,

I,_____,

present the Financial Proposal for the **"Bid for Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of Total 170 kW (AC) Rooftop solar power plant Solar System at 5 Nos. of building premises of Shree Narayana Cultural Mission (SNCM), Ahmedabad in the State of Gujarat"** on EPC basis through the Tender Document No. "SNCM/SOLAR/2024-25/05" confirming that:

i. I agree to all the terms and conditions set forth in this Tender Document. If awarded the Project, the implementation of the Project shall also conform to the terms and conditions, as well as specifications indicated in the Tender Document and as finally indicated by the Evaluation Committee.

ii. Rates quoted in this Bid is for destination prices **inclusive of all taxes** (unless stated otherwise), levies, duties, packing, forwarding, freight, insurance, loading, unloading, supply, installation, testing, commissioning, and any/all charges for successful Engineering, All statutory charges, Supply & Installation, Construction, Comprehensive

Maintenance Contract of "Project" at the Site. The break-up of taxes considered are also furnished in price bid.

iii. Rates quoted in this Bid are **inclusive of taxes and duties**. The statutory variation in taxes shall be admissible in accordance with the Clause no. 7.13 Taxes and duties of Tender Document. Under no circumstances shall escalation in the prices of this Tender Document shall be entertained.

iv. The details quoted herein stand valid for at least four months from the date of opening of the Price Bid.

v. Deleted

vi. Bidder shall quote the tender as per applicable GST rates at the time of bidding and SNCM may have right to reject the financial bid in case of any deviation in statutory applicable tax rates.

SCHEDULE OF PRICE

All Schedules of Prices to be submitted physically in separate cover as per RFP

Submission Due Date:

(As per Bid Submission Instruction of TENDER)

Table 15.A: SCHEDULE OF PRICE –A: TOTAL PRICE QUOTE FOR SUPPLY CONTRACT SNCM, AHMEDABAD 170 kW (AC) SOLAR ROOFTOP TENDER

Sr. No.	Item	Price for Cumulative 170 kW (AC) Solar System (Without taxes & duties)	Freight & Transportation	Custom Duties (if applicable)	Other Taxes & Duties (if applicable)	Good and Services Tax (if applicable)	Total Cost for 170 kW (AC) Solar System (Including of all applicable taxes)
		(A)	(B)	(C)	(D)	(E)	(F) = (A+B+C+D+E)
		(In Rs.)				(In Rs.)	(In Rs.)
1	170 kW (AC) Rooftop (RCC Roof + Metal Shade) Solar System						
2	**"Supply Price" quoted by the Bidder [in Words as per column (1F)]**						

Table 15.B: SCHEDULE OF PRICE –B: Total Price Quote for Works (Installation, Testing, Commissioning, 1 Month PR Test and 5 years CMC) for Total 170 kW (AC) Solar System.

(COST FOR CONSTRUCTION, ERECTION, TESTING AND COMMISSIONING INCLUDING FIVE YEARS COMPREHENSIVE MAINTENANCE CONTRACT (CMC), 1 MONTHS SUCCESSFUL PR TEST & COD WITH GEDA/GUJARAT STATE DESIGNATED AGENCY)

Sr. No.	General work including Construction, erection, testing, commissioning including five years comprehensive maintenance contract (CMC) COD with GEDA/Gujarat State Designated Agency etc. of entire plant as per details specified in the Tender documents, on EPC Basis.	**Quoted Price (without taxes & duties)**	**GST**	**Other taxes & duties (If any)**	**Final Price including all applicable Taxes**
		(A)	**(B)**	**(C)**	**(D) = (A+B+C)**
		(In Rs.)	**(In Rs.)**	**(In Rs.)**	**(In Rs.)**
1	Total 170 kW (AC) Rooftop (RCC roof + Metal Shade) Solar System				
2	**"Works Price" quoted by the Bidder: (in Words) (=TOTAL Final Price as per Column (1D)**				

Note:

1. Quoted Supply Price + Works Price with taxes and duties shall be considered for evaluation of bid.
2. No variation due to change in forex rate shall be admissible.
3. Bidder has to quote all taxes & duties as per latest government circulars.
4. Payment shall be made in Indian National Rupees (INR) only. Bidder(s) has to quote their rate in INR only.

5. Arithmetical errors will be rectified on the following basis: If there is a discrepancy between words and figures, the amount written in words will prevail.
6. **Bidders are required to quote rates inclusive of Comprehensive Maintenance Contact (CMC) for the period of five years for the system. The rates quoted should be inclusive of charges for providing routine maintenance services at the beneficiary's end to ensure smooth and satisfactory performance of the system. Replacement of any components of the system is included in the scope of work of CMC. As per the format given in the bid document annual report should be prepared and submitted to SNCM after providing necessary services.**

Signature: _____ Designation: _____

Name: _____

Address: _____ _____

_____ Seal of Company / Organization:

_____ Phone: _____, Email: _____

Appendix 16: Procedure for Performance Testing

Performance Ratio (PR) - Test Procedure

1. One (1) month duration of Performance Ratio as determined through the Instantaneous PR Test Procedure specified here should not be less than **75%.**

2. The Instantaneous Performance Ratio Test to prove the guaranteed performance parameters of the power plant shall be conducted at site by the Contractor in presence of the Owner/Owner's Engineer/Consultant. The Contractor's Engineer shall make the plant ready to conduct such tests. The Instantaneous PR Test shall be commenced for a period of One (1) month after successful Commissioning and, there will be continuous monitoring of the performance for 30 days. These tests shall be binding on both the parties to the Contract to determine compliance of the equipment with the guaranteed performance parameters. This monitoring will be performed on the site under the supervision of the Owner/ Owner's engineer/Consultant.

3. The test will consist of guaranteeing the correct operation of the plant over 30 days, by the way of the efficiency rate (Instantaneous performance ratio) based on the reading of the energy produced and delivered to the grid and the incident solar radiation. During this period of 30 days, 2 (Two) instances (i.e. 2 instance for 30 days) shall be taken to calculate the instantaneous Performance Ratio. If the Instantaneous PR is above 75%, then PR Test shall be considered successful.

4. The successful bidder shall be required to meet minimum guaranteed generation with Instantaneous Performance Ratio (PR) at the time of commissioning as per the GTI levels of the location.

5. The Instantaneous Performance Ratio (IPR) of the SPV System shall be calculated as follows

   PRtc (Instantaneous) = {Pac/(Instantaneous Irradiance * Module Area * Total Nos of Module) * (Module Efficiency) /100 } * 100

Where,

- Instantaneous AC Power in Watt at Inverter (Pac)
- Instantaneous Irradiance (Watt/m2)

- Module Area (m2)
- Total number of modules
- Module Efficiency in %

Appendix17A: Deleted

Appendix 17B: Deleted

Appendix 18: Contract Agreement (to be entered separately with SNCM for their respective projects)

This agreement is made at AHMEDABAD the ----------day of ----------in the Christian year Two thousand -------- between ----------(herein after referred to as "THE CONTRACTOR" which expression shall unless excluded by or repugnant to the contract include its successors or permitted assigns) of the one part and the Shree Narayana Cultural Mission (SNCM) having their Registered Office at Ahmedabad, Gujarat, India (hereinafter called "The SNCM" which expression shall unless excluded by or repugnant to the context include its successors or assigns) of the other part.

WHEREAS the aforesaid SNCM has accepted the Tender of the aforesaid contractors for ---------- as per SNCM's Order No.----------hereinafter called "**the Works**" and more particularly described enumerated or referred to in the specification, terms and conditions prescribed in the Order letter, covering letter and other letters and schedule of price which for the purpose of identification have been signed by Shri ---------- on behalf of the Contractors and by ----------on behalf of the SNCM a list whereof is made out in the Schedule hereunder written and all of which said documents are deemed to form part of this contract and included in the expression " **the Works"** wherever herein used, upon the terms and subject to the conditions hereinafter mentioned.

AND WHEREAS THE SNCM has accepted the Tender of the contractors for the construction of the said works for the sum of Rs. ----------(Rupees: ----------) upon the terms and subject to the conditions herein mentioned.

NOW THIS AGREEMENT WITNESSES AND IT IS HEREBY AGREED AND DECLARED THAT:

(a) The contractors shall do and perform all works and things in this contract mentioned and described or which are implied therein or therefrom respectively or are reasonably necessary for the completion of the works as mentioned and at the times, in the manner and subject to the terms, conditions and stipulations contained in this contract, and in consideration of the due provision, executions, construction and completion of the works agreed to by the contractors as aforesaid, the SNCM doth hereby covenant with the contractor to pay all the sums of money as and when they become due and payable to the contractors under the provisions of the contract. Such payment to be made at such times and in such manner as is provided by the contract.

(b) The conditions and covenants stipulated herein before in this contract are subject to and without prejudice to the rights of the SNCM to enforce penalty for delays and / or any other rights whatsoever including the right to reject and cancel on default or breach by the contractors of the conditions and the covenants as stipulated in the general conditions, specifications, forms, or Tender schedule, drawing, etc., attached with SNCM's Order No. ----------.

The contract value, extent of supply delivery dates, specifications, and other relevant matters may be altered by mutual agreement and if so altered shall not be deemed or construed to mean or apply to affect or alter other terms and conditions of the contract and the general conditions and the contract so altered or revised shall be and shall always be deemed to have been subject to and without prejudice to said stipulation.

SCHEDULE

List of documents forming part of the contract:

1.
2.
3
4.
5.
6
7.
8.

In witness whereof the parties hereto have set their hands and seals this day and month year first above written.

1. Signed, Sealed and delivered by:

(Signature with Name, Designation & official seal)

for and on behalf of M/s._____

In the presence of name, Full Address & Signatures:
i).

ii).

2.Signed, Sealed and Delivered by:

(Signature with Name, Designation & official seal)

For and on behalf of-
Shree Narayana Cultural Mission (SNCM)
Opp. ISRO, Ramdevnagar, Jodhpur Tekra, Behind Nirman Bhavan,
Ahmedabad, Gujarat, INDIA

In the presence of Name, Full Address & Signature:

i)----------

ii)----------

Appendix 19: Format for Bid Queries

Sr.	Chapter No.	Clause No.	Page No.	Tender Term	Bidder's Query

Appendix 20: Solvency Certificate (Liquidity Certificate)

FORMAT FOR BANKING REFERENCE FOR LIQUIDITY

BANK CERTIFICATE

This is to certify that M/s ..... is a reputed company with a good financial standing,

If the contract for the work, namely.....is awarded to the above firm, we shall be able to provide overdraft / credit facilities to the extent of Rs..... to meet their working capital requirements for executing the above contract.

___Sd.___

Name of Bank: _____

Senior Bank Manager_____

Address of the Bank_____

Appendix 21: Form of Declaration

(On the letter head of Company)

Date:

To,

President (P);

Shree Narayana Cultural Mission (SNCM)

Opp. ISRO, Ramdevnagar, Jodhpur Tekra,

Satellite, Ahmedabad-380015, Gujarat, India

Sub: Declaration

Ref: *Request for Proposal Bid for Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of Total 170 kW (AC) Rooftop solar power plant Solar System at 5 Nos. of building premises of Shree Narayana Cultural Mission (SNCM), Ahmedabad.*

Dear Sir,

I/ We, M/s …… hereby certify that I/we have not been declared blacklisted/banned/de-listed/debarred from similar business by State/Central Govt. departments or Government Under takings in accordance with Clause No. 3.2.3 (v) of TENDER document No. SNCM/SOLAR/ 2024-25/05 on Banning of Business Dealings.

(Seal & Signature of the Bidder)

Appendix 22: Format for Guarantee Card

FORMAT FOR GUARANTEE CARD TO BE SUPPLIED WITH EACH SOLAR SYSTEM

1. Name & Address of the System:

2. Date of supply of the system:

    i. Solar PV Module:
    ii. Inverter:

3. Details of PV Module (s) supplied in the System

    iii. Make:
    iv. Model Serial No(s):
    v. Wattage of the PV Module (s) under STC:
    vi. Guarantee valid up to:

4. Details of Electronics & other BOS items

    i. Make:
    ii. Model:
    iii. Serial No(s):
    iv. Guarantee valid up to:

(Signature)

Name & Designation

Name & Address of the Bidder/bidder
(SEAL)

Place & Date:

(During the guarantee period SNCM / users reserves the right to cross check the performance of the systems with the minimum performance levels specified in the Tender specifications).

Appendix 23: Format for CMC Report

To,

President (P);

Shree Narayana Cultural Mission (SNCM)

Opp. ISRO, Ramdevnagar, Jodhpur Tekra,

Satellite, Ahmedabad-380015, Gujarat, India

Sub: CMC Report

Ref: *Request for Proposal Bid for Design, Engineering, Supply & Procurement, Erection, Testing and Commissioning including five years comprehensive maintenance contract (CMC) of Total 170 kW (AC) Rooftop solar power plant Solar System at 5 Nos. of building premises of Shree Narayana Cultural Mission (SNCM), Ahmedabad.*

Date of Commissioning: …….

Date of visit: ……...

1. CHECK OF THE PRODUCT
    a) Correct inclination and orientation of SPV panel:
    b) Tightness of nut-bolts of MMS:
    c) Interconnection of modules, DCDB:
    d) All Inverters working properly:
    e) Inverter's Data logger live data available:
    f) Earth pits earth resistance values are as per IS standards:
    g) No. of Modules in damaged condition:
2. Solar generation data show in inverter display:
    a) Inverter 1 Data:
    b) Inverter 2 Data:
    c) Inverter 3 Data:
    d) Inverter 4 Data:

e) Inverter 5 Data:

3. DIFFICULTIES IN OPERATION / PROBLEM FACED BY USER:

4. DISGNOSIS DETAILS / REPAIR ACTION:

5. DATE ON WHICH SYSTEM LAST ATTENDED:

Note:

1. During 5 Years of CMC period, preventive maintenance, calibration, service charges, visit charges and spares including in the Total EPC price quoted by the bidder for total 170 kW (AC) Grid connected rooftop solar power plant, Bidder shall not charge any extra amount to the SNCM during 5 years of CMC period.
2. Contractor personnel has to visit the site within 48 hours from the date and time of intimation by SNCM via E-mail to bidder and the problem related to solar power plant breakdown/ generation error/ plant damage condition/ Any other issue should be resolved/rectified within 5 working days from the date of intimation by SNCM.
3. Bidder personnel has to visit the site for minimum once in a year for a CMC period of 5 years' contract and check the installed site condition and submit CMC report to SNCM to claim 1% of the CMC payment of that CMC contract year.
4. EPC Contractor shall submit CMC report as per SNCM's prescribed format and SNCM shall have right to revise the format as per future requirement of SNCM.

REMARKS:

User Name & Signature

Date:

Technician Name & Signature

(with rubber stamp)

Appendix 24: Project completion Report for SPV Photo-Voltaic (PV) System by the Contractor

Sr. No.	Component	Observation
1	Name of the Building	
	Site/ Location with Complete Address	
	Longitude/ Latitude	
2	Capacity of system installed(kWp)	
3	**Specification of the Modules**	
	Type of modules(mono perc)	
	Make of Modules and year of manufacturing	
	No. of Modules	
	Wattage of Modules	
	Module Efficiency	
	No of series &Parallel combinations	
	Tilt Angle of Modules	
3.1	IEC certificate Date of issue Agency Validity Enclose a IEC certificate	
3.2	RFID tag is pasted inside or outside	
3.3	Type of RFID	

4	**PCU**	
	Make, & rating Type of Charge controller/MPPT	
	Capacity of inverter and year of manufacturing	
	AC Output	
	Whether hybrid or stand alone	
	Whether indigenous or imported	
	Enclose test certificate as per MNRE requirement	
	Input Voltage to Inverter	
5	**Structures**	
	Tracking or non-tracking	
	Indigenous or imported	
6	**Cables Make and size**	
	Enclose Certificate: Rating :-	
	voltage of cable	
7	**Distribution Box**	
	Name	
	Make	
	Certificate	
8	**Earthling and protections**	

	Lightening Arrester (Type)	
10	**I-E Meter, Solar Meter & Check Meter Make & Sr. No**	

Declaration

It is to certify that all the components/subsystems and materials including junction boxes, cables, distribution boards, switches, circuit breakers used are as per TENDER requirement.

(Solar Company signature and stamp)

Date and place

Appendix 25: Inspection Report (By Inspecting Officer)

S No	Component	Observation
1	Site/ Location with Complete Address	
2	Capacity of system installed (kWp)	
3	Whether the system was installed in shadow free area or not? If not mention the details	
	Gap between rows of the modules	
	Any inter module shading exists or not	
	Whether the modules contain information about company name, serial no and year manufacturing inside	
	RIFD pasted inside or outside	
4	**PCU**	
	Whether the information given in Appendix 22 is same or found any deviation	
5	**Structures (MMS)**	
6	**Cables Make and size**	
7	**Distribution Box**	
8	**L.A., Earthling and protections**	
9	**Cumulative generation data at the date of visit or cumulative energy consumption data at the time of visit**	
11	User Feed Back	
12	Any specific problem	

1. **Signature of User with Stamp and date**

2. **Solar Company signature with stamp and date**

3. **Signature of inspecting Officer and date**

Appendix 26: Details of Site

1. **Site Location:**

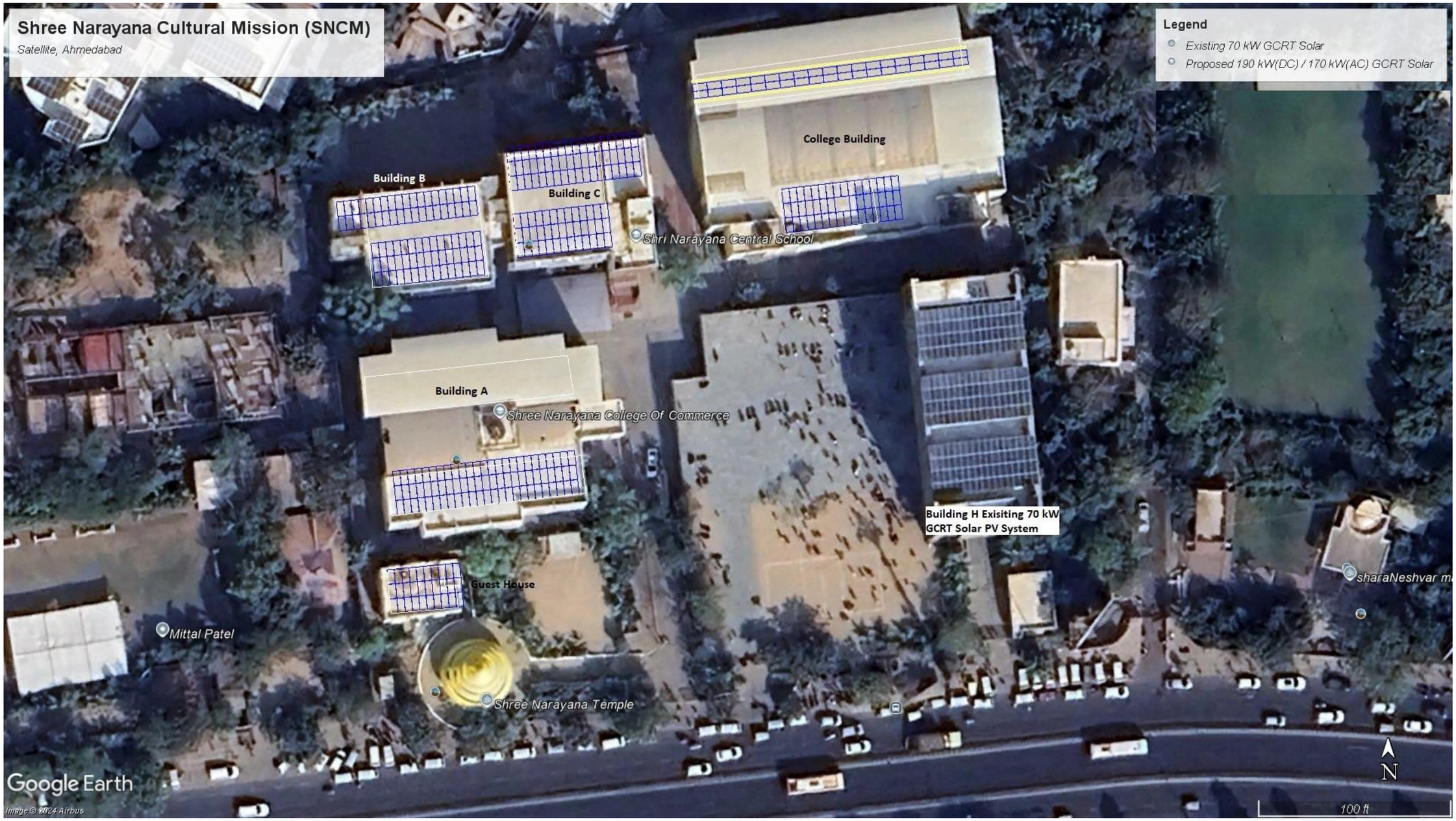
   The proposed TOTAL 170 kW (AC) with minimum 190 kWp (DC) Rooftop (RCC Roof + Metal Shade) Grid Connected Rooftop solar power plant at 5 Nos. of building premises of SNCM, Ahmedabad as depicted in the figure below of Shree Narayana Cultural Mission (SNCM). There is existing 70 kW Rooftop Grid connected solar system installed and commissioned at SNCM, Building H Rooftop premises. The successful Bidder / Contractor has to Install additional solar system at various 5 Nos. of Building premises as mentioned in RFP. For Extension of Rooftop solar power plant at SNCM premises all required necessary approval from GEDA / DISCOM / CEIG / Govt. approved Nodal Agency, processed and carried out by the contractor.

   The Site data of the Project is being provided only as a preliminary reference document by way of assistance to the Bidders who are expected to carry out their own surveys, investigations and other detailed examination of the Project before submitting their Bids.

   Bidder is required to economize the allocated space on the roof for Solar Roof-Top & In case the developer demonstrates that the capacity from the survey is lower than the indicated capacities for which the allocated roof space is not adequate, SNCM at its discretion may offer reduce or additional/ alternate new roof /space. After the LoA the Bidder has to carry out a detailed survey of the sites and submit the calculation, and complete engineering document for the approval of SNCM / TPE Agency.

The sites are located at Latitude 23.028401 and Longitude 72.514952 of SNCM, Ahmedabad.

Annexure:1 Layout of SNCM Building Premises



Layout (Indicative) of SNCM, Ahmedabad Building Premises

Annexure:2 Electricity Bill & Load Extension receipt

torrent POWER

NZ300042

Zone	Naranpura
T. No.	3002566325
Billing mode	30 days
Distribution date	01/08/24

Torrent Power now on WhatsApp

Services available:
- Bill Copy
- Submit meter reading
- Submit safety concerns
- Bill payments & offers
- Complaint registration
- Manage multiple services

Scan to register
OR say hi to 6356070070

YOUR DETAILS

M/S SHREE NARAYANA CULTURAL MISSION
1162/B, OPP. ISRO, NR. SHIVANAND A
JODHPUR TEKRA, AHMEDABAD-380015.

Registered Mobile: ******1643
Registered Email: info@shreenarayanaguru.in
PAN No.: AACTS0610E

CONTRACT DEMAND	200 KW	BILLING MONTH	July 2024
BILLING DEMAND	170.0 KW	READING DATE	31/07/24
AVG. POWER FACTOR %	98	BILL DATE	01/08/24

HTMD1

CUSTOMER ID **100265238**

e-Bill

YOUR BILL
To be paid by e-payment mechanism only

₹343,350.00

Thank you for your previous payment of ₹259,300.00 on 06/07/24.
Payment received through ECMS-RTGS/NEFT

DUE BY	SECURITY DEPOSIT HELD	ADDITIONAL SECURITY DEPOSIT REQUIRED
12/08/24	₹817,000.00	₹0.00

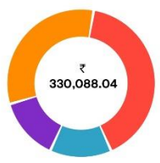
METER DETAILS

Meter No.: 29800059

	KW	KWH	TOU KWH	KVAH	NTCT
Present	0.65000	1766.420	559.890	1851.760	433.770
Past -	0.00000	1647.220	525.580	1729.550	408.490
Multiplier x	250.00	250.00	250.00	250.00	250.00
Units consumed	162.500	29800.000	8577.500	30553.000	6320.000

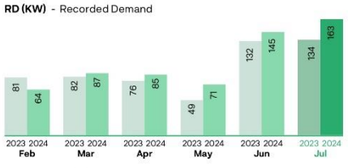
MAJOR BILL COMPONENTS

- ₹135,075.85 Energy charges
- ₹107,170.07 FPPPA charges
- ₹44,200.00 Fixed Demand Charges
- ₹43,642.12 Government duty

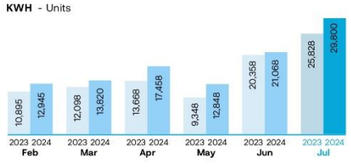


CONSUMPTION TREND

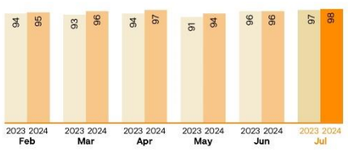
RD (KW) - Recorded Demand



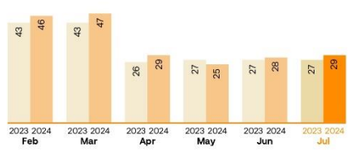
KWH - Units



Power Factor(%) -Min. required level 90%



TOU units - as % of Total Units Consumed



PAYMENT OPTIONS

1. SCAN THIS QR CODE TO PAY USING MOBILE WALLETS OR PAY ONLINE

2. PAY BY NEFT / RTGS

Beneficiary Name	Torrent Power Limited
IFSC Code of the Branch	HDFC0000240
Bank Account No. for This Service	TPLAHM100265238

This payment facility is not available for energy bill payment of disconnected services and energy bill with notice of service liable for disconnection

BILL DETAILS

	₹
Energy charges	135075.85
FPPPA charges @ 361 (paise/unit)	107170.07
Fixed demand charges	44200.00
Excess demand charges	0.00
TOU charges	6862.40
Power Factor adjustment charges	464.88-
NTC rebate	1896.00-
Total energy charges	**290947.44**
Total government duty @ 15.00%	43642.12
Banking charges (Solar generation unit-Excess solar unit) @ Rs. 1.50	9121.50
Other debit	0.00
Credit	359.7-
Previous dues	3.38
Wheeling charges	0.00
Cross subsidy charges	0.00
Delay payment charges	0.00
Amount due	**343354.74**

Important Bill Message:

(1) Bill amount is rounded down for convenience, adjusted amount will be carried forward in next bill.
(2) Solar generation units are: 6299 ,Net billed units- 29687
(3) Solar Setoff Units 113.00
(4) Credit of Rs. 359.70 for 218 excess Solar units (@ rate of Rs. 1.65) adjusted in this bill.
(5) As per GERC amendment 2023, bill amount more than Rs.1000 shall mandatorily be payable through e-payment mechanism only.

1. COMPLAINT/QUERY

Naranpura Plug Point
Sola Road, Naranpura, Ahmedabad - 380013
You can also reach out to us by
: connect.ahd@torrentpower.com : connect.torrentpower.com
Torrent Power mobile app

2. CONSUMER GRIEVANCE REDRESSAL FORUM*

Chairman, Consumer Grievance Redressal Forum
Torrent Power Limited, Plug Point Naranpura, Ahmedabad - 380013
Phone: 079-66520022 Ext - 5940
Email: consumerforum@torrentpower.com
Timings : 10:00 AM to 05:00 PM

3. ELECTRICITY OMBUDSMAN*

GF & FF, CMTS Building, Telephone Exchange, Bimanagar,
Jeevandham Road, Ahmedabad - 380015
Email : eleombahm@gercin.org

* Matters falling under section 126,127, 135 to 139, 152 and 161 of the Electricity Act, 2003 are not within the purview of CGRF and Ombudsman.

Call our 24x7 helpline:
19129 (toll free) | (079) 2255 1912 / 6655 1912
WhatsApp **63560 70070**

THIS BILL IS NOT A PROOF OF PROPERTY OWNERSHIP.

GOVERNMENT DUTY RATES

METER NO.	KWH	PERCENTAGE
NOT APPLICABLE		

TARIFF STRUCTURE

FIXED CHARGES (PER MONTH)	HTMD 1
For billing demand	₹/kW
1. Upto & including contract demand	
a. Upto 1000 kW	260.00
b. 1000 kW and above	335.00
2. In excess of contract demand	385.00

ENERGY CHARGES (PER MONTH)	HTMD 1
	₹/unit
For first 400 units consumed per kW of billing demand	4.55
For remaining units consumed	4.45

TOU CHARGES (FOR UNITS CONSUMED IN PEAK HOURS)	HTMD 1
For billing demand	₹/unit
Upto 300 kW	0.80
Above 300 kW	1.00

PEAK HOURS:
April to October: 12:00 noon to 5:00 pm & 6:30 pm to 9:30 pm,
November to March: 8:00 am to 12:00 noon & 6:00 pm to 10:00 pm.

NIGHT TIME CONCESSION:

The energy consumed during night hours between 10:00 pm to 6:00 am the next day recorded by the tariff meter having built-in feature of time segments, will be eligible for rebate of 0.30 / kWh.

NTCT (NIGHT TIME CONCESSIONED TARRIF)

Applicable to consumers of regular power supply who opt to use electricity exclusively at night from 10:00 pm to 6:00 am of the next day.

Fixed charges	30% of demand charges under relevant tariff category
Energy charges	Flat rate of 3.50 per unit.

BILLING DEMAND

Billing demand will be taken under:
1. Maximum demand recorded during the month OR
2. 85% of the contract demand OR
3. 100 kW, whichever is highest

POWER FACTOR REBATE / PENALTY

1. If average Power Factor during billing period exceeds 90%

a. For each 1% improvement in the Power Factor from 90% to 95%	Rebate of 0.15 paise per unit
b. For each 1% improvement in the Power Factor above 95%	Rebate of 0.27 paise per unit

2. If average Power Factor during billing period is below 90%

For each 1% decrease in the Power Factor below 90%	Penalty of 3.00 paise per unit

TORRENT POWER LIMITED CIN: L31200GJ2004PLC044068 REGD. OFF.: "SAMANVAY", 600, TAPOVAN, AMBAWADI, AHMEDABAD - 15. **PAN: AACCT0294J**

CUSTOMER ID : 100265238 **DUE DATE :** 12/08/24 **BILL AMOUNT :** ₹343350.00

Bills < Rs.1000 may be paid by Cheque/DD in favour of Torrent Power Limited.

torrent POWER

Quotation

Reference No	2110435713	Service No	100265238	Date : 21.09.2024
Order No	Application No	Quotation No	Order Type	Activity Type
11300014060	339837011	2110435713	Extension HT Process	Extension Reduction HT
Name of Applicant	SHREE NARAYANA CULTURAL MISSION			
Address	1162/B, OPP. ISRO, NR. SHIVANAND ASHRAM, JODHPUR TEKRA, AHMEDABAD-380015., Contact No:26861695			
Classification	Existing Load(KW)	Applied Load(KW)	Total Load(KW)	रकम (Rs.)
HT - Commercial	200.00	120.00	320.00	

Description	UOM	Total Quantity	Amount
PRORATA CHARGES	AU	1	
TEST REPORT CHARGES	EA	1	
Total Amount (Rs.)			
SECURITY DEPOSIT	EA	1	
Total Payable Amount (Rs.)			

Service Line Charges	Security Deposit	Registration Charges	Test Report Charges	Inspection Charges
[redacted]	[redacted]	0.00	[redacted]	0.00

With reference to your application, payable amount is as mentioned above. It may be noted that this Quotation is based on the work estimated on site and as per the present day prices. The final bill will be prepared on basis of the actual work carried out and the cost at the time of execution.

The amount paid will be adjusted against actual cost incurred and the differential amount will be refunded / adjusted in the subsequent bill.

You are requested to make the payment at the earliest.

For, TORRENT POWER LIMITED

TORRENT POWER LIMITED
CIN : L31200GJ2004PLC044068
Key Accounts, Naranpura Zonal Office, Sola Road, Ahmedabad-380 013. Phone : 079 2749 2222
Reg.Office : "Samanvay", 600, Tapovan, Ambawadi, Ahmedabad - 380015 India. www.torrentpower.com

Annexure:3 OLD GEDA Registration Letter

GEDA
ગુજરાત ઊર્જા વિકાસ એજન્સી
GUJARAT ENERGY DEVELOPMENT AGENCY

GUJARAT ENERGY DEVELOPMENT AGENCY

4th Floor, Block No. 11-12, Udyog Bhawan, Gandhinagar,
Ph: 079-23257251-54, GST. No. 24AAATG1858Q1ZA

Registration No.: TO/COM/10079416 Date: 03-Feb-2022

To:

M/S SHREE NARAYANA CULTURAL MISSION
1162/B, OPP. ISRO, NR. SHIVANAND ASHRAM, JODHPUR TEKRA, AHMEDABAD-380015.
AHMEDABAD
AHD

Sub : Registration for Rooftop Solar PV (RTPV) system under Gujarat Solar Power Policy – 2021, G.R. No. SLR/11/20121/77/B1 dated 29th December 2020 and amendments thereof (the "Policy")

Ref : *1. Application No. GUJ/RT/COM/10079416 dated 01.02.2022*
2. DisCom Consumer No. 100265238 and Sanctioned Load/ Contract Demand 200.000 kW
3. Solar PV Capacity (AC) to be Installed 70 (kW) ; Plant DC Capacity to be Installed 70 (kW)

Dear Sir,

Thank you for your online application for setting up of a rooftop solar PV system. Your application is registered with GEDA and the Registration Number is TO/COM/10079416.This Registration Number with the name of the applicant and the name of the Installer that you have selected must always be quoted for any communication with GEDA in this regards.

Your application is registered for installation of the rooftop solar system of 70 kW AC, 70 kW DC Capacity (the "Capacity") under Industrial/commercial Sector.

This Registration Letter is copied to the Installer selected by you, the Chief Electrical Inspector and to the DISCOM in whose service area the rooftop system is to be located, for their further process. The registration of your project shall be governed by the following terms and conditions:

1. This Registration is neither transferable to other applicant nor is transferable to any other Rooftop PV Installer. This Registration shall be governed by the provisions of the Solar Policy-2021 and its amendments thereof.

2. In the event if you have to change your selected Installer after the Registration, you need to cancel this Registration and apply under a fresh application

3. Irrespective of the kW rating of the system proposed to be installed.

4. You have registered the solar PV plant under the Clause no. 10.

5. You shall ensure that the location proposed for installation of the system is shadow free during the entire day and also keep the system clean and dust free for optimum output.

6. You shall sign the connectivity agreement with the DISCOM upon its ascertaining the technical feasibility of the system installation.

7. You shall allow access to your premises by representatives of GEDA/DISCOM/CEI for installation of bidirectional meter/inspection/verification of the system.

8. The bi-directional meter shall be installed in accordance to the technical specifications defined by the DISCOM.

9. The technical specifications of the Solar PV system and all its allied components, shall be mutually agreed between YOU and the INSTALLER selected by you.

10. It is YOUR sole responsibility to ensure and check all the components properly with the selected INSTALLER. In no case, GEDA shall responsible for the delay in installation, sub-standard material, low generation or any issue related to performance and quality. However, it is advisable to always install solar PV system in the shadow free area and with proper sizing and structures for maximum generation. Further, the Applicant shall check the requisite documents and reports from the suitable simulation tools on its own or through the Installer to ascertain the above mentioned points.

11. The Applicant, SHREE NARAYANA CULTURAL MISSION has given following signed undertaking in the application form for installation of the solar roof top system under this registration.

UNDERTAKING: I hereby agree that:

1. This Project is registered under the Capital Expenditure (CAPEX) mode, where the solar PV system is owned by me and electricity generated is used by ME.

2. I have on my OWN selected the Installer upon due diligence and have mutually agreed with the terms and conditions amongst ourselves.

3. I am aware that GEDA has no role whatsoever in the selection of the Installer/Vendor and thus GEDA is not responsible for INSTALLER's technical and financial capabilities, quality and integrity, any kind of delay; financial or technical loss, quality and standards of the system and its components; theft, financial transaction done or any criminal assault occurred because of the selection of the Installer.

4. I am fully responsible for the Solar PV system that will be installed under this application.

5. I am aware that the Solar Policy -2021 and its amendments thereof under which this project is registered does not have any provision of subsidy or financial assistance.

6. I agree to abide by the provisions of the Solar Power Policy-2021 of the Government of Gujarat with all amendments thereof.

Yours faithfully
For Gujarat Energy Development Agency

CC To	:	*1. The Chief Engineer Torrent Power Ahmedabad*	*With a request for ascertaining the technical feasibility, signing of the connectivity agreement and installation of the bi-directional meter.*
		2. The Chief Electrical Inspector	*With a request to approve the SLD and grant charging permission for the eligible system capacity.*
		3.Sky Wings Solar Energy	*For necessary action, and installation of the solar system upon technical feasibility done by the DISCOM*

DISCLAIMER: The PV Installer/ Vendor/ EPC Company is selected by the Applicant/Consumer as per his choice, GEDA owning no responsibility of the EPCs for his technical, financial strength quality integrity, etc. and the financial transactions with PV Installer.

(This is Computer generated letter and does not require any signature)

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