



Ref: TSCCL/Projects/11(Floating Type Solar)/2018

REQUEST FOR PROPOSAL FOR
“DESIGN, PROCUREMENT, SUPPLY,
INSTALLATION, TESTING, COMMISSIONING,
OPERATION AND MAINTENANCE FOR 10 [TEN]
YEARS OF 4 MW_p GRID CONNECTED FLOATING
TYPE SOLAR PHOTO VOLTAIC POWER PROJECT
ON RESERVOIR IN CHITTOOR DISTRICT ALONG
WITH GRID CONNECTING EQUIPMENT
INCLUDING ASSOCIATED ELECTRICAL AND
CIVIL WORKS UNDER IMPLEMENTATION OF
SMART CITY MISSION IN TIRUPATI”

Issued by:

Managing Director,
Tirupati Smart City Corporation Limited,
Tirupati,
Andhra Pradesh - 517501
Email: tsccltirupati@gmail.com

TIRUPATI SMART CITY CORPORATION LIMITED (TSCCL)

Ref: TSCCL/Projects/11(Floating Type Solar)/2018

TSCCL desires to invite Request for Proposal [RFP] for selection of “**DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI**”. The detailed RFP including EMD, TOR, Eligibility criteria etc., can be downloaded from website of www.tender.aeprocurement.gov.in from **12-07-2018** onwards.

The last date for online submission of bids is 01-08-2018 up to 16.00 hrs.

For more details contact:

Tirupati Smart City Corporation Limited.

E-mail: tsccltirupati@gmail.com

Cc: Rajendra.Raut@aecom.com

**Sd/-
Managing Director,
TSCCL**

DISCLAIMER

The information contained in this Request for Proposal document (the "RFP") or subsequently provided to Bidder(s), whether verbally or in documentary or any other form by or on behalf of the Employer or any of their employees or advisors, is provided to Bidder(s) on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP is not an agreement and is neither an offer nor invitation by the Employer to the prospective Bidders or any other person. The purpose of this RFP is to provide interested entities with information that may be useful to them in preparing their bids (the "Bid") including all the necessary submissions and the financial offers pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the Employer in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This RFP may not be appropriate for all persons, and it is not possible for the Employer, its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in this RFP 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 RFP and obtain independent advice from appropriate sources.

Information provided in this RFP 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. The Employer accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

The Employer, its employees and advisors make no representation or warranty and shall have no liability to any person, including any Bidder 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 RFP or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way during the Bidding Process.

The Employer also accepts 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 RFP.

The Employer may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP.

The issue of this RFP does not imply that the Employer is bound to select a Bidder or to appoint the Selected Bidder for the Project and the Employer reserves the right to reject all or any of the Bidders or Bids without assigning any reason whatsoever.

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 Employer or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Bidder and the Employer 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, regardless of the conduct or outcome of the Bidding Process.

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REQUEST FOR PROPOSAL FOR "DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI"

Important Dates

S. No.	Activity	Deadline
1	Release of RFP	12-07-2018
2	Pre-Bid Meeting	No Meetings
3	Last date of receipt of Pre-Bid queries	18-07-2018 at 16:00 Hrs
4	Posting of response to Pre-Bid queries	20-07-2018 at 17:00 Hrs
5	Last date for online submission of Bids	01-08-2018 at 16:00 Hrs
6	Date of submission of Hard Copies of documents - Demand Draft of Bid Processing Fee + [EMD / Bid Security] - Original Bank Guarantee + 02 Sets of Photostat copies + 01 set of Soft Copy (Non-Writeable CD/DVD Copy)	06-08-2018 at 17:00 Hrs
7	Date of opening of Pre-qualification Bids	09-08-2018 at 17:00 Hrs
8	Declaration eligible / qualified bidders	Will be notified later
9	Date of Technical presentation	Will be notified later
10	Date of opening of Financial bids	Will be notified later
11	Letter of Award [LoA]	Will be notified later
12	Validity of Bid	120 days from Bid Due Date
13	Signing of Agreement	Within 15 days of award of LOA

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1. Introduction

1.1 About Tirupati

With the India Smart Cities Challenge, the Government of India has taken the first step towards realizing its vision of building 100 smart cities across the nation. As part of the India Smart Cities Challenge under Ministry of Urban Development, Government of India, Tirupati is one of the cities that was selected in Round 2 and was ranked 4th amongst a nation-wide competition between 67 cities.

Under Indian Smart Cities Mission, the projects focus is on retrofitting a selected area within the city known as Area-Based Development (ABD). Additionally projects at PAN City level has also been taken up. The projects focus is multi-sectoral. The emphasis is on creating livable cities, Holistic development of the selected area such that it catalyzes the development of other areas and sets an example for other cities.

Tirupati is now working on an implementation plan to convert the Smart City Proposal (SCP) ideas into reality, beginning with retrofitting of the ABD that will catalyse future scalability to entire city and projects at PAN City. Tirupati Smart City ABD area is known as "Tirupati Town Center (TTC)

Tirupati is known as the spiritual center of Andhra Pradesh with about daily 75,000 pilgrims visit Tirumala for Darshan of Lord Venkateshwara., besides other historical temples, and is referred to as the "Spiritual Capital of Andhra Pradesh". It was named the "Best Heritage City" for the year 2012-13 by Ministry of Tourism. Tirupati has strong cultural heritage and is a melting pot of various festivals, is considered the Medical Hub of Andhra Pradesh and is home to numerous hospitals.

Tirupati city is located in Chittoor district in the state of Andhra Pradesh. The Tirupati Municipal Corporation (TMC) spread is around 27.44Sq Km and includes 50 Wards. According to 2011 census, the City's population is around 3,74,260. TTC (ABD) area is around 3.01 sq Km with a population of around 1,12,000. The TTC area covers around 11% of MCT area and includes 30% of City's population.

The Smart City Plan for Tirupati revolves around the vision of creating - **"A 21st century pilgrimage city that promotes Arts, Innovation & Sustainable Growth"**.

1.2 Tirupati Municipal Corporation (TMC)

Tirupati Municipal Corporation is the 1st largest ULB in the Chittoor district. It is located 420 Km from State Capital and 71 Km from District Headquarters. It was established as 3rd grade Municipality in the year 01/04/1886 and upgraded as Municipal Corporation with w.e.f. 02/03/2007.

It is spread over an area of 27.44 Sq. Km with a population of 3,74,260 as per 2011 census. TMC is also the headquarters of Tirupati (Urban) Mandal, and of the Tirupati Revenue Division. It is the 9th most populous city in Andhra Pradesh and seventh most urban agglomerated city in the State.

1.3 About the Tirupati Smart City Corporation Limited (TSCCL)

A Special Purpose Vehicle (SPV) was incorporated with the name “Tirupati Smart City Corporation Limited” (TSCCL) on 28th November 2016, to implement the projects proposed under the SCP.

1.4 Name of Work

Design, Procurement, Supply, Installation, Testing, Commissioning, Operation and Maintenance for 10 [Ten] Years Of 4 Mwp Grid Connected Floating Type Solar Photo Voltaic Power Project On Reservoir In Chittoor District Along With Grid Connecting Equipment Including Associated Electrical And Civil Works Under Implementation of Smart City Mission In Tirupati.

For making a City Smart, Renewable Energy is best to use in cities. It is the energy from a source that is not depleted when used, such as wind or solar power. Renewable energy resources are always available to be tapped and will not run out, therefore some people call it Green Energy. In Renewable Energy, one type is Solar Energy. Solar energy is radiant light and heat from the Sun harnessed using a range of ever-evolving technologies such as solar heating, photovoltaic, solar thermal energy, solar architecture and artificial photosynthesis. It has already been mandated that 10% of the smart cities’ energy requirement will come from solar energy.

To achieving this, Tirupati Smart City Corporation Limited is implementing floating solar photovoltaic power project on reservoir in Chittoor District along with Grid Connecting Equipment.

1.5 Location:

4 MWp, Captive Floating Type Solar PV Plant at Kailashgiri Reservoir in Chittoor district (Andhra Pradesh)

Latitude : 13.6667319°N

Longitude : 79.6978831°E

Note : The above information is general and indicative only. However, the Bidder is advised to visit the site to gather first-hand information to assess the basic Parameters required for design of the floating Solar PV Plants and then quote.

1.6 Scope of the RFP:

The scope of the contract shall be on the basis of Single bidder's responsibility completely covering all the equipment/components/material and services specified under the Accompanying technical specifications. The contract shall be signed with the successful bidder alone who would be referred to as the Implementing Agency. The scope of the contract generally includes the following:

- a) Detailed design of the entire plant
- b) Arranging complete manufacture of all the equipment / material / components required for plant including their shop testing, Supply including packing, loading and transportation from the manufacturer's works to the sites / stores and intra-site transport with unloading, loading and stacking / storage at site as specified or required duly obtaining insurance cover for transit, storage cum erection.
- c) All associated Civil Engineering works like tree/ bush clearance / site levelling, fabrication of structures, and construction of foundations for SPV plant mounting structures, construction of control room cum office room, water pipe line required for washing / cleaning of panels.
- d) The cable trenches within and outside the control room i.e., area transformer & outdoor yard, etc.
- e) Supply of Tools & Plants required for erection, testing and commissioning and Maintenance of Plant.
- f) Installation / Erection, Testing and Commissioning of the equipment in co-ordination with the other contractors, if any, as per the scope of the contract.
- g) Furnishing of design calculations, drawings, data, test reports, instruction manuals, operation manuals etc., for Authority's approval, and on approval, submission of specified quantities.
- h) Training to the Authority operating personnel at Manufacturers works, Operating power stations and at site.
- i) Extending guarantee to the Supplied material for the period specified during maintenance period and also after taking over by the Authority.
- j) Comprehensive Maintenance (routine, preventive and break down etc) of Plant for specified period including required men, spares and consumables etc.
- k) The equipment/Solar Power Plant offered shall be complete with all Components necessary for its effective and trouble-free operation. Such components shall be deemed to be within the scope of Bidder's Supply irrespective of whether those are specifically mentioned in the specification, his bid and/or the commercial order or not. Only for equipment's & material of plant.
- l) The bidder shall guarantee an output per annum of 56,00,000 (Fifty Six lakh) units in the first year (Considering Annual Average GHI of 5.11 kWh/m²/day, with a degradation of 0.75% (zero point seven five percent) per annum, failing which the bidder shall pay for the difference in units between the guaranteed output and the actual output, at the rate of twice the unit price prevailing at that point in time.

1.7 RFP Format

The intent of this RFP is to invite bids from the Bidders for “**DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI.**” for the Authority.

The Request for Proposal (RFP) consists of three volumes viz.

1. RFP Volume 1: Instruction to Bidders

Volume 1 details the instructions with respect to the bid process management, technical evaluation framework and the technical & financial forms.

2. RFP Volume 2: Scope of work including Functional & Technical Specifications

Volume 2 of the RFP provides information regarding the Project Implementation Plan, business requirements/applications to be covered and corresponding process related documentation, scope of work for the selected bidder and functional requirements.

3. RFP Volume 3: Conditions of Contract and Contract Forms

Volume 3 contains the contractual, legal terms & conditions applicable for the proposed engagement.

Volume 1: Instruction to Bidders

1.1. Fact sheet

Sl #	Item	Description
1.	Method of Selection	The method of selection is Least Cost Based Selection (L1).
2.	Availability of RFP Documents	Download from www.tender.a procurement.gov.in
3.	Date of RFP Issuance	12-07-2018
4.	Bid Processing fee (Non-refundable and Not - exempted)	Indian Rupees 20,000 (Indian Rupees Twenty Thousand only) shall be paid via Demand Draft in favour of the "Managing Director, Tirupati Smart City Corporation Limited", Payable at Tirupati.
5.	Bid Security/Earnest Money Deposit (EMD)	Indian Rupees 15,00,000 (Indian Rupees Fifteen Lakh only) by online / Bank Guarantee (as per format attached in Annexure 5(b))
6.	Last date and time for Submission of Pre-Bid Queries	18-07-2018 at 16.00 Hrs
7.	Posting of responses to queries (on website)	Respective bidder's e-mail ID's / www.tender.a procurement.gov.in
8.	Last Date and time for Bid submission (On or before)	01-08-2018 at 16.00 Hrs
9.	Date, time for opening of Pre-Qualification Bids	09-08-2018 at 17:00 Hrs
10.	Bid validity	Bid must remain valid up to 120 (One Hundred and Twenty) days from the actual date of submission of the Bid.
11.	Project Duration	Supply / Delivery + Construction Period - 9 Months + Operation & Maintenance for 10 (Ten) years including 02 (Two) years of Defect Liability Period. All the dates are from the date of issue of LOA / agreement
12.	Currency	The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is: Indian Rupees (INR) The source of official selling rates is: <u>State Bank of India [SBI] (New Delhi) BC Selling rate of Exchange.</u> The date of exchange rates is: Timeline/Last date for submission of proposals (electronically)
13.	Name and Address for Correspondence	Attention: Managing Director, Tirupati Smart City Corporation Limited (TSCCL), Tirupati Municipal Corporation, 13-29-M9-1-00, Tilak Road, East Tirupati, Chittoor District, Andhra Pradesh. Pin Code : 517501 Electronic mail address: tsccltirupati@gmail.com with a copy to Rajendra.Raut@aecom.com

1.2 Definitions/Acronyms

Terms	Meaning
ABD	Area Based Development
AC	Alternating Current
Authority / Client / Employer / TSCCL	Tirupati Smart City Corporation Limited
BIS	Bureau of Indian Standards
BOD	Biological Oxygen Demand
BOM	Bill of Material
BOQ	Bill of Quantities
BS	Bid Security
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CC	Capital Cost
CEA	Central Electricity Authority
CEO	Chief Executive Officer
CERC	Central Electricity Regulation Commission
CUF	Capacity Utilisation Factor
CVg /CV	Curriculum Vitae
DBT	Dry Bulb Temperature
DC	Direct Current
DD	Demand Draft
DHI	Diffuse Horizontal Irradiation
DNI	Direct Normal Irradiation
DSCR	Debt Service Coverage Ratio
EMD	Earnest Money Deposit
EPC	Equipment, Procurement and Commissioning
EPS	Expanded Polyesterene
GCC	General Conditions of Contract
GHI	Global Horizontal Irradiation
GoAP	Government of Andhra Pradesh
GoI	Government of India
GW	Giga Watt
GWh	Giga Watt Hour
HDPE	High Density Poly Ethylene
HOD	Head of Department
IEC	International Electro-Technical Commission
INR	Indian Rupee
IRR	Internal Rate of Return
ISO	International Standards Organisation
KVA	Kilo Volt Amps
kWh	Kilo-Watt Hour
kWp	Kilo-Watt Peak
L1	Lowest Bidder
LOA	Letter of Acceptance
MCT / TMC	Municipal Corporation Tirupati
MD	Managing Director, Tirupati Smart City Corporation Limited
MNRE	Ministry of New and Renewable Energy, Government of India
MPP	Maximum Power Point
MW	Mega Watt
NASDAQ	National Association for Securities Dealers Automated Quotations
NIT	Notice Inviting Tender

NPV	Net Present Value
NREL	National Renewable Energy Laboratory
OEM	Original Equipment Manufacture
O&M	Operations & Maintenance
ONAN	Oil Natural Air Natural
PBG	Performance Bank Guarantee / Performance Security
PCC	Particular Conditions of Contract
PDD	Proposal Due Date
PLF	Plant Load Factor
PoC	Proof of Concept
PPP	Public Private Partnership
PQ	Pre-Qualification
PV	Photo Volatic
RESCO	Renewable Energy Service Companies
RFP	Request for Proposal
SCADA	Supervisory Control and Data Acquisition
SCP	Smart City Proposal of Tirupati
SNA	State Nodal Agency
SOP	Standard Operating Procedures
SPV	Special Purpose Vehicle
Supplier/Implementing Agency / Contractor	Successful Bidder
TEC	Technical Evaluation Committee
TOR	Terms of Reference
TQ	Technical Qualification
TTC	Tirupati Town Center
UAT	User Acceptance Testing
USD	US Dollars
UV	Ultra Violet
Wp	Watt Peak
Wspd	Wind Speed

Interpretations:

1. Words comprising the singular shall include the plural and vice versa.
2. An applicable law shall be constructed as reference to such applicable law including its amendments or re-enactments from time to time.
3. A time of day shall save as otherwise provided in any agreement or document be constructed as a reference to Indian Standard Time.
4. Different parts of this contract are to be taken as mutually explanatory and supplementary to each other and if there is any differentiation between or among the parts of this contract, they shall be interpreted in a harmonious manner so as to give effect to each part.
5. The table of contents and any headings or sub headings in the contract has been inserted for case of reference only & shall not affect the interpretation of this agreement.

2. Instruction to Bidders

Preamble:

This Volume of the Bidding Documents provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the TSCCL. It also provides information on bid submission, opening and on contract award.

Further in all matters arising out of the provisions of Volume of I, II and III of the Bidding Documents, the laws of the Union of India shall be the governing laws and courts of Tirupati shall have exclusive jurisdiction.

2.1 Back ground:

- a) The Tirupati Smart City Corporation Limited (the “Authority / Client / Employer / TSCCL”) is engaged in the implementation of the Smart City Mission projects in Tirupati and as part of this endeavor, the Authority has decided to undertake to procurement and service requirement for **Design, Procurement, Supply, Installation, Testing, Commissioning, Operation And Maintenance For 10 [Ten] Years Of 4 Mwp Grid Connected Floating Type Solar Photo Voltaic Power Project On Reservoir In Chittoor District Along With Grid Connecting Equipment Including Associated Electrical And Civil Works Under Implementation Of Smart City Mission In Tirupati** (the “Project”) and has, therefore, decided to carry out the bidding process for selection of an entity as the bidder to whom the Project may be awarded.
- b) The selected Bidder (the “Contractor/ Implementing Agency”) shall be responsible for designing, engineering, procurement and construction of the Project under and in accordance with the provisions of an engineering, procurement and construction contract (the “Contract”) to be entered into between the Implementing Agency and the Authority in the form provided by the Authority as part of the Bidding Documents pursuant hereto. The Implementing Agency shall also be responsible for the maintenance of the project during the Defect Liability Period, which is expected to be as per clause 2.1.c).
- c) The “Contract” shall mean and include the general conditions, specification, schedules, drawings, form of Bid, covering letter, schedule of prices, or the final general conditions, any special conditions applying to the particular contract specification and drawings and the agreement to be entered into [A formal agreement shall be entered into between the bidder and the Authority for the proper fulfilment of the contract] of these general conditions, all of which must be accepted under the signatures and stamp of the bidder in order to construe the same within the meaning of Contract.
- d) The Agreement sets forth the detailed terms and conditions for award of the project to the Implementing Agency, including the scope of the Implementing Agency’s services and

obligations.

- e) The statements and explanations contained in this RFP are intended to provide a better understanding to the Bidders about the subject matter of this RFP and should not be construed or interpreted as limiting in any way or manner the scope of services and obligations of the Implementing Agency set forth in the Agreement or the Authority's rights to amend, alter, change, supplement or clarify the scope of work, the work to be awarded pursuant to this RFP or the terms thereof or herein contained. Consequently, any omissions, conflicts or contradictions in the Bidding Documents including this RFP are to be noted, interpreted and applied appropriately to give effect to this intent, and no claims on that account shall be entertained by the Authority.
- f) The Authority shall receive BIDs pursuant to this RFP in accordance with the terms set forth in this RFP and other documents to be provided by the Authority pursuant to this RFP (collectively the "Bidding Documents"), and all BIDs shall be prepared and submitted in accordance with such terms on or before the BID due date specified in Important Dates / Fact Sheet for submission of BIDs (the "BID Due Date").
- g) "Plant Work or Works" shall mean and include plant and materials to be provided and work to be done by the bidder under the contract.
- h) Tech "Specification" shall mean the specification annexed to these general conditions and the schedules there to (if any).
- i) "Tests on completion" shall mean such tests as prescribed by the requirements of specification and performance & operation of the plant to be made by the bidder before the plant is taken over by the authority.
- j) "Taking over" shall mean taking over of the plant by the authority after completion of "tests on completion" and completion of 72 hours/three days of continuous trouble-free operation of the plant without any outages/ breakdowns attributable to the implementing Agency.
- k) "Commercial use" shall mean that use of the work, which the contract contemplates or of which it is to be commercially capable.
- l) "Month" shall mean calendar month.
- m) "Writing" shall include any manuscript, typewritten or printed statement, under or over signature or seal as the case may be.
- n) Words importing persons shall include firms, companies, Department, and other bodies whether incorporated or not.
- o) Words importing the singular only shall also include the plural and vice versa where the context requires.

2.2 Brief description of Bidding Process

- a) The Authority has adopted a single stage two part system (referred to as the "Bidding Process") for selection of the Bidder for award of the Project. Under this process, the bid shall be invited under two parts. Eligibility and qualification of the Bidder will be first examined based on the details submitted under first part (Technical Bid) with respect to eligibility and qualifications criteria prescribed in this RFP. (The "Bidder", which expression shall, unless repugnant to the context, include the members of the Consortium). The Financial Bid under the second part shall be opened of only those Bidders whose Technical Bids are responsive to eligibility and qualifications requirements as per this RFP.
- b) Interested bidders are being called upon to submit their BID in accordance with the terms specified in this Bidding Document. The Bid shall be valid for a period of 120 days from the date specified in Important Dates / Fact Sheet for submission of BIDs (the "Bid Due Date").
- c) The complete Bidding Documents including the draft Agreement and other annexures / schedules for the Project is enclosed for the Bidders. Subject to the aforesaid documents and any addenda issued subsequent to this RFP Document, will be deemed to form part of the Bidding Documents.
- d) A Bidder is required to deposit, along with its BID, a BID Security of Rs.24.00 lakh (Rupees Twenty Four Lakh Only) (the "BID Security"), refundable not later than 150 (One hundred & fifty) days from the BID Due Date, except in the case of the Selected Bidder whose BID Security shall be retained till it has provided a Performance Security under the Agreement. The Bidders will have an option to provide BID Security in the form of Bank Guarantee issued by a Nationalised Bank, counter guaranteed by its branch at Tirupati, and in such event, the validity period of the Bank Guarantee, shall not be less than 180 (one hundred and eighty) days from the BID Due Date, inclusive of a claim period of 60 (sixty) days, and may be extended as may be mutually agreed between the Authority and the Bidder from time to time and document fee of Rs. 20,000 (Twenty thousand only). The BID shall be summarily rejected if it is not accompanied by the BID Security and document fee.
- e) Bidders are advised to examine the Project in greater detail, and to carry out, at their cost, such studies as may be required for submitting their respective BIDs for award of the contract including implementation of the Project.
- f) BIDs will be evaluated for the Project on the basis of the lowest cost required by a Bidder for implementing the Project (the "BID Price"). The total time allowed for completion of construction under the Agreement (the "Construction Period") and the period during which the Implementing Agency shall be liable for maintenance and rectification of any defect or deficiency in the Project after completion of the Construction Period (the "Defect Liability Period") shall be pre-determined, and are specified in the draft Agreement forming part of the Bidding Documents. In this RFP, the term "Lowest Bidder" shall mean the bidder who is

quoting the lowest BID price.

g) Generally, the Lowest Bidder shall be the selected Bidder. In case such Lowest Bidder withdraws or is not selected for whatsoever reason, the Authority shall / may annul the Bidding Process and invite fresh BIDs.

h) Other details of the process to be followed under this bidding process and the terms thereof are spelt out in this RFP.

2.3 General

- i. While every effort has been made to provide comprehensive and accurate background information, requirements and envisaged proposal(s) specifications, Bidders must form their own conclusions about the proposal(s) needed to meet the Authority's requirements. Bidders and recipients of this RFP may wish to consult their own legal advisers in relation to this RFP.
- ii. All information supplied by Bidders as part of their bids in response to this RFP, may be treated as contractually binding on the Bidders, on successful award of the assignment by the Authority on the basis of this RFP.
- iii. No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by or on behalf of Authority. Any notification of preferred bidder status by Authority shall not give rise to any enforceable rights by the Bidder. Authority may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of Authority.
- iv. Bids shall be received by the Authority on the e-Procurement portal www.tender.apecurement.gov.in before the time and date specified in the schedule of the RFP notice. In the event of the specified date for the submission of Bid offers being declared a public holiday by the Government of Andhra Pradesh, the offers will be received up to the appointed time on the next working day. The Authority may, at its discretion, extend this deadline for submission of offers by issuing corrigendum and uploading the same on e-Procurement portal.
- v. Telex, cable or facsimile offers will be rejected.
- vi. **Source of Fund:** The TSCCL are empowered with grant of funds from Govt. of India and Government of Andhra Pradesh to be utilized for execution of this Project. All eligible payments under the contract(s) for the package for which this Invitation for Bids is issued shall be made by the TSCCL.

2.4 Eligible Bidders

Sole Bidder	<ul style="list-style-type: none">• Individual firms preferably empaneled with NREDCAP, Government of Andhra Pradesh and/or MNRE Channel Partners are eligible.
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Consortium #	<ul style="list-style-type: none"> • Max 2 Contracting firms/companies are allowed in a consortium • One of the consortium members should lead the consortium and should be registered in India with appropriate Government Organization.. In case of Company, should be registered under Companies Act 1956/2013 or as amended. • All the consortium members are equally responsible and jointly & severally liable under this RFP for Successful completion of the project. • Other consortium members either should be registered in India under Companies Act 1956/2013 or as amended or Registered Abroad under any other suitable Act Or Registered as Civil Contractors with any Indian Government Organization as appropriate in eligible class
<p># In case of consortium, the list of participants needs to be declared Consortium members cannot be changed during the project period. If any of bidders/members of one consortium becomes members of the other consortium, both the consortiums will be disqualified.</p>	

The Lead Bidder shall be authorized by the consortium members for

- i. The management of all Consortium members who are part of the bid.
- ii. The supply and delivery of all products and services submitted in their bid and as part of the contract.
- iii. To incur liabilities and receive instructions for and on behalf of any and all consortium members. Entire execution of the Contract, including payment, shall exclusively by/with the Lead Bidder
- iv. Entire execution of the Contract, receipt of payments etc., on behalf of consortium
- v. Ensuring that all the bid compliance is met by the consortium members (mentioned in the bid, failing which bid can be disqualified).
- vi. **ARTICLES OF ASSOCIATION:** All Bids must be accompanied with duly authenticated copies of the documents defining the constitution of the company, power of attorney and other relevant documents, and any bid submitted by a partnership firm must be accompanied by duly authenticated extracts from the partnership deed or other documents, so as to show by which person and in what manner contracts may be entered into, by or on behalf of the company, partnership for the due execution of such contracts and responsibilities.“ The said documents must be legalized by the local authorities at the place of issue.” Such documents should indicate current address of the firm and full name and current address of all partners of the firm. Any Bid not containing these documents, or if such documents are incomplete, or do not conform to the aforesaid forms, may at the discretion of the Client be excluded.

2.5 Compliant Bids / Completeness of Response

- a. Bidders are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of the bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.
- b. Failure to comply with the requirements of this paragraph may render the bid non-compliant and the Bid may be rejected. Bidders must:
 - i. Include all documentation specified in this RFP, in the bid.
 - ii. Follow the format of this RFP while developing the bid and respond to each element in the order as set out in this RFP.
 - iii. Comply with all requirements as set out within this RFP.

2.6 Bidder to Inform

The Bidder shall be deemed to have carefully examined the Terms & Conditions, Scope, Specifications, and Schedules of this RFP. If bidder has any doubts / clarifications as to the meaning of any portion of the Conditions or the specifications they shall, before the last date for Submission of Pre-Bid Queries, set forth the particulars thereof and submit them to Authority in writing in order that such doubt may be removed or clarifications are provided.

2.7 Bid Preparation and Presentation costs

The Bidder shall bear all costs associated with the preparation and submission of its bid, including visits for the purpose of clarification of the bid, if so desired / any Presentation as may be required in accordance with the conditions of this RFP and the authority shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

2.8 Pre-bid Clarification

Bidders Queries

Any clarification regarding the RFP document and any other item related to this project can be submitted to Authority as per the submission mode and timelines mentioned in the Fact Sheet. The pre-bid queries should be submitted in excel sheet format, along with name and details of the organization submitting the queries.

Authority shall not be responsible for ensuring that the bidders' queries have been received by them. Any requests for clarifications post the indicated date and time shall not be entertained by Authority.

Bidders must submit their queries as per the format mentioned in Section 5 - Annexure I Queries should be submitted at <<email ID>> with cc to <<email ID>> within the date and timelines as specified in the Fact Sheet

Responses to Pre-Bid Queries and Issue of Corrigendum

Authority will not organize a pre-bid meeting.

Authority will respond to any request for clarification or modification of the bidding documents. Authority shall formally respond to the pre-bid queries. No further clarifications shall be entertained after the date and time of submission of queries.

Authority shall endeavor to provide timely response to all queries. However, Authority makes no representation or warranty as to the completeness or accuracy of any response made in good faith. Authority does not undertake to answer all the queries that have been posed by the bidders.

Any modifications of the RFP Documents, which may become necessary as a result of the Pre-Bid queries, shall be made by Authority exclusively through a corrigendum. Any such corrigendum shall be deemed to be incorporated into this RFP. However, in case of any such amendment, the bid submission date may be extended at the discretion of Authority.

Any corrigendum/notification issued by Authority, subsequent to issue of RFP, shall only be available / hosted on the website URL mentioned in the fact sheet. Any such corrigendum shall be deemed to be incorporated into this RFP.

2.9 Bid Processing Fee / Bid Document Fee and Transaction Fee

RFP can be downloaded from the website URL mentioned in the fact sheet.

Bid Processing Fee / Bid Document Fee of Indian Rupees 20,000/- (Indian Rupees Twenty Thousand only) shall be paid via Demand Draft in favour of the "Managing Director, Tirupati Smart City Corporation Limited", Payable at Tirupati. The Bid Processing Fee / Bid document fee is mandatory and non-refundable.

Without the payments of Bid document fee the bids will be taken as incomplete and non-responsive and shall not be considered.

Transaction Fee (As per G.O. Ms. No. 4, dated 17-02-2015 IT&C Dept.): It is mandatory for all the participating bidders to pay electronically the transaction fee to M/s Vupadi Technologies through "Payment Gateway Service on E-Procurement platform". The Electronic Payment Gateway accepts all Master and Visa cards issued by any bank and Direct Debit facility / Net Banking of ICICI Bank, HDFC to facilitate the transaction. As prevalent Government GST Norms + Bank Charges for Credit Card Transaction Amount payable to M/s. Vupadi Technologies (Vupadi) shall be applicable.

Corpus fund charges towards 'e' procurement services at 0.0345% of estimated contract value with a cap of Rs.10,000/- for all works with estimated contract value up to Rs.50.00 Crores and Rs. 25,000/- for works with estimated contract value above Rs. 50.00 Crores from successful

bidder payable in the shape of DD drawn in favour of Managing Director, APTS, Hyderabad payable at Hyderabad at the time of concluding agreement.

2.10 Bid Security/Earnest Money Deposit (EMD)

Bid Security/EMD of Indian Rupees 15,00,000 (Indian Rupees Fifteen Lakh only) shall be through a Bank Guarantee from a nationalized bank in India. No exemption for submitting the Bid Security/ EMD will be given to any agency. Bid security/EMD in any other form will not be entertained.

For Unsuccessful bidders: The bid security of all unsuccessful bidders would be refunded without interest by Authority on finalization of the bid in all respects by the successful bidder.

For Successful bidders: The bid security, for the amount mentioned above, of successful bidder would be returned without interest upon submission of Performance Bank Guarantee / Performance Security by the successful bidder. The successful bidder should however pay the PBG / Performance Security at 5% on Bid Contract Value / EMD whichever is higher at the time of signing the agreement in the shape of Bank Guarantee from a nationalised Bank./Scheduled Bank or unconditional in the form given in the RFP document from any Nationalised Bank / Scheduled Bank.

In case bid is submitted without the bid security then Authority reserves the right to reject the bid without providing opportunity for any further correspondence to the bidder concerned.

The E.M.D /PBG/ Performance Security given in the form of bank guarantee on a nationalized/scheduled commercial bank shall be valid for the duration of contract period plus defect liability period and in case any valid extension of contract period is granted, the validity of BG shall also be extended for the corresponding period. The bank guarantee on nationalized/scheduled commercial bank furnished by the bidder towards additional security amount shall be valid till the work is completed in all respects.

The Bid Security/ EMD shall be forfeited and appropriated by the authority as mutually agreed genuine pre-estimated compensation and damages payable to Authority for the time, cost and efforts of the authority, without prejudice to any other right or remedy that may be available to the authority under the RFP or in law under the following conditions:

- a. If a bidder withdraws or modifies its bid during the period of bid validity or any extension agreed by the bidder thereof;
- b. If a bidder is disqualified in accordance with clause 2.2;
- c. If the bidder tries to influence the evaluation process or engages in corrupt, fraudulent, coercive or undesirable practice or restrictive practice;
- d. If the bidder is declared as the successful bidder and it
 - Withdraws its proposal during negotiations. However, failure to arrive at a consensus between authority and the successful bidder shall not be constructed as withdrawal of proposal by successful bidder;
 - Fails to sign and return, as acknowledgement, the duplicate copy of the letter of

- award;
- Fails to submit the performance bank guarantee / Performance Security and/or sign the contract in accordance with this RFP;
- Fails to fulfil any other condition precedent to the execution of the contract, as specified in the letter of award;
- Fails to execute the contract.

2.11 Bid Validity Period

The EMD submitted along with the bid will remain valid for validity period mentioned in the Fact Sheet.

In exceptional circumstances, prior to expiry of the bid validity period, the authority may request that the bidders to extend the period of validity for a specified additional period at Bidder's cost. The request and the responses to the request shall be made in writing. A bidder may refuse the request without risking forfeiting the EMD, but in this case, the bidder will be out of the competition for the award. Bidder agreeing to the request will not be required or permitted to modify its bid, but will be required to ensure that the bid remains secured for a correspondingly longer period.

On completion of the validity period, unless the Bidder withdraws his/her/their bid in writing, it will be deemed to be valid until such time that the Bidder formally (in writing) withdraws bid.

2.12 Contents of Bid

The hard copy bids should be submitted in separate envelopes which in turn shall be packed in a separate envelope and sealed as "Request for Proposal for selection of **DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [Ten] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI**" and not to be opened except in the presence of Bid Evaluation Committee.

The four sets of documents (each enveloped separately and packed in a master envelope are required to be submitted for evaluation. The Sets will comprise of:

Document Set	Name of Document	Content
One	RFP Document fee & Bid Security / Earnest Money Deposit (EMD)	<ul style="list-style-type: none"> a. Scanned copy of online payment of RFP Document Fee b. Scanned Copy of bank Guarantee taken for Bid Security/Earnest Money Deposit (EMD) c. Mode of Submission: Online + Hard Copy + Soft copy (non-writable CD/DVD)

Two	Pre-Qualification Bid	<ul style="list-style-type: none"> a. Pre-Qualification bid as per Section 6.1 and 6.2 along with the required supporting documents. b. No Deviation Certificate as per Section 6.5 c. Total Responsibility declaration as per Section 6.6 d. Mode of Submission: Online + Hard Copy + Soft copy (non-writable CD/DVD)
Three	Technical bid	<ul style="list-style-type: none"> a. Technical Bid b. Mode of Submission: Online + Hard Copy + Soft copy (non-writable CD/DVD)
Four	Financial bid	<ul style="list-style-type: none"> a. Financial bid b. Mode of Submission: ONLY ONLINE

- a. The Bidder shall provide all the information sought under this RFP. The Authority will evaluate only those Bids that are received in the required formats and complete in all respects.
- b. Please note that Prices should NOT be indicated in the Technical Bid but should only be indicated in the Financial Bid.
- c. The Financial Proposal shall be submitted only on www.apetrocurement.gov.in and not by any other means, failing which the Authority shall reject the Bid.
- d. Each bid must be typed or written in indelible ink and an authorized representative of the bidder shall sign the bid and physically initial and stamp all pages of the bid. The authorization shall be by way of a written power of attorney executed in the format attached as Annexure-8. The name and position held by the person signing of the proposal must be typed or printed below.
- e. All the pages of the bid must be sequentially numbered. The bid documents must contain in the beginning of the document, a list of contents with page numbers. Any deficiency in the documentation may result in the rejection of the Bid.
- f. The original bid shall be prepared in indelible ink. It shall contain no interlineations or overwriting, except as necessary to correct errors made by the Bidder itself. Any such corrections must be initialed by the person (or persons - Power of Attorney) who sign(s) the bids.
- g. Failure to submit the bid before the submission deadline specified in the Fact Sheet / Important Dates would cause a bid to be disqualified.
- h. The physical submission of the bid has to be accompanied by soft copy [Non-Writable CD/DVD].
- i. Interested bidders shall submit completed RFP in sealed envelope along with soft copy, DD of Bid Processing Fee, Bid security / EMD and super-scribed the project title with all supporting documents like - Design Intent in brief identifying suitable technology, qualifications, Profile of Organization, financial strength (certified financial statements as per RFP) and expertise to undertake the project. The bidders must furnish the details on the technology adopted and success elsewhere. The bidder shall also submit a conceptual

financial model for the project with proper justifications and proofs along with financial statements to demonstrate the bidder's capability of carrying out such project either individually or jointly in consortium with others. All the documents duly signed by the authorized signatory of the bidder, must be delivered to the undersigned through Speed Post / Courier service / by person so as to reach the office of Managing Director, TSCCL at the address, not later than last date of bid submission date and it shall be the responsibility of the bidder to send it on time. Authority will not take any responsibility for any delay or non-receipt.

- j. Authority will not accept delivery of bid by fax or e-mail.
- k. This RFP's enclosed formats / Annexures/ Documents, no document should be left unfilled; otherwise the RFP filing will not be valid and the incomplete RFP response will not be considered for any evaluation. All the pages of the documents should be signed by the authorised signatory of the lead Bidder and the scanned copies of the documents should be uploaded in the e-procurement portal.
- l. A prospective bidder requiring any clarification on RFP documents may contact the RFP Inviting officer at the address indicated in the NIT. The RFP inviting officer will also respond to any request for clarification, received through post /e-mail.
- m. The bidders who are desirous of participating in e-procurement shall submit their technical bids, financial bids etc., in the standard proscribed in the RFP documents displayed at e-market place.
- n. The bidders should upload the scanned copies of all the relevant certificates, documents etc., in the e-market place in support of their technical bids. The bidders shall sign on all the statements, documents, certificates, uploaded by him, owning responsibility for their correctness / authenticity.
- o. Even while execution of the work, if found that the bidder had produced false / fake certificates in the bidding process for his selection, he will be black listed and the contract will be terminated.
- p. All duties, taxes, and other levies payable by the contractor as per State / Central Government rules, shall be included in the RFP percentage quoted by the bidder, however keeping in view the maximum reimbursable amounts specified in Financial Bid.
- q. The documents shall be prepared and scanned in different files (in *.pdf or *.jpeg format) and uploaded during the online submission of Bid.
- r. The Bidder must also upload certificates stating that the information furnished by him is genuine and he must also give self-declaration regarding value of ongoing works. The documents are to be uploaded in *.zip format only.
- s. The authority will not hold any risk and responsibility for the loss in transit during uploading of the scanned document, for the invisibility of the scanned document online, and any other problem(s) encountered by the bidders while submitting his bids online.
- t. Related certificates, documents etc., duly self-attested are to be scanned and uploaded on to the e-procurement platform at www.apecurement.gov.in in support of items mentioned in clause.
- u. Any other condition regarding receipt of bidders in conventional method appearing in RFP document may be treated as Non-applicable.

- v. Any incorrectness / deviation noticed in the soft copies will be viewed seriously and apart from cancelling the RFP duly forfeiting the EMD, criminal action will be initiated including suspension of business.
- w. If any discrepancy found between the online submission and the physical submission, the bid submitted online shall prevail and be considered as final.
- x. Both physical and online bid submission are mandatory, if anyone is not submitted, the bid shall be considered as non-responsive bid.
- y. The Bidders shall be responsible for all of the costs associated with the preparation of their Bids and their participation in the Bidding Process. The Authority will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Bidding Process.
- z. Bidder shall quote for full quantity against all items. Part bids are liable for rejection. Therefore, the bidder is advised to study all terms and conditions of the RFP including technical specifications for submitting complete and comprehensive bid.
- aa. Failure to comply with any of the terms and conditions or instructions of the offer with insufficient particulars which are likely to render fair comparison of tender as a whole impossible may lead to rejection even if otherwise it is a competitive offer/ Bid.
- bb. **Local Conditions:** It will be imperative on each Bidder to fully inform himself of all local conditions and factors which may have any effect on the execution of the works covered under these documents and specifications. The Authority will not entertain any request for clarifications from the Bidders, regarding such local conditions. It must be understood and agreed that such factors have properly been investigated and considered while submitting the proposals. No claim for financial adjustment to the contract awarded under these specifications and documents will be entertained by the authority neither any change in the time schedule of the contract nor any financial adjustment arising thereof which are based on the lack of such clear information, its effect on the cost of the works to the Bidder shall be permitted by the authority.
- cc. The three envelopes shall be placed in an outer envelope, which shall be sealed. Each of the three envelopes shall clearly bear the following identification:
“DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI” and shall clearly indicate the name and address of the Bidder. In addition, the Bid Due Date should be indicated on the right hand top corner of each of the envelopes.

Each of the envelopes shall be addressed to:

ATTN. TO : The Managing Director,
Tirupati Smart City Corporation Limited,
c/o. Tirupati Municipal Corporation, Tilak Road, Tirupati – 517501,
Chittoor District, Andhra Pradesh, India. E-mail: tsccltirupati@gmail.com

If the envelopes are not sealed and marked as instructed above, the Authority assumes no responsibility for the misplacement or premature opening of the contents of the Bid submitted and consequent losses, if any, suffered by the Bidder.

dd. Bids submitted by fax, telex, telegram or e-mail shall not be entertained and shall be rejected

ee. **Note to the bidder for e-tendering:**

In participation in e-tendering of Authority, it is mandatory for prospective bidder to get registered on website www.apecurement.gov.in. Thus, it is advised to all prospective bidders to get registration by making online registration fees. It is mandatory that the bidder is required to sign their bids online using Digital Signature Certificates, so the same should be obtained the same at the earliest if not obtained already.

For further information regarding issue of Digital Signature Certificate, the bidder may visit website www.apecurement.gov.in it is to be noted that it may take upto 0 to 10 working days for issue of Digital Signature Certificate. Authority shall not be responsible for any delay in issue of Digital Signature Certificate.

If bidder is bidding first time for e-tendering, then it is obligatory on the part of bidder to fulfil all formalities such as registration, obtaining Digital Signature Certificate etc., well in advance. Bidder must positively complete online e-tendering procedure at www.apecurement.gov.in

For any type clarifications bidder can visit www.apecurement.gov.in and for helpdesk <http://www.apecurement.gov.in/helpdesk.html>

ff. **One RFP per Bidder:**

Each bidder shall submit only one RFP for the work. A bidder who submits more than one RFP will cause dis-qualification of all the RFPs submitted by the Bidder. A Bidder bidding individually or as a member of a Consortium shall not be entitled to submit an other bid either individually or as a member of any Consortium, as the case may be.

2.13 Bid Formats

2.13.1 Pre-Qualification Bid Format

Section #	Section Heading	Details
1	Pre-Qualification Bid Covering Letter	As per format provided in section 6.1
2	Consortium Agreement	As per format provided in Annexure 7 of this Volume
3	About Bidder	As per format provided in section 6.2 of this document.
4	Bidder/Consortium Registration	<ul style="list-style-type: none"> • Certificate of Incorporation / Registration under companies Act, 1956/2013 or any suitable Act abroad • Consortium agreement clearly stating the roles and responsibilities of each member • Registration/ Empanelment Certificate with NREDCAP / MNRE / Indian Government Organization, if applicable
5	Average Annual Turnover	Certificate from the Statutory auditor / CA clearly specifying the annual turnover for the specified years
6	Undertaking for non-blacklisting clause	Undertaking by the authorized signatory as per format
7	Bidder Certifications	Copies of valid certificates in the name of the sole bidder or the Lead bidder in case of a Consortium
8	Power of Attorney	Documentary evidence as per format provided in Annexure 8 and 9
9.	Project Experience	Citation details of projects as per format in Section 7.4 and 6.7 as applicable.
10.	No Deviation Certificate	As per format provided in section 6.5
11.	Total responsibility certificate	As per format in 6.6
12	<p>Solvency Certificate: Bidder should have latest bank solvency certificate for an amount of at least equivalent to financial bid value in the current financial year. Certificate should be issued after 31.03.2018 and should clearly state that Banker shall be extending necessary financial support required for execution of the subject work</p>	Latest bank solvency certificate

2.13.2 Technical Bid Format

Section #	Section Heading	Details
1.	Technical Bid Checklist	As per format provided in section 7.1
2.	Technical Bid Covering Letter	As per format provided in Section 7.2
3.	About Bidder	<ul style="list-style-type: none"> · Details about bidder (whether sole bidder or Consortium) · Bidder's General Information as required in Technical Criteria 3.6.
4.	Project presentation	Details as required in Technical Criteria 3.6.
5.	Project/credential summary	As per format provided in Section 7.3
6.	Bidder's Experience	Project citation as per format provided in section 7.4 and supporting documentary evidences and Self-certifications as per format in section 6.7 as Applicable
7.	Manufacturers'/Producers' Authorization Form	As per format provided in section 15
8.	Anti-Collusion Certificate	As per format provided in section 7.6
9.	Non-disclosure agreement	As per format provided in section 11 (Annexure 6)

2.13.3 Financial Bid Format

The Bidder must submit the Financial Bid in the formats specified in Section 8.

Section #	Section Heading	Details
1.	Bid Price Sheet	As per format provided in Section 8 (Annexure - 4)

2.14 Language

The bid should be prepared and submitted by the bidders in English language only. If any submitted supporting documents (like notices, certificates, correspondences, proceedings, etc.,) are in any language other than English, translation of the same in English language is to be provided (duly attested) by the Bidders. For purposes of interpretation of the documents, the English translation shall govern. Such translated documents shall be notarized and in case of any incorrectness of the translation, the bidder will be penalized.

2.15 Authentication of Bids

An authorized representative (or representatives - Power of Attorney) of the Bidder shall initial all pages of the Pre-Qualification, Technical and Financial Bids.

Bid should be accompanied by an authorization in the name of the signatory (or signatories) of the Bid. The authorization shall be in the form of a written power of attorney accompanying the Bid or in any other form demonstrating that the representative has been duly authorized to sign.

2.16 Amendment of Request for Proposal

At any time prior to the due date for submission of bid, Authority may, for any reason, whether at its own initiative or in response to a clarification requested by prospective bidder(s), modify the RFP document by amendments. Such amendments shall be uploaded on the e-procurement portal website, through corrigendum and shall form an integral part of RFP document. The relevant clauses of the RFP document shall be treated as amended accordingly.

It shall be the responsibility of the prospective bidder(s) to check the Authority's website from time to time for any amendment in the RFP document. In case of failure to get the amendments, if any, Authority shall not be responsible.

In order to allow prospective bidders a reasonable time to take the amendment into account in preparing their bids, Authority, at its discretion, may extend the deadline for submission of bids. Such extensions shall be uploaded on website of the Authority.

Verbal clarifications and information given by the authority or any other person for or on its behalf shall not in any way or manner be binding on the authority.

2.17 Bid Price and quotation submission

Financial Bid shall be as per the format provided in Section 8. Bidders shall give the required details of all applicable taxes, duties, other levies and charges etc. in respect of direct transaction between Authority and the Bidder.

Bidders shall quote for the entire scope of contract on a "overall responsibility" basis such that the total bid price covers Bidder's all obligations mentioned in or to be reasonably inferred from the bidding documents

Prices quoted by the Bidder shall remain firm during the entire contract period and not subject to variation on any account.

The bidders shall quote in their proposals a firm lump sum price as per schedules provided for the entire scope of Supplying and erecting the equipment (covered under the Technical Specification) including maintenance period.

The prices quoted shall be lump sum and on for destination basis inclusive of all taxes and duties. For the purpose of clarity, applicable taxes as on the date of submission of bid shall be quoted.

- a) All priced quotations should be in Indian Rupees only. The bidder should quote his lowest firm prices valid for the duration and completion of the contract i.e. Supply, erection, testing, commissioning, operation and maintenance of the plant. No enhancement of prices for what so ever reason will be allowed once the offer is accepted. Quotation should carry the name of the manufacturers for the plant offered.

b) The bidder shall transfer the 90% of subsidy amount (if availed) to the TSCCL within 15 days of receipt of the same.

A bid submitted with an adjustable price quotation shall be treated as non-responsive and rejected.

Any conditional bid with any deviations from the terms and conditions of RFP shall be disqualified.

2.18 Insurance

Transit cum storage cum erection, testing and commissioning insurance is the responsibility of the bidder. Any loss or damage to the equipment for whatever reasons shall be to the account of the bidder. The bidder shall promptly make good the loss or damage by way of replacement and/or repair of the portion of the equipment damaged or lost, irrespective of settlement of claims with the insurance underwriters. There shall be no extra cost to the authority on account of such replacement / repair of losses or damages for whatever reasons. All costs on account of insurance liabilities covered under the contract will be to the Bidder's account and principal of the insurance will be to the authority.

2.19 Deviations and Exclusions

Bids shall be submitted strictly in accordance with the requirements and terms & conditions of the RFP. The Bidder shall submit a No Deviation Certificate as per the format mentioned in Section 6.5. The bids with deviation(s) are liable for rejection.

2.20 Total Responsibility

Bidder should issue a statement undertaking total responsibility for the defect free operation of the proposal as per the format mentioned in Section 6.6.

2.21 Late Bids

RFP must be submitted not later than the date and time specified in RFP. In the event of the specified date / time for the submission of bids declared as holiday, the bids will be received on the next working day.

Late submission will not be entertained and will not be permitted by the e-Procurement Portal.

The bids submitted by telex/fax/e-mail etc. shall not be considered. No correspondence will be entertained on this matter.

Authorities shall does not be responsible for delay in submission of any online submission related or website related issues and date of submission cannot be extended for such reasons

Authority reserves the right to modify and amend any of the above-stipulated condition/criterion.

2.22 Right to Terminate the Process

Authority may terminate the RFP process at any time and without assigning any reason. Authority makes no commitments, express or implied, that this process will result in a business transaction with anyone. This RFP does not constitute an offer by Authority.

2.23 Non-Conforming bids

A bid may be construed as a non-conforming bids and ineligible for consideration:

- a. If it does not comply with the requirements of this RFP.
- b. If a bid does not follow the format requested in this RFP or does not appear to address the particular requirements of the scope.

2.24 Acceptance / Rejection of Bids

- a. Authority reserves the right to reject in full or part, any or all bids without assigning any reason thereof. Authority reserves the right to assess the Bidder's capabilities and capacity. The decision of Authority shall be final and binding.
- b. Bid should be free of over writing. All erasures, correction or addition must be clearly written both in words and figures and attested.

In the event of any assumptions, presumptions, key points of discussion, recommendation or any points of similar nature submitted along with the Bid, Authority reserves the right to reject the Bid and forfeit the EMD.

The authority reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to bidders. In case of annulment, all bids submitted and specifically, bid securities shall be promptly returned to the bidders.

The Authority reserves the right to verify all statements, information and documents submitted by the bidder in response to the RFP. Any such verification or lack of such verification by the authority shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the authority thereunder.

If there is any discrepancy in the financial bid, it will be dealt as per the following:

- a. Activities and items described in the Technical Proposal but not priced in the Financial proposal shall be assumed to be included in the prices of other activities or items and no corrections will be made to the Financial Proposal / Bid.
- b. If, in the price structure quoted for the required goods / services / works, there is discrepancy between the unit price and total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly.
- c. If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.
- d. If there is a discrepancy between words and figures, the amount in words shall prevail.

- e. If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of Authority, the bid is liable to be disqualified.

2.25 Confidentiality

From the time the bids are opened to the time of the contract is awarded, the bidder should not contact the client on any matter related to its qualification documents, Technical Bid and/or Financial Bid. Information relating to the evaluation of proposals and award recommendations shall not be disclosed to the bidders who submitted the bids or to any other party not officially involved with the bid process, until the publication of the contract award.

Any attempt by a bidder or anyone on behalf of the bidder to influence improperly the client in the evaluation of the bids or award of the contract may result in the disqualification of its bid.

All the material/information shared with the Bidder during the course of this procurement process as well as the subsequent resulting engagement following this process with the successful bidder, shall be treated as confidential and should not be disclosed in any manner to any unauthorized person under any circumstances. The employees of the successful Lead bidder and Consortium members who are proposed to be deployed on the project need to furnish a Non-Disclosure Agreement (NDA) as per Annexure 6 in section 11.

2.26 Disqualification

The bid is liable to be disqualified in the following cases or in case bidder fails to meet the bidding requirements as indicated in this RFP:

- a. During validity of the bid, or its extended period, if any, the bidder changes its quoted prices.
- b. The bidder's bid is conditional and has deviations from the terms and conditions of RFP.
- c. Bid is received in incomplete form.
- d. Bid is not accompanied by all the requisite documents.
- e. Information submitted in technical bid is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract (no matter at what stage) or during the tenure of the contract including the extension period if any.
- f. Financial bid is enclosed with the same document as technical bid.
- g. Bidder tries to influence the bid evaluation process by unlawful / corrupt / fraudulent means at any point of time during the bid process.
- h. In case any one party submits multiple bids or if common interests are found in two or more bidders, the bidders are likely to be disqualified, unless additional bids / bidders are withdrawn upon notice immediately
- i. If any of the Lead Bidder is also partner in any other bid, then all the affected bids shall be disqualified.
- j. Bids without EMD / Bid Security and as well as Bid Documentation / Bid Processing Fee will be disqualified.

2.27 Fraud and Corrupt Practices

- a. The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this RFP, Authority shall reject a Bid without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the “Prohibited Practices”) in the Selection Process. In such an event, Authority shall, without prejudice to its any other rights or remedies, forfeit and appropriate the EMD or PBG, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to Authority for, inter alia, time, cost and effort of Authority, in regard to the RFP, including consideration and evaluation of such Bidder’s Bid.
Without prejudice to the rights of Authority under Clause above and the rights and remedies which Authority may have under the LOA or the Agreement, if a Bidder is found by Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the issue of the LOA or the execution of the Agreement, such Bidder shall not be eligible to participate in any tender or RFP issued by Authority during a period of 3 years from the date such Bidder is found by Authority to have directly or through an agent, engaged or indulged in any Prohibited Practices.
- b. For the purposes of this Section, the following terms shall have the meaning hereinafter respectively assigned to them:
 - i. “corrupt practice” means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of Authority who is or has been associated in any manner, directly or indirectly with the Selection Process or the LOA or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of Authority, shall be deemed to constitute influencing the actions of a person connected with the Selection Process); or (ii) save as provided herein, engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LOA or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the Award or the Agreement, who at any time has been or is a legal, financial or technical consultant /adviser of Authority in relation to any matter concerning the Project;
 - ii. “fraudulent practice” means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;
 - iii. “coercive practice” means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person’s participation or action in the Selection Process;

- iv. “undesirable practice” means (i) establishing contact with any person connected with or employed or engaged by Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or (ii) having a Conflict of Interest; and
- v. “restrictive practice” means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.

2.28 Conflict of Interest

- a. A bidder shall not have a conflict of interest that may affect the Selection Process or the proposal delivery (the “Conflict of Interest”). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, Authority shall forfeit and appropriate the EMD, if available, as mutually agreed genuine pre-estimated compensation and damages payable to Authority for, inter alia, the time, cost and effort of Authority including consideration of such Bidder’s Bid, without prejudice to any other right or remedy that may be available to Authority hereunder or otherwise.
- b. Authority requires that the bidder provides proposals which at all times hold Authority’s interests paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The bidder shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of Authority.
- c. **Conflicting Activities: Conflict between consulting activities and procurement of goods, works or non-consulting services:** A bidder that has been engaged by the client to provide goods, works, or non-consulting services resulting from or directly related to those goods, works, or non-consulting services. Conversely, a Bidder hired to provide consulting services for the preparation or implementation of a project, or any of its Affiliates, shall be disqualified from subsequently providing goods or works or non-consulting services resulting from or directly related to the consulting services for preparation or implementation.
- d. **Conflicting Relationships: Relationship with the client’s staff:** A bidder (including its Directors, stakeholders or Management) that has a close business or family relationship with a professional staff of the client who are directly or indirectly involved in any part of
 - The preparation of the RFP for the assignment
 - The Technical Specifications of the goods, works or services may not be awarded a contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the client throughout the selection process and the execution of the contract.

2.29 Sub-Contracting

The bidder would not be allowed to sub-contract work, except for the following:

- Structure, Civil and Architectural works
- Cabling and fixtures work and all civil work during implementation.

Sub-contracting shall be allowed only with prior written approval of Authority. However, even if the work is sub-contracted, the sole responsibility of the work shall lie with the lead bidder. The lead bidder shall be held responsible for any delay / error / non-compliance etc. of its sub-contracted vendor. The details of the sub-contracting agreements (if any) between both the parties would be required to be submitted to Authority.

A list of all sub-Contractors that the bidder proposes to sub-contract the works mentioned above shall be set out as per format provided in Section 16 along with an undertaking as specified in Section 20 [Annexure -11].

2.30 Right to vary quantity by Authority.

- a. At the time of contract, the quantity of goods, works or services originally specified in the bidding documents may be increased or decreased. It shall be without any change in the unit prices or other terms and conditions of the Bid and the bidding documents.
- b. If the authority does not procure any subject matter of procurement or procures less than the quantity specified in the bidding documents due to change in circumstances, the bidder shall not be entitled for any claim or compensation except otherwise provided in the bidding document.
- c. Repeat orders for extra items or additional quantities may be placed, if it is provided in the bidding document, on the rates and conditions given in the contract if the original order was given after inviting open competitive bids. Delivery or completion period may also be proportionally increased.

2.31 Withdrawal, Substitution, and Modification of Bids

- a. No bid may be withdrawn, substituted or modified in the interval between the bid submission deadline and the expiration of the bid validity period specified by the bidder in the bid submission form, or any extension thereof agreed to by the bidder. Withdrawal of the bid during this interval may result in the forfeiture of the EMD / Bid Security.
- b. Any alteration / modification in the application or additional information supplied subsequent to the bid submission date, unless the same has been expressly sought for by the client, shall be disregarded.
- c. Bids withdrawn shall not be opened and processed further.
- d. Alternative bid shall not be permitted.

2.32 Site Visit

- a) The Bidder may wish to visit and examine the site or sites and obtain for itself, at its own responsibility and risk, all information that may be necessary for preparing the bid and entering into the Contract. The costs of visiting the site or sites shall be at the Bidder's own expense.

- b) Bidders are encouraged to submit their respective bids 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.
- c) The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose (upon a written request from bidder) of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- d) A site visit conducted by the authority **shall be organized** on the written request of the bidder. The bidder shall intimate the Employer for site visit through Electronic mail tscltirupati@gmail.com at least three (03) days in advance.
- e) Failure of a Bidder to make a site visit will not be a cause for its disqualification.
- f) No site visits shall be arranged or scheduled after the deadline for the submission of the Bids and prior to the award of Contract.

2.33 Acknowledgement by Bidder

- a. It shall be deemed that by submitting the bid, the bidder has:
 - i. Made a complete and careful examination of the RFP.
 - ii. Received all relevant information requested from the authority.
 - iii. Accepted the risk of inadequacy, error or mistake in the information provided in the RFP or furnished by or on behalf of the authority relating to any of the matters referred to clause 2.30 above; and
 - iv. Agreed to be bound by the undertakings provided by it under and in terms hereof.
- b. The Authority 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 concerning or relating to the bidding process, including any error or mistake therein or in any information or data given by the authority.

2.34 Proprietary Data

All documents and other information supplied by the authority or submitted by bidder to the authority shall remain or become the property of the authority. 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 authority will not return any bid or any information provided along therewith.

2.35 Contacts during Bid Evaluation

Bids shall be deemed to be under consideration immediately after they are opened and until such time the authority 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, save and except as required under the bidding documents, from

contacting by any means, the authority and / or their employees / representatives on matters related to the bids under consideration.

2.36 Maintenance Tools and Tackles

The proposal shall include all special tools and tackles required for the operation and maintenance of the equipment in each equipment package.

The Bidder shall indicate all the above items in the proposal sheets in the form of a schedule giving therein the description and the quantity of each item. The item wise Price to be quoted by the Bidder shall be furnished in the format, which will be delivered with the first shipment of the main equipment.

2.37 Drawings, Data and Literature to be furnished

The Bidder shall include in his offer the following:

Undertaking to furnish details of special precautions and instructions to be followed and check list for erection, testing and commissioning of the plant.

Undertaking to furnish all required drawings, documentations for assembly, erection, testing and commissioning of the plant. Instructions regarding storage, handling, precautions etc., and checklists at various stages, till the plant is installed.

Time schedule for design, manufacture, testing, shipment, installation and commissioning is to be enclosed.

3. Selection Process for Bidder

3.1 Opening of Bids

Bids are invited from the prospective bidders for the tendered capacity i.e., Aggregate Capacity of as given in Annexure – 04 based on the project cost.

The Bids shall be opened by Authority in presence of those Bidders or their representatives who may be present at the time of opening.

The representatives of the bidders should be advised to carry the identity card or a letter of authority from the bidder firms to identify that they are bonafide representatives of the bidder firm, for attending the opening of bid.

There will be bid-opening as follows,

1. Set 1 – RFP Processing Fee & Bid Security / EMD
2. Set 2 – Pre-qualification Bid
3. Set 3 – Technical Bid

The date and time for opening of Technical & Financial bid would be as mentioned in the Fact Sheet.

The Technical Bids of only those bidders who clears the Pre-qualification stage shall be opened.

The Financial Bids of only those bidders will be opened who score equal to or more than 70% in Technical Evaluation.

3.2 Preliminary Examination of Bids

Authority shall examine the bids to determine whether they are complete, whether the documents have been properly signed and whether the bids are generally in order. Any bids found to be nonresponsive for any reason or not meeting any criteria specified in the RFP, shall be rejected by Authority and shall not be included for further consideration.

Initial Bid scrutiny shall be held and bids will be treated as non-responsive, if bids are:

- a. Not submitted in format as specified in the RFP document
- b. Received without the Letter of Authorization (Power of Attorney)
- c. Found with suppression of details
- d. With incomplete information, subjective, conditional offers and partial offers submitted
- e. Submitted without the documents requested
- f. Non-compliant to any of the clauses mentioned in the RFP
- g. With lesser validity period

3.3 Evaluation Process

Authority shall constitute a Bid Evaluation Committee to evaluate the responses of the bidders. The Bid Evaluation Committee shall evaluate the responses to the RFP and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence by bidders may lead to rejection of their bids.

The decision of the Bid Evaluation Committee in the evaluation of bids shall be final. No correspondence will be entertained outside the process of evaluation with the Committee. The Bid Evaluation Committee may ask for meetings or presentation with the Bidders to seek clarifications or conformation on their bids.

Only those Bidders who meet the eligibility criteria specified shall qualify for evaluation under this Section 3. Bids of firms/ consortia who do not meet these criteria shall be rejected.

The Bidder's competence and capability is proposed to be established by the following parameters

- I. After the bidder qualifies in the Pre-Qualification, will be considered for Technical Evaluation and those bidders qualifies in the Technical Evaluation, will be considered for Financial Evaluation. Bidders who submit Pre-Qualification Documents specified in the below mentioned clauses, will be will be eligible for Technical Evaluation.
- II. The TSCCL may constitute a RFP Evaluation Committee to evaluate the responses of the bidders. The RFP Evaluation Committee shall evaluate the responses to the RFP and all supporting documents/documentary evidence. Inability to submit requisite supporting documents/documentary evidence by bidders may lead to rejection of their bids.
- III. The decision of the RFP Evaluation Committee in the evaluation of bids shall be final. No correspondence will be entertained outside the process of evaluation with the Committee. The RFP Evaluation Committee may ask for meetings or presentation with the Bidders to seek clarifications or conformation on their bids.

The RFP Evaluation Committee reserves the right to reject any or all bids without assigning any reason. Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP. The steps for evaluation are as follows:-

3.4.1 Stage 1: Pre-Qualification

- a. The Bidder should be either a body incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto and engaged in the business of Solar Power. A copy of certificate of incorporation shall be furnished along with the bid in support of above.
- b. Authority shall validate "RFP Document fee & Bid Security/Earnest Money Deposit (EMD)". If the contents are as per requirements, Authority shall open the "Pre - Qualification Bid". **Each of the Pre-Qualification condition mentioned in Section 3.5 is MANDATORY.** In case, the Bidder does not meet any one of the conditions, the bidder shall be disqualified.
- c. Technical and Financial bids for those bidders who don't pre-qualify will not be opened. Financial bid will be opened for those bidders, who qualify in the technical evaluation. Bid Security amount shall be returned for those who don't qualify the financial evaluation stage and after PBG is submitted by successful bidder.

3.4.2 Stage 2: Technical Evaluation

- a. "Technical bid" will be evaluated only for the bidders who succeed in Stage 1.
- b. Authority will review the technical bids of the short-listed bidders for responsiveness. If the technical proposal is found
 - Not to be complete in all respects; or
 - Not duly signed by the authorized signatory of the bidder on all pages; or
 - Not to be in prescribed format and interlineations in between the formats / lines in the prescribed formats; or
 - To contain alternation, conditions, deviations or omissions.

then such technical bids shall be deemed to be substantially non-responsive. and liable to be disqualified at Authority's discretion.

- c. The bidders' technical proposal in the bid document shall be evaluated as per the requirements specified in the RFP and technical evaluation framework as mentioned in Section 3.6
- d. Bidders need to submit detailed – "**Presentation of the Project**" (If required). Bidders who qualify the PQ stage shall be called for presentation.

3.4.3 Stage 3: Financial Evaluation

The financial bids for the technically qualified bidders will be notified and shall then be opened on the notified date and time and reviewed to determine whether the financial bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at Authority's discretion.

- a. Financial bids shall be uploaded on e-procurement portal only.
- b. Financial bids that are not as per the format provided in Section 8 (Annexure 4) shall be liable for rejection.
- c. The bid price shall include all taxes and levies and shall be in Indian Rupees.
- d. The bid which is quoted the lowest rate (L₁) will be considered as the Most Advantageous Bid and will be for negotiations for awarding the contract.
- e. In case of a tie where two or more bidders achieve the same lowest cost,
 - The bidder with the higher capacity installed during last six months, will be invited for the first negotiations for awarding the contract.
 - If it is also the same then, the bidder with the higher Technical Score will be invited for negotiations for awarding the contract.
 - In case the technical score is also same the bidder whose annual turnover is more will be preferred.
 - Even if the criteria incidentally become the same, the turnover on similar works and thereafter machinery available for the work and then the clean track record will be considered for selection.

3.4.4 Correction of Arithmetical Errors

Provided that the bid is substantially responsive, the authority shall correct arithmetical errors on the following basis:

1. Only for admeasurement contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected.
2. If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
3. If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to this clause as stated above.
4. Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with RFP shall result in the rejection of the Bid.

3.5 Pre-Qualification Criteria

The Technical Evaluation Committee shall validate the Pre-Requisite documents as per mentioned below. In case, the Bidder does not meet any one of the conditions, the bidder shall be disqualified for processing further.

Sl. No.	Eligibility and Qualification Criteria	Compliance Requirements	Documentation
1.	<p>The Sole Bidder OR Consortium Sole Bidder</p> <ul style="list-style-type: none"> • Individual firm preferably empaneled with NREDCAP, Government of Andhra Pradesh and/or MNRE Channel Partners, are eligible.. • The bidder would be an experienced contractor having executed Turnkey solar power projects. He should have executed solar power projects in India for an cumulative capacity of at least 4 MWp, with minimum solar plant of 500 KW capacity, at a single or multiple locations, and • Max 2 members are allowed in a consortium • One of the consortium member should lead the consortium and should be registered in India with 	<ul style="list-style-type: none"> • Copy of Certificate of Companies A • Consortium agreement clearly stating the roles and responsibilities of each member • Articles of Association. <ul style="list-style-type: none"> • Registration with NREDCAP / MNRE/ Government Organization And/or Copy of Certificate of Incorporation/Registration if applicable. 	PQ_1

<p>Government Organization. In case of company under Companies Act 1956 / 2013 or as amended</p> <p>All the consortium members are equally responsible of fulfilling the contractual obligations and jointly & severally liable under this RFP for successful completion of this entire Project.</p> <ul style="list-style-type: none">○ Other consortium members should also be registered in India under Companies Act 1956 / 2013 with Government Organization○ Any individual party of the Consortium The bidder shall have executed grid connected solar project with Cumulative capacity of 4 MWp, with minimum solar plant of 500 KW, running successfully without any major problem for a minimum period of one year as on the date of submission of the Bid○ The consortium shall fulfil the eligibility criteria mentioned at PQ_3.○ They shall have to submit the agreement / deed fulfilling the relevant conditions of the eligibility criteria and responsibilities.		
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2.	<ul style="list-style-type: none"> • The average annual Turnover (TO) 16 Crore in Indian Rupees for last 3 audited financial years (2014-15, 2015-16, 2016-17). • For Consortium: <ul style="list-style-type: none"> ✓ Lead Bidder should have minimum 50% of TO ✓ One of the other member should have minimum 20% of TO <p>All members together should have meet TO requirement</p>	<ol style="list-style-type: none"> 1. Certificate from the statutory auditor / CA clearly specifying the average annual turnover for the specified years. 2. The Bid must be accompanied by the Audited Annual Reports of the Bidder (of each Member in case of a Consortium) for the last 03 (Three) financial years, preceding the year in which the Bid is made. 	PQ_2
3.	<p>The bidder may be an experienced contractor having executed Turnkey solar power projects. Bidder should have executed grid connected solar power project solar with Cumulative capacity of at least 4 MWp, with minimum one solar plant of 500 KW capacity, in India at a single or multiple locations and running successfully without any major problem for a minimum period of one year as on the date of submission of the Bid.</p>	<p>For each eligible work, bidder(s) should provide copy of work order:</p> <ol style="list-style-type: none"> i.completion certificate issued by the appropriate authority; ii.Performance certificate along with monthly generation details for past 12 months issued by the appropriate authority iii. no-dues certificate issued by the appropriate authority; <p>The Supporting documents from the licensing authorities i.e., Departments of industries, excise, customs, etc. along with production capacities achieved in the previous years shall be submitted. Further, the Supporting documents having designed and executed the solar power plants shall also be submitted.</p> <p>The bidders are advised to furnish the contact person details of the respective</p>	PQ_3

		projects for ascertaining the performance of those plants.	
4.	PAN CARD & IT Returns for the last 3 financial years (2015-16, 2016-17, 2017-18).	• Scanned copy of original document	PQ_4
5.	GST Registration Copy	• Scanned copy of original document	PQ_5
6.	The sole bidder OR the Lead bidder and each of the member of the Consortium should not be blacklisted by any Central / State Government Department or Central/State Public Sector Units (PSUs) in India as on the bid submission date	• Undertaking by the authorized signatory of bidder (In case of Consortium to be provided by each member) as per format given in Annexure 2, section 6.4	PQ_6
7.	Solvency Certificate: Bidder should have latest bank solvency certificate for amount of at least equivalent to financial bid value in the current financial year. Certificate should be issued after 31.03.2018 and should clearly state that Banker shall be extending necessary financial support required for execution of the subject work	Latest bank solvency certificate	PQ_7

Notes:

- The Evaluation Committee will review the bids of the short-listed bidders to determine whether the bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at Authority's discretion.
- Any bid failing to meet all of the above eligibility criteria shall be disqualified and will not be considered for technical evaluation.
- No relaxation will be given to any of the qualification criteria.
- Bidder should produce the documentary evidence for all the above. (Pre-qualification eligibility from the client / Government Agencies).
- In case the annual accounts for the latest financial year are not audited and therefore the Bidder cannot make it available, the Bidder shall give an undertaking to this effect from their directors and the statutory auditor shall certify the same. In such a case, the Bidder shall provide the Audited Annual Reports for 02 (Two) years preceding the year or from the date of incorporation if less than 2 years for which the Audited Annual Report is not being provided.

- Even though the bidders meet the above qualifying criteria, they are subject to be disqualified / debarred / suspended / blacklisted if they have:
 - Furnished false / fabricated particulars in the forms, statements and / annexures submitted in proof of the qualification requirements and/or
 - Not turned up for entering into agreement, when called upon.
 - Made misleading or false representations in the forms, statements and attachments in proof of the qualification requirements; and/or
 - Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc., and/or
 - Participated in the previous bidding for the same work and had quoted unreasonable bid prices (Too high or too low) and could not furnish rational justification to the Employer.
 - Even while execution of the work, if found that the work as awarded to the contractor based on false / fake certificate of experience, the contractor will be blacklisted and work will be taken over invoking clause 61 of PS to APSS.
- Bidder preferably is an Indian National and Goods manufactured in India and preference will be given to such bid in connection to the promotion of India's "Make in India" Campaign.
- The dealers or agencies are not allowed to participate in the tender.
- The bidders are required to quote for full capacity of the project and not allowed to quote for the part capacity.

The computation of Net Worth shall be based on unconsolidated audited annual accounts of the company. The company would be required to submit annual audited accounts for the last 3 financial Years along with a certificate, from the Chartered Accountant to demonstrate the fulfilment of the criteria.

- Net Worth : Paid Up share capital
- Add : Reserves
- Subtract : Revaluation Reserves
- Subtract : Intangible Assets.
- Subtract : Miscellaneous Expenditures to the extent not written off and carry forward losses

3.6 Technical Evaluation Framework

3.6.1 Minimum Cumulative Capacity Installed:

Cumulative Experience (in MW) of the Bidder in executing contracts of design, supply, installation, testing and commissioning grid-connected Solar Photovoltaic Systems/ Power Plants should be at least 4 MWp. The plants should be running successfully for at least for a minimum period of one year as on the date of submission of the Bid.

3.6.2 Minimum Size of Plant executed at single location:

The bidder should have executed contracts of design, supply, installation, testing and commissioning grid-connected Solar Photovoltaic Systems/ Power Plants with minimum capacity of 500 KW at a single location. The plants should be running successfully for at least for a minimum period of one year as on the

date of submission of the Bid.

3.6.3 Cumulative Capacity Installed in Floating Solar PV Plants by bidder:

Total Cumulative Experience (in MW) of the Bidder in executing contracts of design, supply, installation, testing and commissioning grid-connected floating Solar Photovoltaic Systems/ Power Plants. The plants should be running successfully for at least for a minimum period of 6(six) months as on the date of submission of the Bid.

3.6.4 Cumulative Capacity Installed in the World using the proposed technology:

Total Cumulative Capacity (in MW) installed in the World using the proposed technology. The plants should be running successfully for at least for a minimum period of 6(six) months as on the date of submission of the Bid.

4. Award of Contract

4.1 Notification of Award

Authority will notify the successful Bidder in writing by e-mail followed by courier. To be confirmed by the Bidder in writing by email followed by courier.

4.2 Signing of Contract

After the notification of award, Authority will issue Letter of Acceptance (LOA). Accordingly, a contract shall be signed between successful bidder and Authority or the agency designated by Authority. As an acceptance of the LOA, the Bidder shall sign and return back a duplicate copy of the LOA to Authority or the agency designated by the Authority. The bidder shall return the duplicate copy along with a Performance Bank Guarantee / Performance Security within 28 working days from the date of issuance of LOA.

On receipt of the Performance Bank Guarantee / Performance Security, Authority or the agency designated by Authority shall enter into a contract with the successful bidder.

4.3 Performance Bank Guarantee (PBG) / Performance Security:

Within twenty eight (28) working days from the date of issuance of LOA, the successful Bidder shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) / Performance Security to the Authority. The PBG shall be from a Nationalized Bank or a Scheduled Commercial Bank in the format prescribed in Section 9 - Annexure 5 (a), payable on demand, for the due performance and fulfillment of the contract by the bidder.

This Performance Bank Guarantee / Performance Security shall be for an amount equivalent to 5% of total contract value. PBG shall be invoked by Authority, in the event the Bidder:

- a. fails to meet the overall penalty condition as mentioned in RFP Volume II or any changes agreed between the parties,
- b. fails to perform the responsibilities and obligations as set out in the RFP to the complete satisfaction of Authority,
- c. Misrepresents facts / information submitted to Authority.

The performance bank guarantee / Performance Security shall be valid till satisfactory completion of Post Implementation Support. The performance bank guarantee / Performance Security may be discharged / returned by Authority upon being satisfied that there has been due performance of the obligations of the bidder under the contract. However, no interest shall be payable on the performance bank guarantee / Performance Security.

In the event of the Bidder being unable to perform the contract for whatever reason(s), Authority shall have the right to invoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of Authority under the contract in the matter, the proceeds of

the PBG shall be payable to Authority as compensation for any loss resulting from the bidder's failure to perform/comply its obligations under the contract.

Authority shall notify the bidder in writing of the exercise of its right to receive such compensation within 40 days, indicating the contractual obligation(s) for which the bidder is in default. Authority shall also be entitled to make recoveries from the bidder's bills, performance bank guarantee / Performance Security, or from any other amount due to him, an equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.

In case the project is delayed beyond the project schedule as mentioned in RFP Vol 2, the performance bank guarantee / Performance Security shall be accordingly extended by the Bidder till completion of scope of work as mentioned in RFP Volume II.

This Performance Bank Guarantee / Performance Security shall be valid till (90) days beyond the expiry of Ten (10) years O&M contract of the project. However, the warranties of the project are for Twenty Five (25) years which is the life period of the PV System.

On satisfactory performance and completion of the order in all respects and duly certified to this effect by the Project Coordinator, Contract Completion Certificate shall be issued and the PBG would be returned to the Bidder.

4.4 Warranty & Maintenance

- a. Bidder shall also provide complete maintenance support for all the proposed integrated solution as outlined in this RFP for a period of project duration [as stated in the Fact Sheet], as per the requirements provided in this RFP and all the acceptance tests are successfully concluded to the satisfaction of the client.
- b. During the warranty period, the bidder shall warrant that the goods supplied under the contract are new, unused of the most recent version/ models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The bidder further warrants that the goods supplied under this contract shall have no defects arising from design, materials or workmanship.
- c. Client or designated representatives of the bidder shall promptly notify successful bidder in writing of any claims arising under this warranty. Upon receipt of such notice, the bidder shall within the warranty period and with all reasonable speed, repair or replace the defective systems, without costs to client and within time specified and acceptable to client.
- d. If the successful bidder, having been notified, fails to remedy the defect(s) within the period specified in the contract, client may proceed to take such reasonable remedial action as may be necessary, at the successful bidder's risk and expense and without prejudice to any other rights, which client may have against the bidder under the contract.
- e. During the comprehensive warranty period, the successful bidder shall provide all product(s) and documentation updates, patches/ fixes, and version upgrades within 15 days of their availability and should carryout installation and make operational the

same at no additional cost to client.

- f. The successful bidder hereby warrants that;
- The implemented integrated solution / Project represents a complete, integrated solution/Project meeting all the requirements as outlined in the RFP and further amendments if any and provides the functionality and performance, as per the terms and conditions specified in the contract.
 - The proposed integrated solution/ Project shall achieve parameters delineated in the technical specification / requirement.
 - The successful bidder shall be responsible for warranty services from licensors of products included in the systems.
 - The successful bidder undertakes to ensure the maintenance of the acceptance criterion / standards in respect of the systems / project during the warranty period.

4.5 Failure to agree with the Terms & Conditions of the RFP

Failure of the successful bidder to agree with the Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the award, in which event Authority may award the contract to the next best value bidder or call for new bids. In such a case, Authority shall invoke the PBG and / or forfeit the EMD.

4.6 Miscellaneous.

1. The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts in Tirupati shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or in connection with the Bidding Process.
2. The Authority, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to;
 - (a) suspend and/ or cancel the Bidding Process and/ or amend and/ or supplement the Bidding Process or modify the dates or other terms and conditions relating thereto;
 - (b) consult with any Bidder in order to receive clarification or further information;
 - (c) qualify or not to qualify any Bidder and/ or to consult with any Bidder in order to receive clarification or further information;
 - (d) retain any information and/ or evidence submitted to the Authority by, on behalf of, and/ or in relation to any Bidder; and/ or
 - (e) Independently verify, disqualify, reject and/ or accept any and all submissions or other information and/ or evidence submitted by or on behalf of any Bidder.
3. It shall be deemed that by submitting the Bid, the Bidder agrees and releases the Authority, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/ or performance of any obligations hereunder, pursuant hereto and/ or in connection with the Bidding Process and waives, to the fullest extent permitted by applicable laws, any and all rights and/ or claims it may have in this respect, whether actual or

- contingent, whether present or in future.
4. Obtaining the required statutory licenses like Consent to Establish and Consent to operate approvals from the statutory authorities (if required / directed by Client).
 5. Authority may, at its discretion reserves the right to extend the RFP submission date and amending for which the RFP is invited.
 6. Authority reserves the right to accept / reject any or all RFP(s)/Proposals and to annul the process without assigning any reason thereto.
 7. Authority reserves the right to define the requirements and issue another RFP/s / Tenders as may be deemed necessary.
 8. The Authority reserves the right to verify the particulars furnished by the bidders independently and also reserves the right to reject any proposal without assigning any reason thereof in the interests of effective implementation of the project.
 9. After uploading the technical/financial bid, the original DDs/BG are to be submitted by the bidder to the concerned MD, TSCCL so as to reach before opening of the pre-qualification bid. Failure to furnish DDs/BG, entail rejection of the bid and forfeiture of the EMD. Similarly if any of the certificates, documents etc. furnished by the bidder are found to be false/fabricated/bogus, the bidder will be black listed and the EMD forfeited.
 10. The Authority may extend the dates for issue and receipt of RFP by issuing an amendment in which case all rights and obligations of the Managing Director, Tirupati Smart City Corporation Limited.

5. Annexure 1 – Template for Pre-Bid Queries

Bidder shall submit all pre-bid queries in excel in the following format along with the name and details of the origination submitting the queries.

SL #	RFP Volume, Section	RFP page no	Content in the RFP	Clarification sought
Note:				
a. In case of queries with regard to RFP document, please mention the section/clause as may be applicable.				
b. In case of queries with regard to functional or technical requirements, please give reference of the corresponding FR/TR				

6. Formats for submission of Pre-Qualification Bid

6.1 Pre-Qualification Bid Covering Letter

Dated: DD/MM/YYYY

To,
The Managing Director,
Tirupati Smart City Corporation Limited,
C/o Tirupati Municipal Corporation,
Tilak Road, Tirupati – 517501, Chittoor District,
Andhra Pradesh, India

Sub: **“DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI”**

Ref: RFP No. <<.....>> dated <<>>

Dear Sir,

With reference to your **“DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI”**, we hereby submit our Pre-qualification bid, Technical Bid and Financial Bid for the same.

We hereby declare that:

- a. We hereby acknowledge and unconditionally accept that the Authority can at its absolute discretion apply whatever criteria it deems appropriate, not just limiting to those criteria set out in the RFP and related documents, in short listing of Agency for providing services.
- b. We have submitted EMD of Indian Rupees[] and Bid Processing fee of Indian Rupees[]
- c. We hereby declare that all information and details furnished by us in the Bid are true and correct, and all documents accompanying such application are true copies of their respective originals.
- d. We agree to abide by our offer for a period of 120 (One Hundred and Twenty) days from the date of opening of pre- qualification bid prescribed by **Authority** and that we shall remain

- bound by a communication of acceptance within that time.
- e. We have carefully read and understood the terms and conditions of the RFP and the conditions of the contract applicable to the RFP. We do hereby undertake to provision as per these terms and conditions.
 - f. In the event of acceptance of our bid, we do hereby undertake:
 - i. To supply the products and commence services as stipulated in the RFP document
 - ii. To undertake the project services for entire contract period from the date of signing of the contract as mentioned in the RFP document.
 - iii. We affirm that the prices quoted are inclusive of design, development, delivery, installation, commissioning, training, providing facility management and handholding support, and inclusive of all out of pocket expenses, taxes, levies discounts etc.
 - g. We do hereby undertake, that, until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and notification of award of contract, shall constitute a binding contract between us.
 - h. We understand that the **Authority** may cancel the bidding process at any time and that **Authority** is not bound to accept any bid that it may receive without incurring any liability towards the bidder.
 - i. We fully understand and agree to comply that on verification, if any of the information provided in our bid is found to be misleading the selection process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so

In case of any clarifications please contact _____ email at

Thanking you,

Yours sincerely,

(Signature of the Lead bidder)

Printed Name Designation

Seal

Date:

Place:

Business Address:

6.2 Company profile

A. Brief company profile (required for both bidder and consortium member)

Sl. No.	Particulars	Description or details
1.	Name of Bidder	
2.	Legal status of Bidder (Registered Contractor, company, Pvt. Ltd., LLP etc.)	
3.	Main business of the Bidder	
4.	Registered office address	
5.	Incorporation / Registration date and number	
6.	GST number	
7.	PAN details	
8.	Primary Contact Person (Name, Designation, address, mobile number, fax, email)	
9.	Secondary Contact Person (Name, Designation, address, mobile number, fax, email)	
10.	EMD details	
11.	Role in Consortium (if applicable)	Brief scope of work in the consortium

B. Certificate of Incorporation / Registration (required for both bidder and Consortium members)

C. Financial Turnover

The financial turnover of the company is provided as follows:

	2015 - 16	2016 - 17	2017- 18
Annual Turnover			

Copy of audited financial statements or declaration from the appointed statutory auditor/CA to be provided as proof of the financial turnover

Positive net worth, as on the last date of latest audited financial year.

Copy of self-certified statutory auditor certificate / CA to be submitted along with the bid

Fiscal Criteria of the Bidder

Bidder Type	Net Worth	Financial Year
Single Entity Bidder		
Consortium Member1		
Consortium Member2		

Fiscal Data

Description of Fiscal Information	Amount / Value (In ₹, - Crore)		
	2015-16	2016-17	2017-18
Statement of Fiscal Position			
Information from Balance Sheet			
Total Assets			
Total Liabilities			
Total Equity / Net Worth (NW)			
Securities (Stocks, Bonds, Mutual Funds, etc.,)			
Insurance Policies (Cash surrender value)			
Current Assets			
Current Liabilities			
Working Capital			
Information from Income Statement			
Total Revenue			
Profits Before Taxes			
Cash Flow Information			
Cash Flow from Operating Activities			

Source of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments

Serial Number	Source of Finance	In ₹, - Crore
1		
2		
3		

Instructions:

- The Bidder/Member (in case of a Consortium) shall attach copies of the balance sheets, financial statements and Annual Reports for the last financial year preceding the Bid Due Date. The financial statements shall:
 - reflect the financial situation of the Bidder or Consortium Member;
 - be audited by a statutory auditor;
 - be complete, including all notes to the financial statements; and
 - Correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).
- Net Worth shall mean (Subscribed and Paid-up Equity + Reserves) less (Revaluation reserves + miscellaneous expenditure not written off + reserves not available for distribution to equity shareholders).

- 3 Financial Year will be the latest completed financial year, preceding the bidding. In case the Bid Due Date falls within 3 (three) months of the close of the latest financial year.
- 4 In the case of a Consortium, a copy of the Jt. Bidding Agreement shall be submitted.
- 5 The Bidder shall provide an Auditor's Certificate specifying the Net Worth of the Bidder and also specifying the methodology adopted for calculating such Net Worth.

Turnover* of the bidder's company in last three financial years

Description	2015-16	2016-17	2017-18	Remarks
Turnover (₹ in Cr.)				
Profit after Tax (₹ in Cr.)				

* Certified copies from a registered chartered accountant shall be enclosed.

Names of three Clients from different departments to whom similar works are done in the last three financial years and to whom reference may be made by the Authority regarding the bidder's performance for timely completion of delivery, installation and after sales service support:

Description	Client1	Client 2	Client 3	Remarks
Name and Designation of Contact person				
Complete Address of the Buyer				
Telephone Number / Mobile Number / Fax				
E-mail Address				

Special Accreditations or Awards:

Other details - (If bidder wants to furnish relate to their capabilities)

Declaration:

(Signature, name and designation of the authorised signatory with seal and Date)

6.3 Declaration of Non-Blacklisting

(On ₹ 100/- Stamp Paper).

Declaration is to be made by Lead Bidder:

Subject: Self Declaration of not been blacklisted in response to the **REQUEST FOR PROPOSAL FOR “DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI”**

Ref: RFP No. <<.....>> **dated** <<>>

Dear Sir,

I M/s. (Sole Applicant/Lead Member/Other Member/s), (the names and addresses of the registered office) hereby certify and confirm that we or any of our promoter/s / director/s are not barred or blacklisted by any state government or central government / department / agency /PSU in India or abroad from participating in Project/s, either individually or as member of a Consortium as on

We further confirm that we are aware our Application for the captioned Project would be liable for rejection in case any material misrepresentation is made or discovered with regard to the requirements of this RFP at any stage of selection and / or thereafter during the Contract Period. Dated this.....Day of, 201....

Name of the Applicant

.....
Signature of the Authorised Person

.....
Name of the Authorised Person

Printed Name Designation **Seal**

Date:

Place:

Business Address:

Note:

To be executed separately by all the members in case of consortium

6.4 Declaration for Consortium Member:

(To be provided on the Company letter head)

{Place}

{Date}

To,

[]

Subject: Self Declaration of not been blacklisted in response to the **REQUEST FOR PROPOSAL FOR “DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI”**

Ref: RFP No. <<.....>> **dated** <<>>

Dear Sir,

We confirm that our company or firm, _____, is currently not blacklisted in any manner whatsoever by any of the State or UT and or Central Government in India on any ground including but not limited to indulgence in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

(Signature of the Consortium Member)

Printed Name Designation

Seal Date:

Place: Business Address:

6.5 No Deviation Certificate

This is to certify that our offer is exactly in line with your RFP enquiry (including amendments) no. _____ dated _____. This is to expressly certify that our offer contains no deviation either Technical (including but not limited to Scope of Work, Business Requirements Specification, Functional Requirements Specification, Hardware Specification and Technical Requirements Specification) or Financial in either direct or indirect form.

(Authorized Signatory)

Signature:

Name:

Designation:

Address:

Seal:

Date:

6.6 Total Responsibility Certificate

This is to certify that we undertake the total responsibility for the defect free operation of the proposals per the requirement of the RFP for the duration mentioned in all the volumes of the RFP.

(Authorized Signatory)

Signature:

Name:

Designation:

Address:

Seal:

Date:

**6.7 Self-certificate for Project execution experience and Litigation History
(In Bidding Entity's Letter Head)**

This is to certify that <Name of the Bidding entity> has been awarded with < Name of the Project > as detailed under:

Name of the Project	
Client's Name, Contact no. and Complete Address	
Contract Value for the bidder (in Indian Rupees)	
Current status of the project (Completed/Ongoing)	
Activities completed by bidding entity as on bid submission date <i>(N.B Only relevant activities as sought in the Criteria to be included)</i>	
Value of Work completed for which payment has been received from the client.	
Date of Start	
Date of Completion	
References(Name and contact details of the authorized client officials issued the project executed certifications are to be referred)	

We further confirm that we are aware our proposal for the Floating Solar for implementation of Smart Solutions in Tirupati would be liable for rejection in case any material misrepresentation is made or discovered with regard to the requirements of this RfP at any stage of selection and/or thereafter during the term of the contract.

Dated this.....Day of, 201.....

(Authorized Signatory) Signature:

Name:

Designation:

Bidding entity's name Address:

Seal:

Date:

Details of works on hand and, yet to be completed as on the date of submission of the RFP and works for which Tenders / RFPs has been submitted are to be furnished.

A) Existing Commitments on ongoing works:

Sl.No	Name of work	Address of Agt. Concluding authority	Agt. No. & Date	Value of contract	Stipulated period of completion	Value of work done so far.	Balance Value of works to be completed	Anticipated date of completion	Updated value of balance work
1	2	3	4	5	6	7	8	9	10

Attach certificates issued by the Executive Engineer concerned and countersigned by Superintending Engineer / respective authorized representative from client indicating the balance work to be done, and likely period of completion.

**Signature of the Bidder
(Authorised Signatory)**

B) Details of works for which Tenders/ RFPs are submitted [awarded / likely to be awarded]

Sl. No.	Name of work	Address of Agt. Concluding authority	Estimated value of work	Stipulated period of completion	Date on which tender was submitted	Present stage of Tender.
1	2	3	4	5	6	7

**Signature of the Bidder
(Authorised Signatory)**

C) Litigation History

Bidder's Name: _____

Date: DD/MM/YYYY

Joint Venture Member's Name _____

RFP No. and Title: _____

Page _____ of _____ pages

Non-Performed Contracts			
<input type="checkbox"/> Contract non-performance did not occur since 1 st January [insert year]			
<input type="checkbox"/> Contract(s) not performed since 1 st January [insert year]			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and INR equivalent)
		Contract Identification: Name of Employer: Address of Employer: Reason(s) for non-performance:	
Pending Litigation			
<input type="checkbox"/> No pending litigation			
<input type="checkbox"/> Pending litigation			

Information on litigation history in which Bidder is the Petitioner.

S. No	Case No. / Year	Court where filed.	Subject Matter / Prayer in the case.	Respondents i.e., SE / CE	Present Stage.
1	2	3	4	5	6

(To be provided by the Bidder/each Member/Associate for any material non-performance or contractual non-compliance in past projects, contractual disputes and litigation/ arbitration in the last 5 years preceding the Bid Due Date)

Sl. No	Name	Forum and Counterparty With Contract Identification	Brief Description of the matter	Estimated financial liability	Current Status of Litigation	Orders passed against the Bidder/Member

Signature of the Bidder

6.8 Certification for availing subsidy

(on Rs. 100 Judicial Stamp Paper)

This is to certify that I _____ (Name of Bidder) have applied for **REQUEST FOR PROPOSAL FOR “DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI”** and have availing the subsidiaries or grant from following State / Central agency / MNRE in this regard.

- 1.
- 2.
- 3.

I hereby also agree not to claim any subsidy or grant in future either from MNRE or from any other State / Central agency for the same.

Place:

Signature of Bidder

Date:

Name:

7. Annexure 3 – Formats for Submission of the Technical Bid

7.1 Technical Bid Check-List

Sl. No	Checklist Item	Compliance (Yes/No)	Page No. and Section No. in the Bid
1	Technical Bid Letter		
2	Credential summary		
3	Project Citations and Self-certifications, as applicable		
4	Detailed proposal		
5	Project plan		
6	Compliance to Requirement (Technical / Functional Specifications)		
7	Manufacturers'/Producers' Authorization Form		
8	Anti-Collusion certificate		
9	Non-disclosure agreement		

Signature of the Bidder

7.2 Technical Bid Covering Letter

To,

[]

Subject: REQUEST FOR PROPOSAL FOR “DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI”

Ref: RFP No. <<.....>> dated <<>>

Dear Sir,

I (in case of single bidder) or We, <<name of the undersigned Bidder and consortium members>>, having read and examined in detail all the bidding documents in respect of **REQUEST FOR PROPOSAL FOR “DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI”** do hereby propose to provide our services as specified in the bid submitted by us.

It is hereby confirmed that I / We are entitled to act on behalf of our company / corporation / firm / organization and empowered to sign this document as well as such other documents, which may be required in this connection.

We declare that all the services shall be performed strictly in accordance with the RFP documents.

We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to Authority, is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the department in its evaluation process. We also confirm that we shall not attract conflict of interest in principle.

We hereby declare that in case the contract is awarded to us, we shall submit the contract Performance bank guarantee / Performance Security in the form prescribed at Annexure 5

(a) of Section 9 of the RFP Volume I.

We hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.

We understand that our bid is binding on us and that you are not bound to accept a Bid you receive. This bid is valid for 120 (One Hundred and Twenty) days after opening of technical bid. We shall extend the validity of the bid if required by Authority.

Thanking you,
Yours sincerely,

(Signature of the Lead Bidder)

Printed Name Designation

Seal

Date:

Place:

Business Address:

7.3 Credential Summary

Sl. No.	Project Name	Client Name	Client Type	Project Value (in Indian Rupees)	Project Components	Documentary evidence provided (Yes or No)	Project Status (Completed or Ongoing or Withheld)
1							
2							
3							
4							
5							
6							
7							

- *Client type – Indicate whether the client is Government or PSU or Private*
- *Documentary evidence provided – Indicate the documentary evidence provided with the detailed project credential like work order or purchase order or completion certificate or letter of appointment*
- *Project Status – Completed (date of project completion) or Ongoing (project start date)*

Signature of the Bidder

7.4 Bidder's Experience - Client Citations

Prime Bidder or Consortium member is requested to furnish the credentials in the following format for both Pre-qualification and Technical criterion. All credentials should be followed by relevant documentary proof.

Name of the Project & Location	
Client's Name and Complete Address	
Narrative description of project Contract Value for the bidder (in Indian Rupees)	
Date of Start	
Date of Completion	
Activities undertaken by prime bidder or consortium member	

Note: If the project is ongoing, bidder must clearly specify which of the stages/phases/milestones are completed and which are ongoing and at what stage of completion and produce a self- certificate as per the format provided in Section 6.7.

Signature of the Bidder

7.5 Project Plan

A **Detailed Project Plan** covering break-up of each phase into the key activities, along with the start and end dates must be provided as per format given below.

Activity-wise Timelines							
Sl. No.	Detailed Work Break down structure	Month wise Program					
		1	2	3	4	5	...
	Project Plan						
1	Activity 1						
1.1	Sub-Activity 1						
1.2	Sub-Activity 2						
2							
2.1							
2.2							
3							
3.1							
4							

Activity-wise Timelines

Sl. No.	Item of Activity	Month wise Program
----------------	-------------------------	---------------------------

Note: The above activity chart is just for the purpose of illustration. Bidders are requested to provide detailed activity & phase wise timelines for executing the project with details of deliverables & milestones as per their bid.

7.6 Conduct and Anti-Collusion Certificate

(To be notarized on Non-Judicial Stamp Paper of Rs.100)

I / We hereby certify and confirm that in the preparation and submission of our Bid for **REQUEST FOR PROPOSAL FOR “DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI** against the RFP issued by Authority, that

I / We undertake that, in competing for the contract, I / we will strictly observe the laws against fraud and corruption in force in India namely Prevention of Corruption Act 1988.

I / We declare that our organization or our partners in the Consortium have never been blacklisted by any department / units of Government of India or State Governments or Union Territories in India for any of the reasons of committing serious misconducts or have been charged with committing criminal action(s), or dissatisfaction with the performance of our services, or violation of any terms and conditions of the Agreement. In case if such misconducts are found to have been committed by us with documentary evidences, our contract can be summarily cancelled with the forfeiture of the security and performance guarantees we have executed with the Authority.

I / We hereby certify and confirm that in the preparation and submission of our Bid, I / we have not acted in concert or in collusion with any other Bidder or other person(s) and also not done any act, deed or thing which is or could be regarded as anti-competitive.

I / We further confirm that I / We have not offered nor will offer any illegal gratification in cash or kind to any person or agency in connection with the Bid.

I / We further acknowledge that on any later date, if it was found that I / We indulged in any of the corrupt activities mentioned in Prevention of Corruption Act 1988, the Authority has the right to take necessary legal action.

Dated thisDay of, 2017
Place:

.....
(Name of the Bidder)

.....
(Signature of the Bidder / Authorised Person)

.....
(Name of the Authorised Person)

Seal

Business Address:

8. Annexure 4 – Formats for Submission of the Financial Bid

Price Schedules

In order to receive consistent and responsive bids, it is recommended that Employers include a PREAMBLE to the Price Schedules indicating exactly what is required of bidders when completing and pricing their bids.

The following Preamble is given as an example only. Employers are responsible for ensuring that the Preamble included in the bidding documents is complete and appropriate for the contract in question.

PREAMBLE

General

1. The Price Schedules are divided into separate Schedules as follows:
Schedule No. 1 Plant and Equipment (including Mandatory Spare Parts) Supplied from Abroad
Schedule No. 2 Plant and Equipment (including Mandatory Spare Parts) Supplied from within the Employer's Country
Schedule No. 3 Local Transportation
Schedule No. 4 Installation Services
Schedule No. 5 Operation & Maintenance for a period of 10 Years
Schedule No. 6 Grand Summary
Schedule No. 7 Recommended Spare Parts
2. The Schedules do not generally give a full description of the plant and equipment to be supplied and the services to be performed under each item. Bidders shall be deemed to have read the Technical Specifications and other sections of the bidding documents and reviewed the Drawings to ascertain the full scope of the requirements included in each item prior to filling in the rates and prices. The entered rates and prices shall be deemed to include for the full scope as aforesaid, including overheads and profit.
3. If bidders are unclear or uncertain as to the scope of any item, they shall seek clarification in accordance with the Instructions to Bidders in the bidding documents prior to submitting their bid.

Pricing

4. Prices shall be filled in indelible ink, and any alterations necessary due to errors, etc., shall be initialled by the Bidder.

As specified in the Conditions of Contract, prices shall be fixed and firm for the duration of the Contract.

5. Bid prices shall be quoted in the manner indicated and in the currencies specified in the Instructions to Bidders in the bidding documents.

For each item, bidders shall complete each appropriate column in the respective Schedules, giving the price breakdown as indicated in the Schedules.

Prices given in the Schedules against each item shall be for the scope covered by that item as detailed in the Technical Specifications, Drawings or elsewhere in the bidding documents.

6. Where there are errors between the total of the amounts given under the column for the price breakdown and the amount given under the Total Price, the former shall prevail and the latter will be corrected accordingly.

Where there are errors between the total of the amounts of Schedule Nos. 1 to 4 and the amount given in Schedule No. 5 (Grand Summary), the former shall prevail and the latter will be corrected accordingly.

Where there are discrepancies between amounts stated in figures and amounts stated in words, the amounts stated in words shall prevail.

7. Payments will be made to the Contractor in the currency or currencies indicated under each respective item.
8. Items left blank will be deemed to have been included in other items. The TOTAL for each Schedule and the TOTAL of the Grand Summary shall be deemed to be the total price for executing the Facilities and sections thereof in complete accordance with the Contract, whether or not each individual item has been priced.
9. When requested by the Employer for the purposes of making payments or part payments, valuing variations or evaluating claims, or for such other purposes as the Employer may reasonably require, the Contractor shall provide the Employer with a breakdown of any composite or lump sum items included in the Schedules.

Schedules of Rates and Prices

Schedule No. 1. Plant, Equipment, and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code 1	Qty. (1)	Unit Price ²		Total Price ² (1) x (3)
				FOB or FCA (2)	CIF or CIP (3)	
TOTAL (to Schedule No. 6. Grand Summary)						

Code	Country

Name of Bidder _____

Signature of Bidder _____

¹ Bidders shall enter a code representing the country of origin of all imported plant and equipment.

² Specify currency.

**Schedule No. 2. Plant, Equipment, and Mandatory Spare Parts Supplied
from Within the Employer's Country**

Item	Description	Qty. <i>(1)</i>	EXW Unit Price ¹ <i>(2)</i>	EXW Total Price ¹ <i>(1) x (2)</i>
TOTAL (to Schedule No. 6. Grand Summary)				

Name of Bidder	_____
Signature of Bidder	_____

Schedule No. 3. Local Transportation, Insurance and Other Incidental Services

Item	Description	Qty. <i>(1)</i>	Unit Price ¹		Total Price ¹ <i>(1) x (2)</i>
			Local Currency Portion <i>(2)</i>	Foreign Currency Portion <i>(optional)</i>	
TOTAL (to Schedule No. 6. Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

Schedule No. 4. Installation Services

Item	Description	Qty.	Unit Price ¹		Total Price ¹	
			Foreign Currency Portion <i>(2)</i>	Local Currency Portion <i>(3)</i>	Foreign <i>(1) x (2)</i>	Local <i>(1) x (3)</i>
		<i>(1)</i>				
TOTAL (to Schedule No. 6. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

Schedule No. 5. Operation & Maintenance for a period of 10 years

Item	Description	Qty.	Unit Price ¹		Total Price ¹	
			Foreign Currency Portion <i>(2)</i>	Local Currency Portion <i>(3)</i>	Foreign <i>(1) x (2)</i>	Local <i>(1) x (3)</i>
		<i>(1)</i>				
TOTAL (to Schedule No. 6. Grand Summary)						

Name of Bidder	_____
Signature of Bidder	_____

Schedule No. 6. Grand Summary

Dated: DD/MM/YYYY

To,

The Managing Director,

Tirupati Smart City Corporation Limited, C/o Tirupati Municipal Corporation,
Tilak Road, Tirupati – 517501, Chittoor District, Andhra Pradesh, India

Sub: Financial Bid for **“REQUEST FOR PROPOSAL FOR “DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI”**

Ref: Your RFP Notification No. _____ dated _____

Dear Sir,

Having gone through this RFP document and having fully understood the Scope of the Project and the Scope of Work for the Project as set out by AUTHORITY in the RFP. I / we are pleased to inform that I / we would deploy the following resources for undertaking the entire activities involved in this RFP No.____. We also quote the amount that we would be charging from the Authority. The quote is inclusive of all applicable taxes and charges.

Item	Description	Total Price ¹	
		Foreign	Local
	Total Schedule No. 1. Plant, Equipment, and Mandatory Spare Parts Supplied from Abroad		
	Total Schedule No. 2. Plant, Equipment, and Mandatory Spare Parts Supplied from Within the Employer’s Country		
	Total Schedule No.3. Local Transportation, Insurance and Other Incidental Services		
	Total Schedule No. 4. Installation Services		
	Total Schedule No.5-O&M Charges for 10 Years		
TOTAL (to Bid Form)			
		Name of Bidder _____	
		Signature of Bidder _____	

I / we have reviewed all the terms and conditions of the RFP and would undertake to abide by all the terms and conditions contained therein. I / we hereby declare that there are and shall be no deviations from the stated terms in the RFP Document.

Yours faithfully,
For and on behalf of (*Name of Bidder*)

*Duly signed by the Authorised Signatory of the Bidder
(Name, Designation, Address and official stamp)*

Date : DD/MM/YYYY

Schedule No. 7. Recommended Spare Parts

Item	Description	Qty. <i>(1)</i>	Unit Price		Total Price <i>(1) x (2) or(3)</i>
			CIF or CIP (foreign parts) <i>(2)</i>	EXW (local parts) <i>(3)</i>	

Name of Bidder	
Signature of Bidder	

9. Annexure 5 (a) - Performance Bank Guarantee

Ref:_____

Date_____

Bank Guarantee No. _____

<Name>

<Designation>

<Address><Phone Nos.><Fax Nos.><Email id>

Whereas, <<name of the firm and address>> (hereinafter called "Implementing Agency") has undertaken, in pursuance of contract no. <Insert Contract No.> dated. <Date> to provide Implementation services for <<name of the assignment>> to Tirupati Smart City Corporation Limited (hereinafter called "the Authority")

And whereas it has been stipulated by in the said contract that the bidder shall furnish you with a bank guarantee by a recognized bank for the sum specified therein as security for compliance with its obligations in accordance with the contract;

And whereas we, <Name of Bank> a banking company incorporated and having its head/registered office at <Address of Registered Office> and having one of its office at <Address of Local Office> have agreed to give the supplier such a bank guarantee.

Now, therefore, we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of Indian Rupees<Insert Value> (Rupees <Insert Value in Words> only) and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of Indian Rupees<Insert Value> (Rupees <Insert Value in Words> only) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the bidder before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the Implementing Agency shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This Guarantee shall be valid until <<Insert

Date>>) Not withstanding anything

contained herein:

I. Our liability under this bank guarantee shall not exceed Indian Rupees<Insert Value> (Rupees <Insert Value in Words> only).

II. This bank guarantee shall be valid up to <Insert Expiry Date>)

III. It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this bank guarantee that we receive a valid written claim or demand for payment under this bank guarantee on or before <Insert Expiry Date>) failing which our liability under the guarantee will automatically cease.

Date _____

Place _____

Signature _____

Witness _____

Printed name _____

(Bank's common seal)

10. Annexure 5 (b) – Bank Guarantee for Bid Security / Earnest Money Deposit

To,

<Name>

<Designation>

<Address>

<Phone Nos.>

<Fax Nos.>

<Email id>

Whereas <<Name of the bidder>> (hereinafter called 'Implementing Agency') has submitted the bid for Submission of RFP <<RFP Number>> dated <<Date>> for <<Name of the assignment>> (hereinafter called "the Bid") to <<Authority>>.

Know all Men by these presents that we <<... >> having our office at <<Address>> (hereinafter called "the Bank") are bound unto the <<Authority>> (hereinafter called "the Authority") in the sum of Indian Rupees<<Amount in figures>> (Rupees <<Amount in words>> only) for which payment well and truly to be made to the said Authority, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this <<Date>>.

The conditions of this obligation are:

1. If the Bidder having its bid withdrawn during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its bid by the Authority during the period of validity of bid
 - (a) Withdraws his participation from the bid during the period of validity of bid document; or
 - (b) Fails or refuses to participate in the subsequent Bid process after having been short listed;

We undertake to pay to the Authority up to the above amount upon receipt of its first written demand, without the Authority having to substantiate its demand, provided that in its demand the Authority will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to <<insert date>> and including <<extra time over and above mandated in the RFP>> from the last date of submission and any demand in respect thereof should reach the Bank not later than the above date.

NOTWITHSTANDING ANYTHING CONTAINED HEREIN:

I. Our liability under this Bank Guarantee shall not exceed Indian Rupees<<Amount in figures>> (Rupees <<Amount in words>> only)

II. This Bank Guarantee shall be valid up to <<insert date>>)

III. It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this Bank Guarantee that we receive a valid written claim or demand for payment under this Bank Guarantee on or before <<insert date>>) failing which our liability under the guarantee will automatically cease.

(Authorized Signatory of the Bank)

Seal:

Date:

11. Annexure 6 – Non-Disclosure Agreement

WHEREAS, we the undersigned Bidder, _____, having our principal place of business or registered office at __, are desirous of bidding for RFP No. <<>> dated <<DD-MM-2018>> **REQUEST FOR PROPOSAL FOR “DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI”** (hereinafter called the said 'RFP') to the “Tirupati Smart City Corporation Limited”, hereinafter referred to as ‘Authority’

And,

WHEREAS, the Bidder is aware and confirms that the Authority’s business or operations, information, application or software, hardware, business data, architecture schematics, designs, storage media and other information or documents made available by the Authority in the RFP documents during the bidding process and thereafter, or otherwise (confidential information for short) is privileged and strictly confidential and or proprietary to the Authority,

NOW THEREFORE, in consideration of disclosure of confidential information, and in order to ensure the Authority’s grant to the Bidder of specific access to Authority’s confidential information, property, information systems, network, databases and other data, the Bidder agrees to all of the following conditions.

It is hereby agreed as under:

1. The confidential information to be disclosed by the Authority under this Agreement (“Confidential Information”) shall include without limitation, any and all information in written, representational, electronic, verbal or other form relating directly or indirectly to processes, methodologies, algorithms, risk matrices, thresholds, parameters, reports, deliverables, work products, specifications, architecture, project information, security or zoning strategies & policies, related computer programs, systems, trend analysis, risk plans, strategies and information communicated or obtained through meetings, documents, correspondence or inspection of tangible items, facilities or inspection at any site to which access is permitted by the Authority.
2. Confidential Information does not include information which:
 - a. the Bidder knew or had in its possession, prior to disclosure, without limitation on its confidentiality;
 - b. information in the public domain as a matter of law;
 - c. is obtained by the Bidder from a third party without any obligation of

- confidentiality;
- d. the Bidder is required to disclose by order of a competent court or regulatory authority;
- e. Is released from confidentiality with the written consent of the Authority.

The Bidder shall have the burden of proving hereinabove are applicable to the information in the possession of the Bidder.

3. The Bidder agrees to hold in trust any Confidential Information received by the Bidder, as part of the Bid process or otherwise, and the Bidder shall maintain strict confidentiality in respect of such Confidential Information, and in no event a degree of confidentiality less than the Bidder uses to protect its own confidential and proprietary information. The Bidder also agrees:
 - a. to maintain and use the Confidential Information only for the purposes of bidding for this RFP and thereafter only as expressly permitted herein;
 - b. to only make copies as specifically authorized by the prior written consent of the Authority and with the same confidential or proprietary notices as may be printed or displayed on the original;
 - c. to restrict access and disclosure of Confidential Information to their employees, agents, consortium members and representatives strictly on a "need to know" basis, to maintain confidentiality of the Confidential Information disclosed to them in accordance with this clause; and
 - d. To treat Confidential Information as confidential unless and until Authority expressly notifies the Bidder of release of its obligations in relation to the said Confidential Information.
4. Notwithstanding the foregoing, the Bidder acknowledges that the nature of activities to be performed as part of the Bid process or thereafter may require the Bidder's personnel to be present on premises of the Authority or may require the Bidder's personnel to have access to software, hardware, computer networks, databases, documents and storage media of the Authority while on or off premises of the Authority. It is understood that it would be impractical for the Authority to monitor all information made available to the Bidder's personnel under such circumstances and to provide notice to the Bidder of the confidentiality of all such information.

Therefore, the Bidder shall disclose or allow access to the Confidential Information only to those personnel of the Bidder who need to know it for the proper performance of their duties in relation to this project, and then only to the extent reasonably necessary. The Bidder will take appropriate steps to ensure that all personnel to whom access to the Confidential Information is given are aware of the Bidder's confidentiality obligation. Further, the Bidder shall procure that all personnel of the Bidder are bound by confidentiality obligation in relation to all proprietary and Confidential Information received by them which is no less onerous than the confidentiality obligation under this agreement.

5. The Bidder shall establish and maintain appropriate security measures to provide for the safe custody of the Confidential Information and to prevent unauthorized access to it.
6. The Bidder agrees that upon termination or expiry of this Agreement or at any time during its currency, at the request of the Authority, the Bidder shall promptly deliver to the Authority the Confidential Information and copies thereof in its possession or under its direct or indirect control, and shall destroy all memoranda, notes and other writings prepared by the Bidder or its Affiliates or directors, officers, employees or advisors based on the Confidential Information and promptly certify such destruction.
7. Confidential Information shall at all times remain the sole and exclusive property of the Authority. Upon completion of the Bid process and or termination of the contract or at any time during its currency, at the request of the Authority, the Bidder shall promptly deliver to the Authority the Confidential Information and copies thereof in its possession or under its direct or indirect control, and shall destroy all memoranda, notes and other writings prepared by the Bidder or its Affiliates or directors, officers, employees or advisors based on the Confidential Information within a period of sixty days from the date of receipt of notice, or destroyed, if incapable of return. The destruction shall be witnessed and so recorded, in writing, by an authorized representative of the Authority. Without prejudice to the above the Bidder shall promptly certify to the Authority, due and complete destruction and return. Nothing contained herein shall in any manner impair rights of the Authority in respect of the Confidential Information.
8. In the event that the Bidder hereto becomes legally compelled to disclose any Confidential Information, the Bidder shall give sufficient notice and render best effort assistance to the Authority to enable the Authority to prevent or minimize to the extent possible, such disclosure. Bidder shall not disclose to a third party any Confidential Information or the contents of this RFP without the prior written consent of the Authority. The obligations of this Clause shall be satisfied by handling Confidential Information with the same degree of care, which the Bidder applies to its own similar Confidential Information but in no event less than reasonable care.

For and on behalf of:

(BIDDER)

Authorized Signatory
Name:
Designation:

Office Seal:
Place:
Date :

12. Annexure 7 - Consortium Agreement

DRAFT MEMORANDUM OF UNDERSTANDING EXECUTED BY MEMBERS OF THE CONSORTIUM

[On Non-judicial stamp paper of Indian Rupees 100 duly attested by notary public]

This Memorandum of Understanding (MoU) entered into this day of *[Date]* *[Month]* 2018 at *[Place]* among____(hereinafter referred to as "___") and having office at *[Address]*, India, as Party of the First Part and _____(hereinafter referred to as "___") and having office at *[Address]*, as Party of the Second Part and _____ (hereinafter referred to as "___") and having office at *[Address]*, as Party of the Third Part.

The parties are individually referred to as Party and collectively as Parties.

WHEREAS Tirupati Smart City Corporation Limited has issued a Request for Proposal dated *[Date]* (RFP) from the Applicants interested in **REQUEST FOR PROPOSAL FOR "DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI"** for
Authority:

AND WHEREAS the Parties have had discussions for formation of a Consortium for bidding for the said Project and have reached an understanding on the following points with respect to the Parties' rights and obligations towards each other and their working relationship.

AS MUTUAL UNDERSTANDING OF THE PARTIES, IT IS HEREBY AGREED AND DECLARED AS FOLLOWS:

i. The purpose of this Agreement is to define the principles of collaboration among the Parties to: Submit a response jointly to Bid for the **REQUEST FOR PROPOSAL FOR "DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI"** as a Consortium.

- a. Sign Contract in case of award.
- b. Provide and perform the supplies and services which would be ordered by the Authority pursuant to the Contract.

This Agreement shall not be construed as establishing or giving effect to any legal entity such as, but not limited to, a company, a partnership, etc. It shall relate solely towards the Authority for **REQUEST FOR PROPOSAL FOR “DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI”.**

- ii. for and related execution works to be performed pursuant to the Contract and shall not extend to any other activities
- iii. The Parties shall be jointly and severally responsible and bound towards the Authority for the performance of the works in accordance with the terms and conditions of the BID document, and Contract.
- iv. ----- (Name of Party) shall act as Lead Partner of the Consortium. As such, it shall act as the coordinator of the Party’s combined activities and shall carry out the following functions:
 - a. To ensure the technical, financial and administrative co-ordination of the work package
 - b. To lead the contract negotiations of the work package with the Authority.
 - c. The Lead partner is authorized to receive instructions and incur liabilities for and on behalf of all Parties.
 - d. In case of an award, act as channel of communication between the Authority and the Parties to execute the Contract
- v. That the Parties shall carry out all responsibilities as Developer in terms of the Project Agreement.
- vi. That the broad roles and the responsibilities of each Party at each stage of the Bidding shall be as below:

Party A: _____ Party B: ____ Party C: _____
- vii. That the Parties affirm that they shall implement the Project in good faith and shall take all necessary steps to see the Project through expeditiously.
- viii. That this MoU shall be governed in accordance with the laws of India and courts in Andhra Pradesh shall have exclusive jurisdiction to adjudicate disputes arising from the terms herein.

In witness whereof the Parties affirm that the information provided is accurate and true and have caused this MoU duly executed on the date and year above mentioned.

(Party of the first part) (Party of the second part) (Party of the third part)

Witness:

- i. _____
- ii. _____

13 Annexure 8 - Format for Power of Attorney to Authorize Signatory

POWER OF ATTORNEY

[To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney.]

We, M/s._(name of the firm or company with address of the registered office) hereby constitute, appoint and authorize Mr. or Ms._ (Name and residential address) who is presently employed with us and holding the position of____, as our Attorney to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to our RFP for the Project_ (name of the Project), including signing and submission of the RFP response, participating in the meetings, responding to queries, submission of information or documents and generally to represent us in all the dealings with Client or any other Government Agency or any person, in connection with the works until culmination of the process of bidding till the Project Agreement is entered into with _____(Client) and thereafter till the expiry of the Project Agreement.

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

(Add in the case of a Consortium)

Our firm is a Member or Lead bidder of the Consortium of____,____and ____.

Dated this the_day of_2018

(Signature and Name of authorized signatory)

(Signature and Name in block letters of all the remaining partners of the firm Signatory for the Company)

Seal of firm Company

Witness 1:

Witness 2:

Notes:

- a. To be executed by all the members individually.*
- b. 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.*

14 Annexure 9 - Format for Power of Attorney for Lead bidder of Consortium

[To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney]

Whereas _____ has invited RFP response for _____ (Name of the Project)

Whereas, the Members of the Consortium comprising of M/s.____, M/s.____, M/s.____ and M/s.____ (the respective names and addresses of the registered offices to be given) are interested in bidding for the Project and implementing the same in accordance with the terms and conditions contained in the RFP Documents.

Whereas, it is necessary for the members of the Consortium to designate one of them as the lead member with all necessary power and authority to do, for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium’s RFP response for the Project.

NOW THIS POWER OF ATTORNEY WITNESSETH THAT

We, M/s.____ and M/s.____ and M/s.____ hereby designate M/s. ____ being one of the members of the Consortium, as the lead member of the Consortium, to do on behalf of the Consortium, all or any of the acts, deeds or things necessary or incidental to the Consortium’s RFP response for the Project, including submission of the RFP response, participating in meetings, responding to queries, submission of information or documents and generally to represent the Consortium in all its dealings with Client or any other Government Agency or any person, in connection with the Project until culmination of the process of bidding till the Project Agreement is entered into with Client and thereafter till the expiry of the Project Agreement.

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

Dated this the _____ day of _____ 2018

(Signature)

_____ [Name in Block Letter of Executant] *[Seal of Company]*

Witness 1

Witness 2

Notes:

*To be executed by all the members individually, in case of a Consortium.
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.*

15 Annexure 10 – Manufactures / Producers Authorization Form

Date:

To

[]

Subject : Manufacturer’s Authorization Form

Ref.: RFP No.<<----->>, Dated: <<--/--/-->>

Dear Sir,

We _____ [Name of the Vendor] who are established and reputable manufacturers of _____ [List of Goods] having factories or product development centers at the locations _____ or as per list attached, do hereby authorize. _____ [Name and Address of the Bidder] to bid, negotiate and conclude the contract with you against RFP No. _____, dated: _____ for the above goods manufactured or developed by us.

We hereby extend, our warranty for the goods supplied by the bidder and or maintenance or support services for the products against this invitation for bid by _____ [Name of the Bidder] as per requirements and for the duration of contract as specified in this RFP.

Products or technology quoted are neither end-of-sale nor end-of-life as on the date of installation and commissioning and are not end-of-support till the successful completion of O&M period of the project.

We have not have been blacklisted by any state / Central Government Department or Central/State PSU’s.

We have not filed for bankruptcy and should be profitable for at least last 2 consecutive financial years.

Thanking you,
Yours faithfully,

(Signature)

(Name in Block Letter) [Seal of Company]

For and on behalf of: _____ [Name of the OEM]

Authorised Signatory

Name:

Designation:

Place:

Date:

Note: Please attach resolution of Board of Directors/Power of Attorney for the authorized signatory

SCHEDULE OF PLACES OF TEST AND INSPECTION

The BIDDER shall indicate the item of equipment of Supply, name of the MANUFACTURER or SUB-CONTRACTOR and place of test and inspection as shown below:

Item of Equipment	MANUFACTURER OR SUB-CONTRACTOR	Place of Test and Inspection
-------------------	-----------------------------------	---------------------------------

SIGNATURE	:
DESIGNATION	:
COMPANY	:
COMPANY SEAL	:
DATE	:

16 PROFORMA OF GUARANTEE FOR EQUIPMENT PERFORMANCE

The Bidder hereby guarantees the requirements of this specification. If any of the requirements of the guarantees given are not fulfilled, the Authority has the right to reject the equipment, and if capacity, performance and efficiency obtained during acceptance tests falls short of that guaranteed by the bidder, the bidder hereby affirms that such deficiency will be made good by rectifying / replacing the defective parts. All the replaced parts shall be removed from the site. While the facility for making good the deficiency will be normally given once, the purchaser is entitled to reject the equipment in case of repeated failure to meet the guarantee as per the specification.

Seal of the Company :

Name of the Firm :

Signature of the Bidder :

Designation :

Date :

Seal of the Bidder Signature, Designation and address of the Bidder.

17 SCHEDULE OF DEVIATIONS FROM THE SPECIFICATION

Bidder shall carefully state below all points which are not in accordance with the enclosed specification

Sl. No	Chapter Deviation	Section
--------	----------------------	---------

The Bidder hereby certifies that the above mentioned are the only deviations from the specification No.

Seal of the Bidder

Signature, Designation and address of the Bidder.

18 SCHEDULE OF TESTS

Seal of the Bidder

Signature, Designation and address of the Bidder.

19 List of proposed Sub-Contractors (if applicable)

Sl. No.	System / Sub-System/ Item Activity	Proposed Sub-Contract [Full Name & Address]
1.		
2.		
3.		
4.		
5.		

20 Annexure 11 – Undertaking from Sub-Contractor

[on the letterhead of the subcontractor firm]

Letter No.: _____

Date:

To

Managing Director,
Tirupati Smart City Corporation Limited (TSCCL),
Tirupati Municipal Corporation, 13-29-M9-1-00, Tilak Road, East Tirupati,
Chittoor District, Andhra Pradesh. Pin Code : 517501

REQUEST FOR PROPOSAL FOR DESIGN, PROCUREMENT, SUPPLY, INSTALLATION, TESTING, COMMISSIONING, OPERATION AND MAINTENANCE FOR 10 [TEN] YEARS OF 4 MWp GRID CONNECTED FLOATING TYPE SOLAR PHOTO VOLTAIC POWER PROJECT ON RESERVOIR IN CHITTOOR DISTRICT ALONG WITH GRID CONNECTING EQUIPMENT INCLUDING ASSOCIATED ELECTRICAL AND CIVIL WORKS UNDER IMPLEMENTATION OF SMART CITY MISSION IN TIRUPATI

Sub : Consent of association with _____ as sub-contractor for the referred RFP.

Dear Sir,

1. I, the undersigned, confirm my agreement to associate with M/s. (hereinafter referred to as "lead bidder") as the "Sub-Contractor" to submit the proposal and work for the above-captioned project.
2. I authorize the lead bidder to include my company's experience and expertise in the above referenced project proposal and/or forward my profile to the Authority for the proposal and represent me on all contractual aspects of this proposal.
3. I confirm my interest and availability to work on the projects awarded, should the lead bidder be successful in the RFP.
4. I confirm that to the best of my belief and knowledge, I have not been blacklisted by any government / Semi-government body or donor agency.

Yours sincerely,
Authorised Signatory of the subcontractor.

Volume 2: Scope of Work including Functional & Technical Specifications

Background

Anthropogenic activities, with emissions from fossil fuels at the core, contribute to a variety of climate change impacts. These impacts range from diminished food security, increased frequency of natural disasters, extinction of species, escalated spread of vector borne diseases, rise in sea-level and accelerated erosion of coastal zones (Barros et al., 2015; Harley et al., 2006; Pearson & Dawson, 2003). The Intergovernmental Panel on Climate Change (IPCC) indicates that the net damage costs of climate change are likely to be significant and to increase over time (ESCT, 2016).

India's National Action Plan on Climate Change (NAPCC), in its vision articulates the need to create a prosperous but a prudent society that thrives on responsible and sustainable innovation (GoI, 2008). Amongst the guiding principles of NAPCC is the deployment of "appropriate technologies for both adaptation and mitigation of greenhouse gas emissions extensively as well as at an accelerated pace" (GoI, 2008).

This guiding principle also forms the core of the national action plan and advocates a shift in India's energy mix for electricity generation, thereby increasing the share of renewable energy.

India, located in the equatorial sun belt of the earth, receives an annual global radiation, within the range of 1600 to 2200 kWh/sq.m. The equivalent energy potential is about 6,000 million GWh of energy per year (CERC, 2015). Utility-scale solar PV power plants, however, have a large spatial footprint. Large tracts of land are required to undertake any multi-megawatt scale energy generation. This puts a restriction on (required) land, which usually has multiple uses ranging from agriculture and ancillary functions to supporting habitats and industries. These multiple uses also put an economic premium on land and provide the central motivation behind the development of land-neutral solar PV power plants with some level of innovation in design, and optimum use of available natural resources, the aforementioned issues can be easily avoided. A land neutral solar power plant further claims *additionally* over the contemporary ground mounted solar PV power plants. Improvements in operating conditions of the solar PV panels (in case of land-neutral solar PV power plant), along with optimization of available solar resource, results in not only an improvement in the capacity utilization factor (CUF) but also may yield substantial water savings which is otherwise lost to the atmosphere because of regular cleaning of solar modules and evaporation losses from the reservoir.

The land-neutral solar PV power plant, therefore, envisages demonstrating the several benefits of adopting this technology and broadly captures the motivation behind two national missions, namely, 'National Solar Mission' and 'National Water Mission'.

Technical specifications

1. FOREWORD

- 1.1. India is laying great emphasis on reducing the country's carbon footprint. Utility-scale solar PV power plants, however, have a large spatial footprint. Large tracts of land are required to undertake any megawatt scale energy generation. This puts a restriction on (required) land, which usually has multiple uses ranging from agriculture and ancillary functions to supporting habitats and industries. These multiple uses also put an economic premium on land and provide the central motivation behind the development of floating/land-neutral solar PV power plant(s) at raw water reservoir (RWH). The energy generated by grid connect solar photovoltaic system will be utilized to feed electrical loads during daytime.
- 1.2. The motivation behind the development of 4 MWp land-neutral solar PV power plants is threefold, namely
 - [a] avoiding the displacement of land that could be used for agricultural expansion;
 - [b] reduction in evaporation losses from reservoir, a definite positive for the plant;
 - [c] accumulation of benefits from additional energy yield, largely due to the result of cooling (of solar PV modules) from water, consistent with the negative temperature coefficient performance for PV modules.

2. SCOPE

- 2.1. This specification provides the generic requirement for grid connected floating solar photovoltaic (SPV) system capacity of 4 MWp.
- 2.2. The specification covers general and technical requirements for design, manufacturing, testing, supply, installation and commissioning of Grid connect floating solar generating system.
- 2.3. Tenderer must have experience in designing, planning and executing and maintaining (or currently under execution) at least 4 MWp capacity grid connected projects in India as investor, consultant or integrator.
- 2.4. Selected tenderer agrees to set up and commission floating solar plant within 9 months from date of signing of LOA. If the tenderer fails to commission the sanctioned project within specified time, as per milestones fixed, Liquidated damages as indicated would be levied.

- 2.5. All components of the Floating Solar PV plant shall be in accordance with technical specifications given in relevant IS/ IEC Standards. The design and commissioning also shall be as per latest IS/ IEC/ BIS standards.
- 2.6. State of art plant efficiency monitoring and data logging system will be an integral part of the solar power plant. TSCCL should be able to do diagnostics & monitor all plant efficiency related parameters.
- 2.7. Metering and grid connectivity to 132/33/11 kV substation of the solar PV system would be the responsibility of the tenderer in accordance with the prevailing guidelines of the concerned DISCOM and (if available by the time of implementation) TSCCL could facilitate connectivity as and wherever possible; however, the entire responsibility lies solely with tenderer.
- 2.8. Bidder shall carry out the detailed site survey, study the bathymetric chart of the water body, shall apprise himself regarding information such water properties, depth of reservoir, variation in the depth of water reservoir, water flow rate, climatic conditions, requirement statutory approvals etc., before submitting the bid. Claims and objections due to ignorance of site condition will not be considered after submission of the bid.
- 2.9. Operation and Maintenance of the Solar PV plant for 10 years will be the responsibility of tenderer.
- 2.10. The bidder shall be liable to supply annually the minimum number of units of electricity as per clause 2.12.
- 2.11. Tenderer will submit technical details like Generation estimate, preliminary system design used along with the tentative bill of material such as panel, inverter make etc.
- 2.12. The bidder shall guarantee an output per annum of 56,00,000 (Fifty-Six lakh) units in the first year (Considering Annual Average GHI of 5.11 kWh/m²/day, with a degradation of 0.75% (zero point seven five percent) per annum, failing which the bidder shall pay for the difference in units between the guaranteed output and the actual output, at the rate of twice the unit price prevailing at that point in time.
- 2.13. Cabling, LT and HT shall be in the scope of tenderer and to be done as per IEC rules. Tenderer will follow all internationally applicable electrical safety norms in installation of solar plant and during operation and maintenance of the plant.
- 2.14. Tenderer shall take permission from Chief Electricity Inspector for setting up the plant.

2.15. Tenderer shall take permission from concerned authorities (Local/state/central) if required under any Laws, rules and regulations.

3. REFERENCE STANDARDS

3.1. The table below provides reference standards for solar photovoltaic modules

IS: 12834:1989 (reaffirmed 2000)	Solar Photovoltaic Energy Systems – Terminology
IEC: 61215 Ed 2 or latest/eqv. IS Std	Crystalline silicon terrestrial photovoltaic (PV) modules – Design qualification and type approval
IEC: 61730 Pt 1 & 2	Photovoltaic (PV) module safety qualification -Part 1: Requirements for construction, Part 2: Requirements for testing
IEC:60904-1(2006)	Photovoltaic Devices- Part-I: Measurement of Photovoltaic current-Voltage Characteristic
IS: 9000	Basic environmental testing procedure for Electronic and electrical items.
IEC:60068	Environmental testing

3.2. The table below provides technical standards for Balance of Systems (BoS).

Item / System	Applicable BIS /Equivalent IEC Standard Or MNRE Specifications	
	Standard Description	Standard Number
Solar PV Systems: Charge Controller/MPPT units Power Conditioners/ Inverters**including MPPT and Protections	Environmental Testing Efficiency Measurements	IEC 60068-2 (1,2,14,30) / Equivalent BIS Std. IEC 61683 / IS 61683 IEC 60068-2 (1, 2, 14, 30) / Equivalent BIS Std.
Cables	General Test and Measuring Method PVC insulated cables for working voltage up to and including 1100 V and UV resistant for outdoor installation	IEC 60227 / IS 694 IEC 60502 / IS 1554 (Pt. I & II)
Switches/Circuit Breakers /Connectors	General Requirements Connectors –safety A.C. /D.C.	IEC 60947 part I, II, III / IS 60947 Part I, II, III EN 50521
Junction Boxes / Enclosures for Inverters / Charge Controllers / Luminaries	General Requirements	IP 65/66(for outdoor) IP 54(for indoor)

Note: Latest version of the standards shall be referred to.

4. SYSTEM DESCRIPTION

- 4.1. Floating solar photovoltaic (SPV) grid connect system shall consist of mainly the following:
 - 4.1.1. Solar photovoltaic panels
 - 4.1.2. Flotation unit for mounting of solar panels and PCU
 - 4.1.3. Module mounting structure
 - 4.1.4. Mooring and anchoring system
 - 4.1.5. Junction boxes
 - 4.1.6. Power conditioning unit (PCU)
 - 4.1.7. Import and export metering
 - 4.1.8. Cable and other accessories
 - 4.1.9. Transformer
- 4.2. The module mounting structure shall be installed over an appropriately designed modular and pre-fabricated flotation device with appropriate buoyancy to support the weight of at least one solar panel and one person per solar panel. The floatation device shall be designed for simple mechanical on-site installation. There shall be no requirement of welding, masonry or complex machinery at the installation site.
- 4.3. The PV array converts the light energy of the sun to DC power. The module mounting structure shall be used to hold the module in position. The DC power shall be converted to AC by PCU to supply AC loads. Solar power shall be integrated and synchronized with the Grid.
- 4.4. DC distribution board/ combiner shall be provided in between solar array and PCU. It shall have DC Disconnect/MCCB of suitable rating for connection and disconnection of array section. Type II Surge Arrestor should be incorporated for surge protection. It shall have meters for measuring the array voltage and array current. Appropriate IP protection shall be provided. In case of string inverters, if the requirements served by DC distribution board are fully taken care of by string inverter(s), then firms' proposal (if any) for elimination of DC distribution board from the system design, can be considered.

Note: All items including cables are in vendor's scope.
- 4.5. AC distribution board shall be provided in between PCU and loads. It shall have an integrated energy meter, voltmeter and ammeter. As for energy, generally the parameter of interest shall be the aggregate energy output of inverter(s) fed into the individual AC distribution board(s). Party must offer the facility for recording the energy output data of each inverter (wherever multiple inverters are feeding into an AC distribution board). Class I + II (as per IEC 62305) 100 kA Surge Arrestor should be incorporated for protection against surges.
- 4.6. No electrical storage batteries shall be required and accordingly, these are not included in the scope of work. In case, energy storage is required appropriate pumped hydro storages would be set-up.
- 4.7. The system shall comply with IEC 62446.

5. GENERAL REQUIREMENTS

- 5.1. Total capacity of Solar PV power plant to be installed is 4 MWp. The total 4 MWp shall be distributed on the available water reservoir(s). The final locations will be decided during the pre-bid meeting. The measurement of cabling, to be adjudged by the bidder.
- 5.2. Solar panels and array junction boxes shall be installed on shade free areas while the PCU and distribution boards, etc. shall be housed inside an appropriate canopy. In case of string inverters, the client shall carefully weigh the option of indoor vs outdoor installation and shall be finalized during design stage. The installation of SPV modules in raw water reservoirs must not negatively impact the ecology of the reservoir.
- 5.3. Array structure of PV yard and all electrical equipment's such as PCU, inverters, etc. shall be grounded properly. All PCU/inverters should be enclosed in appropriate housing that are rated IP 65/66. Towards this end, the contractor will supply and install an adequate number and appropriate size of IS: 3043 – 1987 compliant earthing kits; at least one each for AC circuit, DC circuit and lighting protection system. The complete earthing job and connecting with the existing earthing grid is in vendor's scope.
- 5.4. Suitable marking shall be provided on the bus for easy identification.
- 5.5. PV modules may be connected in series up to the maximum allowed operating voltage of the PV modules and the PV inverter whichever is lower.
- 5.6. The reverse current of blocking diodes (connected in series), if required/provided, shall be rated for 2 X VOC STC of the PV string. Reverse blocking diode would not be required if inverter has reverse polarity protection feature.
- 5.7. All cables that are submerged or in contact with water shall be water proof.
- 5.8. Proper sealing arrangements at the points of cables entering the enclosures should be incorporated. Although not mandatory, manufacturers are however encouraged that the cables entering into the enclosures be sealed with modular EPDM based cable sealing and protection system based on multi-diameter technology.
- 5.9. Access to the Solar PV Power Plant shall be through a walkway

6. TECHNICAL REQUIREMENTS

- 6.1. The DC output from the modules shall be fed to array junction box and the strings are paralleled at sub Main & Main junction boxes. Then PCU shall

convert DC energy produced by the solar array to AC energy. The AC power output of the inverter shall be fed to the AC distribution board (metering panel & isolation panel), which also houses the energy meter. The AC output of grid-connect SPV system should be paralleled with electric power supply from the grid.

- 6.2. The system shall automatically wake-up in the morning and supply power, provided there is sufficient solar energy and the grid voltage and frequency are in range.
- 6.3. When the grid voltage and/or frequency go out of pre-set range, the inverter shall be immediately disconnected from the grid. The inverter will reconnect after a pre-determined time when the grid is back in the range (which should not be more than 5 minutes).
- 6.4. Array to inverter voltage drop shall be less than 3% at the maximum power output of the array.
- 6.5. In case of central inverters adequate space and ventilation for the inverter shall be provided. In case of string inverter, the same shall be installed within a range of 100 m from the solar PV array.
- 6.6. For safety reasons, PV inverter system shall be disconnected from the network following a fault or loss of supply on the power network.
- 6.7. The performance and generation data shall be recorded using a data logger. The monitoring system shall comprise of the following main components:
 - 6.7.1. PCU will log the inverter performance data and transmit the same to the data logger. It shall also monitor basic parameters like power generated, etc.
 - 6.7.2. Data logger shall gather information and monitor the performance of the inverter. It shall also support measurements from the external sensors. Data Logger shall also monitor the Solar Insolation and Temp of Array Yard.
 - 6.7.3. Data logging system/software shall enable automatic long-term storage of measured data from PV plant. It shall allow visualization, monitoring, commissioning and service of the installation. The data logger shall be web enabled. It should be possible to access the data logger with any standard web browser like internet explorer, google chrome, safari etc. from any PC/Mac using client's private LAN and for this purpose, relevant software/hardware will be supplied by the contractor. In addition to the web portal, it should also be possible to see the data directly from the data logger. This is basically for inverter display; Inverter must have display where the

client can see and change required parameter directly on the inverter. The software for access/ visualization of data from data logger should also be provided by the Implementing Agency. Necessary executable files, if any, will be required to be given free of cost by the Implementing Agency on a CD/ any other storage device along with lifetime license (if applicable).

6.7.4. **Communication interface:** The system should offer Ethernet port and LAN/ WAN interface to facilitate remote monitoring of the system. All necessary components, cables, software and one (01) laptop are in vendor's scope. Monitoring of inverters from any PC on client's local LAN must be possible.

6.7.5. Monitoring mechanism to include the following

- 6.7.5.1. Remote monitoring and digital metering unit
- 6.7.5.2. Built-in meter and data logger to monitor plant performance through external computer
- 6.7.5.3. String monitoring unit (SMU; to be provided in case of central inverters) if installed it should be UV resistant in accordance with UL 746C suitable for outdoor application. The mechanical impact resistance of IK 07 or better as per IEC 62262 or equivalent standard must be ensured.

6.8. **Sizing of the SPV system:** 4 MWp floating SPV system.

6.9. **SPV module:**

6.9.1. Individual Solar PV Module should be of minimum capacity 250 Wp for 60-cell and 300 Wp for 72 cell conforming to IEC: 61215 Ed 2/ IS14286 (Standard for PV module design qualification and type approval) and latest, IEC: 61730 – I :2007 (Standard of requirements for construction), IEC: 61730 – II : 2007 or equivalent IS (Standard of requirements for testing and safety qualifications), manufactured in a plant certified under ISO 9001 : 2008 and type tested by an accredited national/international testing laboratory. The Solar PV Module should be made from mono/poly crystalline Silicon Solar Cell connected in series. Cut cells should not be used. Photovoltaic Modules shall comply with the specified latest edition of IEC/ equivalent BEC standards as specified below: -

Standard	Description
IEC 61215-1 Ed. 1.0	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements
IEC 61215-1-1 Ed. 1.0	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules
IEC 61730-1 Ed. 2.0	Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction
IEC 61730-2 Ed.2	Photovoltaic (PV) module safety qualification - Part 2: Requirements for

	testing
IEC 61701 Ed.2	Salt mist corrosion testing of photovoltaic (PV) modules (Applicable for coastal and marine environment)
IEC 62716 Ed.1	Photovoltaic (PV) modules - Ammonia corrosion testing
IEC TS 62804-1 Ed.1	Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation - Part 1: Crystalline silicon

6.9.2. Individual solar PV modules must be Potential Induced Degradation (PID) free. Double-glass module will be preferred, which replaces the traditional polymer back sheet with heat strengthened glass. This typology of solar module has no metal frame and is Potential Induced.

Degradation (PID) free because it requires no module level grounding, which eliminates the cause of PID. However, the supplied modules have to be PID free.

6.9.3. SPV modules of similar output with 5 Wp tolerance in single string shall be employed to avoid array mismatch losses.

6.9.4. SPV module shall contain crystalline high power silicon solar cells. The solar cell shall have surface anti-reflective coating to help to absorb more light in all weather conditions.

6.9.5. Photo-electric conversion efficiency of SPV module shall not be less than 15.5%.

6.9.6. Fill factor of the module shall not be less than 72%.

6.9.7. Each module shall have low iron tempered glass front for strength and superior light transmission. It shall also have tough multi-layered polymer back sheet / heat strengthened glass for environmental protection against moisture and provide high voltage electrical insulation. Transitivity of glass shall not be less than 91%.

6.9.8. Module junction box and terminal block (weather resistant) shall be designed for long life outdoor operation in harsh environment.

6.9.9. SPV module shall be highly reliable, light weight and shall have a service life of more than 25 years. SPV modules shall have a limited power loss of not more than 10% of nominal output at the end of 10 years and of not more than 20% of nominal output at the end of 25 years.

6.9.10. The output of any supplied module shall not be less than the rated output and shall not exceed the rated power by more than 5Wp. Each module, therefore, has to be tested and rating displayed.

6.9.11. Whenever more than one module is required, identical modules shall be used.

6.9.12. The module shall perform satisfactorily in relative humidity upto 95% and temperature between -10oC and +85oC.

6.9.13. The solar modules shall have suitable encapsulation and sealing arrangements to protect the silicon cells from the environment. The encapsulation arrangement shall ensure complete moisture proofing for the entire life of solar modules. The terminal block shall be of Noryl rubber with weatherproof design (min. IP 65) and shall have a provision for

opening /replacing the cables if required.

6.9.14. SPV Modules shall be tested and approved/certified as per above standards. Qualification Test certificate to be submitted with supply which can be from any NABL/ IEC /MNRE/BIS accredited/recognized testing/calibrating laboratories/Solar Energy Centre. Bidder to provide certification proof/verification of Testing Lab along-with certificates.

6.9.15. All the SPV modules to be tested for performance at vendor's works.

6.9.16. The performance of PV module (minimum 1% of total PV modules) at STC conditions must be tested and approved by one of the IEC / NABL / MNRE / BIS accredited / recognized Testing / calibrating Laboratories / Solar Energy Centre. Bidder to provide certification proof / verification of Testing Lab along-with certificates.

6.10. **Markings:** Each module would carry the following clear and indelible markings.

6.10.1. Name, monogram or symbol of manufacturer of PV module

6.10.2. Name of manufacturer of Solar Cell

6.10.3. Type or model number

6.10.4. Serial number

6.10.5. Polarity of terminals or leads (colour coding is permissible)

6.10.6. Open-circuit voltage

6.10.7. Operating voltage

6.10.8. Maximum system voltage for which module is suitable

6.10.9. Operating current

6.10.10. Short-circuit current

6.10.11. Date and place of manufacture

6.10.12. Weight of module

6.10.13. Module Wp tolerance

6.11. RFID Tag: Each PV module must use a RF identification tag (RFID), which must contain the following information. The RFID can be inside or outside the module laminate, but must be able to withstand harsh environmental conditions. Four (04) compatible RFID readers shall also be provided by the successful bidder along with supply of panels.

6.11.1. Name of the manufacturer of PV Module

6.11.2. Name of the Manufacturer of Solar cells

6.11.3. Month and year of the manufacture (separately for solar cells and module)

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

6.11.5. I-V curve for the module

6.11.6. Peak Wattage, I_m , V_m and FF for the module

6.11.7. Unique Serial No and Model No of the module

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

6.11.9. Name of the test lab issuing IEC certificate

6.11.10. Other relevant information on traceability of solar cells and modules as per ISO 9000 series

6.12. Flotation device:

- 6.12.1. The floatation device should be prefabricated and designed for simple mechanical on-site installation. There shall be no requirement of welding, masonry or complex machinery at the installation site.
- 6.12.2. The floatation device should be modular, such that the installed assembly can be easily expanded and scaled up if required. Each module/combination of maximum two modules should support at least one solar panel. All modules should be standardized and independently created.
- 6.12.3. The floatation device should be manufactured from appropriate thermoplastic. The grade of thermoplastic used should have a good Environmental Stress Crack Resistance (ESCR) and a combination of hardness and impact strength (ASTM D1693). The thermoplastic used should be safe for use when in contact with drinking water and meet requirements stipulated in standard IS 15410:2003/BS6920 or equivalent.
- 6.12.4. The material of the floatation device would be UV stabilized.
- 6.12.5. The material used shall be halogen, silicon free conforming to RoHS directive 2002/95/EC
- 6.12.6. The floatation device should be chemically resistant to acid, lye, petrol and mineral oil & partially resistant to benzene.
- 6.12.7. The floatation device, when installed in the raw water reservoir, should not restrict the process of gas exchange across the air water interface. In order to facilitate this, the design of the floatation device should be such that appropriate voids, greater than at least 30% of all area covered by the floatation device, are provided and form an integral part of the floatation device design.
- 6.12.8. The floatation device should be designed such that it arrests evaporation and facilitates in evaporation loss mitigation. To this end, the vendor should provide appropriate cover of not less than 60% from the floatation device and not less than 90%, when combined with solar panels, of all area covered by the floatation device. Appropriate vapour escape vents should be provided for each floatation device and solar panel assembly for the purpose of maintaining BOD of the water body.
- 6.12.9. The design of the floatation device should incorporate appropriately sized walking platforms for regular maintenance and inspection. The walking platform shall have a continuous surface. Maximum 2-inch gap is allowed between the floats. The minimum width of the walking platform shall be 400 mm. The buoyancy, on an average, of the floatation device should be greater than 100 kg/m² of area covered by the floatation device.
- 6.12.10. The floatation device shall be of life not less than 25 years and of a minimum thickness of 3 mm. The bidder shall furnish a warranty for the mentioned period.
- 6.12.11. The floatation device should be re-processable and recyclable at the end of its useful life.
- 6.12.12. Float system should be designed to withstand the maximum wind speed

of the location and shall be able to withstand the weight of O&M Personal, carrying Tools, the forces of nature such as wind/water flow etc.

6.12.13. The material used for floatation device shall be chemically resistant to acid, lye, petrol and mineral oil and also partially resistant to benzene does not contaminate the water of the reservoir.

6.12.14. The floatation device, when installed in the raw water reservoir, shall not restrict the process of gas exchange across the air water interface. In order to facilitate this, the design of the floatation device shall be such that appropriate voids and shall form an integral part of the floatation device design.

6.12.15. The floatation device shall have minimum strength at ambient temperature of the site location or minimum range of (+) 50 to (-) 10 deg C, while it shall be designed to have safety factor of minimum 1.15 on extreme conditions.

6.12.16. The floating system shall be tested for aerodynamic design by subjecting to wind tunnel test imposed from all wind directions on real scale and real angle.

6.12.17. PV fixation system shall be of proven design and subjected to Mechanical test to withstand unit failure conditions under static and fatigue conditions for wind speeds to withstand the maximum wind speed of the area.

6.12.18. The SPD shall follow the below mentioned standard not limited to any other standard applied from time to time.

Standard	Description
ASTM D1693 (or equivalent ISO Standards)	Test for Environmental Stress Cracking of HDPE
ISO16770	Stress cracking resistance of HDPE
IS 15410:2003 or equivalent BS 6920:2014	Test for drinking water compatibility, Material safe for drinking water
RoHS directive 2002/ 95/EC	Test for Restriction of Hazardous Substances
ASTM D790 (or equivalent ISO Standards)	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ISO 178	Plastics -- Determination of flexural properties
ASTM D638, ISO 527	Standard Test Method for Tensile Properties of Plastics
ASTM D695, ISO 604	Standard Test Method for Compressive Strength Properties of Plastics
ISO16770	Full Notch Creep Test (FNCT)
ASTM D2565 (or equivalent ISO Standards)	Standard Practice for Xenon-Arc Exposure of Plastic intended for outdoor Applications
ASTM D4329 (or equivalent ISO Standards)	Standard Practice for fluorescent ultraviolet (UV) lamp apparatus exposure of plastics
ASTM G7/G7M-11 (or equivalent ISO Standards)	Standard Practice for atmospheric environmental exposure testing of non-metallic materials

ASTM D1693-15 (or equivalent ISO Standards)	Standard Test Method for Environmental stress cracking of Ethylene plastics
ASTM D5397-07(2012)	Standard Test Method for Environmental stress crack resistance of polyolefin geo-membrane using Notched Constant tensile load test
IS 15410:2003 or equivalent BS6920	Containers for Packaging of natural mineral water and package drinking water

6.13. Module mounting structure:

- 6.13.1. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from SPV panels.
- 6.13.2. The structure shall be designed to allow easy replacement of any module by authorized personnel and shall be in line with the site requirements.
- 6.13.3. The array structure shall be made of Annealed Aluminum alloy/ Stainless steel SS 316 of suitable size.
- 6.13.4. The support structure, design and foundation shall normally be designed to withstand wind speed upto 200 kmph.
- 6.13.5. The clearance between lowest part of the module structure and the water level shall normally not be more than 250mm.
- 6.13.6. The module alignment and tilt angle, in case of floating SPV power plant, shall be between 1 degree to 13 degrees. It shall be mounted facing south and tilted to an angle within the range of 1 degree to 13 degrees for optimum performance and appropriate wind resistance that must be mentioned in engineering drawing for approval of TSCCL with documentary proof.
- 6.13.7. In general bolts, nuts, shims and other hardware should be stainless steel SS316. Fasteners visible outside shall be of stainless steel SS316.

6.14. Anchoring and mooring system: The water level variation and prevailing wind speed are the primary safety considerations, to be taken into account, while designing the plant such that the plant has no impact on the reservoir. The mooring system thus needs to be designed that it not only restricts the lateral movement of the proposed plant but also accommodates the water level variability. In addition, the mooring system should also have minimal impact on the overall ecosystem of the reservoir, specifically on the flora and fauna.

- 6.14.1. Placement of plant: The floating solar PV power plant should be at a minimum distance of 5 M from the edge of the reservoir.
- 6.14.2. Prevailing wind load: the mooring system should be designed for worst-case scenario, for a wind load of 150 km/hr. The design of the mooring system should prevent the lateral movement of the plant in case of maximum wind loads.
- 6.14.3. Water variability: The mooring system should accommodate any fluctuations in water level. Further the orientation of the plant needs to be maintained; hence any fluctuations in water level should not result in lateral movement of the plant.
- 6.14.4. Flora and fauna: the mooring system should minimize its impact on the

flora and fauna, and thus as far as possible pilings or movement of mooring system on the reservoir bed should be avoided.

6.14.5. The materials used in the anchoring system shall not contaminate the water of the reservoir or affect the aquatic ecosystem.

6.14.6. The anchoring system should withstand the extreme weather conditions

6.14.7. The design of anchoring system shall be certified by an accredited national/ international labs to fulfil the above conditions.

6.15. Junction boxes:

6.15.1. The module junction box (if any) shall be certified as per IEC 61215. Else, they should have the same properties as mentioned for array junction boxes. Array sub-main and main junction boxes, shall have the following properties:

6.15.1.1. They shall be dust, vermin & waterproof and made of Polycarbonate-Glass Fibre Substance (PC-GFS) thermoplastic. The enclosure should be double insulated with protection class II as per IEC 61439-1. Material and the protection class shall be marked on the enclosure.

6.15.1.2. The enclosure shall have a transparent front lid for enabling easy visibility.

6.15.1.3. The enclosures shall have IP 65/66 protection in accordance with IEC 60529. Third party conformance certificate is required to be given for IP 65/ IP 66 degree of protection.

6.15.1.4. Minimum requirements for fire protection in the event of internal faults: Glow wire test in accordance with IEC 60 695- 2-11 at 960°C for box and 850°C for conducting components.

6.15.1.5. Burning Behaviour: Base part of Polycarbonate Enclosure shall be UL94-V-0 compliant and Lid part of PC Enclosure shall be UL94-V-2 compliant.

6.15.1.6. The enclosures shall have IK 08 degree of protection for mechanical load.

6.15.1.7. The material used shall be halogen, silicon free conforming to RoHS directive 2002/95/EC.

6.15.1.8. The enclosure shall have a usage temperature rating of -10° C to 55° C.

6.15.1.9. The enclosure should be chemically resistant to acid, petrol, mineral oil & partially resistant to benzene.

6.15.1.10. The enclosures shall have a rated insulated voltage of 1000V DC and dielectric strength of 4.65 KV DC.

6.15.1.11. The material of the enclosure shall be UV stabilized.

6.15.1.12. Though not mandatory, manufacturers are encouraged to provide breather glands in the array junction boxes to prevent overheating and explosions.

6.15.1.13. MAKE: TYCO / HENSEL/ or equivalent.

- 6.15.2. SPDs Class II as per IEC 61643-1, shall be used at the terminals of array junction boxes for external surge protection. Internal Surge protection (SPDs) shall consist of three MOV type arrestors connected from + ve and - ve terminal to earth (Via Y arrangement) for higher withstand of the continuous PV-DC voltage during earth fault condition. SPD shall have safe disconnection & short circuit interruption arrangement through integrated DC in-built bypass fuse (parallel) which should get tripped during failure mode of MOV, extinguishing DC arc safely (created by inbuilt thermal disconnection) in order to protect the installation against fire hazards. Nominal discharge current (In) at 8/ 20 microseconds shall be minimum 10 KA with maximum discharge current (Imax) of minimum 20 KA at 8/20 microseconds with visual indication (through mechanical flag) in all modules to monitor the life of SPD. The Iscwpv (Short Circuit current withstands capacity of arrester) would be at least 10% more than Nominal output current of the combiner box and AJB. Detailed internal schematic for the above SPDs, compliant to these specifications, should be submitted by the manufacturers.
- 6.15.3. The junction boxes shall have suitable cable entry points with cable glands of appropriate sizes for both incoming and outgoing cables
- 6.15.4. Suitable markings should be provided on the bus bar for easy identification, and cable ferrules shall be fitted at the cable termination points for identification.
- 6.16. **Earthing for PV array, Balance of System (BOS), lightning protection and other components.**
- 6.16.1. The photovoltaic modules (in case of PV modules with polymer back sheet), Balance of system (BOS) and other components of power plant require proper grounding for protection against any serious faults as guided by IEC 60364.
- 6.16.2. Soil resistivity measurement at the site need to be undertaken prior to deciding on earthing solutions required.
- 6.16.3. Vendor must ensure requisite earthing for inverters, junction box, SMU etc. as per standard procedure.
- 6.16.4. The construction of earth pit shall be in vendor's scope.
- 6.16.5. Each row in the solar array (if photovoltaic modules with polymer back sheet are installed) need to be earthed and all earthing electrodes need to be interconnected to form an earthing grid. The earthing resistance must not exceed the limits generally in practice for such applications.
- 6.16.6. The Bidder shall submit the detailed scheme of earthing and grounding.
- 6.16.7. The contractor will supply and install an adequate number and appropriate size of IS:3043 - 1987 compliant earthing kits; at least two each for AC circuit, DC circuit and lightning protection system.
- 6.16.8. The source of over voltage can be lightning or other atmospheric disturbance. Main aim of over voltage protection is to reduce the overvoltage to a tolerable level before it reaches the PV or other sub system components. Lightning protection should be provided as per IEC

62305 or NFC 17 (ESE type).

6.16.9. Necessary concrete foundation or any other arrangement for holding the lightning conductor in position is to be made after giving due consideration to shadow on PV array, maximum wind speed and maintenance requirement at site in future.

6.16.10. The lightning conductor and structures shall be earthed through flats as per applicable Indian Standards with earth pits. Each lightning conductor shall be fitted with individual earth pit as per required Standards including accessories, and providing masonry enclosure. Else, a matrix of lightning conductors is to be created which will be required to be connected to an earth.

6.16.11. If necessary, more numbers of lightning conductors may be provided.

6.16.12. The Bidder shall submit the drawings and detailed specifications of the PV array lightning protection equipment.

6.16.13. Earthing system shall comply with latest revisions and amendments of the relevant IEC standards and IS codes. In particular, Earthing system shall comply with the following standards and codes.

Standard	Code Description
IS 3043	Code of Practice for Earthing
IEEE 80	IEEE Guide for Safety in AC Substation Grounding
IEEE 142	IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems
Indian Electricity Rules	

6.17. **Power Conditioning Unit (PCU)/ Grid Connected Inverter:**

Power Conditioning Unit (PCU) consists of an electronic Inverter along with associated control, protection and data logging devices. The system shall incorporate a uni-directional inverter designed to supply the AC power to the grid at load end conforming to IEC 61727 or equivalent standard. The power conditioning unit shall adjust the voltage & frequency levels to suit the Grid. For sizing of grid connect inverter, the general guideline will be that the ratio of SPV KWp rating to total inverter KVA rating shall be within 1.15. The array output should be well within the input voltage range of the inverter so that the inverter works in MPPT range for most of the solar insolation range. This should be applicable for the whole life of the solar array and needs to be substantiated through design calculations.

All three phases shall be supervised with respect to rise/fall in programmable threshold values of frequency. PCU must have provision to be isolated from grid through Circuit Breaker.

6.17.1. **General Requirements:**

6.17.1.1. The efficiency of the PCU shall be equal to or more than 97 % at 75% load as per IEC 61683 or equivalent standard. The contractor shall specify the conversion efficiency at different load say 25%, 50%, 75% and 100% in his offer.

6.17.1.2. The PCU shall have internal protection arrangement against any

- sustained fault in the feeder line and against lightning in the feeder line.
- 6.17.1.3. The PCU shall have the required protection arrangements against earth leakage faults.
 - 6.17.1.4. Specifically, the PCU should be three phase power conditioning unit using static solid-state components. DC lines shall have suitably rated isolators to allow safe start up and shut down of the system. DC lines side of PCU should have isolator of suitable rating.
 - 6.17.1.5. Each Sub-Array Junction Box/SMU will have suitably rated fuse with suitable rating for its connecting.
 - 6.17.1.6. Electrical surge protection shall be provided with surge protection device (SPD). SPD shall consist of three Metal Oxide Varistor (MOV) type arrestors connected from positive and negative to earth with inbuilt fuse or thermal disconnecter. During earth fault condition SPD shall safely disconnect the healthy system.
 - 6.17.1.7. The PCU should be suitably designed for parallel operation. Each solid state electronic device shall have to be protected to ensure long life of the inverter as well as smooth functioning of the inverter.
 - 6.17.1.8. The PCU shall have anti islanding protection.
 - 6.17.1.9. The PCU must have the feature to work in tandem with other similar PCU's and be able to be successively switched "ON" and "OFF" automatically based on solar radiation variations during the day.
 - 6.17.1.10. The system shall tend to balance unequal phase voltage (with 3-phase systems) with reference to the red phase (line-1).
 - 6.17.1.11. The PCU front panel shall be provided with a display (LCD or equivalent) of all important parameter such as DC input voltage, DC input current, AC input voltage, AC input current, AC output power, frequency etc.
 - 6.17.1.12. Nuts & bolts and the PCU enclosure shall have to be adequately protected taking into consideration the atmosphere and weather prevailing in the area.
 - 6.17.1.13. The PCU shall include appropriate self-protective and self-diagnostic feature to protect itself and the PV array from damage in the event of PCU component failure or from parameters beyond the PCU's safe operating range due to internal or external causes. The self-protective features shall not allow signals from the PCU front panel to cause the PCU to be operated in a manner which may be unsafe or damaging. Faults due to malfunctioning within the PCU, including commutation failure, shall be cleared by the PCU protective devices.
 - 6.17.1.14. It should have local LCD (Liquid Control Display) and keypad for system control, monitoring instantaneous system data, event logs, data logs and changing set points. Control and read-out should be

provided on an indicating panel integral to the Inverter. Display should be simple and self-explanatory display to show all the relevant parameter relating to PCU operational data and fault condition in form of front Panel meters / LED's or two-line LCD Display.

- 6.17.1.15. The Power Conditioners/ Inverters of the SPV power plants must conform to the latest edition of IEC/ equivalent BIS Standards as specified below:

Efficiency Measurements	IEC 61683
Environmental Testing	IEC 60068-2/ IEC 62093
Electromagnetic Compatibility (EMC)	IEC 61000-6-2, IEC 61000-6-4 & othe relevant parts of IEC 61000
Electrical Safety	IEC 62103/ 62109-1&2
Protection against Islanding of Grid	IEEE1547/IEC 62116/ UL1741 or equivalent BIS Standards
LVRT Compliance	As per the latest CERC Guidelines/ Order/ Regulations
Grid Connectivity	Relevant CERC Regulations (including LVRT Compliance) and Grid Code as amended and revised from time to time.
Rated capacity	Nominal/ Rated output power of the inverter (if different power ratings are mentioned at different temperatures, then power rating at 500 C shall be considered) in kW will be considered as inverter rated capacity.

- 6.18. **Cables and hardware:** The cables used in module/ array wiring shall be TUV 2Pfg 1169/08.2007 or VDE EPV 01:2008-02 or UL4703 certified.

- 6.18.1. Cables of appropriate size to be used in the rest of the system shall have the following characteristics

- 6.18.1.1. Temp. Range 0 deg C to +90 deg C. Cable must be able to withstand this ambient temp range while carrying max current. Maximum and minimum withstand temperature of cable must be mentioned in engineering drawing for approval of TSCCL/APSPDCL/CEIG with documentary proof.
- 6.18.1.2. Voltage rating 600/1100V
- 6.18.1.3. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation, ozone and weathering
- 6.18.1.4. Halogen-free, low smoke, low toxicity.
- 6.18.1.5. Flame retardant
- 6.18.1.6. Flexible. Armoured or un-armoured cable should have flexibility as per applicable standard respectively.
- 6.18.1.7. Fulfils IEC 60332-1 requirements. Accredited lab test report/Manufacturer's test report shall be attached. (Details of test lab is as per clause 21).
- 6.18.1.8. Conductor class IEC 60228 class 5. Accredited lab test report/Manufacturer's test report shall be attached. Only Copper conductor is to be used.

- 6.18.2. Cabling on DC side of the system shall be as short as possible to minimize the voltage drop in the wiring.

- 6.18.3. Components and hardware shall be vandal and theft resistant. All parts shall be corrosion-resistant.

- 6.18.4. All cables required must be supplied by vendor.
- 6.18.5. Voltage drop on the DC side from array to the inverter should not be more than 2.5%. Necessary calculations in this regard shall also be submitted during design approval.
- 6.18.6. Overload protection is to be provided. Design Overload capacity for 10 sec of 125% of continuous rating. The principle aim in this protection is to reduce the over voltage to a tolerable value before it reaches the PV or other subsystem components. The source of over voltage can be lightning or any other atmospheric disturbance.
- 6.18.7. The system description, general/technical requirements, etc. are given for general guidance only. The Implementing Agency/manufacturer shall submit the detailed design of the complete solar generating system by using their software to optimize the combination of modules considering the specific location, insolation, nature of load, etc.
- 6.18.8. Cable to be routed in standard manner through cabletrays & cable marker to be placed for future identification.
- 6.18.9. For physical protection of unarmoured cables (wherever used) suitable conduit to be provided wherever necessary. Armoured cable is to be used wherever required.

6.19. LT COMBINER PANEL BOARD:

LT Combiner Panel Board shall combine the AC output power from inverter and should have necessary surge arrestors. Requirement/specifications of the combiner panel may be changed as per site conditions. All switches at the, circuit breakers, connectors should confirm to IEC 0947, part I, II and III

- i. The Panel shall have adequate inputs to take in, from individual PCUs & adequate outputs to, Transformer with adequate number of spare terminals.
- ii. The Panel shall be floor mounted type and equipped with all measuring instruments such as voltmeter, ammeter, frequency meter, Electronic Energy Meter (for measuring the deliverable units (kwh), selector switches, Mimic front panel.
- iii. All the Power cables shall be taken through backside of the Panel and cable shall be avoided from sides.
- iv. The Panel shall be fitted with suitable rating & size copper bus, HRC fuses/circuit breaker/isolator indicators for all incomer and outgoing Feeders, Voltmeter & Ammeter with suitable selector switches to monitor & measure the power to be evacuated.
- v. Nut & bolts including metallic cubicle shall have to be adequately protected against atmosphere and weather prevailing in the area.
- vi. The overall dimension shall be fitted with other Power Conditioning Units of the Power Plant. However, dimension, weight, sheet thickness, painting etc., should be indicated by the Contractor. The bill of material associated with the equipment should be clearly indicated while delivering the equipment.

6.20. Cables:

- i. All cables shall be PVC insulated with appropriate grade conforming to IS.
- ii. The wiring for module inter-connection shall have hard PVC conduit of approved make. All Tees, Bends etc., shall be approved make. Before procurement, approval for materials should be obtained from Engineer-in-charge or his representative.
- iii. Wherever the cables pass through water, the marine grade cables shall be used. Cables should have adequate protection system to withstand the adverse environmental condition of the site.
- iv. All wires used on the LT side and HT side shall conform to IS and should be appropriate voltage grade and of reputed make shall be used.
- v. Cable terminations shall be made with suitable cable lugs & sockets etc., crimped properly and passed through brass compression type cable glands at the entry & exist point of the cubicles. The panel's bottoms should be properly sealed to prevent entry of snakes / lizard etc., inside the panel.
- vi. All cable/wires shall be marked with good quality letter and number ferrules of proper sizes so that the cables can be identified easily.
- vii. As-built wiring diagrams shall be provided.

The HT & LT cables should comply with the following standards. LT side Zebra conductor and HT side Panther conductor is preferable.

6.20.1. HT Cables:

The 11/33KV Cables shall be unearthed grade suitable for use in medium resistance earthed system, with stranded & compacted Copper/Aluminum conductors, extruded semi-conducting compound screen, extruded XLPE insulated, extruded semi-conducting compound with a layer of non-magnetic metallic tape for insulation screen, extruded PVC (Type ST-2) FRLS inner sheath, Aluminium/galvanized steel round wire armoured extruded PVC (Type ST-2) FRLS outer sheathed, single / multi Core conforming to IS 7098 (Part II) IEC-60502 for constructional details and tests.

6.20.2. LT Power Cables:

LT Power Cable shall be 1100V grade, suitable size of Multi-Stranded Copper/Aluminum conductor, XLPE insulated with PVC inner sheath and outer sheath made on FRLS PVC compound. The armouring shall be of Aluminium/galvanized steel round wire.

6.20.3. DC Cables:

The DC Cables in a solar PV plant are used in the following areas

- i. Interconnecting SPV modules
- ii. From SPV Modules upto String Monitoring Unit(SMU)
- iii. From SMU upto the Inverter.

i. DC CABLES (Interconnecting SPV MODULES and from SPV Modules TO SMU):

Cables used for inter-connecting SPV modules as well as Modules to SMU's shall conform to the requirements of TUV specification 2 Pfg 1169/08.2007 applicable for DC cable for photovoltaic system. These cables shall meet the fire resistance requirement as per TUV specification 2 Pfg 1169/08.2007 and shall be electron beam cured.

The Cables used for (+) ve and (-) ve shall have distinct color identification. In addition to manufacturer's identification on cables as per TUV, following marking shall also be provided over outer sheath.

(a.) Cable size and voltage grade

(b.) Word 'FRNC' at every 5 meter

(c.) Sequential marking of length of the cable in meters at every one meter

The Printing shall be progressive, automatic, in line and marking shall be legible and indelible.

Type test, routine, acceptance tests requirements for these cables shall be as per TUV specification 2 Pfg 1169/08.2007 or 2pfg 1190/05.12 as per requirement Charges of routine and acceptance tests shall be deemed to be included in the cable price. Sampling for acceptance tests will be as per IS 7098.

ii. DC CABLES (SMU's TO INVERTER):

Cables used between SMU's and Inverters shall be of min. 1.5 kV (DC) grade. These Power cables shall have compacted Aluminium/copper conductor, XLPE insulated, PVC inner-sheathed (as applicable), Armoured/Unarmoured, FRLS PVC outer sheathed conforming to IS: 7098 (Part-I). These cables shall conform to the requirements of the standards & codes

iii. DC CABLES SIZING CRITERIA:

The Maximum voltage drop of DC Cables (SPV Modules to Inverters) shall be limited to 2%.

6.21. TRANSFORMER & METERING:

- a) Dry/oil type relevant KVA capacity Step up transformer along with all protections, switchgears, Vacuum circuit breakers, cables etc. to be provided along with required civil work.
- b) The bidirectional electronic energy meter (0.5 S class) shall be installed for the measurement of import/Export of energy.
- c) The tenderer 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 TSCCL before commissioning of SPV plant.
- d) Reverse power relay shall be provided by tenderer (if necessary), as per the local DISCOM requirement.

6.22. SCADA

6.22.1. GENERAL

- 6.22.1.1. Contractor shall provide complete SCADA system with all accessories, auxiliaries and associated equipment and cables for the safe, efficient and reliable operation of entire solar plant and its auxiliary systems.
- 6.22.1.2. Bidder shall include in his proposal all the Hardware, Software, Panels, Power Supply, HMI, Laser Printer, Gateway, Networking equipment and associated Cable etc. needed for the completeness even if the same are not specifically appearing in these specifications.
- 6.22.1.3. SCADA System shall have the provision to perform the following functions:
 - i. Real-time acquisition and display of data, status, alarms and trends
 - ii. Display of status of major equipment in Single Line Diagram(SLD) format
 - iii. Display and storage of measured values
 - iv. Display and storage of derived/calculated/integrated values
 - v. Display and Storage of Alarm, Event and Trends
 - vi. Generate, store and retrieve user configurable Sequence of Event (SOE) Reports
 - vii. Generate, store and retrieve user configurable periodic Reports
 - viii. Remote monitoring of essential parameters on the web using standard modem (Internet connection for transferring data to web shall be taken by Contractor in the name of MCT Site for O & M period).
 - ix. System self-supervision
- 6.22.1.4. The Contractor shall maintain the list of Module IDs along with performance characteristic data for each module. This data shall be submitted to TSCCL.
- 6.22.1.5. The Contractor must install necessary equipment to continuously measure solar radiation on module plane, ambient temperature, wind speed and other weather parameters and simultaneously measure the generation of DC power as well as AC power generated from the plant. They will be required to submit this data to TSCCL on line and/ or through a report on regular basis every month for the entire duration of Operations & Maintenance.
- 6.22.1.6. The plant SCADA should be Open Platform Communications (OPC) compliant with standard DNP3 and Modbus control interfaces over TCP/ IP having the provision to add protocol converters to implement custom and secure communications protocol standard for providing real time online data (including but not limited to irradiance, plant generation (instantaneous/ daily/ monthly/ yearly), Daily Peak Generation, temperature, wind speed etc.) to TSCCL.

6.22.1.7. Fibre Optic Ethernet Ring network (Managed type Ethernet switches in each Control Room) should be provided between MCR & Inverter Control Rooms.

6.22.1.8. Web-based monitoring should be available, which should not be machine dependent. The web-based monitoring should provide the same screens as available in the plant. Also, it should be possible to download reports from a remote web-client in PDF or Excel format.

6.23. Instruments for Meteorological Measurements:

Contractor shall provide following measuring instruments with all necessary software & hardware required to make it compatible with SCADA.

6.23.1. Pyranometer:

Contractor shall provide minimum one no. pyranometer for measuring incident global solar radiation. The specification is as follow:

1. Spectral Response: 0.31 to 2.8 micron.
2. Sensitivity: 7-14 micro-volt/ w/ m²
3. Zero offset thermal radiation: ± 7 w/ m²
4. Zero offset temperature change ± 2 w/ m²
5. Operating temperature range: -40 deg C to +80 deg. C
6. Resolution: Min +/- 1 W/ m²

Each instrument shall be supplied with necessary cables. Calibration certificate traceability to World Radiation Reference (WRR) or World Radiation Centre (WRC) shall be furnished along with the equipment. The signal cable length shall not exceed 20m. Contractor shall provide Instrument manual in hard and soft form.

6.23.2. Thermometer:

Contractor shall also provide two Nos. of RTD type/ semiconductor type ambient temperature measuring instrument at suitable place in PV arrays. Instrument shall have a range of 0 deg. C to 80 deg. C of accuracy ± 0.2 deg. C.

6.23.3. Anemometer:

Contractor shall provide at least one no anemometer of tubular type made up of hot dipped Galvanized iron or anodised aluminium. Velocity range- upto 25 m/ s, accuracy limit of 0.2 m/ s upto 10 m/ sec.

All the above sensors shall have valid calibration certificates which should be produced within one month after the installation.

Note : The above sensors shall be erected as a Single weather monitoring unit at site. This unit shall provide data signal so as to integrate to SCADA without loss of accuracy.

6.24. EVACUATION:

Evacuation of the power will be at 11/33 KV to the nearest Identified Substation. All necessary Evacuation infrastructure for the safe and efficient operation of the plant is part of the scope including:

1. Transformer of capacity of at least 4400 MVA
2. 11/33 KV Switchyard and related equipment
3. Transmission Line to the identified substation

4. 11/33 KV Bay Switchyard and Related Equipment at the substation
5. Metering should be provided on both plant switchyard and bay switchyard

The Evacuation scheme and equipment details has to be finalized by the contractor during detailed design and submitted to the client for approval. Evacuation system design shall incorporate all necessary safety and protection equipment, relays and material as per applicable standards and best practices. All approvals required for the design and erection of the evacuation system (including CEIG, AP Transco, APSPDCL etc.) shall be the responsibility of the contractor.

6.25. WARRANTY

1. PV modules must be warranted with linear degradation rate of power output except for first year and shall guarantee 80% of the initial rated power output at the end of 25 years.
2. The modules shall be warranted for minimum of 10 years against all material/ manufacturing defects and workmanship.
3. The mechanical structures, electrical works and overall workmanship of the grid solar power plants must be warranted for a minimum of 5 years.
4. The Inverters/ PCUs installed in the solar power plant must have a warranty for 5 years.
5. The Floats should be Warranted for atleast twenty five (25) years.
6. The Anchoring System should be warranted for atleast twenty five (25) years.

6.26. DRAWINGS & MANUALS:

- a) Two sets of Engineering, electrical drawings and Installation and O&M manuals are to be supplied. Tenderers 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.
- b) Approved ISI and reputed makes for equipment be used.
- c) For complete electro-mechanical works, tenderers shall supply complete design, details and drawings for approval to TSCCL/APSPDCL/CEIG before progressing with the installation work.

6.27. PLANNING AND DESIGNING:

- a) The tenderer should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of space, material and labour. The tenderer should submit the array layout drawings along with Shadow Analysis Report to TSCCL for approval.
- b) TSCCL reserves the right to modify the design, Layout and specification of sub -systems and components at any stage as per local site conditions/requirements.
- c) The tenderer shall submit preliminary drawing for approval & based on any modification or recommendation, if any. The tenderer should submit three sets and soft copy in CD of final drawing for formal approval to proceed with construction work.

6.28. DRAWINGS TO BE FURNISHED BY TENDERER AFTER AWARD OF CONTRACT:

The contractor shall submit the following engineering drawings, data, design and engineering informations (not limited to the list given below) in both soft copy (CD) and hard copy to TSCCL and MCT along with a "Master Drawing List".

The successful bidder shall furnish the following drawings Award/Intent and obtain approval

- a. SPV Array and Cable layout
- b. General arrangement and dimensioned layout
- c. Floating device system and Module mounting structure details
- d. Inverters, SCADA, transformers, switchyard and other equipment layout
- e. 11/33 kV switchyard design
- f. Power evacuation system
- g. Earthing and lightning layout and design
- h. Walkways, lighting and water supply
- i. Itemized bill of material for complete SV plant covering all the components and associated accessories.

Any other engineering drawings, data, design and engineering information (whether specifically mentioned in the document or not) required to fulfil the stated scope of work.

6.29. SYNCHRONISATION, COMMISSIONING AND COMMERCIAL OPERATION

1. The bidder shall provide at least fifteen (15) days advanced preliminary written notice and at least Six (6) days advanced final written notice to TSCCL/APSPDCL/CEIG of the date on which it intends to synchronize the Power Project to the Grid System.
2. The Power Project shall be synchronized by the bidder with the Grid System when it meets all the connection conditions prescribed in applicable Grid Code then in effect and otherwise meets all other Indian legal requirements for synchronization to the Grid System.
3. The plant civil works, evacuation line and termination at transmission network of APSPDCL Sub Stations are in the scope of Contractor.
4. The bidder shall synchronize its system with the Grid System only after the approval of synchronization scheme is granted by the head of the concerned sub-station/Grid System and checking/verification is made by the concerned authorities of the Grid System.
5. The bidder shall immediately after each synchronization/, inform the substation of the Grid System to which the Power Project is electrically connected in accordance with applicable Grid Code.
6. The Developer shall commission the Project within 9 (nine) months from the Effective Date.

6.30. Fire Extinguishers:

6.30.1. CO2 type fire extinguisher and dry powder type fire extinguisher to be provided.

6.30.2. CO2 type fire extinguisher to be placed near inverter.

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Volume 3: Conditions of Contract and Contract Forms

1.0 General Conditions of Contract

A. General

1. Definitions	<p>1.1 Boldface type is used to identify defined terms.</p> <p>(a) The Accepted Contract Amount means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.</p> <p>(b) The Activity Schedule is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.</p> <p>(c) The Adjudicator is the person appointed jointly by the Employer and the Implementing Agency to resolve disputes in the first instance, as provided for in GCC 23.</p> <p>(d) GoI means Government of India</p> <p>(e) Activity schedule means the Detailed Project Plan covering break-up of each phase into the key activities, along with the start and end dates forming part of the Bid.</p> <p>(f) Compensation Events are those defined in GCC Clause 42 hereunder.</p> <p>(g) The Completion Date is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 53.1.</p> <p>(h) The Contract is the Contract between the Employer and the Implementing Agency to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.</p> <p>(i) The Implementing Agency is the party whose Bid to carry out the Works has been accepted by the Employer.</p> <p>(j) The Implementing Agency's Bid is the completed bidding document submitted by the Implementing Agency to the Employer.</p> <p>(k) The Contract Price is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.</p>
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	<p>(l) Days are calendar days; months are calendar months.</p> <p>(m) A Defect is any part of the Works not completed in accordance with the Contract.</p> <p>(n) The Defects Liability Certificate is the certificate issued by Project Manager upon correction of defects by the Implementing Agency.</p> <p>(o) The Defects Liability Period is the period named in the PCC pursuant to Sub-Clause 34.1 and calculated from the Completion Date.</p> <p>(p) Drawings means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.</p> <p>(q) The Employer is the party who employs the Implementing Agency to carry out the Works, as specified in the PCC.</p> <p>(r) Equipment is the Implementing Agency's machinery and vehicles brought temporarily to the Site to construct the Works.</p> <p>(s) "In writing" or "written" means hand-written, type-written, printed or electronically made, and resulting in a permanent record;</p> <p>(t) The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.</p> <p>(u) The Intended Completion Date is the date on which it is intended that the Implementing Agency shall complete the Works. The Intended Completion Date is specified in the PCC. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.</p> <p>(v) Materials are all supplies, including consumables, used by the Implementing Agency for incorporation in the Works.</p> <p>(w) Plant is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.</p> <p>(x) The Project Manager is the person named in the PCC (or any other competent person appointed by the</p>
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	<p>Employer and notified to the Implementing Agency, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.</p> <p>(y) PCC means Particular Conditions of Contract.</p> <p>(z) The Site is the area defined as such in the PCC.</p> <p>(aa) Site Investigation Reports are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.</p> <p>(bb) Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.</p> <p>(cc) The Start Date is given in the PCC. It is the latest date when the Implementing Agency shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.</p> <p>(dd) A Sub-Implementing Agency is a person or corporate body who has a Contract with the Implementing Agency to carry out a part of the work in the Contract, which includes work on the Site.</p> <p>(ee) Temporary Works are works designed, constructed, installed, and removed by the Implementing Agency that are needed for construction or installation of the Works.</p> <p>(ff) A Variation is an instruction given by the Project Manager which varies the Works.</p> <p>(gg) The Works are what the Contract requires the Implementing Agency to construct, install, and turn over to the Employer, as defined in the PCC.</p>
<p>2. Interpretation</p>	<p>If the context so requires it, singular means plural and vice versa</p> <p>21 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.</p> <p>22 If sectional completion is specified in the PCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).</p> <p>23 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</p>

	<p>2.4. The documents forming the Contract shall be interpreted in the following order of priority:</p> <ul style="list-style-type: none"> (a) Agreement, (b) Letter of Acceptance, (c) Implementing Agency's Bid, (d) Particular Conditions of Contract, (e) General Conditions of Contract, including Appendix, (f) Specifications, (g) Drawings, (h) Activity schedule, (i) Any other document listed in the PCC as forming part of the Contract.
3. Language and Law	3.1 The language of the Contract and the law governing the Contract are stated in the PCC
4. Project Manager's Decisions	4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Implementing Agency in the role representing the Employer.
5. Delegation	5.1 Otherwise specified in the PCC , the Project Manager may delegate any of his duties and responsibilities to other people except to the Adjudicator, after notifying the Implementing Agency, and may revoke any delegation after notifying the Implementing Agency.
6. Communications	6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.
7. Subcontracting	7.1 The Implementing Agency may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Implementing Agency's obligations.
8. Other Implementing Agency	8.1 The Implementing Agency shall cooperate and share the Site with other Implementing Agency, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Implementing Agency, as referred to in the PCC . The Implementing Agency shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Implementing Agency, and shall notify the Implementing Agency of any such modification.
9. Personnel and Equipment	<p>91 The Implementing Agency shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.</p> <p>92 If the Project Manager asks the Implementing Agency to remove a person who is a member of the Implementing Agency's staff or</p>

	<p>work force, stating the reasons, the Implementing Agency shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.</p> <p>93 If the Employer, Project Manager or Implementing Agency determines, that any employee of the Implementing Agency be determined to have engaged in or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with Clause 9.2 above.</p>
10. Employer's and Implementing Agency's Risks	10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Implementing Agency carries the risks which this Contract states are Implementing Agency's risks.
11. Employer's Risks	<p>11.1 From the Start Date until the Defects Liability Certificate has been issued and then during the Operation & Maintenance Period , the following are Employer's risks:</p> <p>(a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to</p> <p>(i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or</p> <p>(ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Implementing Agency.</p> <p>(b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.</p> <p>11.2 From the Completion Date until the Defects Liability Certificate has been issued and then during the Operation & Maintenance Period, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to</p> <p>(a) a Defect which existed on the Completion Date,</p> <p>(b) an event occurring before the Completion Date, which was not itself an Employer's risk, or</p> <p>(c) the activities of the Implementing Agency on the Site after the Completion Date.</p>
12. Implementing Agency's Risks	12.1 From the Starting Date until the Defects Liability Certificate has been issued and then during the Operation & Maintenance Period, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Implementing Agency's risks.
13. Insurance	13.1 The Implementing Agency shall provide, in the joint names of the Employer and the Implementing Agency, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the PCC for the following events which are due to the Implementing Agency's risks:

	<p>(a) loss of or damage to Equipment (if any);</p> <p>(b) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and</p> <p>(c) Personal injury or death.</p> <p>132 Policies and certificates for insurance shall be delivered by the Implementing Agency to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.</p> <p>133 If the Implementing Agency does not provide any of the policies and certificates required, the Employer may effect the insurance which the Implementing Agency should have provided and recover the premiums the Employer has paid from payments otherwise due to the Implementing Agency or, if no payment is due, the payment of the premiums shall be a debt due.</p> <p>134 Alterations to the terms of insurance shall not be made without the approval of the Project Manager.</p> <p>135 Both parties shall comply with any conditions of the insurance policies.</p>
14. Site Data	14.1 The Implementing Agency shall be deemed to have examined any Site Data referred to in the PCC, supplemented by any information available to the Implementing Agency.
15. Implementing Agency to Construct the Works	15.1 The Implementing Agency shall construct and install the Works in accordance with the Specifications.
16. The Works to Be Completed by the Intended Completion Date	16.1 The Implementing Agency may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Implementing Agency, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.
17. Approval by the Project Manager	<p>17.1 The Implementing Agency shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.</p> <p>17.2 The Implementing Agency shall be responsible for design of Temporary Works.</p> <p>17.3 The Project Manager's approval shall not alter the Implementing Agency's responsibility for design of the Temporary Works.</p> <p>17.4 The Implementing Agency shall obtain approval of third parties to the design of the Temporary Works, where required.</p> <p>17.5 All Drawings prepared by the Implementing Agency for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.</p>
18. Safety	18.1 The Implementing Agency shall be responsible for the safety of all activities on the Site.
19. Discoveries	19.1 Anything of historical or other interest or of significant value

	Unexpectedly discovered on the Site shall be the property of the Employer. The Implementing Agency shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.
20. Possession of the Site	20.1 The Employer shall give possession of all parts of the Site to the Implementing Agency. If possession of a part is not given by the date stated in the PCC, the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.
21. Access to the Site	21.1 The Implementing Agency shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.
22. Instructions, Inspections and Audits	<p>221 The Implementing Agency shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.</p> <p>222 The Implementing Agency shall keep, and shall make all reasonable efforts to cause its Sub Implementing Agencies and sub consultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.</p> <p>223 The Implementing Agency shall permit and shall cause its Sub Implementing Agencies and sub consultants to permit, the Bank and/or persons appointed by the Bank to inspect the Site and/or the accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Implementing Agency's and its Sub Implementing Agencies' and sub consultants' attention is drawn to Sub-Clause 25.1 which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Sub-Clause 22.2 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).</p> <p>224 As per PCC.</p>
23. Appointment of the Adjudicator	23.1 The Adjudicator shall be appointed jointly by the Employer and the Implementing Agency, at the time of the Employer's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, if the Adjudicator not appointed, the same may be appointed by the Employer within 14 days of receipt of such request from the Implementing Agency .
	23.2 Should the Adjudicator resign or die, or should the Employer and the Implementing Agency agree that the Adjudicator is not functioning in accordance with the provisions of the Contract; a new Adjudicator shall be jointly appointed by the Employer and the Implementing Agency. In case of disagreement between the Employer and the Implementing Agency, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the PCC at the request of either party, within 14 days of receipt of such request.
24. Settlement of Disputes	<p>24.1 – Amicable Settlement</p> <p>a) The Parties shall seek to resolve any dispute amicably by</p>

	<p>mutual consultation</p> <p>b) If either Party objects to any action or inaction of the other Party, the objecting Party may file a written Notice of Dispute to the other Party providing in detail the basis of the dispute. The Party receiving the Notice of Dispute will consider it and respond in writing within fourteen (14) days after receipt. If that Party fails to respond within fourteen (14) days, or the dispute cannot be amicably settled within fourteen (14) days following the response of that Party, Clause GCC 24.2 shall apply.</p> <p>24.2 – Dispute Resolution</p> <p>Any dispute between the Parties arising under or related to this Contract that cannot be settled amicably may be referred to by either Party to the adjudication/arbitration in accordance with the provisions specified in the PCC</p>
25. Corrupt and Fraudulent Practices	<p>25.1 The Employer requires compliance with Prevention of Corruption Act 1988 (INDIA) and its subsequent amendments on Preventing and Combating Corruption</p> <p>25.2 The Employer requires the Implementing Agency to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.</p>

B. Time Control

26. Program	<p>26.1 Within the time stated in the PCC, after the date of the Letter of Acceptance, the Implementing Agency shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.</p> <p>26.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.</p> <p>26.3 The Implementing Agency shall submit to the Project Manager for approval an updated Program at intervals no longer than the period stated in the PCC. If the Implementing Agency does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the PCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Implementing Agency shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.</p> <p>26.4 The Project Manager's approval of the Program shall not alter the Implementing Agency's obligations. The Implementing Agency may revise the Program and submit it to the Project Manager again at any time. A revised Program may show the effect of Variations and Compensation Events.</p>
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<p>27. Extension of the Intended Completion Date</p>	<p>27.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Implementing Agency taking steps to accelerate the remaining work, which would cause the Implementing Agency to incur additional cost.</p> <p>27.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Implementing Agency asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Implementing Agency has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.</p>
<p>28. Acceleration</p>	<p>28.1 When the Employer wants the Implementing Agency to finish before the Intended Completion Date. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Implementing Agency.</p>
<p>29. Delays Ordered by the Project Manager</p>	<p>29.1 The Project Manager may instruct the Implementing Agency to delay the start or progress of any activity within the Works.</p>
<p>30. Management Meetings</p>	<p>30.1 Either the Project Manager or the Implementing Agency may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.</p> <p>30.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.</p>
<p>31. Early Warning</p>	<p>31.1 The Implementing Agency shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase and/or decrease in the Contract Price, or delay the execution of the Works. The Project Manager may require the Implementing Agency to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Implementing Agency as soon as reasonably possible.</p> <p>31.2 The Implementing Agency shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.</p>

C. Quality Control

32. Identifying Defects	32.1 The Project Manager shall check the Implementing Agency's work and notify the Implementing Agency of any Defects that are found. Such checking shall not affect the Implementing Agency's responsibilities. The Project Manager may instruct the Implementing Agency to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect. 32.2 Penalty of 0.5% of the contract value per day from the due date for rectifying the defects identified by the Project manager. 32.3 Contract Quality Assurance as discussed in PCC.
33. Tests	33.1 If the Project Manager instructs the Implementing Agency to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Implementing Agency shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.
34. Correction of Defects	34.1 The Project Manager shall give notice to the Implementing Agency of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the PCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected. 34.2 Every time notice of a Defect is given, the Implementing Agency shall correct the notified Defect within the length of time specified by the Project Manager's notice.
35. Uncorrected Defects	35.1 If the Implementing Agency has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Implementing Agency shall pay this amount.

D. Cost Control

36. Contract Price	36.1 The Implementing Agency shall provide updated Activity Schedules within 14 days of being instructed to by the Project Manager. The Activity Schedule shall contain the priced activities for the Works to be performed by the Implementing Agency. The Activity Schedule is used to monitor and control the performance of activities on which basis the Implementing Agency will be paid. If payment for materials (if any) on site shall be made separately, the Implementing Agency shall show delivery of Materials (if any) to the Site separately on the Activity Schedule.
37. Changes in the Contract Price	37.1 The Activity Schedule shall be amended by the Implementing Agency to accommodate changes of Program or method of working made at the Implementing Agency's own discretion. Prices in the Payment Schedule shall not be altered when the Implementing Agency makes such changes to the Activity Schedule. 37.2 If requested by the Project Manager, the Implementing Agency shall provide the Project Manager with a detailed cost breakdown of any rate.

38. Variations	<p>38.1 All Variations shall be included in updated Programs and Activity Schedules produced by the Implementing Agency.</p> <p>38.2 The Implementing Agency shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.</p> <p>38.3 If the Implementing Agency's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Implementing Agency's costs.</p> <p>38.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.</p> <p>38.5 The Implementing Agency shall not be entitled to additional payment for costs that could have been avoided by giving early warning.</p>
39. Cash Flow Forecasts	<p>39.1 When the Program and activity schedule is updated, the Implementing Agency shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.</p>
40. Payment Certificates	<p>40.1 The Implementing Agency shall submit to the Project Manager payment statements of the estimated value of the work executed less the cumulative amount certified previously.</p> <p>40.2 The Project Manager shall check the Implementing Agency's payment statement and certify the amount to be paid to the Implementing Agency.</p> <p>40.3 The value of work executed shall be determined by the Project Manager.</p> <p>40.4 The value of work executed shall comprise the value of completed activities in the Activity Schedule</p> <p>40.5 The value of work executed shall include the valuation of Variations and Compensation Events.</p> <p>40.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.</p>

<p>41. Payments</p>	<p>411 Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Implementing Agency the amounts certified by the Project Manager within 28 days of the date of each certificate.</p> <p>412 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Implementing Agency shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.</p> <p>413 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.</p> <p>414 Items of the Works for which no rate or price has been entered in shall not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.</p> <p>415 The certified payments shall be made as specified in the PCC.</p>
<p>42. Compensation Events</p>	<p>42.1 The following shall be Compensation Events:</p> <ul style="list-style-type: none"> (a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1. (b) The Employer modifies the Schedule of Other Implementing Agency's in a way that affects the work of the Implementing Agency under the Contract. (c) The Project Manager orders a delay or does not issue Drawings/approved drawings (as the case may be), Specifications, or instructions required for execution of the Works on time. (d) The Project Manager instructs the Implementing Agency to uncover or to carry out additional tests upon work, which is then found to have no Defects. (e) The Project Manager unreasonably does not approve a subcontract to be let. (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site. (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons. (h) Other Implementing Agencies, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Implementing Agency.

	<p>(i) The advance payment is delayed, if any.</p> <p>(j) The effects on the Implementing Agency of any of the Employer's Risks.</p> <p>(k) The Project Manager unreasonably delays issuing a Certificate of Completion.</p>
	<p>422 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.</p> <p>423 As soon as information demonstrating the effect of each Compensation Event upon the Implementing Agency's forecast cost has been provided by the Implementing Agency, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Implementing Agency's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Implementing Agency shall react competently and promptly to the event.</p> <p>424 The Implementing Agency shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Implementing Agency's not having given early warning or not having cooperated with the Project Manager.</p>
43. Tax	43.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 28 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Implementing Agency, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 44 and GCC Clause 69.
44. Currencies	44.1 Where payments are made in currencies other than the currency of the Employer's country specified in the PCC, the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Implementing Agency's Bid.
45. Price Adjustment	<p>45.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the PCC. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies to each Contract currency:</p> $P_c = A_c + B_c I_{mc}/I_{oc}$ <p>where: P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency "c." A_c and B_c are coefficients specified in the PCC, representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency "c;" and</p>

	<p>Imc is the index prevailing at the end of the month being invoiced and Ioc is the index prevailing 28 days before Bid opening for inputs payable; both in the specific currency "c."</p> <p>45.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.</p>
46. Retention	<p>46.1 The Employer shall retain from each payment due to the Implementing Agency the proportion stated in the PCC until Completion of the whole of the Works.</p> <p>46.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 51.1, half the total amount retained shall be repaid to the Implementing Agency and has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Implementing Agency before the end of this period have been corrected. The Implementing Agency may substitute retention money with an "on demand" Bank guarantee.</p>
47. Liquidated Damages	<p>Failure to Perform the Contractual Obligations</p> <p>I. In the event of total default / failure of the Implementing Agency in execution of the services, the Employer reserves the right to get the work executed by any other agency/ firm at the risk and cost of the defaulting implementing Agency. Decision of employer is final & binding on the implementing agency firm.</p> <p>II In this case liquidated damages @ 1% of the fee cost of balance work per week of delay subject to maximum of 10% shall be levied by the authority.</p>
48. Bonus	<p>48.1 The Implementing Agency shall be paid a Bonus calculated at the rate per calendar day stated in the PCC for each day (less any days for which the Implementing Agency is paid for acceleration) that the Completion is earlier than the Intended Completion Date.</p>
49. Advance Payment	<p>49.1 The Employer shall make advance payment to the Implementing Agency of the amounts stated in the PCC by the date stated in the PCC, against provision by the Implementing Agency of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Implementing Agency. Interest shall not be charged on the advance payment.</p> <p>The contractors for works exceeding Rs.1.00 Crore of estimated cost are permitted to avail the facility of mobilization advance not exceeding 10% of the value of the contract (5% for labour mobilization and 5% for machinery and equipment) in installments against an unconditional and irrevocable bank guarantee in terms of G.O Ms. No. 94 dt.1.7.2003 and G.O. Ms. No.50 I&CAD dt.2.3.2009.</p>

	<p>49.2 The Implementing Agency is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Implementing Agency shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.</p> <p>The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Implementing Agency, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.</p>
50. Securities	<p>50.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount specified in the GCC 100.4 and PCC, by a bank acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until the completion including defect liability period.</p>
51. Dayworks	<p>51.1 If applicable, the Dayworks rates in the Implementing Agency's Bid shall be used only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.</p> <p>51.2 All work to be paid for as Dayworks shall be recorded by the Implementing Agency on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.</p> <p>51.3 The Implementing Agency shall be paid for Dayworks subject to obtaining signed Dayworks forms.</p>
52. Cost of Repairs	<p>52.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Implementing Agency at the Implementing Agency's cost if the loss or damage arises from the Implementing Agency's acts or omissions.</p>

E. Finishing the Contract

53. Completion	<p>53.1 The Implementing Agency shall request the Project Manager to issue a Certificate of Completion of the Works including all other associated works, proceeding further for Operation & Maintenance; the Project Manager shall do so upon deciding that the whole of the Works is completed as per PCC.</p>
54. Taking Over	<p>54.1 The Employer shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.</p>

<p>55. Final Account</p>	<p>55.1 The Implementing Agency shall supply the Project Manager with a detailed account of the total amount that the Implementing Agency considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Implementing Agency within 56 days of receiving the Implementing Agency's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Implementing Agency and issue a payment certificate.</p>
<p>56. Operating and Maintenance Manuals</p>	<p>561 If "as built" Drawings and/or operating and maintenance manuals are required, the Implementing Agency shall supply them by the dates stated in the PCC.</p> <p>562 If the Implementing Agency does not supply the Drawings and/or manuals by the dates stated in the PCC pursuant to GCC Sub- Clause 56.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount stated in the PCC from payments due to the Implementing Agency.</p>
<p>57. Termination</p>	<p>57.1 The Employer or the Implementing Agency may terminate the Contract if the other party causes a fundamental breach of the Contract.</p> <p>57.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:</p> <ul style="list-style-type: none"> (a) the Implementing Agency stops work for 28 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager; (b) the Project Manager instructs the Implementing Agency to delay the progress of the Works, and the instruction is not withdrawn within 28 days; (c) the Employer or the Implementing Agency is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation; (d) a payment certified by the Project Manager is not paid by the Employer to the Implementing Agency within 84 days of the date of the Project Manager's certificate; (e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Implementing Agency fails to correct it within a reasonable period of time determined by the Project Manager; (f) the Implementing Agency does not maintain a Security, which is required; (g) the Implementing Agency has delayed the completion of

	<p>the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the PCC; or</p> <p>(h) if the Implementing Agency, in the judgment of the Employer, has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving fourteen (14) days written notice to the Implementing Agency, terminate the Contract and expel him from the Site.</p> <p>57.3 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.</p> <p>57.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.</p> <p>57.5 If the Contract is terminated, the Implementing Agency shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.</p>
<p>58. Payment upon Termination</p>	<p>58.1 If the Contract is terminated because of a fundamental breach of Contract by the Implementing Agency, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as specified in the PCC. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Implementing Agency, the difference shall be a debt payable to the Employer.</p> <p>58.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Implementing Agency's personnel employed solely on the Works, and the Implementing Agency's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.</p>
<p>59. Property</p>	<p>59.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Implementing Agency's default.</p>
<p>60. Release from Performance</p>	<p>60.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Implementing Agency, the Project Manager shall certify that the Contract has been frustrated. The Implementing Agency shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.</p>

61. Suspension of Bank Loan or Credit	<p>61.1 In the event that the Government of India (GoI) and/or State Government (Government of Andhra Pradesh) suspends the Loan or Credit to the Employer, from which part of the payments to the Implementing Agency are being made:</p> <p>(a) The Employer is obligated to notify the Implementing Agency of such suspension within 7 days of having received the Government of India (GoI) and/or State Government (Government of Andhra Pradesh) suspension notice.</p> <p>(b) If the Implementing Agency has not received sums due it within the 28 days for payment provided for in Sub-Clause 40.1, the Implementing Agency may immediately issue a 14-day termination notice.</p>
62. Force Majeure	<p>(a) The Implementing Agency shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.</p> <p>(b) For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Implementing Agency that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Implementing Agency. Such events may include, but not be limited to, acts of the Authority in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.</p> <p>(c) If a Force Majeure situation arises, the Implementing Agency shall promptly notify the Authority in writing of such condition and the cause thereof. Unless otherwise directed by the Authority in writing, the Implementing Agency shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.</p> <p>(d) As per PCC.</p>
63. Governing Law and jurisdiction	<p>(a) This Agreement shall be governed by the laws of India. The courts in Andhra Pradesh shall have jurisdiction over all matter arising out of or relating to this Agreement.</p> <p>(b) The Jurisdiction limits will be the Tirupati</p>
64. Possession of Goods	<p>(a) Goods have to be delivered to the site only after prior the approval form the Engineer-In-Charge.</p> <p>(b) Such Goods once delivered to Site will not be allowed to taken back except the construction equipments and the construction equipments should be permitted after the successful completion of the Project and as well as the Operation and Maintenance period.</p> <p>(c) In pursuant to GCC 64.B, Goods will be allowed to taken back only after the written permission from the Engineer-In-Charge.</p>
65. Warranty	<p>(a) The Implementing Agency warrants that all the Goods</p>

are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

- (b) The Implementing Agency further warrants that the Goods shall be free from defects arising from any act or omission of the Implementing Agency or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.
- (c) Unless otherwise specified in the PCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the PCC
- (d) The Authority shall give notice to the Implementing Agency stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Authority shall afford all reasonable opportunity for the Implementing Agency to inspect such defects.
- (e) Upon receipt of such notice, the Implementing Agency shall, within the period specified in the PCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Authority.
- (f) If having been notified, the Implementing Agency fails to remedy the defect within the period specified in the PCC, the Authority may proceed to take within a reasonable period such remedial action as may be necessary, at the Implementing Agency's risk and expense and without prejudice to any other rights which the Authority may have against the Implementing Agency under the Contract.

**66. Exit
Management Plan**

An Exit Management plan shall be furnished by IMPLEMENTING AGENCY in writing to the Client within 90 days from the date of signing the Contract, which shall deal with at least the following aspects of exit management in relation to the Contract as a whole and in relation to the Project Implementation, and Service Level monitoring.

(i) A detailed program of the transfer process that could be used in conjunction with a Replacement Service Provider including details of the means to be used to ensure continuing provision of the Services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer;

(ii) Plans for provision of contingent support to Project and Replacement Service Provider for a reasonable period after transfer.

(iii) Exit Management plan in case of normal termination of Contract Period.

(iv) Exit Management plan in case of any eventuality due to which Project is terminated before the Contract period.

(v) Exit Management plan in case of termination of IMPLEMENTING AGENCY.

A. Under Contract Completion

Exit Management plan shall adhere to the following:

(i) Three (3) months of the support to Replacement Service Provider post termination of the Contract.

(ii) Complete handover of the Planning documents, bill of materials, functional requirements specification, technical specifications of all equipment, change requests if any, sources codes / Quality manuals, wherever applicable, reports, documents and other relevant items to the Replacement Service Provider/Client.

(iii) The IMPLEMENTING AGENCY shall be responsible for transferring all the knowledge regarding the Systems, technically and operationally to enable the new agency / Client to carry out the requisite functions.

(iv) All latest operations & technical manuals, configuration files, software, licenses, quality manuals, warranties, guarantee, as-built drawings etc. shall be handed over to Client at least 3 months before contract completion.

(v) Client shall release the performance security to

the IMPLEMENTING AGENCY only after satisfactory Exit Management is achieved as part of the project and IMPLEMENTING AGENCY is obligated to perform all required additional functions to facilitate the same for a smooth transfer of the duties.

(vi) Certificate of Acceptance from authorized representative of Replacement Service Provider issued to IMPLEMENTING AGENCY on successful completion of handover and knowledge transfer.

In the event of termination or expiry of the Contract, Project Implementation, or Service Level monitoring, both Bidder and Client shall comply with the Exit Management Plan.

During the exit management period, IMPLEMENTING AGENCY shall use its best efforts to deliver the services.

B. Under Termination

After termination by the Client, the IMPLEMENTING AGENCY shall as soon as possible and within 90 days (of Termination Period) fully train Client's staff or any other agency designated by Client who is designated to take over the maintenance of the System.

The IMPLEMENTING AGENCY shall be responsible for continuing the maintenance as per the scope of the contract during the Termination period as per the conditions of the Contract.

The IMPLEMENTING AGENCY shall be responsible for transferring all the knowledge regarding the Systems, technically and operationally to enable the new agency/Client to carry out the requisite functions.

All latest operations and technical manuals, configuration files, software, licenses, quality manuals, warranties, guarantee, as-built drawings etc., shall be handed over to Client within 30 days after termination notice.

Client shall release the requisite payments to the IMPLEMENTING AGENCY upon termination to the IMPLEMENTING AGENCY only after satisfactory Exit Management is achieved as part of the project and IMPLEMENTING AGENCY is obligated to perform all required additional functions to facilitate the same for a smooth transfer of the duties.

A. Other Terms and conditions of the contract.

67. Notices	<p>All notices or other communications to be given or made under this agreement shall be in writing, shall either be delivered personally or sent by courier or registered post with an additional copy to be sent by facsimile or e-mail. The address for service of each party, its facsimile number and e-mail address are set out under its name on the signing pages hereto. A notice shall be effective upon actual receipt thereof, save that where it is received after 5:30 (Five Thirty) P.M. on any day, or on a day that is a public holiday, the notice shall be deemed to be received on the first working day following the date of actual receipt. Without prejudice to the foregoing, a party giving or making a notice or communication by facsimile or e-mail shall promptly deliver a copy thereof personally, or send it by courier or registered post to the addressee of such notice of communication. It is hereby agreed and acknowledged that any party may by notice change the address to which such notices and communications to it are to be delivered or mailed. Such changes shall be effective when all the parties have notice of it.</p>
68. Information provided by the Authority	<p>All drawings, Data and documentation that are given to the Implementing Agency by the Authority for the execution of the order are the property of the Authority and shall be returned when demanded. Except for the purpose of executing the order of the Authority, Implementing Agency shall ensure that the above documents are not used for any other purpose. The Implementing Agency shall further ensure that the information given by the Authority is not disclosed to any person, firm, body, corporate and / or authority and every effort shall be made to keep the above information confidential. All such information shall remain the absolute property of the Authority.</p>
69. Implementing Agency's Responsibilities	<p>The Implementing Agency shall supply all the Goods and Related Services included in the Scope of Supply and the Delivery and Completion Schedule.</p> <p>The Implementing Agency shall be responsible for the adequacy, stability and safety of all services being provided.</p> <p>The Implementing Agency shall comply with all applicable safety regulations and take care for the safety of all persons entitled to be on as the operation and maintenance.</p>

The Implementing Agency shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Authority shall be entitled to audit any aspect of the system.

The Implementing Agency shall be deemed to:

- a) have satisfied himself as to the correctness and sufficiency of the Accepted Contract Amount, and
- b) have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters.

Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Implementing Agency's obligations under the Contract and all things necessary for the proper discharge of the contract agreement.

The Implementing Agency shall be wholly and solely responsible for full compliance with the provisions under all labour laws and /or regulations such as Payment of Wages Act 1948, Employees Liability Act 1938, Workmen's Compensation Act 1923, Employees State Insurance Act 1948, Employees Provident Fund Act 1952, Industrial Disputes Act 1947, the Maternity Benefit Act 1961, the Contract Labour (Regulation and Abolition) Act 1970 and the Factories Act 1948 or any modifications thereof or any other law relating thereto and rules there under introduced from time to time.

The Implementing Agency shall assume liability and shall indemnify the Authority from every expense, liability or payment by reason of the application of any labour law, act, rules or regulations existing or to be introduced at a future date during the term of the Contract.

In general, in respect of all labour directly or indirectly employed in the Work for the performance of Implementing Agency's part of the Contract, the Implementing Agency shall comply with all the rules framed by the Government authorities concerned from time to time for protection of the health and welfare of the workers.

	<p>The Implementing Agency shall not employ any children/ child labour below the age of 18 years.</p> <p>The Implementing Agency shall include in the Contract Price all expenses necessary to meet his obligations for making contributions toward employee benefits funds such as Employee Provident fund (EPF), Employee State Insurance Scheme (ESI) benefits, old age pension and/or any other benefits/compensation legally payable in compliance with all the statutory regulations and requirements. All records in this connection shall be properly maintained by the Implementing Agency and produced for scrutiny by the concerned authorities and the Authority</p>
<p>70. Taxes and Duties</p>	<p>a) For goods manufactured outside the Authority's Country, the Implementing Agency shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Authority's Country.</p> <p>b) For goods Manufactured within the Authority's Country, the Implementing Agency shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Authority.</p> <p>c) If any tax exemptions, reductions, allowances or privileges may be available to the Implementing Agency in the Authority's Country, the Authority shall use its best efforts to enable the Implementing Agency to benefit from any such tax savings to the maximum allowable extent.</p>
<p>71. Copyright</p>	<p>The copyright in all drawings, documents, and other materials containing data and information furnished to the Authority by the Implementing Agency herein shall remain vested in the Implementing Agency, or, if they are furnished to the Authority directly or through the Implementing Agency by any third party, including Implementing Agencies of materials, the copyright in such materials shall remain vested in such third party</p>
<p>72. Confidential Information</p>	<p>The Authority and the Implementing Agency 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 completion or termination of the Contract.</p>

	<p>Notwithstanding the above, the Implementing Agency may furnish to its Subcontractor such documents, data, and other information it receives from the Authority to the extent required for the Subcontractor to perform its work under the Contract, in which event the Implementing Agency shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Implementing Agency under GCC Clause 71.</p> <p>The Authority shall not use such documents, data, and other information received from the Implementing Agency for any purposes unrelated to the contract. Similarly, the Implementing Agency shall not use such documents, data, and other information received from the Authority for any purpose other than the performance of the Contract.</p> <p>The obligation of a party under GCC Sub-Clauses 71 (a) and 71 (b) above, however, shall not apply to information that:</p> <ol style="list-style-type: none"> 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; or c. Otherwise, lawfully becomes available to that party from a third party that has no obligation of confidentiality. d. The above provisions of GCC Clause 71 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 Supply or any part thereof. e. The provisions of GCC Clause 71 shall survive completion or termination, for whatever reason, of the Contract
<p>73. Specifications and Standards</p>	<p>Technical Specifications and Drawings</p> <ol style="list-style-type: none"> a. The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin. b. Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Authority and shall be treated in accordance with GCC Clause 11.1.32

<p>74. Packing and Documents</p>	<p>a) The Implementing Agency shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.</p> <p>b) The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, and in any other instructions ordered by the Authority</p>
<p>75. Transportation and Incidental Services</p>	<p>The Implementing Agency responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.</p> <p>The Implementing Agency may be required to provide any or all of the following services, including additional services:</p> <ul style="list-style-type: none"> a. performance or supervision of on-site assembly and/or start-up of the supplied Goods; b. furnishing of tools required for assembly and/or maintenance of the supplied Goods; c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods; d. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Implementing Agency of any warranty obligations under this Contract; and e. training of the Authority's personnel, at the Implementing Agency's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods. f. Prices charged by the Implementing Agency for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Implementing Agency for similar services
<p>76. Patent Indemnity</p>	<p>The Implementing Agency shall, subject to the Authority's compliance with GCC Sub-Clause 75, indemnify and hold harmless the Authority and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Authority may suffer as a result of any infringement</p>

or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

a. the installation of the Goods by the Implementing Agency or the use of the Goods in the country where the Site is located; and

b. Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Implementing Agency, pursuant to the contract.

If any proceedings are brought or any claim is made against the Authority arising out of the matters referred to in GCC Sub-Clause 75, the Authority shall promptly give the Implementing Agency a notice thereof and the Implementing Agency may at its own expense and in the Authority's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claims.

If the Implementing Agency fails to notify the Authority within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Authority shall be free to conduct the same on its own behalf.

The Authority shall, at the Implementing Agency's request, afford all available assistance to the Implementing Agency in conducting such proceedings or claim, and shall be reimbursed by the Implementing Agency for all reasonable expenses incurred in so doing.

The Authority shall indemnify and hold harmless the Implementing Agency and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Implementing Agency may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise

	existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Authority.
77. Limitation of Liability	<p>Except in cases of criminal negligence or willful misconduct,</p> <p>a. the Implementing Agency shall not be liable to the Authority, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Implementing Agency to pay liquidated damages to the Authority and</p> <p>b. the aggregate liability of the Implementing Agency to the Authority, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Implementing Agency to indemnify the Authority with respect to patent infringement</p>
78. Change in Laws and Regulations	<p>Unless otherwise specified in the Contract, if after the bid submission date, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Implementing Agency has thereby been affected in the performance of any of its obligations under the contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC's Contract Price Clause.</p>
79. Change order and Contract Amendments	<p>The Authority may at any time order the Implementing Agency through notice, to make changes within the general scope of the Contract in any one or more of the following:</p> <p>a. Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Authority;</p> <p>b. the method of shipment or packing;</p> <p>c. the place of delivery; and</p> <p>d. the Related Services to be provided by the Implementing Agency.</p>

	<p>If any such change causes an increase or decrease in the cost of, or the time required for, the Implementing Agency's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Implementing Agency for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Implementing Agency's receipt of the Authority's change order.</p> <p>Prices to be charged by the Implementing Agency for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Implementing Agency for similar services.</p> <p>Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.</p>
80. Assignment	Neither the Authority nor the Implementing Agency shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.
81. Export Restriction	Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Authority, to the country of the Authority, or to the use of the products/goods, systems or services to be supplied, which arise from trade regulations from a country supplying those products/goods, systems or services, and which substantially impede the Implementing Agency from meeting its obligations under the Contract, shall release the Implementing Agency from the obligation to provide deliveries or services, always provided, however, that the Implementing Agency can demonstrate to the satisfaction of the Authority and of the Bank that it has completed all formalities in a timely manner, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract. Termination of the Contract on this basis shall be for the Authority's convenience pursuant to Termination Clause.
82. Time is of the Essence	Time shall be of the essence in respect of any date or period specified in this contract or any notice, demand or other communication served under or pursuant to any provision of this contract and in particular in respect of the completion of

	<p>the activities by implementing agency by the specified completion date.</p>
<p>83. Ownership and Retention of Documents</p>	<p>The authority shall own the documents, prepared by implementing agency arising out of or in connection with the contract.</p> <p>Forthwith upon expiry or earlier termination of this contract and at any other time on demand by the client, Implementing Agency shall deliver to the authority all documents provided by or organizing from the authority and all documents produced by or for implementing agency in the course of performing the services, unless otherwise directed in writing by the authority at no additional cost. Implementing Agency shall not, without the prior written consent of the client store, copy distribute or retain any such documents.</p>
<p>84. Records of Contract Document</p>	<p>Implementing Agency shall at all-time make and keep sufficient copies of the process manuals, operating procedures, specifications, Contract Documents and any other documentation for them to fulfil their duties of the contract.</p> <p>Implementing Agency shall keep on the site at atleast three copies of each and every specification and contract document. In excess of their own requirement and those copies shall be available at all times for use by the authority and by any other person authorized by the authority.</p>
<p>85. Security and Safety</p>	<p>Implementing Agency shall comply with the directions issued from time to time by the authority and the standards related to the security and safety, in so far as it applies to the provision of the services.</p> <p>Implementing Agency shall upon reasonable request by the authority or its nominee(s) participate in regular meetings when safety and matters are reviewed.</p>
<p>86. Addition / Alteration / Modifications</p>	<p>The Authority reserves the right to make additions/alterations/modifications to the quantity of items in the contract. The Implementing Agency shall supply such quantities also at the same rate as originally agreed to + 20% of the quantity ordered and incorporated in the contract. The variation shall, however, be limited Waiver.</p> <p>Any waiver by the authority of any breach of the conditions of the Contract shall not constitute any right for subsequent waiver of any other terms and conditions.</p>

<p>87. Rating & Name Plate</p>	<p>Equipment should be provided with name plate giving full details of manufacture, capacity and other details as specified in the relevant IS or other specification stipulated. The purchase order No and date and year of Supply and the words “(TSCCL)” must be etched on the name plate.</p> <p>RATING PLATE: Each main and auxiliary item of plant shall have permanently attached to it a rating plate in a conspicuous position. This shall be of a non-corrodible material preferably chromium plated steel to stand the prevalent atmospheric conditions as indicated. The inscription shall be engraved in black on the plate. The size of the rating plate shall depend Upon space availability and inscriptions shall be approved by the client. The plates shall be reasonably sized for clarity and clear inscription. The plates shall be attached to the body of the equipment by screws.</p> <p>NAME PLATE: Each item of plant shall be provided with a name plate or label designating the service of the particular equipment. The shape and size of the plate and inscriptions shall be approved by the client. Such name plates shall be of non-corrodible material preferably chromium plated steel having engraved black lettering or otherwise as specified. In case of indoor equipment, the plate shall be of transparent plastic material with black lettering engraved on the back. The name plates shall be screwed to the body of the equipment.</p>
<p>88. Interchange ability</p>	<p>All similar materials and removable parts of similar equipment shall be interchangeable with each other. A specific confirmation of this should be furnished along with the invoices for the Supplies</p>
<p>89. Material and Workmanship</p>	<p>Implementing Agency shall fully warrant that the stores, equipment and component Supplied shall be new and first quality, according to the specifications and shall be free from defects (even concealed faults, deficiency in design, materials and workmanship).</p>
<p>90. Spare Parts, Oil and Lubricants</p>	<p>Wherever applicable, the Implementing Agency shall furnish to the Authority, item-wise price list of spares required for regular operation and maintenance of the ordered equipment. The Implementing Agency shall also furnish necessary instructions and drawings to identify the spare part numbers and their location as well as an interchange ability chart</p>
<p>91. Implementing Agency's Liability</p>	<p>Implementing Agency accepts full responsibility and indemnifies the Authority and shall hold the Authority harmless from all acts of omission and commission on the part of the</p>

	<p>Implementing Agency, his agents, his subcontractors and employees in execution of the contract. The Implementing Agency also agrees to defend and undertakes to indemnify the Authority and also hold it harmless from any and all claims for injury to or death of any and all persons including but not limited to employees and for damage to the property arising out of or in connection with the performance of the work under the contract. The Implementing Agency's liability and indemnity under the Contract shall be limited to execution and maintenance of the Solar Power Plant except in case of Force Majeure</p>
<p>92. Access to Implementing Agency's Premises</p>	<p>The Authority and /or its authorized representative shall be provided Access to Implementing Agency's and / or his subcontractor's premises, at any time during the pendency of the contract, for expediting the Supplies, inspection, checking etc.</p>
<p>93. Packing and Marking</p>	<p>All materials/equipment shall be securely packed to the requirement of transportation by Rail/Road/Sea transport. All exposed Services/connections/ protrusions shall be properly protected. All Unexposed parts shall be packed with due care and the packages should bear the words "Handle with Care". The packing requirements of Rail/ Road transport shall be complied with so as to obtain clear Railway/Lorry Receipt i.e. without any qualifying remarks.</p> <p>All packages and unpacked materials shall be marked with the name of the Consignor, Consignee, Purchase Order/Contract No., gross and net weight, sign of handling, if any, with indelible paint in English at least at two places. In tagged with such bundles.</p> <p>All Equipment case of bundles, metallic plates marked with the above details shall be/material shall be protected for ocean shipment, in land transport, carriage at the Site and outdoor storage during transit and at the Site, strictly according to the instructions given in this specification.</p> <p>The contractor shall be responsible for any damage to the equipment during transit due to improper and inadequate packing. Only packages constructed out of sound material and of dimensions proportional to the size and weight of contents shall be used. Bundled materials shall be strapped rigidly with steel band over the protective covering. Fragile materials shall be securely braced with the containers or</p>

otherwise amply fastened and packed to prevent hitting or rattling. Soft non-hygroscopic packing materials shall be placed between the hard packing materials and the fragile equipment. Articles which do not completely fill the selected container must be cushioned, braced, fastened or blocked to prevent damage to the article itself or destruction of the container. Inner bracing or blocking must be such that the content's weight is distributed over interior surfaces rather than concentrate on one or two critical points. Loose material, e.g. bolts, nuts etc., shall be packed in gunny bags and sealed in polythene bags with proper tagging.

Components containing glass shall be carefully covered with shock absorbing protective material such as expanded polystyrene ('ThermoCole').

All openings in the equipment shall be tightly covered, plugged or capped to prevent foreign material from entering.

In the case of large and bulky equipment, the contractor shall be responsible for ascertaining transport limitations and Supply the equipment in the minimum number of components or subassemblies, within the framework of transport limitations.

Wherever necessary, proper arrangements for attaching slings for lifting shall be provided.

The contents of the packages shall be sealed in thick polythene sheet and all the inside walls of the packages shall be lined with waterproof paper to protect the equipment from damage due to dust and moisture.

All equipment shall be protected for the entire period of dispatch, storage and erection against corrosion, incidental damage due to vermin, sunlight, rain, high temperature, humid atmosphere, rough handling in transit and storage in the open including possible delays in transit. Material and equipment shipped across the sea shall be packed to withstand without damage, the effects of salt spray. All machined and plated parts shall be protected with anti-rust grease. At such points, wrapping impregnated with anti-rust composition or vapour phase inhibitors shall be used. These shall have sufficient strength to resist chafing and indentation due to the movement which is likely to occur in transit. The protective

wrappings and impregnation shall last for a minimum period of three months.

Silica-gel or approved equivalent moisture absorbing material in small cotton bags shall be placed and tied at various points on the equipment, wherever necessary. Adequate provision of skids or pallets shall be made to keep the packages above the collecting drainage. Crates, event collection and other large containers should have drain holes in the bottom top of water within the packing. This is especially important where the cargo itself is subject to condensation (cargo sweat).

All cases shall be provided with suitable cut outs, closed by bolted wooden planks to facilitate inspection by customs authorities. Waterproof transparent papers shall be provided at the cut-out locations to prevent water ingress into the casing through the cut-out. Each crate or package shall contain a packing list in a waterproof envelope. Copies of the packing list, in triplicate, shall be forwarded to the Prior to dispatch. All items of material shall be clearly marked for Authority easy identification against the packing list. All spare parts shall be packed and treated for long storage conditions at site. Any material found short inside the packing cases shall be supplied by the contractor at no extra cost to the client. All packing cover and packing material shall become the property of the client. The Contractor is responsible for safe delivery of the material and no compensation for any losses in transit or handling shall be compensated.

Marking:

All packages shall be clearly, legibly and durably marked with uniform block letters (preferably with waterproof paint) on at least three sides with:

- a) Destination address as communicated.
- b) Contract No.:
- c) Dimensions.
- d) Net and gross weights.
- e) Sign showing 'side Up'.
- f) Sign showing 'fragile' marks in case of delicate Equipment.
- g) Sign showing slinging and sling position.
- h) Any handling and unpacking instructions, if considered necessary.
- i) Identification mark relating them to the appropriate shipping documents.

	<p>j) In case of spare parts, each spare part shall be clearly marked and labelled on the outside of its packing with its description and catalogue/part number.</p> <p>Erection Marks: All equipment comprising multipart assemblies, e.g. steel frame works, piping etc., shall be marked with identifying numbers and/or letters corresponding to those of the approved drawings or material lists. These erection marks shall be clearly readable. The contents of the package shall be punched on non-corrosive metal plate and nailed to the package on a prominently visible place. If the number of items in the package is too many, a typed list in transparent waterproof bag shall be kept inside a galvanized steel sheet pocket nailed on to the outside of package in prominently visible location.</p>
<p>94. Electrical Equipment</p>	<p>Solar panels, modules, inverters, Control cabinets, lighting panels etc. shall be packed and shipped in convenient sections. All with drawable equipment's like circuit breakers, and its accessories, relays, instruments are so packed such that their operating mechanisms are secured from movement/vibrations and damage. Transformer may be shipped separately.</p> <p>Cables shall be shipped in non-returnable drums, adequately braced, and with cable ends adequately sealed to prevent ingress of moisture</p>
<p>95. Storage of Mechanical and Electrical Equipments at Site</p>	<p>The types of storage are broadly classified as</p> <ul style="list-style-type: none"> i) Special storage - Air conditioned, ii) Closed storage, iii) Semi-closed storage and iv) Open storage. <p>The equipment covered under this Specification shall be stored in the type of storage as recommended by the manufacturer.</p> <p>STORAGE: Authority shall make available the place at site for storing the material, if available on chargeable basis. The contractor shall arrange construction of storage sheds, etc. for proper storage of materials and to minimize wasteful handling during retrieval of items required for erection. The outdoor storage areas as well as semi-closed stores shall be provided with adequate drainage</p>

	<p>facilities to prevent water logging.</p> <p>The stores sheds shall be built in conformity with fire safety requirements and with adequate lighting and fire extinguishers. No smoking signs shall be placed at strategic locations. Safety precautions shall be strictly enforced.</p> <p>Adequate lighting facility shall be provided by the contractor in storage areas and storage sheds and security personnel positioned to ensure enforcement of security measures to prevent theft and loss of materials.</p> <p>The contractor shall carry out regular inventory of materials received, issued and erected and notify the client of any loss when noticed. The contractor shall provide adequate number of competent stores personnel including store-keepers, clerical staff, inspection engineers, watchmen and security staff to efficiently store and maintain the equipment/material entrusted to him.</p> <p>Any equipment left in the open under such conditions shall be, if required, covered with tarpaulin.</p> <p>MAINTENANCE DURING STORAGE:</p> <p>The Contractor is responsible for maintenance of the equipment stored at site as per standard practices for storage and as per manufacturer's recommendations of each of the equipment.</p>
<p>96. Progress Reports and Photographs / Videos</p>	<p>During various stages of the manufacture in the pursuance of the contract, the contractor shall at his own cost submit progress reports as may be reasonably required by the Client with such materials, such as charts, networks, photographs/Videos, test certificates etc., Such progress reports, shall be in the form and size as per industry standards and shall be submitted at least in four copies. During coordination meetings or review meetings, presentation shall be made by power point presentation with photographs for important mile stones.</p> <p>Progress Reports:</p> <p>Daily/weekly and Monthly progress reports shall be prepared by the Contractor and submitted to the client in three copies. The first report shall cover the period Up to the end of the first calendar month following the Commencement Date.</p> <p>Reporting shall continue until the Contractor has completed all</p>

	<p>work, which is shown to be satisfactory outstanding at the completion date stated in the Taking-Over Certificate for the Works. Each report shall include:</p> <ul style="list-style-type: none"> a) Charts and detailed descriptions of progress, including each stage of surveys, Investigation, design, Contractor's Documents, procurement, manufacture, delivery to Site, construction, commissioning and trial operation; b) Digital photographs/videos showing the status of progress on the Site; c) For the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of: Commencement of manufacture, Contractor's inspections, tests, and Dispatch and arrival at the Site; d) The details of Contractor's Personnel and Equipment; e) Copies of quality assurance documents, test results and certificates of Material; f) List of Variations, notices given g) Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and h) Comparisons of actual and planned progress, with details of any events or circumstances which may jeopardize the completion in accordance with the Contract, and the measures being (or to be) adopted to minimize or overcome delays.
<p>97. Documentation</p>	<p>The contractor's store keeping function will include maintaining various records. These records shall include but not limited to Supplier-wise record of equipment/material received, stored and issued for erection as well as stock position.</p> <p>Record of inspection and repairs carried out, protective measures and lubrication equipment in storage as well as erected until the same is taken over by the owner.</p>
<p>98. Dispatch of Materials</p>	<p>The Implementing Agency is responsible for the safe delivery of the goods in good condition at the project site of the pant. Destination stores. The Implementing Agency should acquaint himself of the conditions for handling and transport of the goods to destination and shall include and provide for security and protective packing of the goods so as to avoid damage in transit. Packing of the materials / equipment shall be strictly as per the provision of the contract or standards or as required. All formalities related to allotment of wagons, loading permission from railways shall be completed by the Implementing Agency. The Implementing Agency shall communicate immediately the dispatch details to the consignee as specified in the contract.</p>

	The original dispatch documents shall be forwarded immediately either directly or through bank, failing which the Implementing Agency shall be responsible for any delay in payment and consequential payments of demurrages and wharf ages to the transporter.
99. Demurrage / Wharf age	Implementing Agency shall also be responsible for all payments due to late receipt of RR/LR and other documents.
<p>100. Conditions:</p> <p>100.1. Prices:</p> <ol style="list-style-type: none"> i. Price(s) shall be firm and not subject to escalation on any account, till the contract is executed in full and its subsequent amendments accepted by the Implementing Agency even though the completion/execution of order may take longer time than delivery period incorporated and accepted in contract. ii. The bidder shall quote their prices for Supply, Erection & Commissioning and Maintenance portion separately as per schedule of prices indicated in the schedules. iii. The prices quoted shall be lump sum and on for Destination basis exclusive of all taxes and duties. The prices shall be FIRM throughout and until Supply, Delivery, Erection, Testing and commissioning and maintenance of the equipment/system Maintenance period covered under the contract is completed. iv. All applicable taxes/duties/levies such as GST, Excise duty, Works Contract Tax, Octroi, Cess, Entry Tax etc., and any other taxes and duties that are applicable for such contracts in the State of Andhra Pradesh as on the date of Opening of bid shall be considered. <p>100.2 <u>Taxes, Levies and Duties:</u> GST, Excise Duty and other payable shall be shown separately in the invoice.</p> <p>Variations in Statutory Levies:</p> <p>All Taxes and Duties paid by the bidder shall be reimbursed as per the prevailing taxation laws. In cases where delivery schedule is not adhered to by the Implementing Agency and there is upward variation/revision after the agreed delivery date, the bidder/Implementing Agency shall bear the impact of such increased levies and if there is downward variation/revision, the Authority shall be given advantage to that extent.</p> <p>100.3. All royalties for patent or charges for the use or infringement thereof that may be involved in the construction or use of any equipment shall be included in the bid price. The bidder /Implementing Agency shall protect the Authority against any and all claims arising on account of the use thereof. The Authority agrees to furnish the Implementing Agency any appropriate information or assistance.</p>	

100.4. Contract performance Security / Performance Bank Guarantee - For contract:

- a) The successful bidder shall furnish within 14 Days or as specified period from the date of issue of Letter of Acceptance, the contract performance Security equal to 5% of Contract value of purchase order/contract (including Taxes and Duties) and balance 5% security amount shall be deducted from running bill in proportion of bill amount and contract value, the deducted amount shall be equal to the 5% of the contract value, for proper fulfilment of the terms and conditions of the contract till full execution of the plant and fulfilment of terms and conditions thereof. The amount of Contract Performance Security shall be forfeited to the extent of financial loss suffered by the TSCCL, if Implementing Agency fails to execute the order and fulfil its terms and conditions.
- b) The Bank guarantee should be valid for a period of 20 months initially from the last of submission of bid and shall be extended from time to time as per requirement. (the same period of 20 months is to be used in format of bid security {bid Bond})
- c) Contract Performance Security shall be returned to the contractor after 6 months of successful commercial operation of the solar plant provided,
 - i. the contractor has fulfilled all contractual obligations,
 - ii. the contractor has proven the satisfactory performance of the plant as per the terms and conditions set out in the contract,
 - iii. the contractor has to submit the additional performance security Deposit equivalent to 10% of the O&M Contract Amount for the period of 10 years set out herein below,
 - iv. and there should not be any outstanding either against the contract or any other purchase orders/contracts placed by the TSCCL on the Contractor.

Contract performance Security - For O&M contract:

- a) After successful commissioning of the plant the bidder shall commence the O&M contract by providing the performance security of 10% of O&M contract value for the stipulated 10 years of O&M period.

The amount of Contract Performance Security shall be forfeited to the extent of financial loss suffered by the Authority, if Implementing Agency fails to operate and maintain the plant properly and fulfil terms and conditions of the contract.
- b) Contract performance Security shall be furnished in the shape of bank guarantee drawn on any nationalized bank in favour of, Authority payable at Tirupati or in the form of bank guarantee from any nationalized bank in the prescribed format.
- c) The Bank guarantee should be valid for a period of One year initially and shall be extended from time to time as per requirement.
- d) Contract Performance Security shall be returned to the contractor after Ten years of successful operation & maintenance of the solar plant provided,

- i. the contractor has fulfilled all contractual obligations,
- ii. the contractor has maintained the plant properly to generate maximum power by the plant as per the terms and conditions set out in the contract with production as per output guaranteed (Technical Specification),
- iii. and there should not be any outstanding either against the contract or any other purchase orders/contracts placed by the Authority on the Contractor.

100.5. Terms of payment:

- A. Mobilization advance: Mobilisation Advance of 10 % will be paid to the Contactor against submission of BG in valid format as follows,
10% the Contract value will be paid after the Contractor submits Performance Security and concludes agreement and on application by the contractor.
The mobilization advance attracts interest at the rate of SBI SLR Rate + 3%. The mobilization advance shall be adjusted from the bills of the contractor in equal instalments from the Contractors Bills.

B. Contract Payment:

The payments shall be made as specified in the PCC.

100.6 OPERATION & ANNUAL MAINTENANCE CHARGES:

Annual maintenance charges will be paid in quarterly basis after completion of satisfactory maintenance of the plant as per tendered rates.

NOTE:

1. The payment will be processed only after submission of contractor's commercial invoice along with required documents like test certificates, inspection reports, bank guarantees, etc.
2. The bidders who take deviation from the above terms of payment will be evaluated by loading their price with 15% rate of interest per annum.
3. Payments shall be made through account payee cheques/drafts only.
4. Provided proper document in support of paid taxes are submitted with the bills.

If the Implementing Agency has received any over payments by mistake or if any amounts are due to the TSCCL due to any other reasons, when it is not possible to recover such amount under the contract the Authority reserves the right to collect the same from any other amounts and/or Bank Guarantee given by the Implementing Agency due to or with the Authority. When the Implementing Agency does not at any time fulfil his obligations in replacing/rectifying, etc., of the damages/defective materials in part or whole, promptly to the satisfaction

of the Engineer-in-Charge or his representative, the Authority reserves the right not to accept the bills against subsequent dispatches made by the Implementing Agency and under these circumstances, the Implementing Agency only will be responsible for any demurrage, wharf age or damages occurring to the consignments so dispatched.

100.7. Delivery Period:

The bidder has to submit a detailed Bar/PERT Chart conforming to the delivery schedules for material and completion of erection, testing and commissioning of the plant stipulated in the bid documents.

100.8. Timely Completion:

The solar projects are proposed by (TSCCL) under smart City Development are time bound. and thus, the completion period is essence of the contract and the successful bidder shall take all necessary measures to execute the project in the least possible period preferably before scheduled completion period.

100.9 Removal of Rejected Goods and Replacement:

- a) If Upon delivery, the material/ equipment is found not in Conformity with the specifications stipulated in the contract, whether inspected and approved earlier or otherwise, those shall be unacceptable to the Authority or its authorized representative. A notification to this effect shall be issued to the Implementing Agency, normally within 10 days from the date of receipt of materials at stores/ project site of the solar power plant.
- b) Implementing Agency shall arrange suitable replacement Supplies and remove the rejected goods within 10 days from the date of notification failing which, the goods shall be dispatched to vendor by road transport on freight to pay basis at Implementing Agency risk and cost.
- c) External damages or shortages that are prima-facie the results of rough handling in transit or due to defective packing shall be intimated within a fortnight of the receipt of the materials. In case of internal defects, damage or shortages or any internal parts, which cannot ordinarily be detected on a superficial visual examination, though due to bad handling in transit or defective packing should be intimated within 3 months from the date of receipt of these articles. In either case the damaged or defective material should be replaced by the Implementing Agency free of cost to the Authority.
- d) If no steps are taken within 30 days of receipt of intimation of defects or such other reasonable time as the Authority may deem proper to afford, the Authority may without prejudice to its other rights and remedies arrange for repairs/rectification of the defective materials or replace the same and recover the expenditure incurred from the deposits such as EMD, Performance Security/guarantees or other monies available with the Authority or by resorting to legal action.

100.10. ERECTION CONDITIONS OF CONTRACT:

100.10.1. CONDITIONS:

The following shall Supplement the conditions already contained in the other parts of these specifications and documents and shall govern the scope of contract related to the erection, testing and commissioning. Scope of services: - The scope of the work and duties and responsibilities of the Implementing Agency shall broadly include the following:

1. Re-checking and re-verification of plant and equipment and materials Supplied by the Implementing Agency and their sub-vendors
2. Erection including disassembly, pre-assembly etc. and performing trial and pre-commissioning tests, adjustment, calibration, etc, of the plant and equipment.
3. Initial operation of the plant and equipment till successful completion of trial operations.
4. Carrying out the performance and guarantee tests in terms of General technical conditions.
5. Repairs, modifications and alterations, etc., of the plant and equipment, whenever necessary.
6. Training personnel of the Client in erection, testing and operation and maintenance of the plant and equipment at site.
7. Rendering clarification and guidance, on technical problems and drawings/ documents relating to the plant and equipment.
8. Preparation of detailed programmes/schedules for erection, testing and commissioning activities of the plant and equipment including material and manpower planning.
9. Any other related services though not specifically mentioned herein before but necessary for proper execution of the work, as stipulated.
10. The bidder shall indicate the requirement for adequate storage space at site on the basis of availability.

WORK AND SERVICES

The Implementing Agency shall undertake to perform the complete job as per scope above. Such parts as may have not been specifically included but otherwise form part of the job are deemed to be included unless otherwise specifically excluded.

The Implementing Agency shall arrange for the services of fully qualified and competent supervising Engineer/Engineers and necessary number of personnel as the Implementing Agency deems it absolutely necessary with the requisite specialized skills for the erection, testing and commissioning of equipment.

All tools required for installation shall be arranged by the Implementing Agency.

Inspection and testing of the complete installation and putting in regular service and shall bear the overall responsibility of the satisfactory installation, testing and commissioning of the equipment. The Implementing Agency shall make his own arrangements for Boarding & Lodging of his personnel. The following facilities and services are also covered in the scope of Tenderer. Unloading and loading of equipment and accessories, transportation to the site and storage. Providing of necessary labour force required for the execution of the job. Providing of necessary transport facilities for the staff to be deputed by the contractor for installation work.

100.10.2 ERECTION LABOUR AND TOOLS:

- I. The Implementing Agency shall furnish the list of special erection tools. Special tools which in the opinion of the Implementing Agency would be required for erection work during maintenance should be indicated in schedule for special tools and plants.
- II. The Implementing Agency may select to bring with him certain personal tools required for erection which will remain his property at all times. Use of such personal tools for erection work shall not entitle the Implementing Agency to any additional payment. Any assistance required by the Implementing Agency in securing entry and exit permits for such tools shall be rendered by the Authority.
- III. Checking for necessary positions, levels and dimension of foundation shall be done by the Implementing Agency.
- IV. Cleaning and Servicing: The Implementing Agency shall ensure that inside of all tubes, pipes, valves fittings and actuators shall be free from dirt and loose scales by thoroughly blowing and /or flushing of service before being erected by them.

2 100.10.3. FIELD ENGINEERING CLARIFICATIONS:

The Implementing Agency shall provide all necessary field engineering clarifications to the client that they may require for the purposes of their works. The Implementing Agency shall also provide all engineering clarifications and details to the client for the overall engineering / start-Up of the plant and equipment Supplied by them.

100.10.4. IMPLEMENTATION AND FIELD QUALITY PLANS:

It will be the responsibility of the Implementing Agency to ensure that the erection of the equipment is carried out according to the quality plans and standard manufacturing practices / instructions as given by the manufacturer without any deviations in performing the erection in accordance with such quality plans, etc. The Implementing Agency shall further identify specific hold points beyond which work will not proceed without Client's consent so as to further ensure that he performs the above quality functions effectively.

100.10.5. PRE-COMMISSIONING TRIALS AND INITIAL OPERATIONS:

1. On completion of all works, all the measurements shall be jointly taken by the

Implementing Agency and client and a protocol signed. The tests and trial operations shall be conducted only after signing of the protocol.

2. The pre-commissioning trials and initial operations of the equipment Supplied by the Implementing Agency shall be the responsibility of the Implementing Agency. The Implementing Agency shall provide, in addition, any special instruments/calibrating devices, etc., if required for the successful performance of these trials.

100.10 .6. COMMISSIONING REPORT:

The client and Implementing Agency shall properly maintain in the agreed formats their respective records of all observations and measurements taken in respect of all tests and operations. Joint protocol shall be signed on completion of each and every test / check till the trial operation. During trail operations, all readings shall be jointly maintained and signed. On successful completion of trial operations, a report shall be jointly prepared and signed indicating results of all the tests / checks and trail operation readings.

100.10.7. RELEASE OF CLAIMS:

After completion of work and prior to final payment, Implementing Agency shall furnish a release of claims against the Authority arising out of the contract other than the claims specifically identified, evaluated and accepted.

100.10.8. TAKING OVER:

Upon successful completion of erection, testing and commissioning in respect of all equipment's under the scope of the specification, (Engineer-in-Charge) shall issue to the Implementing Agency, a taking over certificate as a proof of final acceptance of the equipment. Such certificate shall not unreasonably be held Up on account of minor omission or defects, which does not affect the commercial operation or do not constitute any serious risk to the equipment. The Implementing Agency shall undertake to make good such omissions and defects at the earliest possible time. The estimated amount as decided by the (Engineer-in-Charge) for making good such omissions or defects or deficiency in observed performance over the assessed or guaranteed performance shall be deducted from the invoice of the Implementing Agency and the amount deducted shall be paid as soon as the omissions or defects are rectified or made good the financial loss, etc. to the satisfaction of (TSCCL). The taking over certificate however shall not relieve the Implementing Agency of his obligation which otherwise survive by the terms and conditions of the contract after issuance of such certificate.

100.10.9. REGULATION OF LOCAL AUTHORITIES AND STATUS:

The Implementing Agency shall, to the extent relevant and applicable, comply with all the rules and regulations of local authorities/governments, during the performance of his field activities. He shall also comply with the minimum wage Act: 1948 and any modifications thereof and the payment of wages Act (both of

the Government of India) and the rules made there under, in respect of employees or workmen employed or engaged by him. The Implementing Agency shall also Supply the equipment in conformity with the electricity laws, rules, etc. and obtain all permissions and approvals from the competent authorities such as CEIG, etc. before charging the equipment for testing and commissioning.

100.10.10. CONSTRUCTION MANAGEMENT:

1. The field activities of different Implementing Agency working at site, will be co-ordinated by the (Engineer-in-Charge) and his decision shall be final in resolving any disputes or conflicts between the Implementing Agency another Contractors and regarding scheduling and co-ordination of work. For any disputes, the decision of Authority shall be final and binding on both the parties.
2. The Engineer-in-Charge or his representative shall hold meetings of all the Implementing Agency working at site, at a time and a place to be designated. The Implementing Agency shall attend such meetings and take notes of discussions during the meeting and the decisions of (Engineer-in-Charge) and shall strictly adhere to these decisions in performing his services. In addition to the above weekly meetings, (Engineer-in-Charge) may call for other meetings either with individual Implementing Agency or with selected number of Implementing Agency and in all such cases the Implementing Agency, if called shall attend such meetings.

HOWEVER, any delay in timely completion of the work under the contract on account of any such decision of the Engineer-in-Charge causing such delay or suspension of work for any period of time shall not be attributable to the Implementing Agency.

100.10.11. IMPLEMENTING AGENCY'S ASSISTANCE IN WORK PLAN FOR FIELD OPERATION:

1. Erection network submitted by the Implementing Agency and discussed with the client and finalized with necessary modifications to form a part of Contract documents will be the essence for planning erection activities. Accordingly, the Implementing Agency will prepare work plan in line with erection network for erection activities to be performed.
2. First preparation of such erection plan will cover erection activities to be Performed for two months' period. Every subsequent plan prepared in the last week of every month, will contain Updated report for reflecting progress achieved Up to 20th day of the month (hereinafter "reporting month") a firm programme for the first ensuing month and tentative programme for the second ensuing month. The firm erection programme for the first ensuing month will reflect the progress of the reporting month erectable equipment and material available at site, resources at the immediate disposal of the Implementing Agency and the inputs to be provided by the Client. The firm work plan shall be broken down by the Implementing Agency in week-wise erection plan. The tentative

work plan must set target for complete work based on progress achieved in the reporting month, progress likely to be achieved through firm plan of first ensuing month and identify constraints.

- I. The erection work plan will be reviewed periodically for effective implementation of work plan.
- II. The Implementing Agency shall also intimate the programme of the visit of his personnel to site and departure from site. (Engineer-in-Charge) will have the right to review the list of such personnel and ask for increase in the strength or reschedule the visits of such personnel, if in the opinion of (Engineer-in-Charge), the list of personnel furnished by the Implementing Agency is not sufficient for effective performance of the Contract.
- III. The Implementing Agency shall have the complete responsibility for the safety of all persons employed by him, and all the properties under his custody during the Contract. This requirement with respect to the persons employed by the Implementing Agency shall be limited to work site only and with respect to the equipment and properties shall apply continuously till the completion of the contract and shall not be limited to normal working hours.

100.10.12. ACCESS TO SITE:

1. The Contract, so far as it is executed on the client premises, shall be carried out till such time as the client may approve.
2. During the execution of the work, no person's other than the Implementing Agency, or his duly appointed representative, sub-contractors and workmen shall be allowed to do work on the site, except by the special permission in writing. But access to the works at all times shall be accorded to the (Authority) representatives and other authorized officials.

100.10.13. IMPLEMENTING AGENCY'S SITE OFFICE ESTABLISHMENT:

The Implementing Agency shall establish a site office at the site and keep posted a client authorized representative for the purpose of Contact. Any written order or instructions of (Engineer-in-Charge or his representative) shall be handed over to the Implementing Agency's representative under receipt duly taken from the said representative and such communication shall be treated as a communication to the Implementing Agency's legal address.

100.10.14. CO-OPERATION WITH OTHER IMPLEMENTING AGENCYS:

1. The Implementing Agency shall co-operate with all other Contractors and staff of the Client, who may be performing other services on behalf of the Client and the workmen who may be employed by the Client and doing work in the vicinity of the Contractor's work site.
2. Client shall be informed promptly by the Implementing Agency of any defects in the work that could affect the performance of the equipment. The Implementing Agency and the client shall determine the corrective measures, if any, required to rectify this situation after inspection of the works.

100.10.15. QUALIFICATION OF IMPLEMENTING AGENCY'S PERSONNEL:

1. The Implementing Agency's personnel will be adequately qualified, trained and experienced so as to carry out the duties most efficiently and effectively as expected of them. The Implementing Agency's personnel shall have adequate experience of working on similar type of the equipment and similar job.
2. Not with standing above if any of the personnel is not found to be performing his services in a manner as expected of him, under the contract, the Implementing Agency on advice from (Engineer-in-Charge), shall replace such person(s) at his cost with those acceptable to (Engineer-in-Charge), by mutual agreement.

100.10.16. DISCIPLINE OF WORKMEN:

The Implementing Agency shall adhere to the disciplinary procedure set by (Engineer-in-Charge) in respect of his employees and workmen, if any, at site. The (Engineer-in-Charge) shall be at liberty to object to the presence of any representative or employee of the Implementing Agency at the site, if in the opinion of (Engineer-in-Charge), such employee has committed misconduct, or is incompetent or negligent or otherwise undesirable, and then the Implementing Agency, after mutual agreement, shall replace such a person objected to.

100.10.17. MANPOWER REPORT:

The Implementing Agency shall furnish, on the first day of every month, manpower report of the previous month detailing the number of persons scheduled to have been deployed and actually deployed for timely and successful commissioning of the equipment.

100.10.18. CLEANLINESS:

The offices and the residential areas of the Implementing Agency's employees within the premises of the client or those allotted by the client, shall be kept neat and clean to the entire satisfaction of the client.

100.10.19. FIELD OFFICE RECORD:

The Implementing Agency shall maintain at his office, Up-to-date copies of all drawings, specifications and other contract documents and any other Supplementary data, complete with all the latest revisions thereto. The Implementing Agency shall also maintain, in addition, the continuous record of all changes to the above Contract documents, drawings, specifications, Supplementary data etc., effected at the field and on completion of his total assignment under the Contract shall incorporate all such changes on the drawings and other engineering data to indicate "as installed" conditions of the equipment furnished under the Contract. Such drawings and engineering data shall be submitted to (Engineer-in-Charge) in requisite number of copies as per terms of the Contract.

100.10.20. EPF & INSURANCE:

If an existing EPF account code is not in place, then the bidder should obtain independent EPF account code in his name, from the competent authority. Documentary evidence for the same should be produced at the time of entering into agreement or before commencement of works, as demanded by (Engineer-in-Charge).

The insurance of all Implementing Agency" personnel against any accident during erection, testing and commissioning etc., shall be arranged by the Implementing Agency at his cost. The Implementing Agency shall also indemnify the Authority against all liabilities arising out of any accidents, loss and/ or any other reasons. The personal insurance for the Implementing Agency's personnel deputed to site shall also be arranged by the Implementing Agency at his cost.

II. COMPREHENSIVE AUTOMOBILE INSURANCE:

This insurance shall be in such a form as to protect the Implementing Agency against all claims for injuries, disability, disease and death to member of public including the Authority's men and damage to the property of others arising from the use by the Implementing Agency's personnel of motor vehicles during on or off the site operations, irrespective of the ownership of such vehicles.

III. WORKMEN'S COMPENSATION INSURANCE:

This insurance shall protect the Implementing Agency against all claims applicable under the Workmen's Compensation Act, 1948 (Government of India). This policy shall also cover the Implementing Agency against claims for injury, disability, disease or death of his or his sub-contractor's employees which for any reason are not covered under the Workmen's Compensation Act, 1948. The responsibility and liability of this insurance be as provided in the statutes and the liability shall not be less than the liability provided in the statutes.

IV. COMPREHENSIVE GENERAL LIABILITY INSURANCE:

This insurance shall protect the Implementing Agency against all claims arising from injuries, disabilities, disease or death of members of public or damage to property of others, due to any act or omission on the part of the Implementing Agency, his agents, his employees, his representatives and sub-contractors or from riots, strikes and civil commotion.

The hazards to be covered will pertain to all the works and areas where the Implementing Agency, his Sub-Contractors, his agents and his employees have to perform work pursuant to the Contract. The above are only illustrative lists of insurance covers normally required and it will be the responsibility of the Implementing Agency to maintain all necessary insurance coverage to the extent both in time and amount to take care of all his liabilities either direct or indirect in pursuance of the Contract.

100.10.21. SERVICE AND FACILITIES TO BE PROVIDED BY THE AUTHORITY:

Necessary area required for construction of Implementing Agency's office and quarters for Implementing Agency's supervisors/workmen shall be arranged by themselves by the Implementing Agency near project site. It is the responsibility of the Implementing Agency to establish the office and to provide necessary residential accommodation to his employees at his own cost. Power Supply for construction purpose shall be arranged by themselves by the Implementing Agency. Implementing Agency shall arrange distribution of power as required for construction works. The distribution shall be with proper protection with MCCB's/MCB's etc. as per Indian standards. Implementing Agency has to make his own arrangement for water for construction activities and maintenance of plant or providing water to the employees and their residential quarters.

100.10.22. WORKING HOURS:

The personnel shall work normally 8 hours per day in one shift during the hours in between 6.00AM to 8.00PM including one-hour rest and six days working per week. The works can be allowed to be carried out during night, Sundays or authorized holidays in order to meet the schedule targets keeping in view;

1. The provisions of labour laws are adhered to,
2. Adequate lighting, Supervision and safety measures are established,
3. Authority's approves the construction program given by the Implementing Agency and agree for working during Sundays or authorized holidays.

100.10.23. REGULATIONS OF LOCAL AUTHORITIES:

The Implementing Agency shall, throughout the continuance of the contract and in respect of all matters arising in the performance thereof obtain consents, way leaves, approvals and permissions required in connection with the regulations and by-laws of the local or other authority which shall be applicable to the works.

All work shall be executed in accordance with the Indian Electricity Rules, 1956 and any statutory modifications thereof, and any local regulation and laws, wherever applicable, unless otherwise agreed to in writing by the Engineer.

All works shall be carried out by and under the supervision of qualified personnel having required skills and certifications. The necessary approvals for installation and operating the equipment such as CEIG approval, etc. shall be obtained by the Implementing Agency. The Authority shall provide necessary assistance in furnishing the required details.

100.10.24. LIABILITY FOR ACCIDENTS AND DAMAGE:

The bidder shall be responsible for all loss, damage or depreciation to the plant until the plant is taken over or extended period as agreed. The bidder shall, during the progress of the work, properly cover up and protect the plant from injury by exposure to the weather, and shall take every reasonable, proper, timely, and useful precaution against accident or injury to the same from any cause and shall remain answerable and liable for all accidents or injuries thereto which until the same or be deemed to be taken over, may arise or be occasioned by the acts or omissions of the bidder or his workmen or sub-bidder, and all losses and damages arising from such accidents or injuries as aforesaid shall be made good in the most complete and substantial manner by and at the sole cost of the bidder to the reasonable satisfaction of the Authority.

Until the plant shall be or be deemed to be taken over as aforesaid the bidder shall also be liable for and shall be deemed to have indemnified the Authority in respect of all damage or injury to any person or property of the Authority or of other occasioned by the negligence of the bidder or his workmen or sub-bidders or by defective design, work or material, but not otherwise provided that the bidder shall not be liable under the contracts for any loss of profit or loss of contracts or any claims made against the Authority not already provided for in the contract, nor for any damage or injury caused by or arising from the acts of the Authority or of others, or (save as to damage by fire, acts of God or any event of force majeure as hereinafter provided) due to circumstances over which the bidder has no control, nor shall his total liability for loss, damage or injury exceed the total value of the contract.

The bidders shall be deemed to have indemnified and saved harmless the Authority against mal actions, suits, claims, costs or expenses arising, in connection with injuries suffered prior to the date when the plant shall have been taken over and during maintenance period by persons employed by the bidder or his sub-bidders on the works whether under the General law or under the Workmen's Compensation Act, 1923, or any other statute in force at the date of the contract dealing with the question of the liability of employers for injuries suffered by employees and to have taken steps properly to insure against any claims hereunder.

On the occurrence of an accident which results in the death of any of the workmen employed by the bidder or which is so serious as to be likely to result in the death of any such workmen, the bidder shall within 24 hours of the happening of such accident, intimate in writing to the (Engineer-in-Charge), the fact of such accident. The bidder shall indemnify (authority) against all loss or damage sustained by the Authority resulting directly or indirectly from his

failure to give intimation in the manner aforesaid including the penalties or fines if any payable by the Authority as a consequence of its failure to give notice under the Workmen Compensation Act or otherwise, to conform to the provision of the said Act in regard to such accident.

In the event of any claim made, or action brought against the Authority involving the bidder and arising out of the matter referred to and in respect of which bidder is liable under this clause, the bidder shall immediately notify, and he shall, with the assistance, if he so required, of the Authority, but at the sole expense of the bidder conduct all negotiations for the settlement of the same or of any litigation that may arise there from. In such case the Authority shall, at the expense of the bidder, afford all available assistance for any such purpose.

In the event of an accident in respect of which compensation may become payable under workmen's Compensation Act VIII of 1923, weather by the bidder or by the (AUTHORITY) as principal, it shall be lawful for (AUTHORITY) to retain out of moneys due and payable to the bidder such sums of money as may be in the opinion of the said Engineer be sufficient to meet such liability. The decision of (Engineer-in-Charge) shall be final in regard to all matters arising under this clause.

100.10.25. FENCING AND LIGHTING:

Except as herein after provided the bidder shall, unless otherwise specified, be responsible for the proper fencing, guarding, lighting, and watching of all works comprised in the contract and for the proper provision of temporary roadway, footways, guards, and fences as far as the same may be rendered necessary by reason of the work for the accommodation and protection of foot passengers or other traffic and of the owners and occupiers of adjacent property and of the public. Fencing & lighting provided in and around control rooms.

100.10.26. MATERIALS BROUGHT ON TO THE SITE:

All materials, and equipment brought to and delivered Upon the site for the purpose of the work shall, from the time of their being so brought, vest and be the property of the Authority but may be used for the purpose of the work but for that purpose only and shall not on any account be removed or taken away by the bidder or any other person without the express permission in writing of the Engineer but the bidder shall nevertheless be solely liable and responsible for any loss or destruction thereof or damage there to unless resulting from causes beyond the bidder's control not being causes insurance against destruction or damage.

100.10.27. BIDDER REPRESENTATIVE AND WORKMEN:

Complete Erection, Testing and Commissioning is included in scope of works. The bidder shall employ at least one competent representative, whose name or names shall have previously been communicated in writing to the Authority by the bidder, to supervise the erection of the plant and carrying out the works. The said representatives, or if more than one shall be employed then one of such representatives, shall be present at the site during working hours and any written orders or instructions to the said representative of the bidder, shall be deemed to have been given to the bidder. The Authority shall be at liberty to object to any representative or person employed by the bidder in the execution or otherwise about the works who shall misconduct himself or be incompetent or negligent, and the bidder shall remove the person so objected to Upon receipt of notice in writing from the Authority requiring him (the bidder) so to do, and provide in his place a competent representative at the bidder's expense.

100.10.28. ENGINEER'S SUPERVISION:

All the works shall be carried out under the direction and to the reasonable satisfaction of the Engineer-in-Charge. The bidder shall be responsible for the correctness of the positions, levels, and dimensions of the works according to the drawings notwithstanding that he may have been assisted by the Engineer in setting out the same.

100.11. REPLACEMENT OF DEFECTIVE WORK OR MATERIALS:

If during the progress of work the Engineer-in-Charge decides and notifies in writing to the bidder that the bidder has executed any unsound or imperfect work, or has Supplied any plant or materials inferior quality or quantity to these specified, the bidder on receiving details of such defects or deficiency shall, at his own expense, within seven days of his receiving the notice, or within such time as may reasonably necessary for making it good, proceed to alter, reconstruct, or remove such work or Supply fresh materials Up to the standard of the specification, and in case the bidder fails to do so, the Authority may on giving the bidder seven days' notice in writing of his intention so to do proceed to remove the works, the materials complained of, and at the cost of the bidder, perform all such work or Supply all such materials, provided that nothing in this clause shall be deemed to deprive the Authority of or affect any rights under the contract which he may otherwise have in respect of such defects or deficiencies.

100.12. TESTS ON COMPLETION:

Whenever possible all tests shall be carried out before shipment should, however, it be necessary for the final tests as to performance and guarantees to be held over until the plant is erected at site they shall be carried out in the presence of the bidder's representative within one month of the completion of erection or the taking over of the solar power plant by the Authority whichever is earlier.

100.13. TESTS AT SITE:

In all cases where the contract provides for tests at site, the bidder except where otherwise specified, shall provide, free of charge, such labour, materials, fuel, stores, apparatus and instruments as may be required from time to time, and as may reasonably be demanded, efficiently to carry out such tests of the plant, material, or workmanship in accordance with the contract.

In the case of contracts requiring electricity for carrying out tests on site at the time of commissioning, such electricity shall be Supplied free of costs to the bidder.

100.14. POWER TO VARY OR OMIT WORK:

No alterations, amendments, omissions, additions, suspensions, or variations of the work (herein after referred to as "Variations") under the contract as shown by the contract drawings or the specification shall be made by the bidder except as directed in writing by the Authority, but the Authority shall have full power, subject to the provision herein after contained, from time to time during the execution of the contract by notice in writing to instruct the bidder to make such variation without prejudice to the contract, and the bidder shall carry out such variations, and be bound by the same conditions, as far as applicable, though the said variations not occurred in the specification and the bidder will compensate in this situation if applicable.

If any suggested variations, would, in the opinion of the bidder, if carried out, prevent him fulfilling any of his obligations or guarantees under the contract, he shall notify the Authority there of in writing, and the Authority shall decide forthwith whether or not the same shall be carried out, and if the Authority confirms his instructions, the bidder's obligations and guarantees shall be modified to such an extent as may be justified. The difference of cost, if any, occasioned by any such variations shall be added to or deducted from the contract price as the case may require. The amount of such difference, if any, shall be ascertained and determined in accordance with the rates specified in the schedules of prices, so far as the same may be applicable, and where the rates are not specified in the said schedules, they shall be settled by the Authority and

bidder jointly. But the Authority shall not become liable, for the payment of any charge in respect of any such variations, unless the instructions for the performance of the same shall have been given in writing by the Authority.

In the event of the Authority requiring any variations, such reasonable and proper notice shall be given to the bidder as will enable him to make his arrangements accordingly, and in cases where goods or materials are already prepared, or any designs, drawing, or patterns made or work done that require to be altered, a reasonable sum in respect thereof shall be allowed by the Authority. Provided that no such variation shall, except with the consent in writing of the bidder, be such as will involve an increase or decrease of the total price payable under the contract by more than 10 (Ten) percent thereof.

In any case in which the bidder has received instructions, from the Authority as to carrying out the work, which either then or later will, in the opinion of bidder, involve a claim for additional payment, the bidder shall, as soon as reasonably possible after the receipt of the instructions, aforesaid, advise the Authority to that effect.

100.15. NEGLIGENCE:

If the bidder neglects to execute the work with due diligence and expedition or shall refuse or neglect to comply with any reasonable orders given to him in writing by the Engineer-in-charge connection with the work, or shall contravene the provisions of the contract, the Authority may give seven days' notice, in writing, to the bidder, to make good the failure, neglect, or contravention complained of and should the bidder fail to comply with the notice within a reasonable time from the date of service thereof in the case of failure, neglect or contravention capable of being made good within that time or, otherwise within such time as may be reasonably necessary for making good, and in such case, the Authority shall be at liberty to employ other workmen, and forthwith perform such work as the bidder may have neglected to do or if the Authority shall think fit, it shall be lawful for him to take the work wholly, or in part, out of the bidder's hands and re-contract at a reasonable price with any other person or persons, or provide any other materials, tools, tackle or labour for the purpose of completing the work or any part thereof and in that event the Authority shall, without being responsible to the bidder for fair wear and tear of the same to have the free use of all the materials, tools, construction plant or other things which may be on the site, for use at any time in connection with the work, to the exclusion of any right of bidder over the same, and the Authority shall be entitled to retain and apply any balance which may be otherwise due on the contract by him to the bidder or such part thereof as may be necessary to the payment of cost of executing such work as aforesaid.

If the cost of executing the work as aforesaid shall exceed the balance due to the bidder and the bidder fail to make good the deficit, the said materials, tackle, construction plant or other things, the property of the bidder may be sold by the Authority, and the proceeds applied towards the payment of such difference and the cost of an incidental to such sale. Any outstanding balance existing after crediting the proceeds of such sale shall be paid by the bidder on the certificate of the Engineer, but when all expenses, costs and charges incurred in the completion of the work are paid by the bidder, all such materials, tools, tackles, construction plant or other things remaining unsold shall be removed by the bidder.

100.16. DEATH, BANKRUPTCY, ETC.:

If the bidder die or commit any act of Bankruptcy, or being a Department commence to be wound Up except for reconstruction purposes or carry on its business under a receiver, the executor successors, or other representative in law of the estate of the bidder or any such receiver, liquidator, or any person in whom the contract may become vested, shall forthwith give notice thereof in writing to the Authority and shall for one month, during which he shall take all reasonable steps to prevent as stoppage of the works, have the option of carrying out the contract subject to his or their providing such guarantee as may be required by the Authority but not exceeding the value of the work for the time being remaining unexecuted. In the event of stoppage of the work the period of the option under this clause shall be 14 (fourteen) days only. Provided that, should above option not be exercised, the contract may be determined by the Authority by notice in writing to the bidder. And the same power and provisions so reserved to the Authority in the last proceeding clause on taking of the work out of the bidder's hands shall immediately become operative.

100.17. AFTER SALES SERVICE:

The Implementing Agency shall agree to provide after-sales service and spare parts, at prevailing rates for a period of not less than Ten years or specified in the bid documents. The Implementing Agency shall state in the bid the name and address of his representative or that of the manufacturer in India who is qualified to render such services and from whom spare parts can be obtained in respect to each item of equipment in bid. In the event, such a representative has not been established; Implementing Agency shall guarantee that arrangements for such service and spare parts will be made simultaneously with the delivery of the equipment. The after-sales service shall provide directly or through arrangements with an established operating service organization having shop facilities and qualified mechanics to service equipment similar to that in the contract. The Authority reserves the right to visit and inspect the named service representative to determine compliance with this requirement of the contract.

The Authority reserves the right to request the Implementing Agency to depute one service engineer to check the equipment at site and advice on servicing, maintenance and adjustment of the equipment for a period of one week free of charge during the Guarantee period. The Implementing Agency shall Supply necessary repair, service and spare parts at any time during the life of the machine at a price not in excess of prevailing rates charged to others for similar work. The Implementing Agency shall submit shop drawings along with detailed technical specifications of such spare parts liable for frequent wear and tear to enable the Authority to get such spare parts manufactured indigenously.

Bidder shall guarantee that before going out of production the spare parts, he will give adequate notice to the Authority so that the latter will have adequate time to order for future requirement of spares. Seller shall further guarantee that if he goes out of production of spare parts, then he will make available the blue prints, drawings of the spare parts and specification of material at no cost to the Authority if and when required.

100.18. TRAINING OF PERSONNEL:

The Implementing Agency shall under take to train Engineers of the Authority free of cost in installation, operation and maintenance of Plant and associated auxiliary equipment at the works of the Implementing Agency or at installations using similar equipment. The period and nature of training for the individual personnel shall be agreed Upon mutually between the Implementing Agency and the Authority. These Engineering personnel shall be given special training in the shops, where the equipment will be manufactured and/ or in their collaborators work and where possible, in any other plant where equipment manufactured by the Implementing Agency or his collaborator is under installation or test, to enable these personnel to become familiar with the equipment, being Supplied by the Implementing Agency.

100.19. MAINTENANCE CONDITIONS OF THE CONTRACT:

The plant after successful testing and commissioning shall be taken over by the Authority However; comprehensive regular maintenance of the plant is within the scope of the successful tenderer for the specified period. The tenderer shall operate and maintain the plant and equipment by suitable personnel. The spares required for maintenance of the plant is within the scope of the Implementing Agency. The comprehensive maintenance is inclusive of regular/Break down maintenance, preventive maintenance as per the manufacturer's manuals, etc. and to get the better performance and maximum output from the plant. All the break-downs, repairs, etc. are to be attended by the Implementing Agency immediately so as to put the plant in service within the least possible time in any case not later than the periods mentioned in this tender specification.

100.20. GRAFTS AND COMMISONS ETC.:

Any graft, commission, gift or advantage given, promised or offered by or on behalf of the Implementing Agency or his partner, agent, officers, director, employee or servant or any one on his or their behalf in relation to the obtaining or to the execution of this or any other contract with the Authority, shall result in cancellation of contract, in addition to any criminal liability which it may incur. The Authority shall be entitled to deduct the amounts payable from any moneys otherwise due to the Implementing Agency under this contract. Any question or dispute as to amount of damage payable under this clause shall be referred to sole Arbitrator appointed by mutual consent of the Implementing Agency and the Authority or as provided in the Arbitration and conciliation Act.

100.21. RELEASE OF INFORMATION:

The Implementing Agency shall not communicate or use in advertising, publicity, sales releases or in any other medium photographs or other reproduction of the works under this contract, or description of the site, dimensions, quality or other information, concerning the work unless prior written permission has been obtained from the Authority.

100.22. LIMIT OF CONTRACT:

Equipment Supplied shall be complete in every respect with all mountings, fittings, fixtures and standard accessories normally provided with such equipment"s and / or needed for erection, completion and safe operation of the equipment's as required by applicable codes though they may not have been specifically detailed in the respective specifications unless included in the list of exclusions. All similar standard equipment's provided, shall be interchangeable with one another.

100.23. GENERAL:

The Bidder shall be responsible for provision of health and sanitary arrangement more particularly described in contract labour (regulation and abolition Act), safety precautions, etc. as may be required for safe and satisfactory execution of the contract.

The Bidder shall fulfil all his obligations in respect of accommodation including proper facilities for the personnel employed by him.

The bidder shall be responsible for the proper behaviour at site and observance of all regulations by the staff employed by him. Insurance for the labour engaged

shall be the responsibility of the bidder till the equipment is taken over after completion of works in full shape and completion of maintenance period, as per applicability, by the (AUTHORITY). The insurance of the labour engaged for maintenance of the plant by the Implementing Agency shall also be the responsibility of the Implementing Agency. The bidder shall be responsible for settlement of insurance claims arising out of accident/injury to staff employed by him.

100.24. Cancellation of Order:

The Authority reserves the right to cancel the contract in part or in full by giving two weeks' notice there by, if The Implementing Agency fails to comply with any of the terms of the contract. The Implementing Agency becomes bankrupt or goes into liquidation. The Implementing Agency makes general assignment for the benefit of the creditors and Any Receiver is appointed for the property owned by the Implementing Agency.

2.0 Particular Conditions of Contract

Except where otherwise specified, all PCC should be filled in by the Employer prior to issuance of the Bidding Documents. Schedules and reports to be provided by the Employer should be annexed.

A. General	
GCC 1.1 (d)	The financing institution is: Government of India (GoI) and Government of Andhra Pradesh (GoAP)
GCC 1.1 (s)	The Employer is : Tirupati Smart City Corporation Limited <i>Authorized representative: <u>AECOM India Private Limited</u></i>
GCC 1.1 (v)	The Intended Completion Date for the whole of the Works shall be As <i>specified in the scope of works</i>
GCC 1.1 (y)	The Project Manager is : Authorized Representative:
GCC 1.1 (aa)	Location of Site : 4 MWp, Captive Floating Type Solar PV Plant at Kailashgiri Reservoir in Chittoor district (Andhra Pradesh) Latitude : 13.6667319 ⁰ N Longitude : 79.6978831 ⁰ E Note : The above information is general and indicative only. However, the Bidder is advised to visit the site to gather first-hand information to assess the basic Parameters required for design of the floating Solar PV Plants and then quote.
GCC 3.1	The language of the contract is <i>English</i> . The law that applies to the Contract is the law of <i>India</i> .
GCC 5.1	The Project manager <i>may</i> delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other Implementing Agency: <i>[insert Schedule of Other Implementing Agency, if appropriate]</i>
GCC 13.1	The minimum insurance amounts and deductibles shall be: (a) For loss or damage to the Works, Materials, For loss or damage to Equipment, for loss or damage to property (except the Works, Materials, and Equipment) in connection with Contract, For loss or damage to Equipment, for loss or damage to property (except the Works, Materials, and Equipment) in connection with Contract and for personal injury or death (of the Implementing Agency's employees and of other people): equivalent to the accepted <i>value of the contract</i> . (b) The Implementing Agency shall insure against each liability for any loss, damage, death or bodily injury which may occur to any physical property (mechanical, electrical, automation work, all civil works, Storage etc. excluding pipe line) or to any person which may arise out of the Implementing Agency's performance of his obligations under these Conditions during the O&M Period.

	(c) This insurance shall be for a limit of per occurrence of not less than the amount of Rs. 5 lakh, with no limit on the number of occurrences.
GCC 14.1	<p>Site Data are:</p> <p>4 MWp, Captive Floating Type Solar PV Plant at Kailashgiri Reservoir in Chittoor district (Andhra Pradesh)</p> <p>Latitude: : 13.6667319°N</p> <p>Longitude : 79.6978831°E</p> <p>Note : The above information is general and indicative only. However, the Bidder is advised to visit the site to gather first-hand information to assess the basic Parameters required for design of the floating Solar PV Plants and then quote.</p>
GCC 20.1	The Site Possession Date(s) shall be: <i>within 7 days from the date of signing the contract</i>
GCC 22.4	<p>All materials / equipment to be Supplied shall be subject to Inspection / checking / testing by the Authority or its authorized representative at all stages and places, before, during and after the manufacture. All tests shall be carried out in the presence of authorized representative of the Authority. Implementing Agency shall notify the Authority for the inspection of materials/ equipment when they are ready, giving at least 15 days' notice. If Upon receipt at Authority's stores, the materials/ equipment do not meet the specifications, they shall be rejected and returned to the Implementing Agency for repair/ modification etc., or for replacement. In such cases all expenses including to and fro freight charges, repacking charges, transit insurance etc., shall be to the account of Implementing Agency. However, checking/testing, the time frame/schedule for execution of the in case of any delay by the Authority in carrying out the inspection contract shall automatically stand extended by the amount of the said delay or any further time required.</p> <p>Inspection by the authorized representative of the Authority or failure of the Authority to inspect the material/ equipment shall not relieve the Implementing Agency of any responsibility or liability in respect of such materials /equipment and shall not be interpreted in any way to imply acceptance thereof by the Authority. Whenever specifically asked for by the Authority, the Implementing Agency shall arrange for inspection/ testing by institutional Agencies etc. In such cases Implementing Agency shall adhere to the inspection/ testing procedures laid down by such agencies. All expenses including inspection fees shall be to the Implementing Agencies account unless agreed to the contrary and specified in the contract.</p>
GCC 23.1 & GCC 23.2	Appointing Authority for the Adjudicator: <i>Managing Director, Tirupati Smart City Corporation Limited, Tirupati</i>

GCC 24.2

Disputes shall be settled by arbitration in accordance with the following provisions:

1. Selection of Arbitrators.

(a) Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three (3) arbitrators, in accordance with the following provisions:

(b) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to *[Chairman (Delhi State Centre), The Institution of Engineers (India), New Delhi* for a list of not fewer than five (5) nominees and, on receipt of such list, the Parties shall alternately strike names there from, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, *Chairman (Delhi State Centre), The Institution of Engineers (India), New Delhi* shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.

(c) Where the Parties do not agree that the dispute concerns a technical matter, the Authority and the Consultant shall each appoint one (1) arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two (2) arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by *Registrar, The Indian Council of Arbitration, New Delhi*.

(d) If, in a dispute subject to paragraph (b) above, one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to the *Registrar, The Indian Council of Arbitration, New Delhi* to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute.

2. Rules of Procedure. Except as otherwise stated herein, arbitration proceedings shall be conducted in accordance with the rules of procedure for arbitration under the relevant statute applicable.

3. Substitute Arbitrators. If for any reason an arbitrator is unable to perform his/her function, a substitute shall be appointed in the same manner as the original arbitrator

4. Nationality and Qualifications of Arbitrators. The sole arbitrator or the third arbitrator appointed pursuant to paragraphs 1(a) through 1(c) above shall be an internationally recognized legal or technical expert with extensive experience in relation to the matter in dispute and shall not be a national of the Consultant's home country *[Note: If the Consultant consists of more than one entity, add: or of the home country of any of their members or Parties]* or of the Government's country. For the purposes of this Clause, "home country" means any of:

(a) the country of incorporation of the Consultant *[Note: If the Consultant consists of more than one entity, add: or of any of their members or Parties];* or

(b) the country in which the Consultant's *[or any of their members' or*

	<p>Parties'] principal place of business is located; or (c) the country of nationality of a majority of the Consultant's [or of any members' or Parties'] shareholders; or (d) the country of nationality of the Sub-consultants concerned, where the dispute involves a subcontract.</p> <p>5. <u>Miscellaneous</u>. In any arbitration proceeding hereunder: (a) proceedings shall, unless otherwise agreed by the Parties, be held in <i>[select a country which is neither the Authority's country nor the Consultant's country]</i>; the <i>English</i> language shall be the official language for all purposes; and the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement</p>		
B. Time Control			
GCC 26.1	The Implementing Agency shall submit for approval a Program for the Works within 14 days from the date of the Letter of Acceptance.		
GCC 26.3	The period between Program updates is <i>monthly</i> .		
C. Quality Control			
GCC 32.3	The Bidder shall include in his proposal the Quality Assurance Programme containing the overall quality management and procedures which he proposes to follow in the performance of the works during various phases as detailed in relevant clauses of the "Technical Conditions"		
GCC 34.1	The Defects Liability Period after issue of project completion certificate (after completion of construction and commissioning of the project) : Two (02 Years).		
GCC 41.5	Payment Schedule		
	S.No	Description	Percentage Payment
	1	Furnishing of detail designs with drawings showing all details including materials required for erection & commissioning of project and Supply of structures required for Solar PV Modules.	10%
	2	Supply of PCUs, SPV Modules, transformer, Grid connected Equipment and all other balance materials of Plant	35%
	3	Supply, erection and installation of Solar PV Modules, Grid connectivity, installation of Net metering, Cabling and all allied works.	25%
	4	Balance of the contract value shall be released in installment basis at pro rata basis (i.e. O&M part) for O&M period of 10 years from the date of commissioning	30%

D. Cost Control																									
GCC 44.1	The currency of the Employer's country is: Indian Rupees																								
GCC 45.1	The Contract <i>is not</i> subject to price adjustment in accordance with GCC Clause 45.																								
GCC 46.1	The proportion of payments retained is: <i>5% for the certified payments.</i>																								
GCC 48.1	The Bonus for the whole of the Works is <i>Not applicable</i>																								
GCC 49.1	The Advance Payments is applicable																								
GCC 50.1	The Performance Security amount is 5% of the accepted contract amount <i>in the form of Bank Guarantee.</i>																								
E. Finishing the Contract																									
GCC 53	<p>Completion period is the essence of the Contract. In case of delay in implementation of the project, Authority has to incur heavy penalties / financial loss including cancellation, etc. Therefore, the project shall be completed in all respects including synchronization of Plant with Grid within Six months from the date of issue of LOI/LOA order. In order to meet the stipulated completion period, all the equipment /materials shall be delivered within 270 days and meet the following mile-stones:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Sl. No</th> <th style="text-align: center;">Description of mile stone</th> <th style="text-align: center;">Period of Completion in Calendar Days (from the date of Issue of LOA/LOI)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Furnishing of Design calculations, Drawings and obtaining of approvals</td> <td style="text-align: center;">50 Days</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Supply of structures required for Solar PV Modules</td> <td style="text-align: center;">170 Days</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Supply of PCUs, SPV Modules, Transformer, Grid connected Equipment and all other balance of Plant.</td> <td style="text-align: center;">190 Days</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Erection of PV module Structures.</td> <td style="text-align: center;">220 Days</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Erection of all Equipment</td> <td style="text-align: center;">250 Days</td> </tr> <tr> <td style="text-align: center;">6</td> <td>Testing & commissioning</td> <td style="text-align: center;">270 Days</td> </tr> <tr> <td></td> <td style="text-align: center;">Total completion period</td> <td style="text-align: center;">270 Days</td> </tr> </tbody> </table> <p>Note: In case the Implementing Agency fails to achieve the successful commissioning of the plant within the due date for completion as indicated in these bid documents, then the Authority shall levy the liquidated damages on the Implementing Agency at the rate of 1% (one percent) of the contract price per week of delay or part thereof subject to a maximum of 10% of total contract price. Liquidated Damages so levied will be recovered from the Supply/erection bills of the Implementing Agency.</p> <p>The Offers not complying with the delivery schedule shall be considered non-responsive and shall not be evaluated.</p> <p>In case, the Supply of all the material required for the project are not completed within 190 days, the authority or authorised representative,</p>	Sl. No	Description of mile stone	Period of Completion in Calendar Days (from the date of Issue of LOA/LOI)	1	Furnishing of Design calculations, Drawings and obtaining of approvals	50 Days	2	Supply of structures required for Solar PV Modules	170 Days	3	Supply of PCUs, SPV Modules, Transformer, Grid connected Equipment and all other balance of Plant.	190 Days	4	Erection of PV module Structures.	220 Days	5	Erection of all Equipment	250 Days	6	Testing & commissioning	270 Days		Total completion period	270 Days
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	Total completion period	270 Days																							

	<p>may resort to purchase the materials / equipment from elsewhere at the risk and cost of the Implementing Agency and recover all such extra cost incurred by the authority in procuring the material by above procedure.</p> <p>Alternatively, the authority may cancel the Purchase Order / agreement completely or partly without prejudice to his right under the alternative mentioned above.</p> <p>In case of recourse to alternatives above, the Authority shall have the right to purchase the materials to meet the urgency of requirements irrespective of the fact whether the materials / equipment are the right to place orders for individual items with different bidders and to revise the quantities at the time of placing the order. The order for purchase the materials to meet the urgency of requirements irrespective of the fact whether the materials / equipment are similar or not.</p> <p>The Authority reserves materials may also be split up between different bidders to facilitate to quick delivery of critically required materials. Authority, further reserves the right to accept or reject any/ all bids without assigning any reasons thereof.</p>
GCC 56.1	<p>The date by which operating and maintenance manuals are required is during implementation stage.</p> <p>The date by which “as built” drawings are required within one month after the completion of the work.</p> <p>The operation and Maintenance period is <i>Ten (10) years</i>.</p>
GCC 56.2	<p>The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required in GCC 58.1 is <i>1% of the Final Contract amount</i>.</p>
GCC 62.d	<ol style="list-style-type: none"> 1. The Implementing Agency shall not be liable for any delay or failure to Supply the materials /equipment for reasons of Force Majeure such as Acts of God, Acts of War, Act of Public Enemy, Natural calamities, Fires, Floods, Frost, Strikes, Lockouts etc. Only those causes which have duration of more than 3 days and their reparations shall be considered for force majeure. 2. The Implementing Agency shall within 15 days from the beginning of such delay notify to the Authority in writing the cause of delay or telephonically or through email where written communication is not possible due to such force majeure event) the cause of delay. The Authority shall be considered to have direct and sufficient knowledge of such force majeure event where the same is published by the media. The time of completion of the project under the contract shall automatically stand extended till the persistence of such force majeure event and its repercussions preventing resumption of execution of the project under the contract. 3. No price variation shall be allowed during the period of force majeure and

	<p>liquidated damages would not be levied for this period.</p> <p>4. If the performance in whole or part by the Implementing Agency or any obligation under the Contract is prevented or delayed by “Force Majeure” conditions for a period exceeding 180 days, the Authority may at his option terminate the contract by notice in writing.</p>
<p>GCC 65</p>	<p>The Implementing Agency shall guarantee that the equipment being Supplied under this contract shall be new and of best quality, workmanship and shall have no defects in manufacture, shall meet the requirements of the specifications, and shall be in all aspects suited for the purpose intended.</p> <p>The bidder shall guarantee the satisfactory performance of entire plant for Ten (10) years from the date of taking over the Plant after commissioning as the O&M is also within the scope of the bidder for 10 years.</p> <p>Further, the bidder shall provide:</p> <ul style="list-style-type: none"> • 10 years material guarantee and 25 years performance warranty, for the PV module from the date of installation and acceptance whichever occurs later for all the items and • 10 years guarantee for inverters, transformers and switchgears from the date of installation and acceptance whichever occurs later for all the items. If during the said guarantee period, the authority finds any materials to be containing manufacturing defects or defect in workmanship or otherwise, the Implementing Agency would be required to promptly repair/Supply/replace such defective equipment free of charge to Authority. <p>The Implementing Agency shall bear all the expenses incurred in connection with the repair or replacement against such defective equipment inclusive of all freight and insurance, Taxes & Duties levies forwarding and clearing and demurrages and other incidental charges involved in delivering the said equipment to the authority’s specified destination. The charges for erection and Supervision of such replacement shall not be paid by the authority. The decision whether correction of the defects should be by repair or replacement shall be the sole discretion of the authority.</p> <p>The authority and Implementing Agency shall mutually agree to a programme of replacement, renewal or repair which will minimize any interruption in the commercial use of the equipment.</p> <p>The Implementing Agency shall, in addition, comply with the performance and/or consumption guarantees specified under the</p>

Contract. If, for reasons attributable to the Implementing Agency, these guarantees are not attained in whole or in part, the Implementing Agency shall, at its discretion, either:

1. make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with GCC 22.

OR

2. pay liquidated damages to the Authority with respect to the failure to meet the contractual guarantees. The rate of these liquidated damages shall be cost of replacement of goods purchased.

OR

3. In the event, the Implementing Agency fails to undertake necessary steps to repair or replace defective materials as stipulated above after receiving notice from the Authority of any defect in the material, or failure of any material to conform with the specifications, the authority may proceed to undertake the repair or replacement of such defective equipment at bidder's risk and expense but without prejudice to any other rights with the authority may have against the bidder in respect of such defects

For purposes of the Warranty, the place(s) of final destination(s) shall be Tirupati.

3.0 Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

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Contract Agreement

THIS AGREEMENT made theday of, between
. **[name of the Employer]**. (hereinafter "the Employer"), of the one part, and
[name of the Implementing Agency].(hereinafter "the Implementing Agency"), of the
other part:

WHEREAS the Employer desires that the Works known as **[name of the Contract]**. ...
.should be executed by the Implementing Agency, and has accepted a Bid by the
Implementing Agency for the execution and completion of these Works and the remedying
of any defects therein,

The Employer and the Implementing Agency agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - (i) the Letter of Acceptance
 - (ii) the Letter of Bid
 - (iii) the addenda Nos _____(if any)
 - (iv) the Particular Conditions
 - (v) the General Conditions of Contract, including appendix;
 - (vi) the Specification
 - (vii) the Drawings
 - (viii) Activity Schedule and
 - (ix) any other document **listed in the PCC** as forming part of the Contract,
3. In consideration of the payments to be made by the Employer to the Implementing Agency as specified in this Agreement, the Implementing Agency hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Implementing Agency in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of ***[name of the borrowing country]***. . . . on the day, month and year specified above.

Signed by:
for and on behalf of the Employer

Signed by:
for and on behalf the Implementing Agency

in the presence of: _____

in the presence of: _____

Witness, Name, Signature, Address, Date

Witness, Name, Signature, Address, Date