

# Patna Smart City



## Request for Proposal

For

### Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.

**NIT No: 10/MD/PSCL/2018**

**Date:23-06-2018**

**PATNA SMART CITY LIMITED**  
**ADDRESS: 2<sup>nd</sup> Floor, Maurya Lok, Patna, Bihar**

**DISCLAIMER:**

1. Though adequate care has been taken while preparing the RFP document, the Bidders/Applicants shall satisfy them that the document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from any Bidder within fifteen (15) days from the date of notification of RFP /Issue of the RFP documents, it shall be considered that the RFP document is complete in all respects and has been received by the Bidder.
2. PSCL reserves the right to modify, amend or supplement this RFP document including all formats and Annexure. Any such change would be communicated to the applicants by posting it on the website [www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in).
3. The information provided in this RFP is not intended to be an exhaustive on account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Authority accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.
4. The Authority, its employees and advisers make no representation or warranty and shall have no liability to any person including any Applicant 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, reliability or completeness of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in anyway in this subject.
5. The issue of this RFP does not imply that the Authority is bound to select an Applicant for the project and the Authority reserves the right to terminate the process at any time without assigning any reasons whatsoever. The Applicant shall bear all its costs associated with or relating to the participation in this process regardless of the conduct or outcome of the process.
6. 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 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 PSCL or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Bidder and PSCL 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 for submission of the Bid, regardless of the conduct or outcome of the Selection process or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Bidder and PSCL 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 for submission of the Bid, regardless of the conduct or outcome of the Selection process.

SD/-

Managing Director  
Patna Smart City Limited (PSCL)

**NIT No: 10/MD/PSCL/2018**

**Date: 23-06-2018**

**INVITATION FOR BIDS**

Request for Proposal

For

Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.

**Bidding Schedule: Important Dates**

Sl. #	Activity	Timeline & Address
1	Online Sale/Download date of Tender documents	From 02.07.2018 (10:00 Hrs) Till 03.08.2018(14.00Hrs)(www.eproc.bihar.gov.in) (Under Patna Nagar Nigam)
2	Pre-bid Meeting date (Only two members per bidder are allowed).	10-07-2018 (15:00 Hrs.) (At Divisional Commissioner's Office,Patna)
4	Last date for submission of Bids (online) and hard copy.	03-08-2018 Till 15.00 Hrs
5	Opening of Bids	03-08-2018 At 16:00 Hrs
6	Date of opening of Commercial bids	To be informed later to technically qualified bidder.
7.	Cost of Bidding Document(Tender Fee)	Tender Fee Rs 10,000 (Non Refundable) to be paid through Demand Draft (DD) in favor of "Patna Smart City Ltd" payable at Patna.
8.	EMD	Rs 25,00,000(Twenty Five Lakhs) (Refundable) in the form of Bank Guarantee (BG).

RFP document shall be available on website: [www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in)

For Queries & Clarifications, send e-mail to: [patnasmartcity.pscl@gmail.com](mailto:patnasmartcity.pscl@gmail.com)

Contents

**Instructions for Online Bid Submission** ..... Error! Bookmark not defined.

**1. Introduction**.....7

**1.1 About the PSCL**.....7

**1.2 Introduction to Patna Smart city Project**.....7

**1.3 RFP Format**.....8

**1.4. Fact sheet** .....8

**2. Instruction to Bidders**..... 12

**2.1 Size of the projects:** ..... 12

**2.2 Bid capacity** ..... 12

**2.3 General** ..... 12

**2.4 Eligible Bidders** ..... 13

**a. Sole Bidder** ..... 13

**b. Consortium of Firms** ..... 13

**2.5 Compliant Bids/Completeness of Response** ..... 13

**2.6 Bidder to Inform**..... 14

**2.7 Bid Preparation costs** ..... 14

**2.8 Pre-bid meeting & Clarification**..... 14

**2.8.1 Bidders Queries**..... 14

**2.8.2 Responses to Pre-Bid Queries and Issue of Corrigendum**..... 14

**2.9 RFP Document Fee**..... 15

**2.10 Earnest Money Deposit (EMD)** ..... 15

**2.11 Bid Validity Period** ..... 16

**2.12 Contents of Bid** ..... 16

**2.13 Bid Formats** ..... 17

**2.13.1 Pre-Qualification Bid Format** ..... 17

**2.13.2 Technical Bid Format** ..... 17

**2.13.3 Commercial Bid Format** ..... 18

**2.14 Language** ..... 18

**2.15 Authentication of Bids**..... 18

**2.16 Amendment of Request for Proposal** ..... 18

**2.17 Bid Price** ..... 19

**2.18 Deviations and Exclusions** ..... 19

**2.19 Late Bids**..... 19

**2.20 Right to Terminate the Process** ..... 20

**2.21 Non-Conforming bids**..... 20

**2.22 Acceptance/Rejection of Bids** ..... 20

**2.23 Confidentiality** ..... 20

**2.24 Disqualification**..... 21

**2.25 Fraud and Corrupt Practices** ..... 21

**2.26 Conflict of Interest**..... 22

<b>2.27 Sub-Contracting .....</b>	<b>23</b>
<b>2.28 Right to vary quantity .....</b>	<b>23</b>
<b>2.29 Withdrawal, Substitution, and Modification of Bids .....</b>	<b>23</b>
<b>2.30 Site Visit.....</b>	<b>23</b>
<b>3. Selection Process for Bidder.....</b>	<b>24</b>
<b>3.1 Opening of Bids .....</b>	<b>24</b>
<b>3.2 Preliminary Examination of Bids.....</b>	<b>24</b>
<b>3.3 Clarification on Bids.....</b>	<b>25</b>
<b>3.4 Evaluation Process .....</b>	<b>25</b>
<b>3.4.1 Stage 1: Pre-Qualification .....</b>	<b>25</b>
<b>3.4.2 Stage 2: Commercial Evaluation .....</b>	<b>25</b>
<b>3.5 Pre-Qualification Criteria .....</b>	<b>26</b>
<b>4. Award of Contract.....</b>	<b>26</b>
<b>4.2 Signing of Contract .....</b>	<b>26</b>
<b>4.3 Performance Bank Guarantee (PBG) .....</b>	<b>27</b>
<b>4.4 Warranty &amp; Maintenance .....</b>	<b>28</b>
<b>4.5 Failure to agree with the Terms &amp; Conditions of the RFP .....</b>	<b>28</b>
<b>4.6 Arbitration post signing of contract.....</b>	<b>28</b>
<b>2. Annexure 1 – Template for Pre-Bid Queries .....</b>	<b>49</b>
<b>3. Annexure 2 – Formats for Submission of the Pre-Qualification Bid .....</b>	<b>49</b>
<b>3.3 Company profile.....</b>	<b>53</b>
<b>3.4 Declaration of Non-Blacklisting :.....</b>	<b>54</b>
<b>3.5 Declaration for Consortium Member: .....</b>	<b>55</b>
<b>3.6 No Deviation Certificate.....</b>	<b>56</b>
<b>3.7 Total Responsibility Certificate.....</b>	<b>57</b>
<b>3.8 Self-certificate for Project execution experience .....</b>	<b>58</b>
<b>4. Annexure 3 – Formats for Submission of the Technical Bid .....</b>	<b>59</b>
<b>4.3 Credential Summary .....</b>	<b>62</b>
<b>4.4 Bidder’s Experience - Client Citations.....</b>	<b>63</b>
<b>4.5 Overview of Proposed Solution .....</b>	<b>64</b>
<b>B. Project Plan .....</b>	<b>64</b>
<b>4.7 Proposed Bill of Material .....</b>	<b>64</b>
<b>4.8 Anti-Collusion Certificate .....</b>	<b>65</b>
<b>5. Annexure 4 – Formats for Submission of the Commercial Bid .....</b>	<b>66</b>
<b>Annexure 5 (a) – Performance Bank Guarantee.....</b>	<b>67</b>
<b>10. Annexure 5 (b) – Bank Guarantee for Earnest Money Deposit.....</b>	<b>69</b>
<b>11. Annexure 6 – Non-Disclosure Agreement .....</b>	<b>71</b>
<b>12. Annexure 7 - Consortium Agreement .....</b>	<b>72</b>
<b>13 Annexure 8 - Format for Power of Attorney to Authorize Signatory.....</b>	<b>74</b>
<b>14 Annexure 9 - Format for Power of Attorney for Lead bidder of Consortium.....</b>	<b>76</b>

### **Instructions for Online Bid Submission**

1. The RFP document containing the project profile, invitation for qualification and criteria for evaluation may be obtained from the website: [www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in) (Under Patna Nagar Nigam)
2. For support related to e-tendering process, bidders may contact at following address “e- Procurement HELP DESK, First Floor, Plot No.- M/22, Road No.-25, Sri Krishna Nagar, Bank of India Compound, Patna-800001, Contact No: 0612-2523006; 7542028164”. Vendor may visit [www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in).
3. Detailed N.I.T can be seen of website [www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in)(Under Patna Municipal Corporation)
4. PSCL will not be responsible, in case of any delay, due to any reason whatsoever, in receipt of Bid Documents by the Bidders.
5. The Owner reserves the right to reject any or all Bids or cancel/withdraw the Invitation for Bids (IFB) without assigning any reason whatsoever and in such case, no Bidder/ intending Bidder shall have any claim arising out of such action.
6. For participating in e-tendering process, the contractor shall have to get themselves registered to get user ID, Password and digital signature. This will enable them to access the website [www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in) and download/participate in e-tender.
7. The bidder must have the Class II/III Digital Signature Certificate (DSC) and e-Tendering User-id of the e-Procurement website before participating in the e-tendering process. The bidder may use their DSC if they already have the DSC. They can also take DSC from any of the authorized agencies. For user-id they have to get registered themselves on e-procurement website <https://www.eproc.bihar.gov.in/BELTRON> and submit their bids online on the same. Offline bids shall not be entertained by the Tender Inviting Authority for the tenders published in e-procurement platform
8. PSCL, Patna intends to undertake a competitive bidding process in order to shortlist and qualify suitable Bidders, who shall be eligible for evaluation of their price bids towards selection of the successful bidder in terms of the RFP for award of the project.
9. The detail of the bidding process and summary of the scope of construction works for the project is included in the RFP document.
10. Any clarifications may be sought online through the tender site, through the contact details or during pre-bid meeting if any. Bidder should take into account the corrigendum if any published before submitting the bids online.
11. In the unlikely event of the server for [www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in) being down for more than two consecutive hours (in the period from midnight to closing time for receipt of tenders) on the last date of receiving of bid, the last date of the same shall be extended by concerned authority only to the next working day till the last receiving time stipulated in the original NIT.
12. The bidders are requested to check their file size of uploaded documents at the time of submission & they should ensure that work file is uploaded. If they feel that the complete file is not uploaded then they should click on cancel & update the same before submission. The bidders should satisfy themselves of download ability/ visibility of the scanned & uploaded file by them.
13. The bidders must use MS Office- 2003 version. File size should be less than 5MB and should be in M.S. word, M.S. Excel, PDF and JPEG Formats.
14. No claim shall be entertained on account of disruption of internet service being used by bidders. Bidders are advised to upload their bids well in advance to avoid last hour’s technical snags.

15. In exceptional circumstances, the competent authority, PSCL may solicit the Bidder's consent to an extension of the period of validity.
16. Bids that are rejected during the bid opening process shall not be considered for further evaluation, irrespective of the circumstances
17. The bidders shall submit their eligibility and qualification details, Technical bid, Financial bid etc., in the online standard formats given for respective tenders in e-Procurement website ([www.eproc.bihar.gov.in](http://www.eproc.bihar.gov.in)) at the respective stage only. The bidders shall upload the scanned copies of all the relevant certificates, documents etc., in support of their eligibility criteria / technical bids and other certificate /documents in the e-Procurement website. The bidder shall sign on the supporting statements, documents, certificates, uploaded by him, owning responsibility for their correctness /authenticity.
18. Corrigendum/ Addendum, if any, will be published on the website itself.
19. Bidder should submit the Tender Fee/ EMD, pre-qualification bid and the Technical Bid in hard copy also as per Clause of this RFP. The Financial bid should be submitted only online. The Financial bid submitted in hard copy shall be treated as non-responsive and eligible for rejection. The hard copy should be posted/couriered/given in person to the Tender Inviting Authority, within bid submission due date and time as indicated in the tender. Scanned copy of the instrument should be uploaded as part of the offer.
20. The bidder has to select the payment option as offline to pay the Tender FEE/ EMD as applicable and enter details of the instruments.
21. The details of the DD/any other accepted instrument, physically delivered, should tally with the details available in the scanned copy and the data entered during bid submission time, otherwise submitted bid shall not be acceptable or liable for rejection.
22. A bid processing fee (Non-Refundable) to be paid only through e-Payment modes i.e. Internet Payment Gateway (Master or Visa Card) /Internet Banking/NEFT or RTGS towards charges for online processing charges of e-procurement website.
23. For any queries regarding Tendering process, the bidders may contact at address as provided in the tender document.

## 1. Introduction

### 1.1 About the PSCL

Patna Smart City Limited (PSCL) is the special purpose vehicle created by Govt. of Bihar and Patna Municipal Corporation under Smart City Mission to deliver several Pan City and Area Based Development initiatives with a focus on both infrastructure and ICT advancements in the city and at strategic locations.

### 1.2 Introduction to Patna Smart city Project

The Ministry of Urban Development (MoUD), Government of India (GoI) has initiated Smart Cities Mission (SCM), under which selected cities will be developed as smart cities with a focus on improving citizen services with ICT intervention. Smart Cities Mission is an urban renewal and retrofitting programme by the Government of India with a mission to develop 100 cities all over the country making them citizen friendly, sustainable and investment destination. Under the smart city scheme, Government has emphasized to improve the basic civic amenities of the cities on one hand and the provision of modern technological advances for ease of living on the other hand.

The Smart City Proposal for Patna envisions to implementing a number of projects categorized into Area Based Development (ABD) projects and Pan City components. The ABD projects focuses on physical infrastructure components, whereas the Pan City components focuses on the ICT interventions in the city. The components being undertaken as part of the Area Based Development and Pan City Proposal is as under:

To achieve Patna's vision for a smart city, large numbers of measures are required to be implemented. Considering the priorities echoed by city stakeholders during the consultative process and practical feasibility, the main project umbrella initiatives shortlisted are:

- **'Aadharbhoot'**: Provide the city with citizen oriented Core & Resilient Infrastructure which will be a major backbone of various services like water supply, sewerage network in ABD area ,sanitation etc..
- **'Visankulan & Gatisheel'**: To address the key concern of traffic congestion as emerging from public consultation, promoting mixed land use to decongest the ABD area and also to increase average travel speed and mobility and reduce travel time including increased carriageway and improved parking management.
- **'Jan-Kshetra'**: To create organized public spaces that will improve the livability quotient and quality of life and also to optimally utilize its resources and reduce carbon footprint through various measures, viz., by restoring riparian wetland and infusing native urban forest concept, and promoting bio-diversity, Rooftop farming, Solar rooftop on govt. buildings etc. .
- **'Sampoorna Nagar Vikas '**: By leveraging on its strengths like location, connectivity and "ease of starting-up business," Patna aims at boosting public services and governance with the help of ICT intervention proposed Integrated command and control Centre, Jan Seva Kendra, LED street lighting and Intelligent SWM etc. for PAN city development.
- **'Samagra Vikas'**: Introduction of slum free ABD area through an easily replicable model built around housing for all and land leveraging. It will also focus on improving service delivery and cleaning & maintaining drains that are now in a state of disuse.
- **'Vaisvik'**: Under vaisvik international convention Centre, Urban Incubation Centre proposed to get global identity.



### 1.3 RFP Format

The intent of this RFP is to invite bids from the Bidders for Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission. The main scope of work includes Design, Engineering, Supply, Installation, Testing, Commissioning, Synchronizing and Comprehensive Maintenance (5 Years) of Grid Connected Rooftop Solar PV Systems on Net Metering Basis on the roofs of various Public Buildings in the ABD area of Patna Smart City.

### 1.4. Fact sheet

S No.	Item	Description
1	Method of Selection	The method of selection is LCS. Successful bidder or L1 will be chosen with Lowest price among the financial proposals under consideration.
2	Availability of RFP Documents	Download from <a href="https://www.eproc.bihar.gov.in">https://www.eproc.bihar.gov.in</a> (Under Patna Municipal Corporation)
3	Tender document fee (Non-refundable and Not –exempted)	Rs 10,000 (Non Refundable) to be paid through Demand Draft (DD) in favor of “Patna Smart City Ltd” payable at Patna.
4	Bid Security/Earnest Money Deposit (EMD)	INR 25,00,000/- (INR Twenty five Lacs) in the form of BG valid upto 180 days from the actual date of submission of the Bid.
5	Bid validity	Bid must remain valid up to 180 (One Hundred & Eighty) days from the actual date of submission of the Bid.
6	Currency	Bidders are required to quote the price in INR only.
7	Name and Address for Correspondence/ Bid Submission/ Opening Venue	MANAGING DIRECTOR, PATNA SMART CITY LIMITED, 2 <sup>nd</sup> Floor, Patna Municipal Corporation, MAURYA LOK, PATNA.

## 1. DEFINITIONS & ABBREVIATIONS

In this “Bid / RFP Document” the following words and expression will have the meaning as herein defined where the context so admits

- 1.1. “**Affiliate**” shall mean a company that either directly or indirectly
- a) controls or
  - b) is controlled by or
  - c) is under common control with

A Bidding Company and “**control**” means ownership by one company of at least twenty six percent (26%) of the voting rights of the other company.

- 1.2. “**ABD**” Shall mean Area Based Development in the Smart city proposals.

1.3. “**Benchmark cost**” shall mean per Wp cost defined by MNRE for solar power plants without battery. For the purpose of this RFP, the bench mark cost may be considered as given on the website of MNRE.

- 1.4. “**B.I.S**” shall mean specifications of Bureau of Indian Standards (BIS);

1.5. “**Bid/Tender**” shall mean the Techno Commercial and Price Bid submitted by the Bidder along with all documents/credentials/attachments/ annexure etc., in response to this RFS, in accordance with the terms and conditions hereof.

1.6. “**Bidder/Bidding Company**” shall mean Bidding Company submitting the Bid. Any reference to the Bidder includes Bidding Company / including its successors, executors and permitted assigns as the context may require;

1.7. “**Bid Bond**” shall mean the unconditional and irrevocable bank guarantee to be submitted along with the Bid by the Bidder as per format given in this RFP.

1.8. “**Bid Deadline**” shall mean the last date and time for submission of Bid in response to this RFP as specified in Bid information Sheet.

1.9. “**Bid Capacity**” shall mean bid for total capacity as asked in this RFP.

1.10. “**CEA**” shall mean Central Electricity Authority.

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

1.12. “**Competent Authority**” shall mean Managing Director/CEO of PSCL himself and/or a person or group of persons nominated by Managing Director/CEO for the mentioned purpose herein;

1.13. “**Commissioning**” means Successful operation of the Project / Works by the Contractor, for the purpose of carrying out Performance Test(s) as defined in RFP.

1.14. “**Company**” shall mean a body incorporated in India under the Companies Act, 1956 or Companies Act, 2013 including any amendment thereto;

1.15. “**Capacity Utilization Factor (CUF)**” shall mean the ratio of actual energy generated by Solar Photovoltaic project over the year to the equivalent energy output at its rated capacity over the

yearly period. ( $CUF = \text{actual annual energy generated from the plant in kWh} / (\text{installed plant capacity in kW} * 365 * 24)$ ).

- 1.16. "Eligibility Criteria" shall mean the Eligibility Criteria as set forth in this RFP;
- 1.17. "Financially Evaluated Entity" shall mean the company which has been evaluated for the satisfaction of the Financial Eligibility Criteria set forth in this RFP hereof;
- 1.18. "IEC" shall mean specifications of International Electro-technical Commission;
- 1.19. "KWp" shall mean kilo-Watt Peak;
- 1.20. "kWh" shall mean kilo-Watt-hour;
- 1.21. "PSCL" shall mean **Patna Smart City Limited**
- 1.22. "MNRE" shall mean Ministry of New and Renewable Energy, Government of India;
- 1.23. "[Name of the Organization]" Shall mean PSCL.
- 1.24. "Net –worth" shall mean as per Company Act 2013 and amendments if any.
- 1.25. "O&M" shall mean Operation & Maintenance of Rooftop Solar PV system (5 Yrs).
- 1.26. "Owner of Building" shall mean anyone who has ownership of the roof (including in the form of lease)
- 1.27. "Owner of project" shall mean Patna Smart City Limited (PSCL)
- 1.28. "Project Cost / Project Price" shall mean the price offered by the Bidder for the Scope of work as per RFP document.
- 1.29. "SPV" Means "Patna Smart City Limited" a special purpose vehicle created under the Patna Municipal Corporation.
- 1.30. "Project capacity" means Capacity in MWp offered by the Bidder consisting of single or multiple roof tops. The project capacity specified is on "DC" output Side only.
- 1.31. "Performance Ratio" (PR) means : "Performance Ratio" (PR) means the ratio of plant output versus installed plant capacity at any instance with respect to the radiation measured.  $PR = (\text{Measured output in kW} / \text{Installed Plant capacity in kW} * (1000 \text{ W/m}^2 / \text{Measured radiation intensity in W/m}^2))$ .
- 1.32. "Parent company" shall mean a company, which holds more than 50%equity either directly or indirectly in the Bidding Company or Project Company or a Member in a Consortium developing Project.
- 1.33. "Project Company" shall mean Company incorporated by the bidder as per Indian Laws in accordance with Clause of this RFP.
- 1.34. "PSCL" shall mean Patna Smart City Limited (SPV formed by Government of Bihar & Patna Municipal Corporation)

- 1.35. **"Price Bid"** shall mean the Bidder's quoted Price as per Financial format of this RFP;
- 1.36. **"Qualified Bidder "**shall mean the Bidder(s) who, after evaluation of their Technical Bid stand qualified for opening and evaluation of their Price Bid;
- 1.37. **" RFP "** shall mean Request for Proposal (RFP)/Bid document/Tender document
- 1.38. **"RESCO"** shall mean Renewable Energy Service Companies;
- 1.39. **"Rooftop Solar PV"** shall mean The Solar PV systems installed on the Flat /Slanted roof shall be covered under this scheme. In addition, the systems installed on the elevated platform on metallic or concrete structure (above 10feet from ground in case sufficient shadow free rooftop is not available) shall also be considered under this scheme. In addition, 40% of the rooftop solar PV sanctioned Capacity for a site may also be installed on ground, in case sufficient shadow free rooftop is not available.
- 1.40. **"SCP"** shall mean Smart City Proposal of Patna.
- 1.41. **"Statutory Auditor"** shall mean the auditor of a Company appointed under the provisions of the Companies Act, 1956 or under the provisions of any other applicable governing law;
- 1.42. **"Successful Bidder(s) /Contractor/Project Developers(s)"** shall mean the Bidder(s) selected by PSCL pursuant to this RFP for Implementation of Grid Connected Roof Top Solar PV System as per the terms of the RFP Documents, and to whom an Allocation Letter has been issued;
- 1.43. **"SNA"** shall mean State Level Nodal Agency.
- 1.44. **"Subsidy"** shall mean **rebate applicable as per MNRE** of Project Cost.
- 1.45. **"Tendered Capacity"** shall mean the Total aggregate capacity in MW as indicated in clause proposed to be allocated by PSCL to the Successful Bidder through this bidding process as per terms and conditions specified therein;
- 1.46. **"Ultimate Parent Company"** shall mean a company, which directly or indirectly owns at least Twenty Six Percent (26%) paid up equity capital in the bidding company and / or the financially evaluated entity shall be under the direct control or indirectly under the common control of such company.
- 1.47. **"Wp"** shall mean Watt Peak.
- 1.48. **1MWp** for the purpose of conversion in **KWp** shall be considered as 1000KWp.

## **2. Instruction to Bidders**

### **2.1 Size of the projects:**

The size of each project shall be in the range of 15 KWP to 500 KWP for rooftop of identified buildings as given in Annexure-A with this RFP. Each roof top unit can be separately connected with the grid and will have separate meters. The main scope of work includes **Design, Engineering, Supply, Installation, testing, Commissioning, Synchronizing and Comprehensive Maintenance (5 Years) of Grid Connected Rooftop Solar PV Systems on Net Metering Basis on the roofs of various Public Buildings as per Annexure-A in the city of Patna.**

### **2.2 Bid capacity**

The cumulative total Capacity to be Installed (KWp) = 4050. The Bidders shall quote the price for the entire plant and installation services on “EPC Single Point Responsibility Basis”. If quoted capacity by bidder is less than this, the bid will be rejected. (The capacity quoted by the bidder shall be submitted as per the financial formats given in this RFP.)

### **2.3 General**

- a. While every effort has been made to provide comprehensive and accurate background information, requirements and envisaged solution(s) specifications, Bidders must form their own conclusions about the solution(s) needed to meet the PSCL’s requirements. Bidders and recipients of this RFP may wish to consult their own legal advisers in relation to this RFP.
- b. 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 PSCL on the basis of this RFP.
- c. 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 PSCL. Any notification of preferred bidder status by PSCL shall not give rise to any enforceable rights by the Bidder. PSCL may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of PSCL.
- d. Sealed bids shall be received by the PSCL by physical posts with readable CDs along with the online submission, in person before the time and date specified in the schedule of the tender notice. In the event of the specified date for the submission of tender offers being declared a public holiday by the Government of Bihar, the offers will be received up to the appointed time on the next working day. The PSCL may, at its discretion, extend this deadline for submission of offers by issuing corrigendum.
- e. The physical submission of bid should be in the form of hardbound with each page numbered and signed by authorized signatory.
- f. Telex, cable or facsimile offers will be rejected.

## **2.4 Eligible Bidders**

Bids may be submitted by either of the following categories of bidders only:

The Bidder can be either a Single company or a Consortium of companies/ corporations as described below.

### **a. Sole Bidder**

The Sole Bidder must be a single company having class A contractor license which has the capabilities to deliver the entire scope as mentioned in the RFP. The Sole Bidder cannot bid as a part of any other consortium bid under this RFP. In case the bidder is not manufacturer, certificate from OEM should be enclosed.

### **b. Consortium of Firms**

Bids can be submitted by a consortium of firms. A consortium should **not consist of more than three parties** (including the Lead Bidder). One of the Firms would be designated as a "Lead Bidder". The Lead Bidder would have the sole responsibility of ensuring the delivery of products and services mentioned in this RFP. The consortium member will only be responsible for their scope of work. The Lead Bidder would also be responsible for ensuring the successful execution of entire project including meeting the timeline. The detail of Consortium Member needs to be declared in the bid which cannot be changed by the bidder later on.

#### **The Lead Bidder will be responsible for:**

- i. The management of Consortium Member who is part of the bid, and
- ii. The supply, delivery and installation of all products and services submitted in their bid and as part of the contract

Bids submitted by a consortium should comply with the following requirements also:

- i. The Lead Bidder shall be authorized to incur liabilities and receive instructions for and on behalf of consortium member. Entire execution of the Contract, including payment, shall be done exclusively by/with the Lead Bidder
- ii. Any firm which is not a Lead Bidder (however, is a consortium partner) can only partner in one bid i.e. a consortium is restricted from being part of any other consortium that is formed to participate in a Bid in response to this RFP
- iii. Any of the Lead Bidders cannot be a Consortium Member with another bidder in a separate bid
- iv. Internal arrangement with the Consortium Member is left to the bidders.

## **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 he shall, before the last date for Submission of Pre-Bid Queries, set forth the particulars thereof and submit them to PSCL in writing in order that such doubt may be removed or clarifications are provided.

## **2.7 Bid Preparation costs**

The Bidder shall bear all costs associated with the preparation and submission of its bid.

## **2.8 Pre-bid meeting & Clarification**

### **2.8.1 Bidders Queries**

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

PSCL 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 PSCL.

Bidders must submit their queries as per the format mentioned in Annexure-I

Maximum of 2 members per Bidder will be allowed to participate in the Pre-bid conference and a letter from the Authorized Signatory from the intended bidder will clearly specify the names of the participants.

### **2.8.2 Responses to Pre-Bid Queries and Issue of Corrigendum**

PSCL will organize a pre-bid conference and will respond to any request for clarification or modification of the bidding documents. PSCL shall formally respond to the pre-bid queries after the

pre-bid conference. No further clarifications shall be entertained after the date and time of submission of queries.

PSCL shall endeavor to provide timely response to all queries. However, PSCL makes no representation or warranty as to the completeness or accuracy of any response made in good faith. PSCL 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 Conference, shall be made by PSCL 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 PSCL.

Any corrigendum/notification issued by PSCL, 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 RFP Document Fee**

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

Tender Fee of Rs. 10,000 (Rupees Ten Thousand Only) shall be paid at the time of submission of bid. The tender fee shall be non-refundable.

Without the payment of tender fee the bids will be taken as incomplete and non-responsive and shall not be considered.

## **2.10 Earnest Money Deposit (EMD)**

EMD shall be paid at the time of submission of bid through a Bank Guarantee valid up to 180 days from the actual date of submission of the Bid. No exemption for submitting the EMD will be given to any agency. Bid security in any other form will not be entertained.

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

*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 by the successful bidder.

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

The EMD may be forfeited in any of the following circumstances:

- a.If a Bidder withdraws or modifies it's Proposal during the Proposal validity period or any extension agreed by the Bidder thereof.
- b. If a Bidder is disqualified in accordance with Clause 2;
- c.If the Bidder tries to influence the evaluation process or engages in corrupt, fraudulent, coercive or undesirable practice or restrictive practice as set out in this RFP.

If a Bidder is declared the first ranking Bidder and it:

- Withdraws its Proposal before contract agreement. However, failure to arrive at a consensus



between the Client and the first ranked Bidder shall not be construed as withdrawal of proposal by the first ranked Bidder;

- fails to furnish the Performance Security
- fails to sign and return, as acknowledgement, the duplicate copy of the letter of award;
- fails to fulfill any other condition precedent to the execution of the Contract, as specified in the letter of award; or
- fails to execute the Contract.

### 2.11 Bid Validity Period

Bid shall remain valid for the time period mentioned in the Fact Sheet i.e. 180 days.

The bidder shall be required to extend the bid validity period, if requested by client to do so. Accordingly the bid security shall also be extended by the bidder for such period.

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 bid 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

### 2.12 Contents of Bid

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 per envelope	Name of Document	Content	Mode of Submission
<b>One</b>	RFP Document fee & Bid Security/ Earnest Money Deposit (EMD)	a. RFP Document Fee receipt b. Bid Security/Earnest Money Deposit (EMD) receipt	Online and Hard Copy
<b>Two</b>	Pre-Qualification Bid	Pre-Qualification bid along with the required supporting documents	Online and Hard Copy
<b>Three</b>	Technical Bid	BOM, Technical Specifications, Certificates, Approach and Methodology etc.	Online and Hard Copy
<b>Four</b>	Financial Bid	Financial Bid	Online only

a) Please note that Prices should NOT be indicated in the Technical Bid but should only be indicated in

the Commercial Bid.

b) 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.

c) 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) who sign(s) the bids.

d) All pages of the bid shall be initialed and stamped by the person (or persons) who sign the bid.

e) The physical submission of the bid has to be accompanied by soft copy non-writable CD/ DVD.

f) Failure to submit the bid before the submission deadline specified in the Bidding Schedule Sheet would cause a bid to be rejected.

g) PSCL will not accept delivery of bid by fax or e-mail only. Hard Copy & Online submission is mandatory.

## 2.13 Bid Formats

### 2.13.1 Pre-Qualification Bid Format

Section #	Section Heading	Details
1.	Pre-qualification checklist	As per format provided in the RFP
2.	Pre-Qualification Bid Covering Letter	As per format provided in the RFP
3.	Consortium Agreement	As per format provided in Annexure of this RFP
4.	About Bidder	As per format provided in the RFP
5.	Legal	1. Copy of Certification of Incorporation/Registration Certificate 2. PAN Card 3. GST Registration
6.	Annual Turnover	Details of annual turnover with documentary evidence.
7.	Net worth	Details of net worth with documentary evidence.
8.	Certification	Relevant certification
9.	Self-certificate for non-blacklisting clause	As per format provided in the RFP
10.	Power of Attorney	Documentary evidence as per format provided in Annexure of the RFP
11.	Project Experience	Citation details of projects as per format given in this RFP, as applicable.

### 2.13.2 Technical Bid Format

Section #	Section Heading	Details
1.	Technical Bid Checklist	As per format provided in the RFP

2.	Technical Bid Covering Letter	As per format provided in the RFP
3.	About Bidder	<ul style="list-style-type: none"> <li>• Details about bidder (whether sole bidder or consortium)</li> <li>• Bidder's General Information as required in Technical Criteria</li> </ul>
4.	Understanding	Details as required in Technical Criteria
5.	Work approach & proposed Methodology	Details as required in Technical Criteria
6.	Project/credential summary	As per format provided in this RFP
7.	Bidder's Experience	Project citation as per format provided in section and supporting documentary evidences and Self-certifications as per format in the RFP as applicable

### 2.13.3 Commercial Bid Format

The Bidder must submit the Commercial Bid in the formats specified in the RFP.

S No.	Section Heading	Details
1	Total Price Summary	As per financial format provided in the RFP

### 2.14 Language

The bid should be prepared and submitted by the bidders in English language only. If any submitted supporting documents 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.

### 2.15 Authentication of Bids

An authorized representative (or representatives) of the Bidder shall initial all pages of the Pre-Qualification, Technical and Commercial 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, PSCL 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 eproc 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 eproc website given in advertisement from time to time for any amendment in the RFP document. In case of failure to get the

amendments, if any, PSCL shall not be responsible.

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

### **2.17 Bid Price**

Commercial Bid shall be as per the financial format given in this RFP. Bidders shall include all applicable taxes, duties, other levies and charges etc. in respect of direct transaction between PSCL and the Bidder.

The price quoted by the Bidders shall be fixed and firm for the duration of the Contract and shall include all taxes, duties, levies including the service tax. The Bidders shall quote the price for the entire plant and installation services on “EPC Single Point Responsibility Basis” such that the total Bid price covers all the Contractor’s obligations mentioned in or to be reasonably inferred from the Bidding Document in respect of the design, manufacture, including procurement, delivery, construction, installation and completion of the plant. The price bid should also take into account the comprehensive maintenance for five (5) years. This includes all requirements under the Contractor’s responsibilities for testing and commissioning of the plant and the acquisition of all permits, approvals and licenses, etc.; Comprehensive maintenance, regular operation and maintenance and training services and such other items and services as may be specified in the Bidding Document, all in accordance with the requirements of the General Conditions of Contract and Technical Specifications. Items against which no price is entered by the Bidder will not be paid for by the Owner when executed and shall be deemed to be covered by the prices for other items. A bid submitted with an adjustable price quotation shall be treated as non-responsive and rejected.

### **2.18 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 the RFP. The bids with deviation(s) to the clauses/ outlined scope mentioned in the RFP are liable for rejection.

### **2.19 Late Bids**

- a) Late submission will not be entertained.
- b) The bids submitted by telex/telegram/fax/e-mail etc. shall not be considered. No correspondence will be entertained on this matter.
- c) PSCL shall not be responsible for any non-receipt/non-delivery of the documents due to technical snag whatsoever at Bidder’s end. No further correspondence on the subject will be entertained.
- d) PSCL reserves the right to modify and amend any of the above-stipulated condition/criterion.

## **2.20 Right to Terminate the Process**

PSCL may terminate the RFP process at any time and without assigning any reason. PSCL 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 PSCL.

## **2.21 Non-Conforming bids**

A bid may be construed as a non-conforming bid 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 project.

## **2.22 Acceptance/Rejection of Bids**

- a) PSCL reserves the right to reject in full or part, any or all bids without assigning any reason thereof. PSCL reserves the right to assess the Bidder's capabilities and capacity. The decision of PSCL 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, PSCL reserves the right to reject the Bid and forfeit the EMD.

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

- a) If there is a discrepancy between words and figures, the amount in words shall prevail.
- b) 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 explanations. On the above lines PSCL reserves the right to take appropriate decision which needs to be agreed by the bidder. If the bidder does not agree to the decision of PSCL, the bid is liable to be disqualified.

## **2.23 Confidentiality**

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 successful bidder and its consortium partner will sign a NDA. Confidentiality agreement will be mutually applicable on both the bidder and PSCL.

## **2.24 Disqualification**

The bid is liable to be disqualified/ a proper explanation can be called 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 increases 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.

## **2.25 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, PSCL 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, PSCL 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 PSCL for, inter alia, time, cost and effort of PSCL, in regard to the RFP, including consideration and evaluation of such Bidder's Bid.
- b) Without prejudice to the rights of PSCL under Clause above and the rights and remedies which PSCL may have under the LOI or the Agreement, if a Bidder is found by PSCL 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 LOI or the execution of the Agreement and there is a written proof of such practice, such

Bidder shall not be eligible to participate in any tender or RFP issued by PSCL during a period of 3 years from the date such Bidder is found by PSCL to have directly or through an agent, engaged or indulged in any Prohibited Practices.

c) For the purposes of this Section, the following terms shall have the meaning hereinafter respectively assigned to them:

a) “*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 PSCL who is or has been associated in any manner, directly or indirectly with the Selection Process or the LOI 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 PSCL, 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 PSCL in relation to any matter concerning the Project;

b) “*fraudulent practice*” means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;

c) “*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;

d) “*undesirable practice*” means (i) establishing contact with any person connected with or employed or engaged by PSCL 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

e) “*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.

## **2.26 Conflict of Interest**

a) A bidder shall not have a conflict of interest that may affect the Selection Process or the Project delivery (the “Conflict of Interest”). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, PSCL shall forfeit and appropriate the EMD, if available, as mutually agreed genuine pre-estimated compensation and damages payable to PSCL for, inter alia, the time, cost and effort of PSCL including consideration of such Bidder’s Bid, without prejudice to

any other right or remedy that may be available to PSCL hereunder or otherwise.

b) PSCL requires that the bidder provides solutions which at all times hold PSCL'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 PSCL.

### **2.27 Sub-Contracting**

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

- a) Facility Management Staff at Ground maintenance, Cleaning, Utilities management etc. and associated manpower.
- b) Sub-contracting shall be allowed only with prior written approval of PSCL. 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.

### **2.28 Right to vary quantity**

- a) At the time of award of contract, the total capacity as originally specified in the bidding documents may be increased or decreased as per the actual capacity of SPV plant that can possibly be erected at the rooftop space of the identified building as given in Annexure-A.
- b) If the PSCL 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.

### **2.29 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 a 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 Application Due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.
- c) Bids withdrawn shall not be opened and processed further.

### **2.30 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) It is strongly recommended that bidders may conduct their site surveys as per the requirement of RFP wherever necessary, prior to the proposal submission.

c) No site visits shall be arranged or scheduled after the deadline for the submission of the Bids and prior to the award of Contract.

### **3. Selection Process for Bidder**

#### **3.1 Opening of Bids**

The Bids shall be opened by PSCL 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 PSCL from the bidder firms to identify that they are bona fide representatives of the bidder firm, for attending the opening of bid.

There will be three bid-opening events as follows:

- 1. Set 1 (RFP Document fee & Bid Security/EMD)**
- 2. Set 2 (Pre-Qualification bid)**
- 3. Set 3 (Technical bid)**

- a) The venue, date and time for opening the Bids bid are mentioned in the Fact sheet.
- b) The date and time for opening of Technical bid is specified in the bidding schedule and that of the Commercial bid would be communicated at respective stages to eligible bidders.
- c) The Technical Bids of only those bidders will be opened who clears the Pre- qualification stage.
- d) The Commercial Bids of only those bidders will be opened who qualify in Technical Bid.

#### **3.2 Preliminary Examination of Bids**

PSCL 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 PSCL 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
- 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 Clarification on Bids**

During the bid evaluation, PSCL may, at its discretion, ask the Bidder for any clarification(s) of its bid. The request for clarification and the response shall be in writing, and no change in the price or substance of the bid shall be sought, offered, or permitted.

### **3.4 Evaluation Process**

PSCL shall constitute a Tender Evaluation Committee to evaluate the responses of the bidders. The Tender 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 Tender Evaluation Committee in the evaluation of bids shall be final. No correspondence will be entertained outside the process of evaluation with the Committee. The Tender Evaluation Committee may ask for meetings or presentation with the Bidders to seek clarifications or conformation on their bids.

The Tender Evaluation Committee reserves the right to reject any or all bids. 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) PSCL shall validate the Set 1 “RFP Document fee & Bid Security/Earnest Money Deposit (EMD)”.
- b) If the contents of the Set 1 are as per requirements, PSCL 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.

Bidders would be informed of their qualification/disqualification based on the Pre- Qualification criteria through Email and Phone and subsequently, the Bid Security amount shall be returned to the respective disqualified Bidders after the signing of Contract by the successful Bidder.

- c) Technical and Financial bids for those bidders who don’t pre-qualify will not be opened. Financial bid will not be opened for those bidders, who don’t qualify the technical evaluation. Bid Security shall be returned promptly to the unsuccessful bidders.

#### **3.4.2 Stage 2: Commercial Evaluation**

- a) All the technically qualified bidders will be notified to participate in Commercial Bid opening

process.

- b) The commercial bids for the technically qualified bidders shall then be opened on the notified date and time and reviewed to determine whether the commercial bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at PSCL's discretion.
- c) Commercial Bids that are not as per the format provided in Section 8 (Annexure 4) shall be liable for rejection.
- d) The bid price shall be inclusive of all taxes and levies and shall be in Indian Rupees.

### **3.5 Pre-Qualification Criteria**

- a) The Sole/ Lead Bidder (in case of Consortium) should be a company with Incorporation/Registration under Companies Act 1956/2013 (for Indian companies). In case of Global companies they are required to provide equivalent proof of incorporation/ registration.
- b) The Sole/ Lead Bidder (in case of Consortium) shall have class A contractor licence from any state. In case of consortium, one member should be a Manufacturing Company in India of SPV Cells / Modules / LED lights or Battery OR A PV system integrator having specific experience of supply, installation, testing & commissioning of SPV Power Plant.
- c) The Sole/ Lead Bidder Shall be in operations for a period of at least 5 (Five) years as on published date of RFP.
- d) The Bidder/Consortium shall have an average annual turnover of INR 25 Crores over the last three (3) Financial Years. In case of Consortium, at least 60% of the turnover criteria shall be met by the Lead Bidder and the remaining can be fulfilled by the Consortium partner.
- e) The Bidder (Lead Partner in case of consortium) shall have minimum net-worth of INR 15 Crores as per the last audited Financial Year. The Consortium partner should have positive net worth as per the audited consolidated financial statements in each of the last 3 financial years.
- f) The sole bidder / consortium shall have a minimum cumulative experience in 4 MWp of rooftop solar Power plant
- g) The bidder should have minimum cumulative 150 KWP per MW solar grid connected project installation and commissioning experience. (Required Document certified from SNA/Gov. Agencies/ Govt. Bodies). Or
- h) The bidder should have minimum cumulative 300 KWP per MW Off grid solar power plant project installation and commissioning experience. (Required Document certified from SNA/Gov. Agencies/Govt. Bodies)
- i) The Sole Bidder or the Lead Bidder of consortium should have office in the State of Bihar or should furnish an undertaking that the same would be established within one month of signing the contract, if project is awarded. Undertaking from authorized signatory to open office in Patna within 60 days from Contract signing should be submitted with the bid.
- j) As on date of submission of the proposal, the Bidder (all members of the consortium as applicable) shall not be blacklisted due to any non satisfactory performance for any of the work awarded by any State / Central Government Department or Central /State PSUs.

## **4. Award of Contract**

### **4.1 Notification of Award**

PSCL 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, PSCL will issue Purchase Order (PO)/Letter of Intent (LOI). Accordingly, a contract shall be signed between successful bidder and PSCL or the agency designated by PSCL. As an acceptance of the PO/LOI, the Bidder shall sign and return back a duplicate copy of the Purchase Order to PSCL or the agency designated by the PSCL.

### **4.3 Performance Bank Guarantee (PBG)**

Within fifteen (15) working days from the date of signing of contract, the successful Bidder shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) to the PSCL. The PBG shall be from a Nationalized Bank or a Scheduled Commercial Bank in the format prescribed in this RFP payable on demand, for the due performance and fulfillment of the contract by the bidder.

This Performance Bank Guarantee shall be for an amount equivalent to 10% of total contract value. PBG shall be invoked by PSCL, in the event the Bidder:

- a) fails to meet the overall penalty condition as mentioned in this RFP or any changes mutually agreed between the parties,
- b) fails to perform the responsibilities and obligations as set out in the RFP to the complete satisfaction of PSCL as per conditions and scope mentioned in the RFP
- c) Misrepresents facts/information submitted to PSCL

The performance bank guarantee shall be valid till satisfactory completion of Post Implementation Support as per RFP. The performance bank guarantee may be discharged/returned by PSCL 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.

In the event of the Bidder being unable to service the contract for whatever reason(s), PSCL shall have the right to invoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of PSCL under the contract in the matter, the proceeds of the PBG shall be payable to PSCL as compensation for any loss resulting from the bidder's failure to perform/comply its obligations under the contract.

PSCL 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. After 40 days of notice, if the bidder fails to rectify the default, PSCL shall be entitled to make recoveries from the bidder's bills, performance bank guarantee, or from any other amount due to him under this contract, 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 this RFP, the performance bank guarantee shall be accordingly extended by the Bidder till completion of scope of work as mentioned in RFP.

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**

Bidder shall also provide complete maintenance support for all the components as outlined in this RFP for a period of five Years from the date of commissioning and when the power plant is completely operational as per the requirements provided in this RFP and all the acceptance tests are successfully concluded to the satisfaction of PSCL.

During the warranty period, the bidder shall covenant 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 covenant that the goods supplied under this contract shall have no defects arising from design, materials or workmanship.

PSCL 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 PSCL and within time specified and acceptable to PSCL.

If the successful bidder, having been notified, fails to remedy the defect(s) within the period specified in the contract, PSCL 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 maximum to the value of the defected item, which PSCL may have against the bidder under the contract.

#### **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 PSCL may call for new bids.

In such a case, PSCL shall invoke the PBG and/or forfeit the EMD.

#### **4.6 Arbitration post signing of contract**

In case, a dispute is referred to arbitration, the arbitration shall be under the Indian Arbitration and Conciliation Act, 1996 and any statutory modification or re-enactment thereof.

Except as otherwise provided elsewhere in the contract if any dispute, difference, question or disagreement arises between the parties hereto or their respective representatives or assignees, at any time in connection with construction, meaning, operation, effect, interpretation or out of the contract or breach thereof the same shall be referred to a Tribunal of three (3) Arbitrators, constituted as per the terms of and under the (Indian) Arbitration and Conciliation Act, 1996. Each party to the contract shall appoint/ nominate one Arbitrator each, the two Arbitrators so appointed/ nominated by the Parties herein shall together choose the third Arbitrator, who shall be the Presiding Arbitrator of the Tribunal. The consortium of the three Arbitrators shall form the Arbitral Tribunal.

All arbitration would be referred to the Chief Justice of Patna High Court, and their decision would be final and binding to all parties.

In case PSCL chooses to award the contract to an eligible bidder through this tender process, and its subjected to a third party litigation, PSCL would be free to proceed with the contract award and works process. If the litigation is in favor of the third party resulting in termination of awarded contract and retendering process, PSCL would pay out the existing bidder to the tune of work completed upon submission of sufficient proof of material supplied and manpower invested.

## **CONDITIONS OF CONTRACT**

### **1. Scope of Work**

**1.1** The scope of work for the bidder include complete design, engineering, manufacture, supply, storage, civil work, erection, testing & commissioning of the grid connected rooftop solar PV project including Comprehensive Maintenance (CMC) of the project for a period of Five years after commissioning on Government Buildings in Patna under the Smart Cities Mission.

**1.2** The Successful bidder hereinafter called “Contractor” is expected to execute the work as per project timeline submitted by him in the bid document. In case if the completion period is delay beyond this time line it will be subjected to a penalty of 0.1% per week to a maximum of 10%.Once 10% level is reached, the authority has all the rights to terminate the contract at their discretion.

**1.3** The contractor is required to submit the power plant details of each building along with all technical parameters to the authority before commencing the installment.

**1.4** The total capacity to be installed is 4050 which comprises of rooftop solar plant on 42 building as given in Annexue-A.The plant size varies from 15 KWp to 500 KWp and all the individual system are grid connected with separate net meters.The bidder needs to take this into account while bidding. No extra cost other than this computed contract value will be paid to the contractor.

**1.5** The computed contract value shall be fixed and firm for the duration of the Contract and shall Include all taxes, duties, levies including the GST. The Bidders shall quote the price for the entire plant and installation services on “EPC Single Point Responsibility Basis” such that the total Bid price covers all the Contractor’s obligations mentioned in or to be reasonably inferred from the Bidding Document in respect of the design, manufacture, including procurement, delivery, construction, installation and completion of the plant. This includes all requirements under the Contractor’s responsibilities for testing and commissioning of the plant and the acquisition of all permits, approvals and licenses, etc.; Comprehensive maintenance, regular operation and maintenance and training services and such other items and services as may be specified in the Bidding Document, all in accordance with the requirements of the General Conditions of Contract and Technical Specifications.

**1.6** Solar PV system shall consist of equipment/ components, namely, Solar PV modules comprising required number of Poly-crystalline PV modules junction box OR string monitoring unit.Power Conditioning Unit with automatic power sharing with mains to serve the load at the Site, Mounting structures, Batteries and civil structures, earthing and lightening protections. IR/UV protected PVC pipes, cables, junction boxes, other accessories and a separate control room with Smart Mini Grid and remote controlling & monitoring system. For control room the successful bidder shall suitably develop the present available infrastructure.

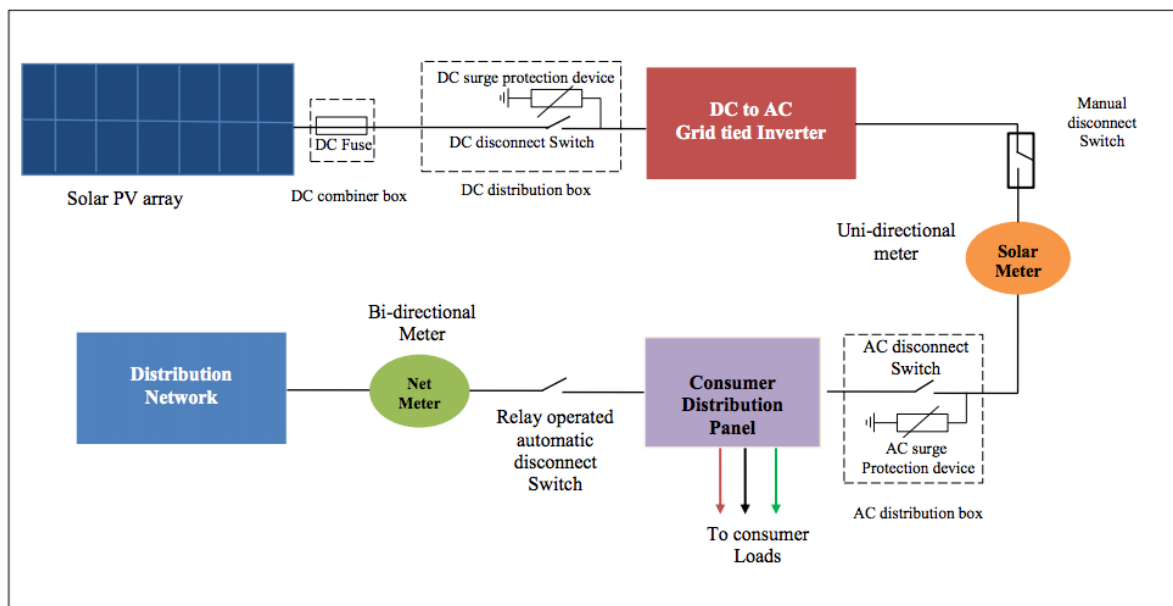
**1.7** The PCU/Inverter shall be tested from MNRE approved / accredited test centers like Solar Energy Centre (SEC, Gurgaon), ERTL (East, West, and North) or CPRI (Bangalore) etc.

**1.8** The PV system of each Building shall be connected to the Grid at 415V at the OWNER’s LT system at Main Distribution Board/ Power Control Centre (PCC) of the respective building with incoming switchgear. If the building is a HT consumer then the generated Energy (excess) shall be stepped up at the existing

transformer and delivered to the grid. The net of the consumption shall be metered at the Distribution Company Net meter which shall be installed by the Bidder by replacing the OWNER's existing tariff meter.

## NET METERING SCHEME

*Single Line Diagram of Rooftop Facility for Net Metering Interconnection*



**1.9** Metering and grid connectivity of the roof top solar PV system would be the responsibility of the Bidder in accordance with the prevailing guidelines of the concerned DISCOM and / or CEA (if available by the time of implementation). SECI/SNA could facilitate connectivity; however the entire responsibility lies with bidder only

**1.10** The bidder shall submit the progress report weekly/ fortnightly/ monthly to PSCL in Prescribed format. PSCL will have the right to depute his/their representatives to ascertain the progress of contract at the premises of works of the bidder.

## TECHNICAL SPECIFICATIONS

The proposed projects shall be commissioned as per the latest technical specifications given by MNRE & as per NEC 690 & IEEE-1547 standard. Any shortcomings will lead to cancellation of contract in full as decided by PSCL & its decision will be final and binding on the bidder.

## SITE PARAMETERS

**Site Parameters**

S NO	DESCRIPTION	PARAMETERS
1)	Site address	Patna Smart City Limited, Patna, Bihar
2)	longitude-latitude	N 25° 36'38", E 85° 08'30"
3)	Tilt angle	As per roof inclination
4)	Azimuth	Vary from site to site
5)	Solar radiation	Refer Bihar Radiation Data
6)	Obstacle	No
7)	Shadow	Shadow loss Considered
8)	Distance of nearest sub-station / evacuation systems	50 meter on average
9)	Grid availability	96%
10)	Approach road to site	Available
11)	Train and air approach	Available
12)	Distance from urban infrastructures	Within City premises
13)	Terrain / Roof Type	GI sheet/RCC
14)	Levelization degree	Not applicable
15)	Soil / Roof strength	Good for mounting the panels
16)	Topographical survey	Done
17)	Availability of water	If not available Developer shall arrange
18)	Security	Developer shall arrange
19)	Availability of local labours	Vary from site to site
20)	Social support for power plant	Yes
21)	Temperature	24.7°
22)	Temperature variation	20.7° to 28.8°
23)	Rainfall data	120-160 Cm
24)	Highest flood records	No records



S NO	DESCRIPTION	PARAMETERS
25)	Highest wind speed at 10m height	2.19m/s
26)	Seismic Zone	Zone – IV (High)
27)	Detailed Soil test report and other tests reports	Not Applicable
28)	Hourly metrological data/Whether data	Refer NASA Surface meteorology and Solar Energy Report
29)	Historical Weather report	Refer NASA Surface meteorology and Solar Energy Report
30)	Technology selection for the proposed site	Polycrystalline

## 1. DEFINITION

A Grid Connected Solar Rooftop Photo Voltaic (SPV) power plant consists of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter, and Controls & Protections, interconnect cables and switches. PV Array is mounted on a suitable structure. Grid tied SPV system is without battery and should be designed with necessary features to supplement the grid power during day time. Components and parts used in the SPV power plants including the PV modules, metallic structures, cables, junction box, switches, PCUs etc., should conform to the BIS or IEC or international specifications, wherever such specifications are available and applicable.

Solar PV system shall consist of following equipment's /components.

- Solar PV modules consisting of required number of Crystalline PV modules.
- Grid interactive Power Conditioning Unit with Remote Monitoring System
- Mounting structures
- Junction Boxes.
- Earthing and lightening protections.
- IR/UV protected PVC Cables, pipes and accessories

### **Solar Photovoltaic Modules:**

The PV modules used should be made in India.

The PV modules used must qualify to the latest edition of IEC PV module qualification test or equivalent BIS standards Crystalline Silicon Solar Cell Modules IEC 61215/IS14286. In addition, the modules must conform to IEC 61730 Part-2- requirements for construction & Part 2 – requirements for testing, for safety qualification or equivalent IS.

For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must

qualify to IEC 61701/IS 61701

The total solar PV array capacity should not be less than allocated capacity (kWp) and should comprise of solar crystalline modules of minimum 250Wp and above wattage. Module capacity less than minimum 250 watts would not be accepted.

Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.

PV modules must be tested and approved by one of the IEC authorized test centers.

The module frame shall be made of corrosion resistant materials, preferably having anodized aluminium.

The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid. PSCL shall allow only minor changes at the time of execution.

Other general requirement for the PV modules and subsystems shall be the Following:

- a) The rated output power of any supplied module shall have tolerance of +/-3%.
- b) The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary by more than 2 (two) per cent from the respective arithmetic means for all modules and/or for all module strings, as the case may be.
- c) The module shall be provided with a junction box with either provision of external screw terminal connection or sealed type and with arrangement for provision of by-pass diode. The box shall have hinged, weather proof lid with captive screws and cable gland entry points or may be of sealed type and IP-65 rated.
- d) IS 60904-1(I-V) curves at STC should be provided by bidder.

The Manufacturer should provide the following minimum information must be mentioned in each module (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions).

Made in India (to be subscribed in words)

Company Name/ Logo

Model Number (It should indicate the voltage and related wattage of the module)

Serial Number

Year of Make

### **Warranties**

- a) Material Warranty:

- i. Material Warranty is defined as: The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than five (05) years from the date of sale to the original customer ("Customer")

- ii. Defects and/or failures due to manufacturing
- iii. Defects and/or failures due to quality of materials
- iv. Non conformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owners sole option

b) Performance Warranty:

The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 25 year period and not more than 10% after ten years period of the full rated original output.

**Array Structure**

- a) Hot dip galvanized MS mounting structures may be used for mounting the modules/ panels/arrays. Each structure should have angle of inclination as per the site conditions to take maximum insulation. However to accommodate more capacity the angle inclination may be reduced until the plant meets the specified performance ratio requirements.
- b) The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed. It may be ensured that the design has been certified by a recognized Lab/ Institution in this regard and submit wind loading calculation sheet to PSCL. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed.
- c) The mounting structure steel shall be as per latest IS 2062: 1992 and galvanization of the mounting structure shall be in compliance of latest IS 4759.
- d) Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts (anti-theft only). Aluminium structures also can be used which can withstand the wind speed of respective wind zone. Necessary protection towards rusting need to be provided either by coating or anodization.
- e) The fasteners used should be made up of stainless steel. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels
- f) Regarding civil structures the bidder need to take care of the load bearing capacity of the roof and need arrange suitable structures based on the quality of roof.
- g) The total load of the structure (when installed with PV modules) on the terrace should be less than  $60 \text{ kg/m}^2$ .
- h) The minimum clearance of the structure from the roof level should be 300 mm.

**Junction Boxes (JBs)**

- a) The junction boxes are to be provided in the PV array for termination of connecting cables. The J. Boxes (JBs) shall be made of GRP/FRP/Powder Coated Aluminium /cast aluminium alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB's shall be such that input & output termination can be made through suitable cable glands.
- b) Copper bus bars/terminal blocks housed in the junction box with suitable termination threads

Conforming to IP65 standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry. Single / double compression cable glands. Provision of earthings. It should be placed at 5 feet height or above for ease of accessibility.

- c) Each Junction Box shall have High quality Suitable capacity Metal Oxide Varistors (MOVs) / SPDs, suitable Reverse Blocking Diodes. The Junction Boxes shall have suitable arrangement monitoring and disconnection for each of the groups.
- d) Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification

**DC Distribution Board:**

- a) DC Distribution panel to receive the DC output from the array field.
- b) DC DPBs shall have sheet from enclosure of dust & vermin proof conform to IP 65 protection. The bus bars are made of copper of desired size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the PCU along with necessary surge arrestors.

**AC Distribution Panel Board:**

- a) AC Distribution Panel Board (DPB) shall control the AC power from PCU/ inverter, and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- b) All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS60947 part I, II and III.
- c) The changeover switches, cabling work should be undertaken by the bidder as part of the project.
- d) All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air - insulated, cubical type suitable for operation on three phase / single phase, 415 or 230 volts, 50 Hz
- e) The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- f) All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better.
- g) Should conform to Indian Electricity Act and rules (till last amendment).
- h) All the 415 AC or 230 volts devices / equipment like bus support insulators, circuit breakers, SPDs, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions

Variation in Supply Voltage	+/- 10%
Variation in Supply Frequency	+/- 3 Hz

**PCU/ARRAY Size Ratio:**

- a) The combined wattage of all inverters should not be less than rated capacity of power plant under STC.
- b) Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.

**PCU/ Inverter:**

As SPV array produce direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. Conversion shall be achieved using an electronic Inverter and the associated control and protection devices. All these components of the system are termed the “Power Conditioning Unit (PCU)”. In addition, the

PCU shall also house MPPT (Maximum Power Point Tracker), an interface between Solar PV array & the Inverter, to the power conditioning unit/inverter should also be DG set interactive. If necessary. Inverter output should be compatible with the grid frequency. Typical technical features of the inverter shall be as follows:

Switching devices	IGBT/MOSFET
Control	Microprocessor/DSP
Nominal AC output voltage & frequency	415V, 3 Phase, 50 Hz (In case, single phase inverters are offered, suitable arrangement for balancing the phases must be made).
Output frequency	50 Hz
Grid frequency synchronization range	+3 Hz or more
Ambient temperature considered	-10°C to 50°C
Humidity	95% (Relative Humidity)
Protection of enclosure	IP-20 (Minimum) for indoor IP-65 (Minimum) for outdoor
Grid frequency tolerance range	+3 Hz or more
Grid voltage tolerance	-20% to +15%
No-load losses	Less than 1% of rated power
Inverter efficiency (Minimum)	>95% (In case of 10kW or above with in-built galvanic isolation) >90% (In case of less than 10kW without in-built galvanic isolation)
THD	<3%
PF	>0.9

- a) Three phase PCU/ inverter shall be used with each power plant system (05 kW and/or above) but In case of less than 05 kW single phase inverter can be used.
- b) PCU/inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown.
- c) The output of power factor of PCU inverter is suitable for all voltage ranges or sink of reactive power; inverter should have internal protection arrangement against any sustainable fault in feeder line and against the lightning on feeder.
- d) Built-in meter and data logger to monitor plant performance through external computer shall be provided. Overall efficiency for Grid Tied inverter as per EN50530
- e) The power conditioning units / inverters should comply with applicable IEC/ equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683 and IEC 60068-2(1,2,14,30) /Equivalent BIS Std.
- f) The charge controller (if any) / MPPT units environmental testing should qualify IEC 60068-2(1, 2, 14, 30)/Equivalent BIS standard. The junction boxes/ enclosures should be IP 65(for

outdoor)/ IP 54 (indoor) and as per IEC 529 specifications.

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

#### **Integration of PV Power with Grid:**

The output power from SPV would be fed to the inverters which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization. In case of grid failure, or low or high voltage, solar PV system shall be out of synchronization and shall be disconnected from the grid. 4 pole isolation of inverter output with respect to the grid/ DG power connection need to be provided.

#### **Data Acquisition System / Plant Monitoring**

- i. Data Acquisition System shall be provided for each of the solar PV plant above 10 kWp Capacity.
- ii. Data Logging Provision for plant control and monitoring, time and date stamped system data logs for analysis with the high quality, suitable PC with UPS at site. Metering and Instrumentation for display of systems parameters and status indication to be provided.
- iii. Solar Irradiance: An integrating Pyranometer / Solar cell based irradiation sensor (along with calibration certificate) provided, with the sensor mounted in the plane of the array. Readout integrated with data logging system (above 10 kW project only)
- iv. Temperature: Temperature probes for recording the Solar panel temperature and/or ambient temperature to be provided complete with readouts integrated with the data logging system (above 10 kW project only)
- v. The following parameters are accessible via the operating interface display in real time separately for solar power plant:
  - a. AC Voltage.
  - b. AC Output current.
  - c. Output Power
  - d. Power factor.
  - e. DC Input Voltage.
  - f. DC Input Current.
  - g. Time Active.
  - h. Time disabled.
  - i. Time Idle.
  - j. Power produced
  - k. Protective function limits (Viz-AC Over voltage, AC Under voltage, over frequency, under frequency ground fault, PV starting voltage, PV stopping voltage).
- vi. All major parameters available on the digital bus and logging facility for energy auditing through the internal microprocessor and read on the digital front panel at any time) and logging facility (the current values, previous values for up to a month and the average values) should be made available for energy auditing through the internal microprocessor and should be read on the digital front panel.
- vii. Computerized DC String/Array monitoring and AC output monitoring shall be provided as part

of the inverter and/or string/array combiner box or separately.

- viii. String and array DC Voltage, Current and Power, Inverter AC output voltage and current (All 3 phases and lines), AC power (Active, Reactive and Apparent), Power Factor and AC energy (All 3 phases and cumulative) and frequency shall be monitored.
- ix. Computerized AC energy monitoring shall be in addition to the digital AC energy meter.
- x. The data shall be recorded in a common work sheet chronologically date wise. The data file shall be MS Excel compatible. The data shall be represented in both tabular and graphical form.
- xi. All instantaneous data shall be shown on the computer screen.
- xii. Software shall be provided for USB download and analysis of DC and AC parametric data for individual plant.
- xiii. Provision for Internet monitoring and download of data shall be also incorporated.
- xiv. Remote Server and Software for centralized Internet monitoring system shall be also provided for download and analysis of cumulative data of all the plants and the data of the solar radiation and temperature monitoring system.
- xv. Ambient / Solar PV module back surface temperature shall be also monitored on continuous basis.
- xvi. Simultaneous monitoring of DC and AC electrical voltage, current, power, energy and other data of the plant for correlation with solar and environment data shall be provided.
- xvii. Remote Monitoring and data acquisition through Remote Monitoring System software at the owner /PSCL location with latest software/hardware configuration and service connectivity for online / real time data monitoring/control complete to be supplied and comprehensive maintenance/control to be ensured by the supplier. Provision for interfacing these data on PSCL server and portal in future shall be kept.

**Transformer “IF Required” & Metering:**

- a) Dry/oil type relevant kVA, 11kV/415V, 50 Hz Step up along with all protections, switchgears, Vacuum circuit breakers, cables etc. along with required civil work.
- b) The bidder must take approval/NOC from the Concerned DISCOM for the connectivity, technical feasibility, and synchronization of SPV plant with distribution network and submit the same to PSCL before commissioning of SPV plant.
- d) Reverse power relay shall be provided by bidder (if necessary), as per the local DISCOM requirement.

**Power Consumption:**

Regarding the generated power consumption, priority need to give for internal consumption first and thereafter any excess power can be exported to grid. Finalization of tariff is not under the purview of PSCL. Decisions of appropriate authority like DISCOM, state regulator may be followed.

**Protections:**

The system should be provided with all necessary protections like earthing, Lightning, and grid islanding as follows:

#### **A).LIGHTNING PROTECTION**

The SPV power plants shall be provided with lightning & overvoltage protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per IEC 62305 standard. The protection against induced high-voltages shall be provided by the use of metal oxide varistors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.

#### **B).SURGE PROTECTION**

Internal surge protection shall consist of three MOV type surge-arrestors connected from +ve and –ve terminals to earth (via Y arrangement)

#### **C).EARTHING PROTECTION**

Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-1987 (reaffirmed 2006). In addition the lightning arrester/masts should also be earthed inside the array field. Earth Resistance shall be tested in presence of the representative of DISCOM/PSCL as and when required after earthing by calibrated earth tester. PCU, ACDB and DCDB should also be earthed properly. All non-current metal parts shall be earthed with two separate and distinct earth continuity conductors to an efficient earth electrode. Separate earthing to be provided for LA, AC and DC parts.

Earth resistance shall not be more than 5 ohms. It shall be ensured that all the earthing points are bonded together to make them at the same potential.

#### **D).GRID ISLANDING:**

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

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

#### **Cables**

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

- i. Shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards



- ii. Temp. Range:  $-10^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$ .
- iii. Voltage rating 660/1000V
- iv. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
- v. Should be appropriately Flexible
- vi. Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use.
- vii. Cable Routing/ Marking: All cable/wires are to be routed in a GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable easily identified.
- viii. The Cable should be of copper as per standards selected that it should be compatible up to the life of the solar PV panels i.e. 25years.
- ix. The ratings given are approximate. Bidder to indicate size and length as per system design requirement. All the cables required for the plant provided by the bidder. Any change in cabling sizes if desired by the bidder/approved after citing appropriate reasons. All cable schedules/layout drawings approved prior to installation.
- x. Multi Strand, Annealed high conductivity copper conductor PVC type 'A' pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection Armored cable for underground laying. All cable trays including covers to be provided. All cables conform to latest edition of IEC/ equivalent BIS Standards as specified below: BoS item / component Standard Description Standard Number Cables General Test and Measuring Methods, PVC/XLPE insulated cables for working Voltage up to and including 1100 V ,UV resistant for outdoor installation IS /IEC 69947.
- xi. The size of each type of DC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 1%.
- xii. The size of each type of AC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 2 %.

### Connectivity

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

Plant Capacity	Connecting voltage
Up to 05 kW	240V-single phase or 415V-three phase at the option of the consumer
Above 05 kW and up to 50 kW	415V – three phase

Above 50 kW	At HT/EHT level (11kV/33kV/66kV) as per DISCOM rules

- i. The maximum permissible capacity for rooftop shall be 500 kWp for a single net metering point.
- ii. Utilities may have voltage levels other than above; DISCOMs may be consulted before finalization of the voltage level and specification is made accordingly.
- iii. For large PV system (Above 50 kW) for commercial installation having large load, the solar power can be generated at low voltage levels and stepped up to 11 kV level through the step up transformer. The transformers and associated switchgear would require to be provided by the SPV bidders.

**Tools & Tackles and Spares:**

- i. After completion of installation & commissioning of the power plant, necessary tools & tackles are to be provided free of cost by the bidder for maintenance purpose. List of tools and tackles to be supplied by the bidder for approval of specifications and make from PSCL.
- ii. A list of requisite spares in case of PCU/inverter comprising of a set of control logic cards, IGBT driver cards etc. Junction Boxes. Fuses, MOVs / arrestors, MCCBs etc along with spare set of PV modules be indicated, which shall be supplied along with the equipment. A minimum set of spares shall be maintained in the plant itself for the entire period of warranty and Comprehensive Maintenance which upon its use shall be replenished

**Danger Boards and Signage's:**

Danger boards should be provided as and where necessary as per IE Act. /IE rules as amended up to date. Three signage shall be provided one each at control room, solar array area and main entry from administrative block. Text of the signage may be finalized in consultation with PSCL/DISCOM.

**Fire Extinguishers:**

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

- a) Portable fire extinguishers in the control room for fire caused by electrical short circuits
- b) Sand buckets in the control room
- c) The installation of Fire Extinguishers should confirm to TAC regulations and BIS standards. The fire extinguishers shall be provided in the control room housing PCUs as well as on the Roof or site where the PV arrays have been installed.

**Drawings and Manuals:**

- a) Two sets of Engineering, electrical drawings (certified from MNRE empaneled chartered engineer above 10kWp) and Installation and CMC manuals are to be supplied. Bidders shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes in their bid along with basic design of the power plant and power evacuation, synchronization along with protection equipment.
- b) Approved ISI and reputed makes as per MNRE technical specifications for equipment to be used.
- c) For complete electro-mechanical works, bidders shall supply complete design, details and drawings for approval to PSCL before progressing with the installation work

#### **Planning and Designing:**

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

#### **PLANT LAYOUT**

The sites for the proposed plant are located on the rooftop of the Identified Government Buildings inside the city of Patna in Bihar. The plant layout for the grid connected 4.05 MWp rooftop solar PV power comprises the following aspects

- a. Maximize energy yield
- b. Power evacuation facility
- c. Approach road to the building and access to rooftop
- d. Existing topography

#### **SITE TOPOGRAPHY AND GRADED LEVEL**

The proposed site is flat in general.

#### **STRENGTHENING OF ROOF**

Roof Strength reviewed before the execution. However, if necessary, strengthening of roof shall be done by the Bidder.

#### **Drawings to be furnished by Bidder after Award of Contract**

- a) The Contractor shall furnish the following drawings Award/Intent and obtain approval
- b) General arrangement and dimensioned layout
- c) Schematic drawing showing the requirement of SV panel, Power conditioning Unit(s)/ inverter, Junction Boxes, AC and DC Distribution Boards, meters etc.
- d) Structural drawing along with foundation details for the structure.

- e) Itemized bill of material for complete SV plant covering all the components and associated accessories.
- f) Layout of solar Power Array
- g) Shadow analysis of the roof

**Solar PV System on the Rooftop for Meeting the Annual Energy Requirement**

The Solar PV system on the rooftop of the selected buildings will be installed for meeting the annual energy requirements of the PV capacity permissible by DISCOM as per regulation issued by BERC.

**Safety Measures:**

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

IEC Standards	
Solar Modules/Panels	
IEC 61215/ IS 14286	Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
IEC 61701	Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
IEC 61853- Part 1/ IS 16170: Part 1	Photovoltaic (PV) module performance testing and energy rating Irradiance and temperature performance measurements, and power rating
IEC 62716	Photovoltaic (PV) Modules – Ammonia (NH3) Corrosion Testing (As per the site condition like dairies, toilets)
IEC 61730-1,2	Photovoltaic (PV) Module Safety Qualification – Part 1: Requirements for Construction, Part 2: Requirements for Testing
IEC 62804	Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation. IEC TS 62804-1: Part 1: Crystalline silicon (mandatory for applications where the system voltage is > 600 VDC and advisory for installations where the system voltage is < 600 VDC)
IEC 62759-1	Photovoltaic (PV) modules – Transportation testing, Part 1: Transportation and shipping of module package units
Solar PV Inverters	
IEC 62109-1, IEC 62109- 2	Safety of power converters for use in photovoltaic power systems Part 1: General requirements, and Safety of power converters for use in photovoltaic power systems Part 2: Particular requirements for inverters. Safety compliance (Protection degree IP 65 for outdoor mounting, IP 54 for indoor mounting)
IEC/IS 61683 (as applicable)	Photovoltaic Systems – Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)
BS EN 50530 (as applicable)	Overall efficiency of grid-connected photovoltaic inverters: This European Standard provides a procedure for the measurement of the accuracy of the maximum power point tracking (MPPT) of inverters, which are used in grid-connected photovoltaic systems. In that case the inverter energizes a low voltage grid of stable AC voltage and constant frequency. Both the static and dynamic MPPT efficiency is considered.
IEC 62116/ UL 1741/ IEEE	Utility-interconnected Photovoltaic Inverters - Test Procedure of Islanding

1547 (as applicable)	Prevention Measures
IEC 60255-27	Measuring relays and protection equipment – Part 27: Product safety requirements
IEC 60068-2 (1, 2, 14, 27, 30)	Environmental Testing of PV System – Power Conditioners and Inverters a) IEC 60068-2-1: Environmental testing - Part 2-1: Tests - Test A: Cold b) IEC 60068-2-2: Environmental testing - Part 2-2: Tests - Test B: Dry heat c) IEC 60068-2-14: Environmental testing - Part 2-14: Tests - Test N: Change of temperature d) IEC 60068-2-27: Environmental testing - Part 2- 27: Tests - Test Ea and guidance: Shock e) IEC 60068-2-30: Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)
IEC 61000 – 2,3,5 (as applicable)	Electromagnetic Interference (EMI) and Electromagnetic Compatibility (EMC) testing of PV Inverters
Fuses	
IS/IEC 60947 (Part 1, 2 & 3), EN 50521	General safety requirements for connectors, switches, circuit breakers (AC/DC): a) Low-voltage Switchgear and Control-gear, Part 1: General rules b) Low-Voltage Switchgear and Control- gear, Part 2: Circuit Breakers c) Low-voltage switchgear and Control-gear, Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units d) EN 50521: Connectors for photovoltaic systems – Safety requirements and tests
IEC 60269-6	Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems
Surge Arrestors	
IEC 62305-4	Lightning Protection Standard
IEC 60364-5-53/ IS 15086-5 (SPD)	Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control
IEC 61643-11:2011	Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods
Cables	
IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1 & 2) / IEC69947	General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, and UV resistant for outdoor installation)
BS EN 50618	Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC Cables
Earthing /Lightning	
IEC 62561 Series (Chemical earthing)	IEC 62561-1 Lightning protection system components (LPSC) - Part 1: Requirements for connection components IEC 62561-2 Lightning protection system components (LPSC) - Part 2: Requirements for conductors and earth electrode IEC 62561-7 Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds
Junction Boxes	
IEC 60529	Junction boxes and solar panel terminal boxes shall be of the thermo-plastic type with IP 65 protection for outdoor use, and IP 54 protection for indoor use
Solar PV Roof Mounting Structure	
IS 2062/IS 4759	Material for the structure mounting

### Operation of the System During Weekends and General Holidays and Calculation of CUF:

During grid failure, the SPV system stops generating. Any instances of grid failure need to be

mentioned in the monthly report and those instances need to be authorized by local DISCOM. Then the period will be excluded in calculation of CUF. Also in case of Public holidays there will be relaxation in CUG calculation A penalty of INR 10/- per kWp per day, subject to the maximum of 2% Project Cost per year per system will be imposed on bidder after 7 days from the day it was informed about the defect / rectification till the same is rectified.

### **Completion Time Schedule**

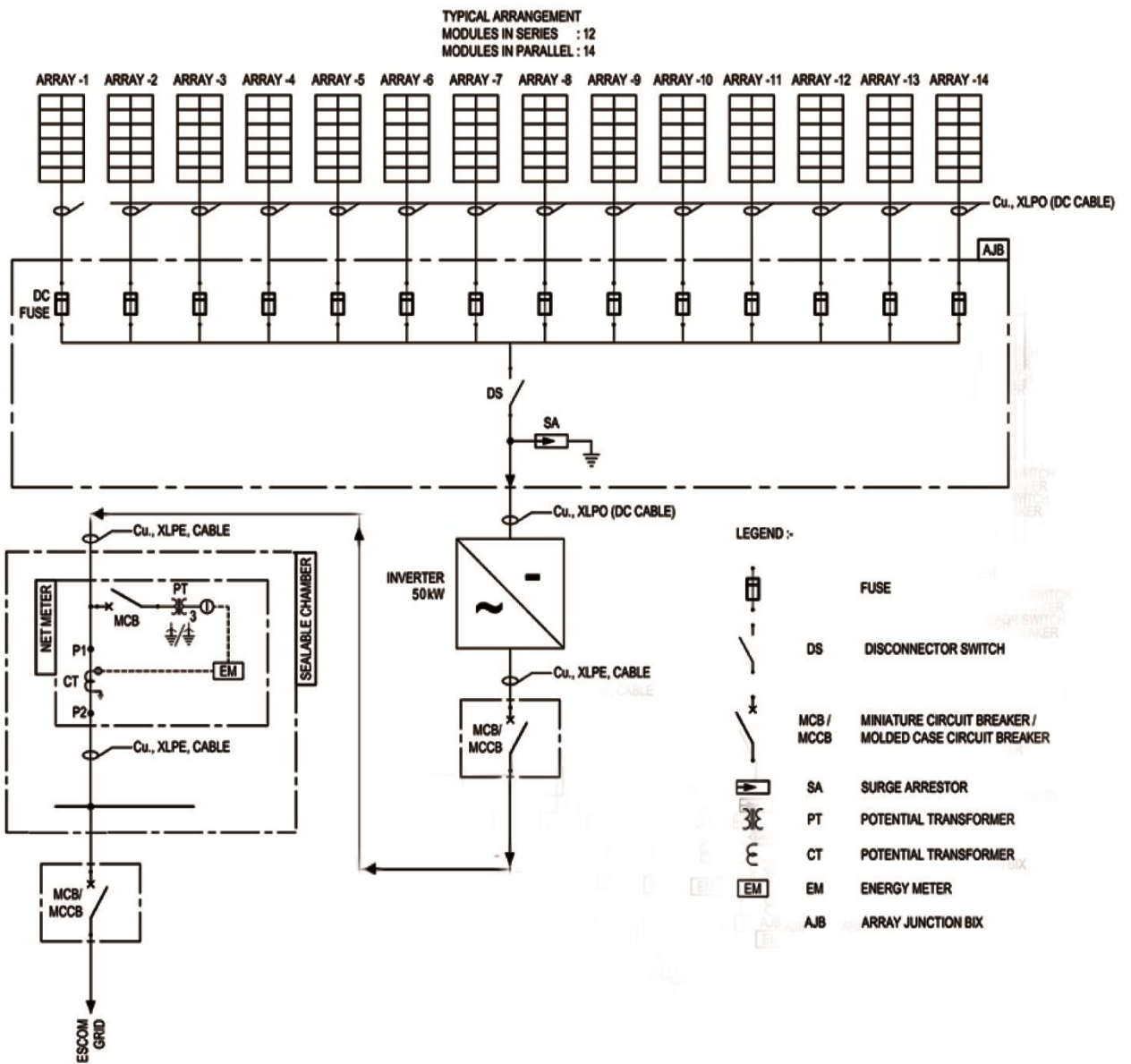
a) The Completion Period of the Project (Plant) shall be Nine (9) months from the effective Date of contract agreement. Based on this completion period, the Bidders shall duly prepare the Project Completion Schedule – Activity-wise and Time-wise in the format as specified in this Bidding Documents

b) The Plant and Equipment covered under this Bidding Document and, in particular, in the Technical Specifications of the Bidding Document shall be designed, manufactured, supplied, erected, tested and commissioned at the Site within the completion period specified above from the effective date of Contract.

c) In case the Contractor (Successful Bidder) fails to achieve the completion of the commissioning and establishing agreed guaranteed technical parameters within the period specified above, the Owner, without prejudice to its other remedies under the contract, shall levy a penalty on the Contractor at the rate of one percent of the Contract Price per week of delay or part thereof subject to maximum of ten percent of the Contract Price. Once the maximum is reached, PSCL may consider termination of the contract.

### Single Line diagram

For understanding purpose SLD for 50kWp plant is given below



**Term of Payment of Contract Price**

1. 40 percent (Forty Percent) of the Contract Price on delivery of Plant and Equipment at contractors’ Warehouse/Site in Bihar within thirty (30) days after material dispatch clearance certificate, test certificate of each plant and equipment (MNRE/NABL approved test certificate for Invertors / PCU & Module test certificates, cables, junction box / enclosures for invertors / charge controller, lightning arrestor, Structures wind load bearing capacity certificate, GI certificate for Module Mounting Structures (MMS)), other applicable certificates as mentioned in the technical sheet for cables, switches/circuit breakers / connectors, lightning arrestors and BOM of each site on receipt of invoice in triplicate. The payment will be released only after the inspection has been done and the reports been submitted.
  
2. 50 percent(Fifty Percent) on completion of erection, testing and commissioning of the Plant and Equipment to the complete satisfaction of the Owner and after successful completion and submission of Photographs of Plant along with beneficiaries and a copy of respective IV curves of the modules, on receipt of invoice (original + two copies) along with the supporting documents of completion of Works and Performance and Guarantee Tests Reports. The bidder is also required to submit a consolidated data sheet stating the details as mentioned below:

Sr. No.	Name of the Building or Premises	Serial No. of the PCU	Serial No. of the Modules	Photograph of the Power Plant & Signature of owner/Authority of Building

The payment will be released only after the inspection has been done and the reports been submitted.

3. Balance 10 % of the contract price shall be paid in 5 yearly installments (2% per year) towards Comprehensive maintenance (which shall include regular Operation and Maintenance) against submission of 5 (five) BG’s (each of 2% amount of work order value) for 12, 24, 36, 48 & 60 months validity respectively after successful commissioning of the solar PV power plant. These BGs under this clause shall be refunded on expiry of respective defect liability period of BG’s every year.

*Note: The bidder is required to submit a monthly report along with a consolidated 12 months report of the plants with a copy of the service log book as mentioned below along with the invoice for CMC.*

Sr. No.	Name of Building	Address & location of the building	Date of Complaint	Date of complaint redressed	Issue at Site	Remarks of service Centre with date & Signature	Remarks of building owner/Authority with date & Signature



**ANNEXURE-A**

SL.NO	Name of Site	Total Area (Sq.M)	System Size (KWp)
1	Bankipur Girls High School	828.8	170
2	Bihar School Examination Board	3053.27	200
3	Bhartiya Nritya Kala Mandir	1831.21	33
4	Biscouman Bhavan	2725.5	90
5	Bihar Rajya Jal Parishad	1220.76	40
6	Bharat Sanchar Nigam Ltd.	3045.25	70
7	Bankipur Bus Stand	383.83	29
8	Chamber Of Commerce,Gandhi Maidan	1160.66	76
9	City SP Office, Gandhi Maidan	709.61	25
10	Divisional Commissioner Office	1482.75	60
11	DM Residence, Gandhi Maidan	739.08	15
12	DM Office, Gandhi Maidan	2291.45	50
13	Fire Brigade Office	599.38	40
14	Gandhi Museum	1114.91	30
15	GPO Patna	6705.93	200
16	Planetarium	3529.53	180
17	Bihar Rajya Khadi Gram Udyog Board	436.7	50
18	LIC,Exhibition Road	2554.74	26
19	Sinha Library	2106.29	80
20	Radio Station Akashwani	502.96	180
21	Patna Museum	2772.47	200
22	LIC,Fraser Road	682.67	80
23	New Police Line	990.52	60
24	New Patna Club	1209.27	120
25	Magadh Mahila College	10364.5	300
26	Lok Nayak Bhavan,Dakbungalow	2748.9	100
27	Red Cross, Gandhi Maidan	862.62	30
28	SriKrishna Science Centre	1102.9	100
29	Patliputra Co-Operative Bank	225.88	30
30	Youth Hostel Patna	641.9	25
31	Bihar Grih Raksha House (NDRF)	819.77	130
32	Telegraph Recreation Club	1693.57	30
33	Officers Hostel	1616.83	140
34	Mahalekhakar Bhavan	1062.25	130
35	Kotwali Police Station	2409.92	40
36	Kedar Bhavan (Bihar State Office)	649.22	15
37	Engineers Club	517.82	20
38	Electricity Board Office	333.56	100
39	Doordarshan Kendra	3728.55	150
40	Bihar Rajya Police Parivahan Mukhyalaya	1627.31	100
41	Bihar Pashu Chikitsa Sangh Bhavan	368.16	15
42	Maurya Lok Complex	7718.37	500

Total Capacity to be Installed (KWp) = 4050

### 1. Annexure 1 – Template for Pre-Bid Queries

Bidder shall submit all pre-bid queries in MS excel format in the following format to be emailed at clearly specifying in the subject column- ‘Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission’.

SL #	RFP Section and sub- section	Page no.	Clause/ Content in the RFP	Clarification sought/ Change Request (highlight the portion with red color which is intended to be changed.)

### 2. Annexure 2 – Formats for Submission of the Pre-Qualification Bid

#### 2.1 Pre-qualification bid checklist

SI#	Checklist Items	Compliance (Yes or No)	Page No. and Section No. in bid
1.	RFP Document fees		
2.	Earnest Money Deposit		
3.	Pre-Qualification Covering letter		
4.	Consortium Agreement, if applicable as per Annexure 7		
5.	<ul style="list-style-type: none"> <li>• Copy of Certification of Incorporation/Registration Certificate</li> <li>• PAN card</li> <li>• GST registration</li> </ul>		

6.	Audited financial statements for the last three financial years AND Certificate from the Statutory Auditor/ CA		
7.	Declaration of non-blacklisting		
8.	Power of attorney for Lead Bidder of Consortium		
9.	Project Citations and Self-certifications, as Applicable		
10.	Category of Bidder/Type of Organization Manufacturer/ System Integrator under the Companies Act, 1956 or 2013 A copy of certificate of incorporation shall be furnished along with the bid in support of above.		
11.	Makes of Inverters offered for the system:		a. ...., b. ...., c. ...., d. .... etc.  <i>(Test Certificates shall be attached)</i>
12.	Valid certification		

## 2.2 Pre-Qualification Bid Covering Letter

Date: dd / mm / yyyy

To,

MD, PSCL,

Patna,  
Bihar, India

**Subject:** Request for Proposal for Selection of Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission'

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

Dear Sir,

With reference to your “**Request for Proposal for** Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.”, we hereby submit our Prequalification bid, Technical Bid and Commercial Bid for the same.

We hereby declare that:

- a) We hereby acknowledge and unconditionally accept that the PSCL 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 INR [ ] Crores and Tender fee of INR [ ] in the <<Account details>>.
- c) We hereby declare that all information and details furnished by us in the Bid are true and correct to the best of our knowledge, 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 180 days from the date of Submission of bid prescribed by PSCL 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 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 PSCL may cancel the bidding process at any time and that PSCL 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 \_\_\_\_\_, contact no. \_\_\_\_\_

Thanking you,

Yours sincerely,

(Signature of the Lead

bidder) (Printed Name)

Designation

Seal Date: Place:

Business Address:

## 2.3 Company profile

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

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

### B. Valid Certificate of Incorporation (required for both bidder and consortium member)

### C. Financial Turnover of last 3 years

The financial turnover of the company has to be provided as per the following table:

Annual Turnover details (certified)			
S No.	FY- 2014- 2015	FY- 2015- 2016	FY- 2016- 2017

- a. Copy of audited financial statements or declaration from the appointed statutory auditor to be provided as proof of the financial turnover
- b. Positive net worth of the last five financial years as on 31.03.2017. Copy of self-certified statutory auditor certificate to be submitted along with the bid

**2.4 Declaration of Non-Blacklisting (To be provided on the Company letter head) Declaration for Lead Bidder:**

To,

**MD, PSCL,**  
Patna Smart City Ltd,  
Bihar, India  
Place

Date

Subject: Self Declaration of not been blacklisted in response to the Request for Proposal for Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.

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

Dear Sir,

We confirm that our company or firm, \_\_\_\_\_, is currently not blacklisted in any of the awarded order or due to performance by any of the State or UT and or Central Government in India

(Signature of the Lead

Bidder) Printed Name

Designation

**Seal** Date: Place:

Business Address:

## 2.5 Declaration for Consortium Member:

*(To be provided on the Company letter head)*

{Place}

{Date}

To,

**MD, PSCL,**  
Patna Smart City Ltd,  
Patna, Bihar, India

Subject: Self Declaration of not been blacklisted in response to the Request for Proposal for Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.

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

Dear Sir,

We confirm that our company or firm, \_\_\_\_\_, is currently not blacklisted due to non satisfactory performance in any work order awarded by any of the State or UT and or Central Government in India.

(Signature of the Consortium Member)

Printed Name

Designation

**Seal Date:**

Place: Business Address:



## 2.6 No Deviation Certificate

This is to certify that our offer is exactly in line with your tender enquiry/RFP (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, and Technical Requirements Specification) or Commercial in either direct or indirect form.

(Authorised Signatory)

Signature:

Name:

Designation:

Address:

Seal:

Date:

## **2.7 Total Responsibility Certificate**

This is to certify that we undertake the total responsibility for the defect free operation of the proposed solutions as per the requirement of the RFP for the duration mentioned in the RFP.

(Authorised Signatory)

Signature:

Name:

Designation:

Address:

Seal:

Date:

**2.8 Self-certificate for Project execution experience (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:

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

(Authorised Signatory) Signature:

Name: Designation:

Bidding entity's name Address:

Seal and Date:

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

#### 3.1 Technical Bid Check-List

SI #	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 proposed solution		
5	Project plan (Timeline of Project execution)		
6	Makes of Inverters offered for the system:		
7	Compliance to Requirement (Technical / Functional Specifications)		
8	Proposed Bill of Material		
9	Manufacturers'/Producers' Authorization Form		
10	Non-disclosure agreement		

### 3.2 Technical Bid Covering Letter

Date: dd/mm/yyyy

To,

**MD,**  
**Patna Smart City Limited,**  
Patna,  
Bihar, India

**Subject: Request for Proposal for Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.**

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

Dear Sir,

I (in case of single bidder) or We, <<name of the undersigned Bidder and consortium member>>, having read and examined in detail all the bidding documents in respect of “**Request for Proposal for Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.**” 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 PSCL, Government of Bihar 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 in the form prescribed in the Annexure of the RFP .

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 180 days after opening of technical bid. We shall extend the validity of the bid if required by PSCL.

Thanking you,

Yours

sincerely,

(Signature of the Lead  
Bidder) Printed Name

Designation

**Seal Date:**

Place:

Business Address:

### 3.3 Credential Summary

Sl #	Project Name	Client Name	Client Type	Project Value (in INR)	Project Details (Off grid/On grid)	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
- Project Details – Indicate the major project components like capacity of SPV Plant, on grid or off grid etc.
- 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)

### 3.4 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.

<b>Name of the Project &amp; Location</b>	
<b>Client's Name and Complete Address</b>	
<b>Narrative description of project</b>	
<b>Contract value for the bidder (in INR)</b>	
<b>Date of Start</b>	
<b>Date of Completion</b>	
<b>Activities undertaken by prime bidder or consortium member</b>	

*N.B - 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.*



### 3.5 Overview of Proposed Solution

#### A. Approach & methodology

Bidders are required to provide a detailed approach & methodology to execute the entire project. Bidders are advised to comply with the below provided headers/Approach components while detailing out their solution.

#### B. 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.	Item of Activity	Month wise Program									
		1	2	3	4	5	6	7	8	9	10
1	Project Plan										
1.1	Activity 1										
1.2	Activity 2.....Contd										

Note: The above activity chart is for the purpose of conveying the actual time period required by bidder to execute the overall project. Bidders are requested to provide detailed activity & phase wise timelines for executing the project with details of deliverables & milestones as per their bid. Once the bidder is selected, he will have to strictly adhere to this timeline.

### 3.6 Compliance to Requirement (Technical / Functional Specifications)

*The bidder should provide compliance to the requirement specifications (both technical and functional) specified in this RFP in form of self-certification.*

### 3.7 Proposed Bill of Material

The Bidder should provide the proposed Bill of Material (BoM) here for total plant capacity. Bidders are required to mention the details of the make/brand and model against each line item, wherever applicable. The bid can be considered non-responsive in the absence of such details. Once the bidder provides this information in the submitted bid, the bidder cannot change it with any other component / equipment etc. of lower specifications / performance. The bidder can submit three alternatives for each component but each should be of equal standard and should have MNRE approved.

### **3.8 Anti-Collusion Certificate**

*[Certificate should be provided by sole bidder/Lead Bidder and on letter head]*

#### Anti-Collusion Certificate

We hereby certify and confirm that in the preparation and submission of our Bid for **Request for Proposal for Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.**, Patna against the RFP issued by PSCL, 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. We further confirm that we have not offered nor will offer any illegal gratification in cash or kind to any person or organization in connection with the instant bid.

(Signature of the Lead Bidder)

Printed Name

Designation

**Seal**

Date:

Place

:

Business Address:

#### 4. Annexure 4 – Formats for Submission of the Commercial Bid

##### Total Price Summary

We hereby submit our best offer for Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.

Particular	Amount (in Rs.)	Amount (in words)
<b>Total price (For Cumulative 4050 KWp solar rooftop power plant on 42 different rooftop with all the technical specification as mentioned in the RFP with comprehensive maintenance for 5 (Five) years</b>  (Inclusive of all taxes, levies, duties, etc. as applicable)		

\*\*\*Note

- I. The bidder needs to consider that the total capacity for bidding is 4050 KWp, however the entire capacity consists of 42 different individual SPV plants to be installed on 42 different buildings. The list of building is attached in this RFP (Annexure-A) along with system size in KWp. So the bidders are advised to quote accordingly.
- II. All taxes, duties, levies or any extra surcharge etc will be the sole responsibility of bidder and will be paid by him

**Annexure 5 (a) – Performance Bank Guarantee**

Ref: \_\_\_\_\_

Date \_\_\_\_\_

Bank Guarantee No. \_\_\_\_\_

<Name>

<Designation>

<Address> <Phone

Nos.> <Fax Nos.>

<Email id>

Whereas, <<name of the supplier and address>> (hereinafter called “Contractor”) has undertaken, in pursuance of contract no. <Insert Contract No.> dated. <Date> to provide Implementation for <<Name of the assignment>> to Patna Smart City Limited (hereinafter called “the PSCL”)

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 Rs.<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 Rs. <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 System Integrator 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>>) notwithstanding anything contained herein:

I. Our liability under this bank guarantee shall not exceed Rs. <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)

## Annexure 5 (b) – Bank Guarantee for Earnest Money Deposit

To,

<Name>

<Designation>

<Address>

<Phone Nos.>

<Fax Nos.>

<Email id>

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

Know all Men by these presents that we <<... >> having our office at <<Address>> (hereinafter called "the Bank") are bound unto the << Patna Smart City Limited >> (hereinafter called "the PSCL") in the sum of Rs. <<Amount in figures>> (Rupees <<Amount in words>> only) for which payment well and truly to be made to the said PSCL, 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 PSCL 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 Tender process after having been short listed;

We undertake to pay to the PSCL up to the above amount upon receipt of its first written demand, without the PSCL having to substantiate its demand, provided that in its demand the PSCL 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.

NOT WITHSTANDING ANYTHING CONTAINED HEREIN:

I. Our liability under this Bank Guarantee shall not exceed Rs. <<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:

**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 Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.**” (Hereinafter called the said 'RFP') to the “Patna Smart City Limited”, hereinafter referred to as ‘PSCL’

and,

WHEREAS, the Bidder is aware and confirms that the PSCL’s business or operations, information, architecture schematics, designs, technical specifications and other information or documents made available by the PSCL 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 PSCL,

NOW THEREFORE, in consideration of disclosure of confidential information, and in order to ensure the PSCL’s grant to the Bidder of specific access to PSCL’s confidential information, the Bidder agrees to non-disclosure of any propriety information of PSCL and the details of the site.

For and on behalf of:

(BIDDER)

Authorized Signatory

Office Seal:

Name:

Place:

Designation:

Date :



## Annexure 7 - Consortium Agreement

### DRAFT MEMORANDUM OF UNDERSTANDING EXECUTED BY MEMBER OF THE CONSORTIUM

*[On Non-judicial stamp paper of INR 100 duly attested by notary public]*

This Memorandum of Understanding (MoU) entered into this day of [Date] [Month] 2018 at [Place] among Patna Smart City Limited (PSCL) (hereinafter referred to as "\_") and having office at [Address], India, as Party of the First Part and \_\_\_\_\_(hereinafter referred as "\_") and having office at [Address], as Party of the Second Part and \_\_\_\_\_

(Hereinafter referred 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 PSCL, Patna, Bihar has issued a Request for Proposal dated [Date] (RFP) from the Applicants interested in **Request for Proposal for Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission:**

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:
  - a. Submit a response jointly to Bid for the **“Request for Proposal for Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission.”** as a Consortium.
  - b. Sign Contract in case of award.
  - c. Provide and perform the supplies and services, which would be ordered by the PSCL pursuant to the Contract.
- ii. 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 PSCL for **“Request for Proposal for Implementation of Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities**

**Mission.”** for and related execution works to be performed pursuant to the Contract and shall not extend to any other activities.

- iii. The Lead Bidder shall be solely and severally responsible and bound towards the PSCL for the performance of the works in accordance with the terms and conditions of the BID document, and Contract. The consortium members, if any will support the lead bidder in successful implementation of the objectives.
  - 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, commercial and administrative co-ordination of the work package
    - b. To lead the contract negotiations of the work package with the PSCL.
    - 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 PSCL 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: \_\_\_\_\_
  - 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 Patna 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)

Witness:

i. \_\_\_\_\_

ii. \_\_\_\_\_

## **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.*

**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. \_\_\_\_\_, (the respective name and address 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 PSCL 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. \_\_\_\_\_ hereby designate M/s. \_\_\_\_\_

being 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.*

## Form of Contract Agreement

(To be signed by the Owner and the Successful Bidder within the period specified in the Bidding Documents after the issue of Notification of Award)

(To be stamped in accordance with the Stamp Act, of the State)

THIS AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_ month of the year \_\_\_\_\_ between Patna Smart City Limited, a SPV formed by Bihar Government & Patna Municipal Corporation for planning and implementation of Patna Smart City Project, having its office at 2nd Floor, "Maurya Lok", Patna – 800001 (Bihar) (hereinafter referred to as "Owner", which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) of the **ONE PART** and M/s \_\_\_\_\_, having its office at \_\_\_\_\_ (hereinafter referred to as the "Contractor", which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) of the **OTHER PART**.

WHEREAS the Owner, desirous of associating with the Contractor for the design, manufacture, supply, erection, testing and commissioning including warranty, Comprehensive maintenance for a period of five (5) years of 4050 kWp Capacity **Grid Connected Roof Top Solar PV System on Government Buildings in Patna under the Smart Cities Mission on EPC Basis** (the Project) on the terms and conditions contained in the Bidding Documents and amendments of the clarifications in respect thereof issued by the Owner in response to Invitation for Bid (IFB) dated \_\_\_\_\_.

AND WHEREAS the Contractor had submitted its Bid for the said Project under its Covering Letter No. \_\_\_\_\_ dated \_\_\_\_\_ and the clarifications/confirmations given under cover of its subsequent letters bearing numbers, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ dated \_\_\_\_\_, and \_\_\_\_\_ respectively (all put together are hereinafter referred to as the "Bid").

AND WHEREAS the Owner has accepted the Bid, as conveyed to the Contractor vide Notification of Award No. \_\_\_\_\_ dated \_\_\_\_\_ (hereinafter referred to as the "Notification of Award"), on the terms and conditions brought out in the said Notification of Award and the Documents referred to therein, resulting into a Contract.

AND WHEREAS the Contractor has accepted the Notification of Award, as conveyed to the Owner vide Letter No. \_\_\_\_\_ dated \_\_\_\_\_ (hereinafter referred to as the "Letter of Acceptance"), resulting into this Contract.

**NOW THEREFORE THIS AGREEMENT WITNESSETH AS UNDER:**

### Article -1.0 - Definition

In this Agreement the words and expressions shall have the same meaning as are respectively assigned to them in the Contract Documents specified hereunder attached herewith which form an integral part of this Contract Agreement. This Agreement together with all the Documents attached therewith is referred to as the Contract for all intent and purposes of the aforesaid Project.

### Article - 2.0 - Date of commencement of Contract

This Contract has come into force with effect from \_\_\_\_\_ i.e. from the date of the Notification of Award.

### Article - 3.0 - Contract Documents

The Contract shall be performed strictly as per the terms and conditions stipulated herein and in the following documents attached hereto (hereinafter referred to as Contract Documents):

- (i) Notification of Award till the execution of Contract Agreement between the Owner and the Contractor – (Appendix I)

- (ii) The Contract Agreement between the Owner and the Contractor and the attachments thereto. (This Contract Agreement)
- (iii) Minutes of negotiations if any signed between the Owner and Successful Bidder prior to signing of the Contract Agreement (Appendix II)
- (iv) General Conditions of Contract (Appendix III)
- (v) Technical Specifications (Appendix IV)
- (vi) Instructions to Bidders (Appendix V)
- (vii) Designs and Drawings (Appendix VI)
- (viii) Bid submitted by the Successful Bidder .

The above Contract Documents shall form an integral part of this Agreement. If there is an ambiguity or discrepancy or conflict within the Contract Documents, the priority of the Documents shall be in the order in which the Contract Documents are listed above. All Documents forming part of the Contract Documents are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.

Subject to the provisions relating to Arbitration specified in Section 3 – General Conditions of Contract of the Contract Document, in case of any conflict amongst Contract Documents, the decision of the Owner shall be final & binding on the Contractor

#### **Article - 4.0 - Scope of Work**

The detailed scope of work of the Contractor, under the Contract, has been brought out in the Contract Documents. However, the above scope of work of the Contractor shall also include such items of work as may not have been specifically brought out in the said Contract Documents but as may be necessary for the safe and successful completion of the various items of work, envisaged, as per good engineering practice and recognized principles.

#### **Article - 5.0 - Contract Price**

The total Contract Price under the Contract shall be Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) inclusive of all the taxes, duties, levies, fees etc. as specified in General Conditions of Contract and the Price Bid Schedules forming part of this Contract. The price shall remain fixed and firm and shall not change on any account whatsoever, for the duration of the Contract. All the matters relating to the payments to the Contractor shall be as per the Terms and Conditions and subject to the requirements as specified in the said General Conditions of Contract.

#### **Article - 6.0 - Contract Schedule**

Time is the essence of Contract and shall be strictly adhered to. The Contractor shall so organize its resources and perform its work as to complete it within a period of \_\_\_\_\_ months from the date of Notification of Award and as per the Projects Completion Schedule (Appendix VIII) forming part of the Bid submitted by the Contractor subject to further modifications/ changes as may be mutually agreed to between the Owner and the Contractor.

#### **Article – 7.0 – Owner’s Engineer Functions**

The Owner’s Engineer in relation to the Contractor shall have such functions as are delegated to it by the Owner from time to time and intimated to the Contractor. The Contractor shall carry out the instructions issued by the Owner’s Engineer as if they were the instructions issued by the Owner. If there is any difference between the Contractor and Owner’s Engineer, on any matter about the implementation of this Contract/Project, the matter shall be referred to the Owner whose decision shall be final and binding on the Contractor and the Owner’s Engineer.



This Contract is executed in English Language in two originals, each Party receiving one set and both the sets will be authentic.

IN WITNESS WHEREOF the Parties through their duly authorized representatives have executed these presents on the day, month and year first above mentioned, at ..... place.

\_\_\_\_\_

\_\_\_\_\_

(PATNA SMART CITY LIMITED)

(CONTRACTOR)

\_\_\_\_\_

\_\_\_\_\_

(Printed Name)

(Printed Name)

\_\_\_\_\_

\_\_\_\_\_

(Company's Seal)

(Company's Seal)