



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Gujarat Industries Power Company limited

**Invites Request for Selection (RFS) of Bidders For Implementation of 25 KWp Grid
Connected Rooftop Solar PV Systems for NABL , Gurgaon (Under CAPEX model)**

Ref No: GIPCL/RTS/DEV/ 2018 Dated: 15.02.2018

On Behalf Of NABL, Gurgaon



GUJARAT INDUSTRIES POWER COMPANY LIMITED

An ISO Certified Company

P.O. Petrochemicals - 391 346, Dist. Vadodara Gujarat (India)

(Sign and Seal of Bidder)

Page 1 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

TABLE OF CONTENTS

Topic	Page Number
Part-I : Invitation for Bidders (IFB) & Bid Details	5-10
Part-II : Instruction to Bidders	11-30
Part-III : Evaluation Criteria & Incentive Disbursement	31-41
Part- IV : General Conditions of Contract (GCC)	42-53
Part- V : Special Conditions of Contract (SCC)	54-59
Part- VI : Scope of Work and Technical Specification	60-78
Part- VII : Samples Forms & Formats	79-124
Annexure- I Price Schedule	Annexed Separately
Annexure- II Reference Calculation for release of Incentive as per time schedule of completion	Annexed Separately
Annexure –III Model EPC Agreement (Duly vetted by Department of Legal Affairs, Ministry of Law & Justice, Department of Expenditure, Ministry of Finance and provided by Ministry of New and Renewable Energy)	Annexed Separately



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Brief About Roof Solar Top Project

RFS No: GIPCL/RTS/DEV/2018

Date: 15.02.2018

Gujarat Industries Power Company Limited (hereinafter called “GIPCL”), invites bids from the eligible bidders to participate in the Request for Selection (RFS) for site survey, design, manufacture, supply, erection, testing and commissioning including warranty, operation & maintenance of Roof Top Solar PV power system at NABL , Gurgaon. GIPCL has been designated as expert PSU by Ministry of New and Renewable Energy (MNRE) for implementation Roof Top Solar Project at NABL Gurgaon under ‘ Achievement Linked Incentive Scheme for Govt. Sector’

For the implementation of above mentioned work, Bidders should submit their bid proposal online complete in all aspect on or before Last date of Bid Submission as mentioned on nprocure (<https://www.nprocure.com>).

Bidder shall submit bid proposal along with non-refundable processing fee, complete in all respect as per the Bid Information sheet. Techno-Commercial bids will be opened as per the Bid Information Sheet in online presence of authorized representatives of bidders who wish to be present online. Bid proposals received without the prescribed processing fee and Bid Bond will be rejected. In the event of any date indicated above is a declared Holiday, the next working day shall become operative for the respective purpose mentioned herein.

Bid documents which include Eligibility criteria, “Technical Specifications”, various conditions of contract, formats, etc. can be downloaded from nprocure (<https://www.nprocure.com>). **It is mandatory to download official copy of RFS Document from nprocure to participate in the Tender.** Any amendment(s)/corrigendum/clarifications with respect to this Bid shall be uploaded on <https://www.nprocure.com> only. The Bidder should regularly follow up for any Amendment/Corrigendum/Clarification on the above website.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

DISCLAMIER:

- 1 Though adequate care has been taken while preparing the RFS document, the Bidders shall satisfy themselves 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 till Pre-bid meeting as mentioned in RfS documents**, it shall be considered that the RFS document is complete in all respects and has been received by the Bidder.
- 2 Gujarat industries power Company Limited (GIPCL) reserves the right to modify, amend or supplement this RFS document including all formats and Annexures.
- 3 While this RFS has been prepared in good faith, neither GIPCL nor their employees or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or Omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this RFS, even if any loss or damage is caused by any act or omission on their part.

Place: Vadodara



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

PART – I

INVITATION FOR BIDS (IFB) & BID DETAILS



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Implementation of 25 KWp Grid Connected Roof Top Solar PV System Scheme for NABL Gurgaon under CAPEX Model

(SINGLE STAGE TWO ENVELOPE BIDDING)

Under e-procurement

- 1 Government of India has launched Jawaharlal Nehru National Solar Mission (JNNSM) which now has a target of 100,000 MW of grid solar power by 2022, out of which grid connected rooftop Solar PV systems is considered as very potent area and has a target of 40,000 MW. To achieve energy security and for having good optics, it is envisaged to develop solar rooftop projects on large scale by utilizing vacant roofs of buildings and adjoining lands of the campus etc.
- 2 MNRE (Ministry of New and Renewable Energy, Government of India) desires to implement grid connected rooftop solar PV projects on the roofs of Government buildings/offices as well as ground mounted Solar PV systems as a part of its Renewable Energy Initiatives.
- 3 The procurement activities in respect of the aforesaid Project on behalf of NABL, Gurgaon has been entrusted to GIPCL, having its Registered Office at PO: Petrochemicals, Dist: Vadodara, Gujarat 391346 and GIPCL intends to use funds to be provided by Govt of India for eligible payments under the contract for package as mentioned above. For the purpose of all procurement activities related to the said works, GIPCL shall be referred to as 'Employer' and 'NABL, Gurgaon "the Owner"'.
- 4 GIPCL, therefore, invites sealed bids from eligible bidders to participate in Request for Selection (RfS) for Site Survey, Design, Manufacture, Supply, Erection, Testing and Commissioning including Warranty, Operation and Maintenance of Roof Top Solar PV Power System in different states of India.
- 5 For the implementation of above mentioned work, Bidders should submit their bid proposal online complete in all aspect on or before Last date of Bid Submission as mentioned on the Bid Information Sheet and nprocure (<https://www.nprocure.com>).



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

- 6 Bidder shall submit bid proposal along with non-refundable bid processing fee and refundable Bid Bond complete in all respect as per the Bid Information Sheet. Techno Commercial bids will be opened as per the Bid Information Sheet online in presence of authorized representatives of bidders who wish to be present. Bid proposals received without the prescribed bid processing fees and Bid Bond will be rejected. In the event of any date indicated above is a declared Holiday, the next working day shall become operative for the respective purpose mentioned herein.
- 7 Bid documents which include Eligibility Criteria, Technical Specifications, various Conditions of Contract, Formats etc. can be downloaded from nprocure (<https://www.nprocure.com>). **It is mandatory to download official copy of RfS Document from nprocure in order to participate in the Tender.** Any amendment(s)/corrigendum/clarification(s) with respect to this Bid shall be uploaded on nprocure website. The Bidder should regularly check for any Amendment(s)/Corrigendum/Clarification on the above website only.
- 8 The bidding process under this Rooftop scheme is for 25 KWp under CAPEX Model. Bidder can bid as per the eligibility criteria of RfS.
- 9 Under CAPEX Model, Bidder is required to submit its single price bid and for the whole capacity. Bids for partial capacity will not be entertained.
- 10 The detailed scope of work includes
 - 10.1 Successful bidders are requested to visit the respective sites and check the feasibility of space including installation capacity in consultation with respective site in charge / owner. Successful bidders need to submit project sanction documents (EPC agreement between successful bidder and the rooftop owner(s) at the quoted project cost as per RfS and project report) for the approval of GIPCL for issuance of project specific sanction letter(s). The EPC agreement shall be executed in the prescribed format attached herewith this RfS document.
 - 10.2 The scope of work would essentially cover, but not limited to Site Survey of Identified Roof Top, Site Visit, Solar Potential Assessment, Finalization of Feasibility Report for Identified locations, Design, Engineering, Manufacture, Supply, Storage, Civil work, Erection, Testing & Commissioning, Submission of project proposals after incorporating Net metering as per state/UT policies, quality control of the grid connected rooftop Solar PV Project including Operation and Maintenance (O & M) of the project for a period of 5 years after commissioning of project. Any additional modification work of the roof tops in order to implement the system/project shall be in the scope of successful bidder/developer.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

- 11 Bid Bond/EMD shall be enclosed in a sealed envelope and shall be submitted in the office of GIPCL (offline).
- 12 PBG amount shall be furnished for allocated Capacity by the successful bidder after issuance of Letter of Allocation (LOA) by GIPCL.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

INTERPRETATIONS

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

BID Information Sheet

Document Description	RFS for implementation of 25 KWp Roof Top Project at NABL, Gurgaon under Capex model
FRS No & Date	GIPCL/RTS/DEV/2018 Dated: 15.02.2018
Funding	Domestic
Location	NABL Gurgaon, Plot No.: 45 Sector 44
Completion of Period of Work	4 month from date of issue of LOA
Document Sale close date	09.03.2018 upto 15:00 hours
Last date & Time for Online Submission of bids and physical submission of offline document at GIPCL office.	10.03.2018 upto 17:30 hours
Online Bid Opening (Techno-Commercial)	11.03.2018 15:00 hours
Bid Processing Fee (Nonrefundable)	Rs 2500/- inclusive of GST (to be submitted in the form of DD / Banker's Cheque, along with

(Sign and Seal of Bidder)

Page 9 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

	the bid in favour of Gujarat Industries Power Company Limited, Vadodara)
Bid Bond	Rs 32000/- .(To be submitted in the form of Bank Guarantee along with the bid). Minimum validity period upto 06 Months, may be extended as per request / instruction of GIPCL
Name, Designation, Address and other details (For Submission of Response to RfS)	Mr. S.N.Purohit ADDL. GENERAL MANAGER (BD & BO) Gujarat Industries Power Company Limited P.O Petrochemicals, Dist: Vadodara-391346, Gujarat, India. Tel.:+91-265-2234341 Cell : +91-99090 35311 E-mail : snpurohit@gipcl.com
Address of nprocure Office (For Registration and Clarifications regarding nprocure Portal)	(n)procure cell, (n) code solution Ahmedabad , division of GNFC Ltd, 403, GNFC Infotower S.G.Road , Budakdev Ahmedabad 380054 (Gujarat) Toll Free: 1-800-419-4632/1-800-233-1010 Phone No: 079-26857315/316/317 Fax: 079-2685734/40007533 Email: nprocure@gnvfc.net
Details of persons to be contacted in case of any assistance required	Mr. S.N.Purohit, AGM (BD & BO) Email: snpurohit@gipcl.com Mobile: 99090 35311 Mr. P.S.Goyal DGM (MECH) Email: psgoyal@gipcl.com Mobile: 99099 25801



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

PART - II

INSTRUCTIONS TO BIDDERS (ITB)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

1 INTRODUCTION

3.1. The Incentive Structure applicable is tabulated below :

Sr. No	Achievement vis-a-vis Target Allocation	Incentive	Incentive Illustration on benchmark cost
1	80% and above within the sanctioned period	25% of benchmark cost or cost arrived through competitive bidding whichever is lower	INR 16,250/- per kW
2	Below 80% and upto 50% within the sanctioned period	15% of benchmark cost or cost arrived through competitive bidding whichever is lower	INR 9,750/- per kW
3	Below 50% and 40%(including 40%) within the sanctioned period	10% of benchmark cost or cost arrived through competitive bidding whichever is lower	INR 6,500/- per kW
4	Below 40% within the sanctioned period	NIL	Nil

The incentive given above is based on the benchmark project cost of Rs. 65000 /kWp. However the applicable incentive may change depending on benchmark project cost or quoted project cost (whichever is lower) .The incentive indicated above are subject to revision on annual basis by MNRE.

3.2. It may be noted that the applicable incentive amount shall be released directly to successful bidder(s)/developer(s). However, the total outgo of Project Cost Plus Incentive shall not exceed INR 65,000/- per kWp.

3.3. The Bidder is advised to read carefully all instructions and conditions appearing in this document and understand them fully. All information and documents required as per the bid document must be furnished. Failure to provide the information and / or documents as required may render the bid technically unacceptable.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

- 3.4. The bidder shall be deemed to have examined the bid document, to have obtained his own information in all matters whatsoever that might affect carrying out the works in line with the scope of work specified elsewhere in the document at the offered rates and to have satisfied himself to the sufficiency of his bid. The bidder shall be deemed to know the scope, nature and magnitude of the works and requirement of materials, equipment, tools and labour involved, wage structures and as to what all works he has to complete in accordance with the bid documents irrespective of any defects, omissions or errors that may be found in the bid documents.

2 Size of Project

The project size is 25 KWp.

3 BID Capacity

- 3.1. Bidders cannot quote their bid, partial in capacity. Any bidder quoting the bid for partial capacity shall be out rightly rejected.

4 SPECIAL INSTRUCTIONS TO BIDDERS FOR E-TENDERING

GENERAL

Bidders who wish to participate in this tender will have to procure or should have legally valid Digital Certificate (Class III) as per Information Technology Act-2000, using which they can sign their electronic bids. Bidders can procure the same from any of the license certifying Authority of India or can contact (n)code solutions-a division of GNFC Limited, who are licensed Certifying Authority by Government of India at address mentioned below

Bidder may go through the e-tendering instruction for online Bid participation through n-procure platform for further details and guidance for participation in the tendering process through e-tendering.

In case bidder needs any assistance in accessing / submission of on line bid / clarification or if training required for participating in online tender, they can contact the following office:

(n) Procure Cell, (n) code solutions-A division of GNFC Ltd.,
403, GNFC Infotower, S.G. Road,
Bodakdev Ahmedabad – 380054 (Gujarat)
Toll Free: 1-800-419-4632/ 1-800-233-1010,
Phone No. 079-26857315 / 316 / 317,
Fax: 079-26857321 / 40007533, Email: nprocure@gnvfc.net



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Bidder may visit <https://www.nprocure.com/html/faq.asp> for information regarding e-tendering registration process.

Bid shall be submitted in two parts namely: Technical-cum-Commercial Bid and Price Bid as per following:

Part -I :Technical-cum-Commercial Bid with EMD:

- (1) This part contain un-priced Techno-commercial Bid along with EMD and Tender fee including complete technical information with all the required details and all the documents as stated in this RFP document. Bidder shall download and upload Technical-cum-Commercial bid (PDF Tender document & amendments) on n-procure with digital signature as a token of acceptance. The Technical-cum-Commercial bid shall also contain one copy of duly signed and stamped on each and every page of tender document and addenda, if any. Price Schedule format with prices kept blank shall be submitted as a token of acceptance of the same. Technical-cum-Commercial Bid (One Original Bid in Physical Form + One Copy in Physical Form + One scanned soft copy (CD/DVD/Pen Drive)) shall be submitted. If any discrepancy in Physical copy and Soft copy then details in Physical copy will be prevailing.
- (2) **Technical-cum-Commercial Bid** in physical form shall be kept in a separate sealed envelope [Envelop (1)] super scribed with “**Technical-cum-Commercial Bid**” along with Tender Number and Due Date.
- (3) **Earnest Money Deposit (EMD)** shall be submitted in the form of Bank Guarantee valid for **120 days** from the due date of this tender. This Bank Guarantee shall be as per proforma given at **Format-3** and shall be drawn from any of the banks listed at **Annexure-B**. The EMD shall be kept in a separate sealed envelope [Envelop (2)]super scribed with “**Earnest Money Deposit**” along with Tender Number and Due Date.

NOTE:

- (a) The EMD of the Successful bidder shall be returned after submission of the performance bank guarantee.
- (b) The EMD of unsuccessful Bidder shall be returned as soon as the Contract Agreement is signed with the Successful Bidder.
- (c) Any bid not accompanied with EMD will be rejected.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

(d) No interest shall be payable on EMD.

(e) The EMD will be forfeited if the Bidder (i) withdraws his Bid after acceptance or (ii) withdraws his Bid before the validity date of the Bid.

(4) Envelop (1) + Envelop (2) both shall be kept in another sealed Envelope super scribing following:

BID DOCUMENT – DO NOT OPEN

Part – I Technical-cum-Commercial Bid with EMD

TENDER NO.: GIPCL/RTS/DEV/2018

Part – I as above shall be submitted in physical form to following address before due date and time:

MR. S.N.Purohit
ADDL. GENERAL MANAGER (BD & BO)
Gujarat Industries Power Company Limited
P.O Petrochemicals,
Dist: Vadodara-391346, Gujarat, India.
Tel.:+91-265-2234341
Cell : +91-99090 35311
E-mail : snpurohit@gipcl.com

Part-II : Price Bid:

All Bidders kindly note that Price Bid must be submitted online only through e-tendering on n-procure portal at <https://gipcl.nprocure.com> with valid digital signature certificate by authorized signatory and strictly as per GIPCL RFP format and Bid submission instructions only.

Some Bidding related Information for this Tender (Sealed Bid)

The entire bid-submission would be online on nprocure (unless specified for Offline Submissions). Broad outline of submissions are as follows:

Submission of Bid-Parts

(Sign and Seal of Bidder)

Page 15 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Envelope I (Technical-Bid)

Envelope II (Financial-Bid- Unpriced)

Offline submission of documents:

In addition to the above, the bidders are required to submit the following documents physically offline also in a Sealed Envelope, failing which the technical bids will not be opened.

1. Covering Letter as per the format given in Tender document.
2. Original Copy of the Bid Bond in the form of a Bank Guarantee.
3. Original Power-of-Attorney supplemented with Board resolutions if applicable
4. DD/Banker's Cheque for Bid Processing Fees, drawn in favour of Gujarat Industries power Company Limited, Vadodara, payable at Vadodara.
5. Bid Security shall be submitted in the form of bank guarantee in the format as attached with RfS.

Contact Persons Name:

Mr. S.N.Purohit, AGM (BD & BO)

Email: snpurohit@gipcl.com

Mobile: 99090 35311

Mr. P.S.Goyal DGM (MECH)

Email: psgoyal@gipcl.com

Mobile: 99099 25801

The envelope shall bear the RfS No. and the words 'DO NOT OPEN BEFORE' (due date & time).

Note: The Bidder should also upload the scanned copies of all the above mentioned original documents as Bid-Annexure during Online Bid-Submission.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

SIX CRITICAL DO'S AND DON'TS FOR BIDDERS

Specifically, for Supplier organizations, the following 'SIX KEY INSTRUCTIONS for BIDDERS' must be assiduously adhered to:

1. Obtain individual Digital Signing Certificate (DSC or DC) of Class III or above well in advance of your tender submission deadline on ETS.
2. Register your organization on nprocure well in advance of the important deadlines for your first tender on nprocure viz 'Date and Time of Closure of Procurement of Tender Documents' and 'Last Date and Time of Receipt of Bids'. Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require time to complete activities related to your organization, such as creation of users, assigning roles to them, etc.
3. Get your organization's concerned executives trained on nprocure well in advance of your first tender submission deadline on ETS
4. Submit your bids well in advance of tender submission deadline on nprocure (There could be last minute problems due to internet timeout, breakdown etc.)
5. It is the responsibility of each bidder to remember and securely store the password for each Bid Part submitted by that bidder. The bidders are required to submit correct, valid and operative password to decrypt either Technical Bid Part or Financial Bid Part in a separate sealed envelope before due date and time of submission of bid. In the event, the bids are not opened with the password submitted by bidder, GIPCL may ask for re-submission/clarification for correct password. If bidder fails to submit correct password immediately as requested by GIPCL, the bid processing fee shall be forfeited and bid shall not be opened as bid bond shall be refunded. No request on this account shall be entertained by GIPCL.
6. nprocure will make your bid available for opening during the Online Public Tender Opening Event (TOE) 'ONLY IF' your 'Status pertaining Overall Bid-Submission' is 'Complete'. For you record, you can generate and save a copy of 'Final Submission Receipt'. This receipt can be generated from 'Bid-Submission Overview Page' only if the 'Status pertaining overall Bid-Submission' is 'Complete'.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

NOTE: While the first three instructions mentioned above are especially relevant to first time users of ETS, the fourth, fifth and sixth instructions are relevant at all times.

Minimum Requirements at Bidder's End

Computer System with good configuration (1 GB RAM, Windows 7 and above)

Broadband connectivity

Microsoft Internet Explorer 7.0 or above

Digital Certificate(s)

5 Eligibility Criteria General

The Bidder should be a body incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto, Government owned Enterprises, Limited Liability Partnership Firms, Proprietor Firm and MSE Vendors, barring Government Department and barring those firms with whom business is banned by the Employer. A copy of certificate of incorporation shall be furnished along with the bid in support of above. **The Bid Processing Fees and Bid Bond are exempted for MSE Vendors / Developers registered under NSIC / Udyog Aadhaar Category only.**

5.1. Technical Eligibility Criteria:

The Bidder should have designed, supplied, installed & commissioned at least one Grid connected ground mounted/roof top Solar PV Power Project having a capacity of not less than 25 kW which should have been commissioned at least six months prior to Techno-Commercial Bid Opening date. The list of project commissioned at least 6 months prior to Techno-Commercial Bid Opening date, indicating whether the project is grid connected, along with a scanned copy of the Commissioning certificate and Work order / Contract / Agreement from the Client / Owner shall be submitted (online) in support of this Clause.

5.2. Financial Eligibility Criteria:

a. The Minimum Average Annual Turnover (MAAT) of the bidder in the last three

(Sign and Seal of Bidder)

Page 18 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

financial years (i.e. FY2014-2015, 2015-2016 and 2016-2017) should be INR 50000 per KW (Indian Rupees Fifty thousand per KW) on standalone basis. This must be the individual Company's turnover and not that of any group of Companies. A summarized sheet of average turnover certified by registered CA should be compulsorily enclosed along with corresponding annual accounts.

or

Net worth equal to or greater than the value calculated at rate of Rs. 50000 per KW of capacity offered by the Bidder in its Bid. "Net Worth" of the Bidder shall be calculated as per Company Act, 2013. This must be the individual Company's net worth and not that of any group of Companies. A summarized sheet of net worth certified by registered CA should be compulsorily enclosed along with corresponding annual accounts.

- b. The financial eligibility criteria must be fulfilled by Bidder for the sum total of capacity being offered by it in its Price Bid.
- c. Bidders shall furnish documentary evidence as per the Format - 7 (**online as well as offline**), duly certified by Authorized Signatory and the Statutory Auditor / Practicing Chartered Accountant of the Bidding Company in support of their financial capability.

A scanned copy of certificate of incorporation shall be furnished in the bid (through online mode)

- d. The Bidder will provide a copy each of audited annual report of previous three financial years for ascertaining their turnover and Net Worth along with Bank Statements for the purpose of verification.
- e. The Net Worth of the Bidder as on the last day of the preceding financial year shall not be less than total paid-up share capital. However, in case, the bidder is subsidiary of a holding company, the net worth of the bidder as on the last day of the preceding financial year shall not be less than 75% of total paid-up share capital and in such case, bidder has to submit a board resolution of the holding company indicating that "holding company shall support the bidder financially or otherwise, to execute the project successfully". Also, the Net Worth of the Holding Company of the Bidder, as on the last day of the preceding financial year shall not be less than total paid-up share capital.
- f. In case the bidder is not able to furnish its audited financial statements on standalone entity basis, the unaudited unconsolidated financial statements



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

of the bidder can be considered acceptable provided the bidder furnishes the following further documents for substantiation of its qualification:

- a. Copies of the unaudited unconsolidated financial statements of the bidder along with copies of the audited consolidated financial statements of the Holding Company.
- b. A Certificate from the Director of the Holding Company, stating that the unaudited unconsolidated financial statements form part of the Consolidated Annual Report of the company.

In case where audited results for the last preceding financial year are not available, certification of financial statements from a practicing Chartered Accountant shall also be considered acceptable, provided the bidder provides the detailed Financial Statements certified by the Management of the company.

NOTES:

- **Paid up share capital will include**
- Paid up equity share capital
- Fully, compulsorily and mandatorily convertible preferential shares
- Fully, compulsorily and mandatorily convertible Debentures
- Share premium will form an integral part of the net worth provided it is realized in cash or cash equivalents.
- Other income shall not be considered for arriving at annual turnover.

6 BID Submission By Bidder

6.1. The information and/or documents shall be submitted by the Bidder as per the formats specified in this RfS document.

6.2. Strict adherence to the formats wherever specified, is required. Wherever, information has been sought in specified formats, the Bidder shall refrain from referring to brochures/pamphlets. Non- adherence to formats and / or submission

(Sign and Seal of Bidder)

Page 20 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

of incomplete information may be a ground for declaring the Bid as non-responsive. Each format has to be duly signed and stamped by the authorized signatory of the Bidder then scanned and uploaded in the Techno-- Commercial Bid Part.

- 6.3. The Bidder shall furnish documentary evidence in support of meeting Eligibility Criteria as indicated in Clause no. 5.1 and 5.2 to the satisfaction of GIPCL. Bidder shall also furnish unconsolidated/ consolidated audited annual accounts in support of meeting financial requirement, which shall consist of unabridged balance sheet, profit and loss account, profit appropriation account, auditor's report, etc., as the case may be of Bidding Company or Financially Evaluated Entity for any of the last three (3) financial years immediately preceding the Bid Deadline which are used by the bidder for the purpose of calculation of Annual Turnover or of last Financial Year in case of Net Worth.
- 6.4. In case the annual accounts for the latest financial year are not audited and therefore the bidder cannot make it available, the applicant shall give certificate to this effect from the Statutory Auditor and Authorized signatory along with provisional Annual Account signed by directors of the company and certificate by practicing Chartered Accountant. In such a case, the Applicant shall provide the Audited Annual Reports for 3 (Three) years preceding the year; or from the date of incorporation if less than 3 years; for which the Audited Annual Report is not being provided.

7 BID Submission By Bidding Company

The Bidding Company should designate one person to represent the Bidding Company in its dealings with GIPCL. The person should be authorized to perform all tasks including, but not limited to providing information, responding to enquires, signing of Bid etc. The Bidding Company should submit, along with Bid, a Power of Attorney in original (as per Format - 6), authorizing the signatory of the Bid.

8 CLARIFICATIONS

- 8.1. GIPCL will not enter into any correspondence with the Bidders, except to furnish clarifications on RfS Documents, if necessary. The Bidders may seek clarifications or suggest amendments to RfS online, also soft copy by e-mail to reach GIPCL at the address, date and time mentioned in Bid information sheet.
- 8.2. GIPCL is not under any obligation to entertain/ respond to suggestions made or to incorporate modifications sought for.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

9 AMENDMENTS TO RfS BY GIPCL

- 9.1. At any time prior to the deadline for submission of Bids, GIPCL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RfS document by issuing addendum/addenda.
- 9.2. The addendum/addenda (if any) shall be notified on nprocure (<https://www.nprocure.com>) at least Two (2) days before the proposed date of submission of the Bid. If any amendment is required to be notified within Two (2) days of the proposed date of submission of the Bid, the Bid Deadline may be extended for a suitable period of time and a corrigendum will be issued on TCIL portal.
- 9.3. GIPCL will not bear any responsibility or liability arising out of non-receipt of the information regarding Amendments in time or otherwise. Bidders must check the website for any such amendment before submitting their Bid.
- 9.4. In case any amendment is notified after submission of the Bid, (prior to the opening of Techno-Commercial Bid, due date /time shall be extended and the Bidders have to submit fresh Bids/supplementary bids as the date notified by the GIPCL for the purpose.
- 9.5. All the notices related to this Bid which are required to be publicized shall be uploaded Portal of nprocure (<https://www.nprocure.com>).

10 BIDDING PROCESS

10.1 BID FORMAT

The Bid in response to this RfS shall be submitted by the Bidders in the manner provided in Clause of Part - I. The Bid shall comprise of the following:

- (A) **ENVELOPE- I (COVERING LETTER, BID PROCESSING FEE AND BID BONDS etc) (TO BE SUBMITTED OFF-LINE AND ONLINE BOTH)**
 - i. Covering Letter as per prescribed Format - 1.
 - ii. Bid processing fee @ INR 2500/- (Rupees Two Thousand Five hundred Only) inclusive of GST (to be submitted in the form of DD / Banker's Cheque, along



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

with the bid in favour of “Gujarat Industries Power company Limited, Vadodara” payable at Vadodara)

- iii. Bid Bond, in form of BG as per the prescribed Format - 3 shall be submitted as per Clause 15.
- iv. Checklist for Bank Guarantee submission requirements as prescribed in Format - 5.
- v. Original power of attorney issued by the Bidding Company in favour of the authorized person signing the Bid, in the form attached hereto as Format - 6 or standard power of attorney in favour of authorized person signing the Bid. **(Power of Attorney must be supplemented by Board Resolution to above effect for the company incorporated under Company Act 1956 or Company Act 2013).** However, Employer may accept general Power of Attorney executed in favour of Authorized signatory of the Bidder, if it shall conclusively establish that the signatory has been authorized by the Board of Directors to execute all documents on behalf of the Bidding Company.
- vi. Original copy of the Consortium Agreement, If any.
- vii. The password to decrypt the relevant Bid-Part in a sealed envelope before the start date and time of the Tender Opening Event (TOE).

The Bidder should also upload the scanned copies of all the above mentioned original documents as Bid-Annexures during Online Bid-Submission.

(B) ENVELOPE II- Financial –(UN-PRICE BID)

The Bidder shall inter-alia take into account the following while preparing and submitting the Price Bid duly signed by an authorized signatory.

- i) The Bidder shall submit sealed Price Format (without Prices indicating – “Quoted’) under CAPEX model in the given formats.
 - ii) Each envelope shall be superscribed as “Price Bid for 25 KWp capacity under CAPEX model .All the Price Bids shall be put in Envelope-III.
- ii) Prices shall be submitted Only online .



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

11 BID DUE DATE

The Bidder should submit the Bids so as to reach the address indicated below by 17:30 hrs (IST) on or before 10.03.2018.

AGM (BD & BO),
Gujarat Industries Power Company Limited,
PO: Petrochemicals, Dist: Vadodara, Gujarat, PIN: 391346

12 VALIDITY OF BID

12.1 The bid and the Price Schedule included shall remain valid for a period of **6 months** from the date of techno-commercial bid opening, with bidder having no right to withdraw, revoke or cancel his offer or unilaterally vary the offer submitted or any terms thereof. In case of the bidder revoking or cancelling his offer or varying any term & conditions in regard thereof or not accepting letter of allocation, GIPCL shall forfeit the Bid Bond furnished by him. **Confirmation regarding the Bid offer validity shall be clearly mentioned in the covering letter.**

12.2 In exceptional circumstances when letter of allocation is not issued, GIPCL may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The Bid Bond shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid Bond. A Bidder granting the request will neither be required nor permitted to modify its Bid in any manner.

13 METHOD OF BID SUBMISSION

13.1 Bids are required to be submitted online and offline mode. The offline documents are to be submitted in a single sealed cover envelope namely Envelope-I containing Covering Letter, Bid Processing Fee and Bid Bonds etc. as referred under clause 10.A above. It should be duly sealed and signed.

13.2 **Outermost envelope should be super scribed as "Offline Documents for Implementation of 25 KW. Grid connected Roof Top Solar PV System Scheme for NABL, Gurgaon under CAPEX model" - -----**

Envelope - I (Covering Envelope) along with the "BI D DUE DATE".

13.3 The Bidders have the option of sending their Offline Documents either by Registered Post or Speed Post or Courier or by Hand Delivery, so as to reach GIPCL Office by the Bid Deadline. Documents submitted by telex/telegram/fax/e-mail shall not be



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

considered under any circumstances. GIPCL shall not be responsible for any delay in receipt of the Bid. Any Bid received after the Bid Deadline shall be returned unopened. **It should be noted that Offline Document envelope shall not contain any information/document relating to Price Bid.** GIPCL shall not be responsible for premature opening of the Price Bids in case of non-compliance of above.

13.4 All pages of the offline documents, except for the Bid Bond, and any other document executed on non-judicial stamp paper, forming part of the Bid and corrections in the Bid, if any, must be signed by the authorized signatory on behalf of the Bidder. It is clarified that the same authorized signatory shall digitally sign all pages of the Bid. However, any published document submitted with the Bid shall be signed by the authorized signatory at least on the first and last page of such document Bidders shall submit the Bid in original, duly signed by the authorized signatory of the Bidder. No change or supplemental information to a Bid will be accepted after the Bid Deadline, unless the same is requested for by GIPCL.

13.5 If the outer cover envelope or Envelope I (Covering Envelope) is not enclosed and not super scribed as per the specified requirement, GIPCL will assume no responsibility for the Bid's misplacement or premature opening.

13.6 The envelope shall be sealed properly & shall indicate the Name & address of the Bidder. The Bid must be complete in all technical and commercial respect and should contain requisite certificates, drawings, informative literature etc. as required in the Bid document. Each page of the Bid document should be signed & stamped. Bids with any type of change or modification in any of the terms/ conditions of this document shall be rejected. If necessary, additional papers may be attached by the Bidder to furnish/ submit the required information. Any term / condition proposed by the Bidder in his bid which is not in accordance with the terms and conditions of the RFS document or any financial conditions, payment terms, rebates etc. mentioned in Price Bid shall be considered as a conditional Bid and will make the Bid invalid.

14 **COST OF BIDDING**

The bidder shall bear all the costs associated with the preparation and submission of offer, and the company will in no case be responsible or liable for those costs, under any condition The Bidder shall not be entitled to claim any costs, charges and expenses of and incidental to or incurred by him through or in connection with submission of bid even though GIPCL may elect to modify / withdraw the invitation of Bid.

15 **BID BOND (To be submitted in original form offline only. Scan copy shall also be uploaded)**

The Bidder shall furnish Interest Free Bid Bond in the form of Bank Guarantee (BG)

(Sign and Seal of Bidder)

Page 25 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

drawn in favour of “Gujarat Industries Power Company limited, Vadodara”, payable at Vadodara. **The validity of Bid Bond shall be for a period of 6 months from the Bid Deadline.** The Bid Bond of unsuccessful bidders shall be returned within 30 days from the date of issuance of Letter of Allocation(s). Bid bond(s) of Successful bidder shall be released after the receipt of PBG in the format prescribed by GIPCL and after the receipt of confirmation of their PBG’s from their respective banker.

The formula applicable to calculate the Bid Bond amount under will be:

Bid Bond amount = Rs 32000/- (Rupees Thirty Two Thousand Only)

15.1 The Bid Bond shall be denominated in Indian Rupees and shall:

- i. at the Bidder's option, be in the form of either a Demand Draft or a Bank Guarantee from the List of Banks as indicated in **Annexure - B**
- ii. be confirmed for payment by the branch of the bank giving the Bank Guarantee at Vadodara.
- iii. be submitted in its original form; copies will not be accepted and remain valid for a minimum period **of 6 months** from the date of original Techno Commercial bid opening, or beyond any period of extension subsequently requested under Clause 12.2. In case of extension in bid opening date, bidder has to either submit the amended BG valid for 06 months from actual date of bid opening or amended BG if requested by GIPCL after actual bid opening for requisite period. The Successful Bidder shall sign and stamp the Letter of Allocation (LOA) and return the signed & stamped duplicate copy of the same to GIPCL within 30 days from the date of its issuance.

15.2 The Bid Bond shall be forfeited without prejudice to the Bidder being liable for any further Consequential loss or damage incurred to GIPCL under following circumstances:

- a. Hundred Percent (100%) of Bid Bond amount of the tendered capacity, if a Bidder withdraws/revokes or cancels or unilaterally varies his bid in any manner during the period of Bid Validity specified in the RfS document and in accordance with the Clause 12.2 .
- b. Hundred Percent (100%) of Bid Bond amount of the tendered capacity, if the Successful Bidder fails to unconditionally accept the Letter of Allocation within 30 days from the date of its issuance.
- c. Hundred Percent (100%) of Bid Bond amount of the tendered capacity, if the Successful Bidder fails to furnish the “Performance Security” after 60 days.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

16.1 PBG

Within 30 days from the date of issuance of Allocation letter, Successful Bidder shall furnish the Performance Security for the allocated capacity only.

The formula applicable to calculate the PBG amount will be:

PBG amount = 10% of the total quoted project cost.

16.2 Further, any delay beyond 30 days shall attract interest @ 1.25 % per month on the total amount, calculated on day to day basis. GIPCL at its sole discretion may cancel the allocated capacity and forfeit 100% of Bid bond, in case Performance security is not submitted beyond 60 days from issuance of Allocation Letter. However, total project completion period shall remain same. Part PBG shall not be accepted.

16.3 The Performance Security shall be denominated in Indian Rupees and shall be in one of the following forms:

- a. Bank Guarantee from the List of Banks as indicated in Annexure - B
- b. be confirmed for payment by the branch of the Bank giving the Bank Guarantee at Vadodara.

16.4 The PBG shall be forfeited as follows without prejudice to the Bidder being liable for any further consequential loss or damage incurred to GIPCL.

- a. to the satisfaction of GIPCL, PBG amount, pro-rata to the capacity for which the Successful Bidder is not able to identify the Projects and submit Project Sanction Documents. However allocated capacity may be changed by GIPCL on case to case basis and the bidder has to submit revised PBG within 30 days after the approval of GIPCL and the PBG submitted earlier shall be returned within 60 days from the date of receipt of revised PBG.
- b. If the Successful Bidder is not able to commission the projects to the satisfaction of GIPCL, PBG amount, pro-rata to the capacity not commissioned by the Successful Bidder. However, Hundred Percent (100%) PBG amount furnished for the Sanctioned Capacity, if the Successful Bidder fails to Commission the Projects(s) to the satisfaction of GIPCL, for the already identified locations, which are notified by GIPCL in the RfS or otherwise and for which Allocation Letter/Sanction Letter has been issued.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

- c. The successful bidder/developer has to successfully demonstrate the performance parameters as mentioned in clause no. 8 of GCC. In case of non achievement of minimum CUF of 15% for a period of 5 years, then the entire PBG shall be forfeited. PBG forfeiture will not be on pro-rata/ partial basis and the entire PBG will be forfeited in such situation.
- d. In all the above cases corresponding unidentified/non-commissioned capacity shall stand cancelled.

16.5 The Performance Security shall be valid for a minimum period of 6.5 years from the date of issuance of Allocation Letter(s) and shall be renewed / extended till the completion of years of O&M period. The Performance security shall be released after 5 years from the date of commissioning with the compliance of entire obligations in the contract.

17 OPENING OF BIDS

17.1 Offline Document Envelope, of the Bidders shall be opened at 15:00 hours on 11.03.2018 at the venue indicated herein above, in the presence of one representative from each of the Bidders who wish to be present. The bidders are required to submit the offline documents in a Sealed Envelope as per clause 10 above, failing which the Technical bids will not be opened.

17.2 Name of the Bidder shall be read out to all the Bidders at the time of opening of Envelope-I.

18 RIGHT TO WITHDRAW THE RfS AND TO REJECT ANY BID

18.1 This RfS may be withdrawn or cancelled by GIPCL at any time without assigning any reasons thereof. GIPCL further reserves the right, at its complete discretion, to reject any or all of the Bids without assigning any reasons whatsoever and without incurring any liability on any account.

18.2 GIPCL reserves the right to interpret the Bid submitted by the Bidder in accordance with the provisions of the RfS and make its own judgment regarding the interpretation of the same. In this regard the GIPCL shall have no liability towards any Bidder and no Bidder shall have any recourse to GIPCL with respect to the selection process. GIPCL shall evaluate the Bids using the evaluation process specified in RfS, at its sole discretion. GIPCL decision in this regard shall be final and binding on the Bidders.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

18.3 GIPCL reserves its right to vary, modify, revise, amend or change any of the terms and conditions of the Bid before submission. The decision regarding acceptance of bid by GIPCL will be full and final.

19 ZERO DEVIATION

This is a ZERO Deviation Bidding Process. Bidder is to ensure compliance of all provisions of the Bid Document and submit their Bid accordingly. Tenders with any deviation to the bid conditions shall be liable for rejection.

20 EXAMINATION OF BID DOCUMENT

20.1 The Bidder is required to carefully examine the Technical Specification, terms and Conditions of Contract, and other details relating to supplies as given in the Bid Document.

20.2 The Bidder shall be deemed to have examined the bid document including the agreement/ contract, to have obtained information on all matters whatsoever that might affect to execute the project activity and to have satisfied himself as to the adequacy of his bid. The bidder shall be deemed to have known the scope, nature and magnitude of the supplies and the requirements of material and labour involved etc. and as to all supplies he has to complete in accordance with the Bid document.

20.3 Bidder is advised to submit the bid on the basis of conditions stipulated in the Bid Document. Bidder's standard terms and conditions if any will not be considered. The cancellation / alteration / amendment / modification in Bid documents shall not be accepted by GIPCL.

20.4 Bid not submitted as per the instructions to bidders is liable to be rejected. Bid shall confirm in all respects with requirements and conditions referred in this bid document.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

PART – III

EVALUATION CRITERIA & INCENTIVE DISBURSEMENT



1.0 BID EVALUATION

The evaluation process comprises the following four steps:

- | | | |
|----------|---|---|
| Step I | - | Responsiveness check of Techno Commercial Bid |
| Step II | - | Evaluation of Bidder's fulfilment of Eligibility Criteria |
| Step III | - | Evaluation of Price Bid |
| Step IV | - | Successful Bidders(s) selection |

1.1 RESPONSIVENESS CHECK OF TECHNO COMMERCIAL BID

The Techno Commercial Bid submitted by Bidders shall be scrutinized to establish responsiveness to the requirements laid down in the RFS subject to Clause 5.1, clause 5.2 and clause 3.3.3 of PART –II. Any of the following may cause the Bid to be considered “Non-responsive”, at the sole discretion of GIPCL.

- a. Bids that are incomplete, i.e. not accompanied by any of the applicable formats inter alia covering letter, power of attorney supported by a board resolution, Bid Bond, etc, Bid processing fees.;
- b. Bid not signed by authorized signatory and /or stamped in the manner indicated in this RFS;
- c. Material inconsistencies in the information /documents submitted by the Bidder, affecting the Eligibility Criteria;
- d. Information not submitted in the formats specified in this RFS;
- e. Bid being conditional in nature;
- f. Bid not received by the Bid Deadline;
- g. Bid having Conflict of Interest;
- h. More than one Member of a Bidding Company using the credentials of the same Parent Company /Affiliate;
- i. Bidder delaying in submission of additional information or clarifications sought by GIPCL as applicable;



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

- j. Bidder makes any misrepresentation.

Each Bid shall be checked for compliance with the submission requirements set forth in this RFS before the evaluation of Bidder's fulfillment of Eligibility Criteria is taken up. Clause 5 of Part II shall be used to check whether each Bidder meets the stipulated requirement.

1.2 PRELIMINARY EXAMINATION

1.2.1 GIPCL will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and stamped and whether the Bids are otherwise in order.

1.2.2 Arithmetical errors will be rectified on following basis. If there is any discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total amount shall be corrected. If there is a discrepancy between words and figures, the amount written in words will prevail.

1.3 EVALUATION OF BIDDER'S FULFILMENT OF ELIGIBILITY CRITERIA

1.3.1 Evaluation of Bidder's Eligibility will be carried out based on the information furnished by the Bidder as per the prescribed Formats and related documentary evidence in support of meeting the Eligibility Criteria as specified in Clause 5. Non-availability of information and related documentary evidence for the satisfaction of Eligibility Criteria may cause the Bid non-responsive.

1.4 EVALUATION OF PRICE BID

Price Bid of the Qualified Bidders shall be opened in online presence of the representatives of such Qualified Bidders, who wish to be present, on a date as may be intimated by GIPCL to the Bidders through nprocure (<https://www.nprocure.com>) or email. The evaluation of Price Bid shall be carried out based on the information furnished in Financial Bid (Price Bid). The Price Bid submitted by the Bidders shall be scrutinized to ensure conformity with the RfS. Any Bid not meeting any of the requirements of this RFS may cause the Bid to be considered "Non-responsive" at the sole decision of the GIPCL.

1.4.1 CAPEX Model

- a. The Price bids for the total capacity shall be evaluated. The project cost shall be capped

(Sign and Seal of Bidder)

Page 32 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

at INR 65,000 per kWp. The bidder has to submit its bid for as a whole. Any bid submitted for partial capacity or any bid submitted at price greater than INR 65,000 will be out rightly rejected.

- b. The Project Cost shall be calculated up to two decimal places. However, in case of a tie, capacity shall be allocated to the bidder having the maximum annual turnover in the last three financial years. In case of further tie in the bid capacities, allocation shall be done on proportionate basis at sole discretion of GIPCL.
- c. Total Project cost shall be considered during evaluation.

1.5 SUCCESSFUL BIDDER(S) SELECTION

1.5.1 Bids qualifying in Clause 1.4 shall only be evaluated in this stage.

1.5.2 Project cost for the capacity under shall be ranked from the lowest to the highest.

1.5.3 Allocation of Capacity

1.5.3.1 Allocation of Capacity to Bidder will be based on lowest quote criteria.

1.5.3.2 Based on the price bid quoted by the bidders, GIPCL shall arrange the bids in the ascending order i.e. L1, L2, L3, (L1 being the lowest quote).

1.5.3.3 The lowest bidder (L1) will be declared as the successful bidder for both the parts.

1.5.3.4 At any instance, if only one bidder submits the bid, then that bidder will be selected as successful bidder.

1.5.3.5 In line with above methodology, GIPCL shall allocate the capacity to L1 bidder. The Letter(s) of Allocation (LOA) shall be issued to the Successful Bidder selected as per the provisions of this Clause 1.5.3.

1.5.4 The Successful Bidder shall acknowledge the LOA and return duplicate copy with signature of the authorized signatory of the Successful Bidder to GIPCL within Ten (10) days of issue of LOA.

1.5.5 If the Successful Bidder, to whom the LOA has been issued, does not fulfil any of the conditions specified in Bid document, then GIPCL reserves the right to annul/cancel the award of the Letter of Allocation of such Successful Bidder.

1.5.6 GIPCL at its own discretion, has the right to reject any or all the Bids without assigning any reason whatsoever, at its sole discretion.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

1.5.7 There shall be no negotiation on the quoted price between GIPCL and the Bidder(s) during the process of evaluation.

2. INCREASE/DECREASE IN BIDDER ALLOCATION CAPACITY

Capacity of 25 KWp is fixed

3. TRANSFER OF CAPACITY

Bidder cannot sublet any part of work without taking permission of GIPCL.

4. NOTIFICATION TO SUCCESSFUL BIDDERS

The name of Successful Bidders shall be notified individually and allocated capacity and the offered price through Letter of Allocation (LOA).

5. PROJECT ALLOCATION AND SANCTION

5.1 The identification of the projects (roof tops) at the time of bidding is not mandatory. The Bidders, however, in their own interest are advised to make a preliminary survey of availability of roof tops, as well as issue of Grid connectivity as non-availability of roof tops and non-completion of other formalities after allocation of project will result in forfeiture of Bid Bond/PBG amount submitted by them.

5.2 The Successful Bidders selected as described in Clause 1.5 above shall be issued Letter of Allocation (LOA) indicating the allocated capacity & Project Cost etc.

5.3 The bidders, who have been notified as Successful bidders, shall be given 4 month from date of issue of letter of allocation for execution of the full capacity. The time for submission of project sanction documents will be maximum 01 month from the date of issuance of letter/LOA.

Failure of non- compliance of conditions stipulated above shall lead to forfeiture of PBG to the capacity allocated in the GIPCL identified location.

5.4 After submission of Project Sanction Documents by the Successful Bidder/ Project Developer and accepted by GIPCL, GIPCL will issue the Sanction Letter(s) for the Project (s) indicating the Incentive amount (s) which will be disbursed in line with the provisions of the RfS document. The Bidder shall complete the design, engineering, manufacture, supply, storage, civil work, erection, testing & commissioning of each project within 4 months from the date of issue of letter of allocation.

The successful bidders / developers shall submit the project sanction documents and Commissioning document to GIPCL for release of sanction letter.

5.5 If the Bidder fails to commission the sanctioned project within specified time i.e. 4



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

months from the date of LOA, incentive shall be disbursed in line with provisions of the bid documents. Illustration is as attached as Annexure II.

If project got delayed by more than 02 (Two) months from scheduled commissioning date, no incentive shall be disbursed. However, further period of 02 (Two) months shall be allowed to Bidder for completion of entire unexecuted allocated capacity and penalty/LD on per day basis calculated for the Performance Security on a 3 months period would be levied.

After 2 months (i.e. total 4 months from the date of issuance of LOA), the project will get cancelled and the PBG on pro-rata basis for the capacity not commissioned would be forfeited.

In case, due to delay, PBG submitted by the bidder(s) is forfeited in full/part, bidder has to resubmit the PBG of requisite amount and validity as per the RfS, failing which their Incentive amount shall not be released.

6. INCENTIVE DISBURSEMENT

6.1 For CAPEX Model:

Bidder shall be eligible for incentive as per MNRE Scheme as indicated in incentive table of Part-I of this tender. The bidder shall get incentive per KWp subject to meeting schedule of completion and approval from MNRE.

6.2 The Incentive shall be disbursed as follows.

Incentive as calculated under Clause 4.1 above will be released as follows:

- i) **INR 10833/- per kWp (2/3 of the amount mentioned in the table) incentive shall be disbursed after Successful Commissioning and acceptance of project and balance INR 5416/ per KWp (1/3 of the amount mentioned in the table) incentive after completion of first year of successful O&M, if the project is commissioned in sanctioned time.**

Similarly, incentive amount shall be disbursed as per Annexure-II of this RfS for delayed commissioning proportionate to the eligible amount.

- ii) The 2/3 (first lot) of incentive shall be released against successful demonstration of desired PR 75% against commissioning. Similarly next 1/3 (second lot) of incentive shall be released after completion of first year of successful O&M and against successful demonstration of desired CUF of 15%. In case of non achievement of above mentioned two criteria for disbursal of incentive, no incentive shall be disbursed. However GIPCL may extend an option to bidder(s) for re demonstration of performance parameters after due rectification at its sole discretion.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

6.3 Release of Incentive shall be on case to case basis depending on the actions taken by the Successful Bidder and subject to meeting the following conditions:

6.3.1 The rooftop SPV power plant should be completed as per the Scope of RfS.

6.3.2 The rooftop SPV power plant must get CEIG inspection certificate.

6.3.3 Intimation to the concerned DISCOM : All the bidders shall intimate the concerned DISCOMs regarding implementation of grid connected roof top solar PV projects as per the given format in Annexure-I and submit the copy of same to for the purpose of release of Incentive.

6.3.4 Owner Consent: In case the Successful Bidder/ Project Developer is not the Owner of the Project, Incentive shall be released to Successful Bidder / Project Developer after written consent of Owner only.

6.4 The Incentive for the project executed under this scheme shall be provided by the MNRE only and no other incentive can be claimed by the bidder/rooftop owner from other Agencies including State Government / Ministries under Central Government.

7. OTHER CONDITIONS

7.1 Bidder or owner of the building has to obtain all the necessary approvals/Consents/Clearances required for Erection, Testing, Commissioning and O&M of the project including Grid connectivity. GIPCL shall not have any responsibility in this regard.

7.2 BID BOND AND BID PROCESSING FEE SUBMISSION:

Bid bond and Bid processing fees shall be submitted for the offered capacity in a separate envelop (along with processing fee) superscribed with details.

7.3 TAX EXEMPTIONS:

Price bids are invited inclusive of Taxes and duties. However, Tax exemptions including certificates of any sort, if available may be dealt with the concerned Department of Govt of India by the bidder. GIPCL in no case will be responsible for providing any tax exemptions to the bidder. However GIPCL shall provide necessary support in facilitating the same.

7.4 ELIGIBILITY OF STANDALONE SYSTEM

Standalone system is not allowed under this scheme. The system should be grid-interactive.

7.5 REQUIREMENT OF APPROVALS ON MAKES OF THE COMPONENTS:

(Sign and Seal of Bidder)

Page 36 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

The modules should be manufactured in India only. Rest of the components can be procured from any source. However, these items should meet the Technical specification and standards mentioned in RfS.

7.6 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.

7.7 TIME OF COMPLETION OF SANCTIONED CAPACITY

The Bidder shall complete the roofs identification, submission of project sanction documents as per the requirement of GIPCL Engineer-in-Charge design, engineering, manufacture, supply, storage, civil work, erection, testing & commissioning of sanctioned project(s) within **4 months** from the date of issue of allocation letter(s). In case of delay beyond scheduled commissioning period, the incentive for the successful bidder / developer shall be disbursed in line with the provisions of RfS documents. A reference sheet indicating calculation of incentive based on time schedule is attached as Annexure-II to this RfS. If project got delayed by more than 02(Two) months from scheduled commissioning date, no incentive shall be disbursed. However, further period of 02(Two) months shall be allowed to Bidder for completion of entire unexecuted allocated capacity and penalty/LD on per day basis calculated for the Performance Security on a 2 months period would be levied. After 2 months (i.e. total 6 months from the date of issuance of LOA), the project will get cancelled and the PBG on pro-rata basis for the capacity not commissioned would be forfeited.

7.8 The period of construction given in Time Schedule includes the time required for mobilization as well as testing, rectifications if any, retesting and completion in all respects to the entire satisfaction of the Engineer-in-Charge.

7.9 A joint programme of execution of the Work will be prepared by the Engineer-in-Charge or its representative nominated for the purpose and Successful bidders based on priority requirement of this project. This programme will take into account the time of completion mentioned in clause above and the time allowed for the priority Works by the Engineer-in-Charge.

7.10 Monthly/Weekly implementation programme will be drawn up by the Engineer-in-Charge jointly with the Successful bidder, based on availability of Work fronts. Successful bidder shall scrupulously adhere to these targets /programmes by deploying adequate personnel, tools and tackles and he shall also supply himself all materials of his scope of supply in good time to achieve the targets/programmes. In all matters concerning the



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

extent of targets set out in the weekly and monthly programmes and the degree of achievements, the decision of the Engineer-in-Charge will be final and binding.

8. UPDATING THE PROJECT PROGRESS ON BIWEEKLY BASIS

Successful bidder's authorized representative, in whose name PoA has been executed and submitted along with the bid, shall update the project progress on biweekly basis in the sanction letter/ Allocation letter for the City. Successful bidder should update the info as per the requirement of the software tool. Non updating of the progress shall be considered as no progress and shall attract punitive actions as per the relevant provision of the Contract. However, the decision of Engineer-in -charge shall be final in this regard.

9. INSPECTION AND AUDIT BY THE GOVERNMENT

The Successful bidder shall permit GIPCL to inspect the Successful bidder's site, accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the GIPCL, if so required by the GIPCL any time.

10.COMMISSIONING /COMPLETION CERTIFICATE:

10.1 Application for completion/commissioning certificate:

When the Successful bidder fulfils his obligation under the Contract, he shall be eligible to apply for Completion/Commissioning Certificate. The Engineer-in-Charge shall normally issue to the Successful bidder the Completion Certificate within one month after receiving any application therefore from the Successful bidder after verifying from the completion documents and satisfying himself that the Work has been completed in accordance with and as set out in Contract documents. The Successful bidder, after obtaining the Completion Certificate, is eligible to avail the Incentive as per the Clause 4.

10.1.1 DOCUMENT SUBMISSION FOR ISSUANCE OF COMMISSINONG / COMPLETION CERTIFICATE:

For the purpose of above the following documents will be deemed to form the completion documents:

- a. Checklist for inspection of Roof Top SPV power plants as per GIPCL format.
- b. Project execution and satisfaction certificate from roof top owners.

10.1.2 FINAL DECISION AND FINAL CERTIFICATE:

- 10.1.3 Upon completion of 5 years of O & M and subject to the Engineer-in-Charge being satisfied, the Engineer-in-Charge shall (without prejudice to the rights of the GIPCL to retain the provisions of relevant Clause hereof) issue a certificate herein referred to as

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

the Final Certificate to that effect and the Successful bidder shall not be considered to have fulfilled the whole of his obligations under Contract until Final Certificate shall have been issued by the Engineer-in- Charge notwithstanding any previous entry upon the Work and taking possession, working or using of the same or any part thereof by the Owner of Roof/GIPCL.

10.2 DEDUCTIONS FROM THE CONTRACT PRICE:

- 10.2.1 All costs, damages or expenses which GIPCL may have paid or incurred, which under the provisions of the Contract, the Successful bidder is liable/will be liable, will be claimed by GIPCL. All such claims shall be billed by GIPCL to the Contractor within 15 (fifteen) days of the receipt of the payment request and if not paid by the Successful bidder within the said period, GIPCL may, then, deduct the amount from any moneys due i.e., Performance Security or becoming due to the contractor or Successful bidder under the contract or may be recovered by actions of law or otherwise, if the Successful bidder fails to satisfy GIPCL of such claims.

11.CORRUPT OR FRAUDULENT PRACTICES

GIPCL requires that Successful Bidders / Developers should follow the highest standard of ethics during the execution of contract. In pursuance of this policy, GIPCL:

- 11.1 defines, for the purposes of this provision, the terms set forth as follows :
- 11.2 “corrupt practice” means offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the bid process or in contract execution; and
- 11.3 “fraudulent practice” means a misrepresentation of facts in order to influence a bid process or the execution of a contract to the detriment of the GIPCL/Govt scheme, and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the GIPCL of the benefits of free and open competition;
- 11.4 will declare a firm ineligible/debarred, either indefinitely or for a specific period of time, a GOVT contract if at any time it is found that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government / GIPCL schemes.

12.DEBARRED FROM PARTICIPATING IN GIPCL’S ROOF TOP TENDER



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

-
- 12.1 GIPCL reserves the right to carry out the performance review of each Bidder from the time of submission of Bid onwards. In case it is observed that a bidder has not fulfilled its obligations in meeting the various timelines envisaged, in addition to the other provisions of the RFS, such Bidders may be debarred from participating in GIPCL's any future tender for a period as decided by the competent authority of GIPCL.
- 12.2 The Successful bidder must ensure that the ROOF TOP SOLAR PV SCHEME Incentive is available for newly commissioned projects i.e. for the projects whose construction/dispatch of equipment's have been started only after the issue of sanction letter/allocation letter .Any roofs on which projects has been installed or commissioned before the issue of allocation letter/sanction letter shall be construed as fraudulent activity in which case Successful bidder(s) may be debarred from participating in GIPCL's future tender for a period as decided by the Competent authority. However, such locations may be used for installation of additional capacity with the prior approval of competent authority.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

PART – IV

GENERAL CONDITIONS OF CONTRACT (GCC)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

1 SCOPE OF WORK

- 1.1 The Scope of work for the bidder include feasibility of installation in identified buildings, Obtaining No Objection Certificate (NOC)" from Distribution Company (DISCOM) for grid connectivity, execution of EPC agreement (in the prescribed format attached herewith this RfS document), complete design, engineering, manufacture, supply, storage, civil work, erection, testing & commissioning of the grid connected rooftop solar PV project including O & M of the project for a period of 05 years for CAPEX Model after commissioning of the projects as per GIPCL's acceptance.

2 PROJECT COST

- 2.1 The Project cost shall include all the costs related to above Scope of Work. Bidder shall quote for the entire facilities on a "single responsibility" basis such that the total Bid Price covers all the obligations mentioned in the Bidding Documents in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (for a period of 05 years for CAPEX), goods and services including spares required if any during O&M period. The Bidder has to take all permits, approvals and licenses, Insurance etc., provide training and such other items and services required to complete the scope of work mentioned above.
- 2.1.1 The Project cost quoted for CAPEX projects is on lump sum turnkey basis and the bidder is responsible for the total Scope of work described at Clause 1.1 above.
- 2.1.2 The Project Cost shall remain firm and fixed and shall be binding on the Successful Bidder till completion of work for payment of Incentive amount irrespective of his actual cost of execution of the project. No escalation will be granted on any reason whatsoever. The bidder shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.
- 2.1.3 The Project Cost shall be inclusive of all duties and taxes, insurance etc. The prices quoted by the firm shall be complete in all respect and no price variation /adjustment shall be payable by GIPCL. However, statutory variation of taxes and duties may be paid by the roof top owner.
- 2.1.4 The Operation & Maintenance of Solar Photovoltaic Power Plant would include wear, tear, overhauling, machine breakdown, insurance, and replacement of defective modules, invertors / Power Conditioning Unit (PCU), spares, consumables & other parts for a period of 05 years for CAPEX projects.
- 2.1.5 The Project Cost shall be specified in sanction letter based on Successful Bidder's quote for each project. The Project Cost shall be in accordance with all terms, conditions,



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

specifications and other conditions of the Contract as accepted by the GIPCL and incorporated into the sanction letter.

- 2.1.6 The Bidder shall complete the Price Bid in the given format for the allocated Capacity in different states of India furnished in the RfS Documents.

2.2 GIPCL SERVICE CHARGES

2.2.1 For 25 KWp CAPEX Projects

Service charges of GIPCL shall be computed as **5% of the Quoted Project Cost/ MNRE benchmark cost, whichever is lower, minus incentive.**

The above charges are exclusive of GST which shall be paid extra as per applicable norms.

- 2.2.2 GIPCL service charges are charged for site visits, inspection, liaison, monitoring etc. Taxes and duties shall be paid extra. GIPCL service charges are non-refundable and the service charges have to be paid at the time of submission of Project Sanction Documents. In the absence of GIPCL's service charges as per clause 2.2.1, the project sanction documents shall not be acceptable to GIPCL.

3 INSURANCE

- 3.1 The Bidder shall be responsible and take an Insurance Policy for transit-cum-storage-cum-erection for all the materials to cover all risks and liabilities for supply of materials on site basis, storage of materials at site, erection, testing and commissioning. The bidder shall also take appropriate insurance including watch and ward during O&M period.
- 3.1.1 The Bidder shall also take insurance for Third Party Liability covering loss of human life, engineers and workmen and also covering the risks of damage to the third party/material/equipment/properties during execution of the Contract. Before commencement of the work, the Bidder will ensure that all its employees and representatives are covered by suitable insurance against any damage, loss, injury or death arising out of the execution of the work or in carrying out the Contract. Liquidation, Death, Bankruptcy etc., shall be the responsibility of bidder.

4 WARRANTIES AND GUARANTEES

The Bidder shall warrant that the goods supplied under this contract are new, unused, of the most recent or latest technology and incorporate all recent improvements in design and materials. The bidder shall provide warrantee covering the rectification of any and

(Sign and Seal of Bidder)

Page 43 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

all defects in the design of equipment, materials and workmanship including spare parts for a period of 05 years from the date of commissioning of the projects. The successful bidder has to transfer all the Guarantees/ Warrantees of the different components to the Owner of the project. The responsibility of operation of Warrantee and Guarantee clauses and Claims/ Settlement of issues arising out of said clauses shall be joint responsibility of the Successful bidder and the owner of the project and GIPCL will not be responsible in any way for any claims whatsoever on account of the above.

5. TYPE AND QUALITY OF MATERIALS AND WORKMANSHIP

- 5.1 The design, engineering, manufacture, supply, installation, testing and performance of the equipment shall be in accordance with latest appropriate IEC/ Indian Standards as detailed in the Part - VI (Technical specifications) of the bid document. Where appropriate Indian Standards and Codes are not available, other suitable standards and codes as approved by the MNRE shall be used.
- 5.2 The specifications of the components should meet the technical specifications mentioned in Part VI.
- 5.3 Any supplies which have not been specifically mentioned in this Contract but which are necessary for the design, engineering, manufacture, supply & performance or completeness of the project shall be provided by the Bidder without any extra cost and within the time schedule for efficient and smooth operation and maintenance of the SPV plant.

6 OPERATION & MAINTENANCE (O & M) GUIDELINES TO BE MANDATORILY FOLLOWED BY BIDDERS

- 6.1 The bidder shall be responsible for all the required activities for successful operation and maintenance of the Rooftop Solar PV system for a period of 05 years from the date of commissioning of the plant.
- 6.2 For system sizes 25 kWp, below mentioned guidelines, shall be followed. In addition, O & M practices shall be strictly followed as **per Annexure D**.
 - 6.2.1 O&M of Solar Power Plant shall be compliant with grid requirements to achieve committed energy generation.
 - 6.2.2 Deputation of qualified and experienced engineer/ technicians till the O&M period at project site.
 - 6.2.3 Periodic cleaning of solar modules. The modules shall be cleaned with a periodic interval of



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

15 days or as and when required as per actual site conditions. It's the responsibility of the bidder to get the modules cleaned during O & M Period. Roof Top Owner is responsible for such obligation of bidder so as to achieve guaranteed CUF.

6.2.4 Periodic checks of the Modules, PCUs and BoS shall be carried out as a part of routine preventive and breakdown maintenance.

6.2.5 Immediate replacement of defective Modules, Invertors/PCUs and other equipment as and when required.

6.2.5.1 Supply of all spares, consumables and fixtures as required. Such stock shall be maintained for all associated equipments and materials as per manufacturer's / supplier's recommendations.

6.2.5.2 All the testing instruments required for Testing, Commissioning and O&M for the healthy operation of the Plant shall be maintained by the Bidder. The testing equipments must be calibrated once in a year from NABL accredited labs and the certificate of calibration must be kept for reference as required.

6.2.5.3 If negligence/ mal-operation on part of the Bidder's operator results in failure of equipment, such equipment should be repaired/ replaced by the Bidder free of cost.

6.2.5.4 Co-ordination with Owner / DISCOM / CEIG as per the requirement for Joint Metering Report (JMR). The person in charge present at site from bidder's side shall take a joint meter reading in the presence of rooftop owner on a daily basis. Furnishing generation data (JMR) each month to GIPCL positively by 1st week of every month for the previous month. Failure to adhere may result in non-disbursal of Incentive

6.2.5.5 Online Performance Monitoring, controlling, troubleshooting, maintaining of logs & records. A maintenance record register is to be maintained by the operator with effect from Commissioning to record the daily generation, regular maintenance work carried out as well as any preventive and breakdown maintenance along with the date of maintenance, reasons for the breakdown, duration of the breakdown, steps taken to attend the breakdown, etc.

6.2.5.6 For any issues related to operation & maintenance, a telephone number shall be made available to the rooftop owner/ plant owner to resolve within 72 hours. If not attended within such stipulated time, a complaint may be raised to GIPCL, pursuant to which, a penalty of Rs.10, 000 for full month shall be imposed. Repetition of such instances for more than 2 times a year may lead to the stop the next tranche of Incentive by the GIPCL. Further, if the outage of the plant is more than 30 days continuously, then the 50% PBG



amount shall be encashed by GIPCL and if the outage is exceeding more than 60 days than complete PBG amount shall be encashed by GIPCL. This will be applicable till 5 years of O&M as per the Scope of the RfS.

6.2.5.7 If any jobs covered in O&M Scope as per RFS are not carried out by the contractor/ Bidders during the O&M period, the Engineer-In-Charge shall take appropriate action as deemed fit. GIPCL reserves the right to make surprise checks/ inspection visits at its own or through authorized representative to verify the O&M activities being carried out by the Bidder. Failure to adhere to above guidelines will result in penal action including debarring from participation in next tender.

7 METERING AND GRID CONNECTIVITY

Metering and grid connectivity of the roof top solar PV system under this scheme 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). GIPCL/ SNA could facilitate connectivity; however, the entire responsibility lies with bidder only.

8 PLANT PERFORMANCE EVALUATION

The successful bidder shall be required to meet minimum guaranteed generation with Performance Ratio (PR) at the time of commissioning and related Capacity Utilization Factor (CUF) as per the GHI levels of the location during the O&M period. PR should be shown minimum of 75% at the time of inspection for initial commissioning acceptance to qualify for release of applicable incentive. Minimum CUF of 15% should be maintained for a period of 5 years for fulfilling one of the conditions for release of PBG. The bidder should send the periodic plant output details to GIPCL for ensuring the CUF. The PR will be measured at Inverter output level during peak radiation conditions.

8.1 PROGRESS REPORT

The bidder shall submit the progress report monthly to GIPCL in Prescribed Performa. GIPCL will have the right to depute its representatives to ascertain the progress of contract at the premises of works of the bidder.

8.1.1 Submission of Project Completion Report (PCR)

The bidder shall submit the Project Completion Report (both in editable soft copy and signed hard copy) after commissioning of the project as per the Scope of RFS to GIPCL as per the Format given in **Annexure H**. Non-submission of the report shall be considered as "Breach of Contract" and shall attract punitive actions as per the relevant provisions of the Contract including non-release of Incentive. However, the decision of Engineer - in - charge shall be final in this regard.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

8.1.2 Submission of O & M Report (OMR)

The bidder shall submit the Monthly O&M Report mandatorily to GIPCL as per the Format enclosed at **Annexure G**. Non-submission of the report shall be considered as “Breach of Contract” and shall attract punitive actions as per the relevant provisions of the Contract including non-release of Incentive. However, the decision of Engineer - in - charge shall be final in this regard.

9 PROJECT INSPECTION

The project progress will be monitored by GIPCL and the projects will be inspected for quality at any time during commissioning or after the completion of the project either by officer(s) from GIPCL or any agency/ experts designated / authorized by GIPCL from time to time. Third party verification, monitoring of system installed to oversee, the implementation as per required standards and also to visit the manufacturer's facilities to check the quality of products as well as to visit the system integrators to assess their technical capabilities as and when required may be done by GIPCL or any agency/ experts designated / authorized by GIPCL . The cost of Inspection shall be carried out by GIPCL shall be borne by GIPCL. The cost of re-inspection, if any shall be borne by Vendor. The projects shall be inspected at any time during commissioning or after the completion of the project(s) as follows.

Inspection shall be carried out by Inspecting officer(s) nominated by GIPCL, GIPCL officials, or from the officials of following listed agencies/bodies

1. Govt./NABL accredited agencies/Labs,
2. NISE,
3. CPRI,
4. DNV Climate Change Services AS (DNV)
5. TUV SUD South Asia Private Limited (TUV SUD)
6. Bureau Veritas Certification Holding SAS (BVCH)
7. TUV Rheinland (China) Ltd. (TUV Rheinland)
8. TUV NORD CERT GmbH (TUV NORD)
9. Any other agencies/bodies to be notified by GIPCL on time to time.

CANCELLATION OF INCENTIVE

GIPCL shall not release the Incentive for any shortcomings in commissioning as per technical specifications mentioned or non- achievement of 02 different milestones related to Performance Parameters .Firstly at commissioning, for performance ratio (PR) below the specified limit (75%) and Secondly for Average CUF(annually) falls below 15% during O&M of first year. Also PBG shall be forfeited in case Average CUF falls below 15% during entire O&M period of 5 years However, GIPCL may extend an option to bidder(s) for redemonstration of Performance Parameters after due rectification at its sole discretion. If the successful bidder/developer fails to



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

demonstrate the required Performance Parameters after due rectification as well, the entire incentive shall be cancelled.

11 APPLICABLE LAW

The Contract shall be interpreted in accordance with the laws of the Union of India.

12 SETTLEMENT OF DISPUTE

12.1 If any dispute of any kind whatsoever arises between GIPCL and Successful bidder in connection with or arising out of the contract including without prejudice to the generality of the foregoing, any question regarding the existence, validity or termination, the parties shall seek to resolve any such dispute or difference by mutual consent.

12.2 If the parties fail to resolve, such a dispute or difference by mutual consent, within 45 days of its arising, then the dispute shall be referred by either party by giving notice to the other party in writing of its intention to refer to arbitration as hereafter provided regarding matter under dispute. No arbitration proceedings will commence unless such notice is given. Any dispute in respect of which a notice of intention to commence arbitration has been given in accordance with Sub Clause 12.1, shall be finally settled by arbitration.

IN CASE THE CONTRACTOR IS A PUBLIC-SECTOR ENTERPRISE OR A GOVERNMENT DEPARTMENT.

12.2.1 In case the Contractor is a Public-Sector Enterprise or a Government Department, the dispute shall be referred for resolution in Permanent Machinery for Arbitration (PMA) of the Department of Public Enterprise, Government of India. Such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary / Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the Parties finally and conclusive. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

12.3 IN ALL OTHER CASES

12.3.1 In all other cases, any dispute submitted by a party to arbitration shall be heard by an arbitration panel composed of three arbitrators, in accordance with the provisions set forth below.



- 12.3.1.1 GIPCL and the Contractor shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the two arbitrators do not succeed in appointing a third arbitrator within Thirty (30) days after the later of the two arbitrators has been appointed, the third arbitrator shall, at the request of either party, be appointed by the Appointing Authority for third arbitrator which shall be the President, Institution of Engineers.
- 12.3.2 If one party fails to appoint its arbitrator within thirty (30) days after the other party has named its arbitrator, the party which has named an arbitrator may request the Appointing Authority to appoint the second arbitrator.
- 12.3.3 If for any reason an arbitrator is unable to perform its function, the mandate of the Arbitrator shall terminate in accordance with the provisions of applicable laws and a substitute shall be appointed in the same manner as the original arbitrator.
- 12.3.4 Arbitration proceedings shall be conducted with The Arbitration and Conciliation Act, 1996. The venue or arbitration shall be Vadodara.
- 12.3.5 The decision of a majority of the arbitrators (or of the third arbitrator chairing the arbitration panel, if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction as decree of the court. The parties thereby waive any objections to or claims of immunity from such enforcement.
- 12.3.6 The arbitrator(s) shall give reasoned award.
- 12.3.7 Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the agreement unless they otherwise agree.
- 12.3.8 Cost of arbitration shall be equally shared between the Successful bidder or Contractor and GIPCL.

13 FORCE MAJEURE

- 13.1** "Force Majeure" shall mean any event beyond the reasonable control of the Employer or of the Contractor, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected, and shall include, without limitation, the following:
- (a) war, hostilities or warlike operations (whether war be declared or not), invasion, act of foreign enemy and civil war, , blockade, embargo, revolution, riot, insurrection, terrorist or military action; or
 - (b) rebellion, revolution, insurrection, mutiny, usurpation of government, conspiracy, riot and civil commotion,
 - (c) Act of God, including, but not limited to earthquake, landslide, volcanic activity, flood or



cyclone, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster,

- (d) radio active contamination or ionising radiation originating from a source in India or resulting from another Force Majeure Event mentioned above excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Power Project by the EPC Contractor or those employed or engaged by the EPC Contractor.

13.2 Notwithstanding the provisions of clauses contained in this RfS document, the contractor shall not be liable to forfeit (a) PBG for delay and (b) termination of contract, if he is unable to fulfill his obligation under this contract due to force majeure conditions.

13.3 For purpose of this clause, "Force Majeure" means an event beyond the control of the contractor and not involving the contractor's fault or negligence and not foreseeable, either in its sovereign or contractual capacity. Such events may include but are not restricted to Acts of God, wars or

revolutions, fires, floods, epidemics, quarantine restrictions and fright embargoes etc. Whether a "Force majeure" situation exists or not, shall be decided by GIPCL and its decision shall be final and binding on the contractor and all other concerned.

13.4 Force Majeure Exclusions

13.4.1 Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

- a. Unavailability, late delivery, or changes in cost of the plant, machinery, equipment, materials, spare parts or consumables for the Power Project;
- b. Not getting timely approvals from the concerned authorities involved.
- c. Delay in the performance of any contractor, sub-contractor or their agents ;
- d. Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment;
- e. Strikes at the facilities of the Affected Party;
- f. Insufficiency of finances or funds or the agreement becoming onerous to perform; and
- g. Non-performance caused by, or connected with, the Affected Party's:
 - i. Negligent or intentional acts, errors or omissions;
 - ii. Failure to comply with an Indian Law; or
 - iii. Breach of, or default under this RfS document.

13.5



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

In the event that the contractor is not able to perform his obligations under this contract on account of force majeure, he will be relieved of his obligations during the force majeure period. In the event that such force majeure extends beyond six months, GIPCL has the right to terminate the contract in which case, the PBG shall be refunded to him.

- 13.6** If a force majeure situation arises, the contractor shall notify GIPCL in writing promptly, not later than 14 days from the date such situation arises. The contractor shall notify GIPCL not later than 3 days of cessation of force majeure conditions. After examining the cases, GIPCL shall decide and grant suitable additional time for the completion of the work, if required.

14 LANGUAGE

All documents, drawings, instructions, design data, calculations, operation, maintenance and safety manuals, reports, labels and any other data shall be in English Language. The contract agreement and all correspondence between the GIPCL and the bidder shall be in English language.

15 OTHER CONDITIONS

- 15.1 The Successful bidder shall not transfer, assign or sublet the work under this contract or any substantial part thereof to any other party without the prior consent of GIPCL in writing.
- 15.2 The Successful bidder or its subcontractors shall not display the photographs of the work and not take advantage through publicity of the work without written permission of GIPCL and owner of the Rooftop.
- 15.3 The Successful bidder or its subcontractors shall not make any other use of any of the documents or information of this contract, except for the purposes of performing the contract.
- 15.4 GIPCL will not be bound by any Power of Attorney granted/ issued by the Successful bidder or its subcontractors or by any change in the composition of the firm made during or subsequent to the execution of the contract. However, recognition to such Power of Attorney and change (if any) may be given by GIPCL after obtaining proper legal advice, the cost of which will be chargeable to the Successful bidder concerned.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

15.5 SUCCESSORS AND ASSIGNEES:

In case GIPCL or Successful bidder may undergo any merger or amalgamation or a scheme of arrangement or similar re-organization & this contract is assigned to any entity (ies) partly or wholly, the contract shall be binding mutatis mutandis upon the successor entities & shall continue to remain valid with respect to obligation of the successor entities.

15.6 SEVERABILITY:

It is stated that each paragraph, clause, sub-clause, schedule or annexure of this contract shall be deemed severable & in the event of the unenforceability of any paragraph, clause sub clause, schedule or the remaining part of the paragraph, clause, sub-clause, schedule annexure & rest of the contract shall continue to be in full force & effect.

15.7 COUNTERPARTS:

This contract may be executed in one or more counterparts, each of which shall be deemed an original & all of which collectively shall be deemed one of the same instrument

15.8 RIGHTS & REMEDIES UNDER THE CONTRACT ONLY FOR THE PARTIES:

This contract is not intended & shall not be construed to confer on any person other than the GIPCL & Successful bidder hereto, any rights and / or remedies herein.

16 CORRESPONDENCE

Bidder requiring any Techno-Commercial clarification of the bid documents may contact in writing or by Fax /E Mail.

Name	Contact Number	Email id
Mr. S.N.Purohit	0265- 2234341	snpurohit@gipcl.com
Mr. P.S.Goyal	0265-2234411	psgoyal@gipcl.com

Verbal clarifications and information given by the GIPCL or its employees or its Representatives shall not be in any way entertained.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

PART - V

SPECIAL CONDITIONS OF CONTRACT (SCC)



DEFINITIONS & ABBREVIATIONS

In this “Bid / RfS 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. “**Benchmark Cost**” shall mean per kWp cost defined by MNRE for solar power plants without battery. For the purpose of this RfS, the benchmark cost will be considered as INR 65,000.
- 1.3. “**B.I.S.**” shall mean specifications of Bureau of Indian Standards (BIS).
- 1.4. “**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.
- 1.5. “**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”
- 1.6. “**Bid Bond**” shall mean the unconditional and irrevocable bank guarantee to be submitted along with the Bid by the Bidder under Clause 15, Part - II of this RfS, in the prescribed Format- 3
- 1.7. “**Bid Deadline**” shall mean the last date and time for submission of Bid in response to this RFS as specified in Bid Information Sheet.
- 1.8. “**Bid Capacity** ” shall mean capacity offered by the bidder in his Bid under invitation.
- 1.9. “**CEA**” shall mean Central Electricity Authority.
- 1.10. “**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.

1.11. “**Competent Authority**” shall mean AGM (Business Development & Baroda Operation) of Gujarat Industries Power company Limited himself and/or a person or group of persons nominated by AGM for the mentioned purpose herein.

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

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

1.14. “**Capacity Utilization Factor**” (**CUF**) means the ratio of the actual output from a solar plant over the year (kWh) to the maximum possible output from it for a year (kWh) under ideal conditions.

$CUF = \text{Actual Plant Output in kWh over the year} / (\text{Installed Plant Capacity in kW}^* \times 365 \times 24).$

Monthly CUF: Monthly Plant output in kWh / (installed plant capacity in kW* x number of days in a month x 24).

* Installed Capacity for calculation of CUF at the end of any year shall be taken considering degradation of 1% per annum.

1.15. “**CAPEX Model**” shall mean, the bidder enters into an Agreement with the rooftop owner at the quoted project cost as per RfS for the Scope of work not limited to that indicated in the RfS as per mutually agreed terms and conditions. This model also allows energy sale at a tariff as per RfS.

1.16. “**Eligibility Criteria**” shall mean the Eligibility Criteria as set forth in Clause 5 of this RfS.

1.17. “**Financially Evaluated Entity**” shall mean the company which has been evaluated for the satisfaction of the Financial Eligibility Criteria set forth in Clause 5.2 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. **"MNRE"** shall mean Ministry of New and Renewable Energy, Government of India.
- 1.22. **"Model"** shall mean CAPEX model and the cost of which shall not exceed INR 65,000 (including incentive)
- 1.23. **"Net-worth"** shall have same meaning as defined in Company Act 2013 and Amendment, if any.
- 1.24. **"O&M"** shall mean Operation & Maintenance of 5 years for CAPEX model of Rooftop Solar PV system
- 1.25. **"Owner of project"** shall mean anyone who has ownership of the roof (including in the form of lease) and is the legal owner of all equipment of the project.
- 1.26. Void
- 1.27. **"Project capacity"** means Capacity in kWp allocated to the Bidder for different states of India consisting of single or multiple roof tops. The project capacity specified is on "DC" output Side only.
- 1.28. **"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.
- $$\frac{\text{PR Measured output in Kw} \times 1000 \text{ W/m}^2}{\text{Installed Plant capacity in kW} \times \text{Measured radiation intensity in W/m}^2}$$
- 1.31 **"Parent Company"** shall mean a company that holds at least Fifty percent (50%) of the paid-up equity capital directly or indirectly in the Bidding Company as the case may be;
- 1.32 **"Project Company"** shall mean Company incorporated by the bidder as per Indian Laws in accordance with Clause no 5 of Part - II.
- 1.33 **"Project Sanction Documents"** shall mean the documents as specified in **Annexure A**.
- 1.34 **"Price Bid"** shall mean Envelope II of the Bid, containing the Bidder's quoted Price as per the Annexure of this RFS;



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

- 1.35 **Qualified Bidder**” shall mean the Bidder(s) who, after evaluation of their Techno Commercial Bid as per Clause 5 of Part-II stand qualified for opening and evaluation of their Price Bid;
- 1.36 **"RfS"** shall mean Request for Selection (RfS) / Bid document / Tender document
- 1.37 **“EPC agreement”** shall mean Agreement to be executed between successful bidder / project developer and the rooftop owner. The prescribed format for execution of EPC agreement is attached as Annexure III to this RfS.
- 1.38 **“Rooftop Solar PV”** shall mean solar PV array/system installed on the flat /inclined roof of the building / elevated platform on metallic or concrete structure minimum 10 feet above ground level / Ground mounted system (in the places where sufficient shadow free rooftop area is not available.)
- 1.39 **“Statutory Auditor”** shall mean the auditor of a Company appointed under the provisions of the Companies Act, 1956 / 2013 or under the provisions of any other applicable governing law.
- 1.40 **“Successful Bidder(s) / Contractor(s) / Project Developers(s)”** shall mean the Bidder(s) selected by GIPCL pursuant to this RfS of different states of India for Implementation of Grid Connected Roof Top Solar PV System as per the terms of the RfS Documents, and to whom Letter of Allocation has been issued;
- 1.41 **“GIPCL”** shall mean Gujarat Industries Power Company Limited, Vadodara .
- 1.42 **“SNA”** shall mean State Nodal Agency. **“Incentives”** available from GIPCL under CAPEX Model is differentiated for general category and special category states as tabulated below:

Sr. No	Achievement vis-a-vis Target Allocation	Incentive	Incentive Illustration on benchmark
--------	---	-----------	-------------------------------------



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

			cost
1	80% and above within the sanctioned period	25% of benchmark cost or cost arrived through competitive bidding whichever is lower	INR 16,250/- per kW
2	Below 80% and upto 50% within the sanctioned period	15% of benchmark cost or cost arrived through competitive bidding whichever is lower	INR 9,750/- per kW
3	Below 50% and 40%(including 40%) within the sanctioned period	10% of benchmark cost or cost arrived through competitive bidding whichever is lower	INR 6,500/- per kW
4	Below 40% within the sanctioned period	NIL	Nil

1.46 **“Tendered Capacity”** 25 KWp

1.47 **“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 in the Financially Evaluated Entity and such Bidding Company and /or the Financially Evaluated Entity shall be under the direct control or indirectly under the common control of such company.

1.48 **“Wp”** shall mean Watt Peak

1.49 **“Sanction Period”** shall mean Four (04) months from Letter of Allocation (LoA).

1.50 **“Commissioning Date”** shall mean the date on which the plant has been Successful operated by the Contractor, for the purpose of carrying out Performance Test(s) as defined in clause 8 of section IV – GCC.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

PART - VI

SCOPE OF WORK & TECHNICAL SPECIFICATION



The proposed projects shall be commissioned as per the technical specifications given below. Any shortcomings will lead to cancelation of Incentive in full or part as decided by GIPCL .Domestic Modules are to be used failing which it will be assumed that system is not matching the requirement of the scheme and bidder's PBG shall be forfeited. Competent Authority's decision will be final and binding on the bidder.

1 DEFINITION

A Grid Tied 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, Junction boxes, Distribution boxes 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 equipments/components.

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

1.1 SOLAR PHOTOVOLTAIC MODULES:

1.1.1 The PV modules used should be made in India.

1.1.2 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-1 - requirements for construction & Part 2 - requirements for testing, for safety qualification or equivalent IS.

a) For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701.

b) The total solar PV array capacity should not be less than allocated capacity



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

(kWp) and should comprise of solar crystalline modules of minimum 300 Wp and above wattage. Module capacity less than minimum 300 watts shall not be accepted.

- c) Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.
- d) PV modules must be tested and approved by one of the IEC authorized test centres.
- e) The module frame shall be made of corrosion resistant materials, preferably having anodized aluminium.
- f) The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid. GIPCL/owners shall allow only minor changes at the time of execution.
- g) Other general requirement for the PV modules and subsystems shall be the Following:
 - I. The rated output power of any supplied module shall have tolerance within +/- 3%.
 - II. The peak-power point voltage and the peak-power point current of any supplied module and/orAny module string(series connected modules) shall not vary by more than 2 (two) percent from the respective arithmetic meansfor all modules and/or for all modulestrings, as the case may be.
 - III. 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.

IV. I-V curves at STC should be provided by bidder.

Solar PV modules

Plants installed in high dust geographies like Rajasthan and Gujarat must have the solar modules tested with relevant dust standards (Applicable standard would be IEC 60068-2-68).

1.1.3Modules deployed must use a RF identification tag. The following information must be mentioned in the RFID used on each modules. This should be inside the laminate only.



- a) Name of the manufacturer of the PV
- b) Module Name of the manufacturer of Solar Cells.
- c) Month & year of the manufacture (separate for solar cells and modules)
- d) Country of origin (separately for solar cells and module)
- e) I-V curve for the module Wattage, I_m , V_m and FF for the module
- f) Unique Serial No and Model No of the module
- g) Date and year of obtaining IEC PV module qualification certificate.
- h) Name of the test lab issuing IEC certificate.
- i) Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001.

1.1.4 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.

1.2 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 insolation. 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 (like Delhi-wind speed of 150 km/ hour). 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 GIPCL. 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. **Aluminium structures also can be used which can withstand the wind speed of respective wind zone.** Protection towards rusting need to be provided either by coating or anodization.
- e) Aluminium frames should be avoided for installations in coastal areas.
- f) 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
- g) 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.
- h) The total load of the structure (when installed with PV modules) on the terrace should be less than 60 kg/m².
- i) The minimum clearance of the structure from the roof level should be 300 mm.

1.3 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.
- e) All fuses shall have DIN rail mountable fuse holders and shall be housed in thermoplastic IP 65 enclosures with transparent covers.

1.4 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 necessary surge arrestors.

1.5 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).

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	+/- 5 Hz

1.6 PCU/ARRAY SIZE RATIO:

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

1.7 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	IG BT/MOSFET
Control	Microprocessor /DSP
Nominal AC output voltage and frequency	415V, 3 Phase, 50 Hz (In case single phase inverters are offered, suitable arrangement for balancing the phases must be made.)
Output frequency	50 Hz
Grid Frequency Synchronization	+/- 5 Hz



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

range	
Ambient temperature considered	-20° C to 50° C
Humidity	95 % Non-condensing
Protection of Enclosure	IP-20(Minimum) for indoor. IP-65(Minimum) for outdoor.
Grid Frequency Tolerance range	+/- 5 Hz
Grid Voltage tolerance	-0.20.15
No-load losses	Less than 1% of rated power
Inverter efficiency(minimum)	>93% (In case of 10 kW or above with in-built galvanic isolation) >97% (In case of 10 KW or above without inbuilt galvanic isolation)
Inverter efficiency (minimum)	> 90% (In case of less than 10 kW)
THD	< 3%
PF	> 0.9

- Three phase PCU/ inverter shall be used with each power plant system (10kW and/or above) but in case of less than 10kW single phase inverter can be used.
- PCU/inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown.
- 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.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

- d) Built-in meter and data logger to monitor plant performance through external computer shall be provided.
- e) **Anti-islanding** (Protection against Islanding of grid): The PCU shall have anti islanding protection in conformity to IEEE 1547/UL 1741/ IEC 62116 or equivalent BIS standard.
- f) Successful Bidders shall be responsible for galvanic isolation of solar roof top power plant (>100kW) with electrical grid or LT panel.
- g) In PCU/Inverter, there shall be a direct current isolation provided at the output by means of a suitable isolating transformer. If Isolation Transformer is not incorporated with PCU/Inverter, there shall be a separate Isolation Transformer of suitable rating provided at the output side of PCU/PCU units for capacity more than 100 kW.
- h) The PCU/ inverter generated harmonics, flicker, DC injection limits, Voltage Range, Frequency Range and Anti-Islanding measures at the point of connection to the utility services should follow the latest CEA (Technical Standards for Connectivity Distribution Generation Resources) Guidelines.
- i) 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.
- j) The MPPT units environmental testing should qualify IEC 60068-2 (1, 2, 14, 30)/ Equivalent BIS std. The junction boxes/ enclosures should be IP 65 (for outdoor)/ IP 54 (indoor) and as per IEC 529 specifications.
- k) 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.

2 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. Once the DG set comes into service, PV system shall again be synchronized with DG supply and load requirement would be met to the extent of availability of power. 4 pole isolation of inverter output with respect to the grid/ DG power connection need to be provided.

3 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. 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.
- 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
- 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. PV array energy production: Digital Energy Meters to log the actual value of AC/ DC voltage, Current & Energy generated by the PV system provided. Energy meter along with CT/PT should be of 0.5 accuracy class.
- viii. 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.
- ix. 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.
- x. Computerized AC energy monitoring shall be in addition to the digital AC energy meter.
- xi. 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.
- xii. All instantaneous data shall be shown on the computer screen.
- xiii. Software shall be provided for USB download and analysis of DC and AC parametric data for individual plant.
- xiv. Provision for instantaneous Internet monitoring and download of historical data shall be also incorporated.
- xv. 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.



-
- xvi. Ambient / Solar PV module back surface temperature shall be also monitored on continuous basis.
- xvii. 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.
- xviii. Remote Monitoring and data acquisition through Remote Monitoring System software at the owner / GIPCL location with latest software/hardware configuration and service connectivity for online / real time data monitoring / control complete to be supplied and operation and maintenance / control to be ensured by the bidder.
- xix. The bidders shall be obligated to push real-time plant monitoring data on a specified intervals (say 15 minute) through open protocol at receiver location (cloud server) in XML/JSON format, preferably. Suitable provision in this regard will be intimated to the bidders.

4 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 bidirectional electronic energy meter (0.5 S class) shall be installed for the measurement of import/Export of energy.
- c) 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 GIPCL before commissioning of SPV plant.
- d) Reverse power relay shall be provided by bidder (if necessary), as per the local DISCOM requirement.

5 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 GIPCL or MNRE. 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:

6.1 LIGHTNING PROTECTION

- a) 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 NFC 17-102:2011 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.

6.2 SURGE PROTECTION

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

6.3 EARTHING PROTECTION

- a) Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-1987. 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 Department/GIPCL as and when required after earthing by calibrated earth tester. PCU, ACDB and DCDB should also be earthed properly.
- b) 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.

6.4 GRID ISLANDING:

- a) 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.

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

7 CABLES

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

- i. Voltage rating 660/1000V
- ii. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
- iii. Flexible
- iv. Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum (2%)
- v. For the DC cabling, XLPE or, XLPO insulated and sheathed, UV-stabilized single core multi-stranded flexible copper cables shall be used; Multi-core cables shall not be used.
- vi. For the AC cabling, PVC or, XLPE insulated and PVC sheathed single or, multi-core multi-stranded flexible copper cables shall be used; Outdoor AC cables shall have a UV- stabilized outer sheath.
- vii. The cables (as per IS) should be insulated with a special grade PVC



compound formulated for outdoor use. Outer sheath of cables shall be electron beam cross-linked XLPO type and black in colour.

- viii. The DC cables from the SPV module array shall run through a UV-stabilized PVC conduit pipe of adequate diameter with a minimum wall thickness of 1.5mm.
- ix. Cables and wires used for the interconnection of solar PV modules shall be provided with solar PV connectors (MC4) and couplers
- x. All cables and conduit pipes shall be clamped to the rooftop, walls and ceilings with thermo-plastic clamps at intervals not exceeding 50 cm; the minimum DC cable size shall be 4.0 mm² copper; the minimum AC cable size shall be 4.0 mm² copper. In three phase systems, the size of the neutral wire size shall be equal to the size of the phase wires.
- xi. 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. In addition, cable drum no. / Batch no. to be embossed/ printed at every one meter.
- xii. Cable Jacket should also be electron beam cross-linked XLPO, flame retardant, UV resistant and black in colour.
- xiii. All cables and connectors for use for installation of solar field must be of solar grade which can withstand harsh environment conditions including High temperatures, UV radiation, rain, humidity, dirt, salt, burial and attack by moss and microbes for 25 years and voltages as per latest IEC standards. DC cables used from solar modules to array junction box shall be solar grade copper (Cu) with XLPO insulation and rated for 1.1kV as per relevant standards only.
- xiv. The ratings given are approximate. Bidder to indicate size and length as per system design requirement. All the cables required for the plant shall be provided by the bidder. Any change in cabling sizes if desired by the bidder shall be approved after citing appropriate reasons. All cable schedules/ layout drawings shall be approved prior to installation.



- xv. Multi Strand, Annealed high conductivity copper conductor PVC type 'A' pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection Armoured 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.
- xvi. The total voltage drop on the cable segments from the solar PV modules to the solar grid inverter shall not exceed 2.0%.
- xvii. The total voltage drop on the cable segments from the solar grid inverter to the building distribution board shall not exceed 2.0%.

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

- xix. Temp. Range: -10°C to +80°C

8 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 10 kW	240V-single phase or 415V-three phase at the option of the consumer
Above 10kW and up to 100 kW	415V - three phase
Above 100kW	At HT/EHT level (11kV/33kV/66kV) as per DISCOM rules



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

- a) The maximum permissible capacity for rooftop shall be 1 MW for a single net metering point.
- b) Utilities may have voltage levels other than above, DISCOMS may be consulted before finalization of the voltage level and specification be made accordingly.
- c) For large PV system (Above 100 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.

9 TOOLS & TACKLES AND SPARES:

- a) 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 GIPCL/ owner.
- b) A list of requisite spares in case of PCU/inverter comprising of a set of control logic cards, IGBT driver cards etc. Junction Boxes. Fuses, MOVs / arrestors, MCCBs etc along with spare set of PV modules be indicated, which shall be supplied along with the equipment. A minimum set of spares shall be maintained in the plant itself for the entire period of warranty and Operation & Maintenance which upon its use shall be replenished.

10 DANGER BOARDS AND SIGNAGES:

- a) 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 battery -cum- control room, solar array area and main entry from administrative block. Text of the signage may be finalized in consultation with GIPCL/ owner.

11 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.

12 DRAWINGS & MANUALS:

- a) Two sets of Engineering, electrical drawings and Installation and O&M manuals are to be supplied. Bidders shall provide complete technical data sheets for each equipment giving detail of the specifications along with make/makes in their bid along with basic design of the power plant and power evacuation, synchronization along with protection equipment.
- b) Approved ISI and reputed makes for equipment be used.
- c) For complete electro-mechanical works, bidders shall supply complete design, details and drawings for approval to GIPCL/owners before progressing with the installation work

13 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 GIPCL/Owner for approval.
- b) GIPCL 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 bidder submit three sets and soft copy in CD of final drawing for formal approval to proceed with construction work.

14 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



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

15 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 upto 90% of the annual energy requirements depending upon the area of rooftop available and the remaining energy requirement of the office buildings will be met by drawing power from grid at commercial tariff of DISCOMs.

16 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.

DISPLAY BOARD

The bidder has to display a board at the project site (above 25 kWp) mentioning the following:

- a. Plant Name, Capacity, Location, Date of commissioning, estimated Power generation.
- b. Financial Assistance details from GIPCL/MNRE/Any other financial institution apart from loan. This information shall not be limited to project site but also be displayed at site offices/head quarter offices of the successful bidder
- c. The size and type of board and display shall be approved by Engineer-in-charge before site inspection.

Please refer **Annexure-E** for IEC standards to be mandatorily adhered.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

PART – VII

SAMPLE FORMS & FORMATS



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

FORMATS FOR SUBMITTING RFS

FORMAT 1

COVERING LETTER

(The covering letter should be on the Letter Head of the Bidding Company)

Date: _____ Ref. No.-----
From: (Insert name and address of Bidding Company)

Tel.#: _____

Fax#:

E-mail address#

To

Gujarat Industries Power company Limited
PO: Petrochemicals
Dist: Vadodara
Gujarat 391346

Sub: Bid for “For Implementation of 25 KWp Grid Connected Rooftop Solar PV Systems for NABL Laboratory , Gurgaon (Under CAPEX model)”

Dear Sir,

1. We, the undersigned....[insert name of the 'Bidder'] have read, examined and understood in detail the RFS Document for Implementation of Grid connected Roof Top Solar PV System Scheme hereby submit our Bid comprising of Price Bid and Techno Commercial Bid. We confirm that neither we nor any of our Parent Company / Affiliate/Ultimate Parent Company has submitted Bid other than this Bid directly or indirectly in response to the aforesaid RFS.
2. We give our unconditional acceptance to the RFS, dated----- and RFS Documents attached thereto, issued by Gujarat Industries Power Company Limited, as amended. As a token of our acceptance to the RFS Documents, the same have been initialled by us and enclosed to the Bid. We shall ensure that we execute such RFS Documents as per the provisions of the RFS and provisions of

(Sign and Seal of Bidder)

Page 79 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

such RFS Documents shall be binding on us.

3. Bid Capacity

We have bid for the for the capacity of ____ KWp.

4. Bid Bond

We have enclosed a Bid Bond of Rs (Insert Amount), in the form of bank
Guarantee no (Insert number of the bank guarantee) dated
..... [Insert Date of bank guarantee] as per Format from
..... (Insert name of bank Providing Bid Bond) and valid up to in
terms of Clause of this RFS. The offered quantum of power by us is
..... KWp in CAPEX Model .

5. We have submitted our Price Bid strictly as per this RFS, without any deviations, conditions and without mentioning any assumptions or notes for the Price Bid in the said format(s).
6. In case we are a Successful Bidder, we shall furnish a declaration at the time of commissioning of the Project to the affect that neither we have availed nor we shall avail in future any incentive other than received from GIPCL for implementation of the project.

7. Acceptance

We hereby unconditionally and irrevocably agree and accept that the decision made by Gujarat Industries Power Company Limited, Vadodara in respect of any matter regarding or arising out of the RFS shall be binding on us. We hereby expressly waive any and all claims in respect of Bid process.

We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfil our obligations with regard to execution of projects of capacity offered by us.

8. Familiarity with Relevant Indian Laws & Regulations

We confirm that we have studied the provisions of the relevant Indian laws and regulations as required to enable us to submit this Bid and execute the RFS Documents, in the event of our selection as Successful

(Sign and Seal of Bidder)

Page 80 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Bidder. We further undertake and agree that all such factors as mentioned in RFS have been fully examined and considered while submitting the Bid.

9. Contact Person

Details of the contact person are furnished as under:

Name :

Designation :

Company :

Address :

Phone Nos. :

Fax Nos. :

E-mail address :

10. We are enclosing herewith the Envelope-I (Covering letter, Processing fee and Bid Bonds etc as per clause 3.8.1.1.A of the RfS) (through Offline) and Envelope-II (Techno-Commercial documents) (through online) and Envelope III (Price Bids) (through online) containing duly signed formats, each one duly sealed separately, in one original as desired by you in the RFS for your consideration as per clause 3.8.1 of the RfS.

It is confirmed that our Bid is consistent with all the requirements of submission as stated in the RFS and subsequent communications. The information submitted in our Bid is complete, strictly as per the requirements stipulated in the RFS and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of 6 month from the Bid deadline. We confirm that we have not taken any deviation so as to be deemed non-responsive.

Dated the-----day of-----,20-----

Thanking you,

We remain,

Yours faithfully,

Name, Designation and Signature of Authorized Person in whose name Power of

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Attorney/Board Resolution.

Format-2

GENERAL PARTICULARS OF THE BIDDER

	Name of the Company	
	Registered Office Address	
	E-mail	
	Web site	
	Authorized Contact Person(s) with name, designation Address and Mobile Phone No., E-mail address/ Fax No. to whom all references shall be made	
	Year of Incorporation	
	Have the bidder/Company ever been debarred By any Govt. Dept. / Undertaking for undertaking any work.	
	Reference of any document information attached by the Bidder other than specified in the RFS.	
	Whether the Bidder wishes to form a Project Company for execution of work	Yes/No
	Bidding company is listed in India	Yes/No
	Details of the Ownership structure (Details of persons owning 10% or more of the Total Paid up equity of the Bidding Company in the Format as below	
	Whether company is MSE as on the bidding date	Yes/No

(Signature of Authorized Signatory)

With Stamp

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Format-A (Shareholding certificate)

Name of the Equity holder	Type and Number of shares owned	% of equity holding	Extent of Voting rights

(Signature of Authorized Signatory)

With Stamp

(Signature of Company Secretary/Director/Chartered Accountant)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Format-3

PROFORMA FOR BANK GUARANTEE FOR EARNEST MONEY DEPOSIT (EMD)

(To be stamped in accordance with stamp Act.)

Ref..... Bank Guarantee No..... Date.....

Guarantee cover period: From: To:

Last date of lodgments of claim:

(same as expiry date)

To,

GUJARAT INDUSTRIES POWER COMPANY LTD.,

P.O.- Petrochemicals,

DIST: Vadodara-391346.

Dear Sirs,

In accordance with your "Request for Proposal" under your specification and dated M/S. having its Registered/Head Office at..... (herein after called the "Contractor") wish to participate in the said Tender for **Development of 25 KWp Solar Roof Top Project in Vadodara, on EPC Basis by** Gujarat Industries Power Company Ltd. An unconditional and irrevocable Bank Guarantee against Tender guarantee for an amount of Rs. _____ (**Rupees** _____ **only**) valid for **120 days** from _____ 2016 required to be submitted by the Contractor, as a condition precedent for participation in the said Tender, which amount is liable to be forfeited on the happening of any contingencies mentioned in the Tender Documents.

We, the Bank at (local address) having our Head Office at guarantee and undertake to pay immediately on written demand by Gujarat Industries Power Company Limited (herein after called the "Company") **Rs.** _____ /- (**Rupees** _____ **Only**) without any reservation protest, demur and recourse. Any such demand made by the Company shall be conclusive and binding on us irrespective

(Sign and Seal of Bidder)

Page **84** of **124**



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

of any dispute or difference raised by the contractor. It shall be conclusive and enough for enforcement of Bank Guarantee on the bank if the Company invokes the Bank Guarantee stating only that the default has been committed by the Contractor, thus far and no further.

This guarantee shall be irrevocable and shall remain valid up to **120 days** from the due date of Tender. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instructions from..... on whose behalf the guarantee is issued.

In witness there of Bank, through its authorized Officer, has set its hand and stamp on this
..... day of2016 at

Signature: _____

Designation with Bank Stamp: _____

Name:

Address:

Seal of the Bank:

Phone:

Attorney as per Power of Attorney No.

Dated:

Notes:

1. The Guarantee validity should **120 days** from last date of Bid submission.
2. The stamp papers of appropriate value shall be purchased in the Name of Guarantee Issuing Bank.
3. The Bank Guarantee by the Bidder shall be given from the any of the Banks listed in Annexure - B

(Sign and Seal of Bidder)

Page **85** of **124**



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Format-4

FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)-FOR CAPEX MODEL

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

In consideration of the — [Insert name of the Bidder] (hereinafter referred to as selected Solar Power Developer') submitting the response to RfS inter alia for selection of the Projects of the capacity of kWp / under Roof Top scheme in response to the RfS no -----

issued by Gujarat Industries Power Company Limited (hereinafter referred to as ---dated----- GIPCL) and

GIPCL considering such response to the RfS of ----- [insert the name of the selected Solar Power Developer] (which expression shall unless repugnant to the context or meaning thereof include its executors, administrators, successors and assignees) and selecting the Solar Power Project of the Solar Power Developer and issuing Letter of allocation No----- to -----(Insert Name of selected Solar Power Developer) as per terms of RfS and the same having been accepted by the selected SPD or a Project Company, M/s {a Special Purpose Vehicle (SPV) formed for this purpose}, if applicable]. As per the terms of the RfS, the ----- [insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to GIPCL at ----- [Insert Name of the Place from the address of the GIPCL] forthwith on demand in writing from GIPCL or any Officer authorised by it in this behalf, any amount upto and not exceeding Rupees [Total Value] only, on behalf of M/s [Insert name of the selected Solar Power Developer / Project Company]

This guarantee shall be valid and binding on this Bank up to and including----- and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs.-----

Our Guarantee shall remain in force until GIPCL shall be entitled to invoke this Guarantee till-----

The Guarantor Bank hereby agrees and acknowledges that GIPCL shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand

(Sign and Seal of Bidder)

Page 86 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

by GIPCL, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to GIPCL.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by ----- [Insert name of the selected bidder]. The Guarantor Bank shall not require GIPCL to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against GIPCL in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at Vadodara shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly GIPCL shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the selected Solar Power Developer / Project Company , to make any claim against or any demand on the Successful bidder or to give any notice to the selected Solar Power Developer / Project Company or to enforce any security held by GIPCL or to exercise, levy or enforce any distress, diligence or other process against the selected Solar Power Developer / Project Company .

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. ----- (Indian Rs.----- only) and it shall remain in force until ----- We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if GIPCL serves upon us a written claim or demand.

Signature _____

Name _____

(Sign and Seal of Bidder)

Page 87 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Power of Attorney No. _____

For

_____ [Insert Name of the Bank] _____

Banker's Stamp and Full Address.

Dated this _____ day of _____ , 20 _

Witness:

1

Signature

Name and Address

2

Signature

Name and Address

Notes:

The Stamp Paper should be in the name of the Executing Bank and of appropriate value.

The Performance Bank Guarantee (PBG) shall be executed by any of the Bank from the List of Banks enclosed as Annexure-B



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Format-5

CHECK LIST FOR BANK GUARANTEES

Sl.No.	Details of checks	YES/NO.
a)	Is the BG on non-judicial Stamp paper of appropriate value, as per applicable Stamp Act of the place of execution	
b)	Whether date, purpose of purchase of stamp paper and name of the purchaser are indicated on the back of Stamp paper under the Signature of Stamp vendor? (The date of purchase of stamp paper should be not later than the date of execution of BG and the stamp paper should be purchased either in the name of the executing Bank or the party on whose behalf the BG has been issued. Also the Stamp Paper should not be older than six months from the date of execution of BG).	
c)	Has the executing Officer of BG indicated his name, designation and Power of Attorney No./Signing Power no. on the BG?	
d)	Is each page of BG duly signed / initialled by executant and whether stamp of Bank is affixed thereon? Whether the last page is signed with full particulars including two witnesses under seal of Bank as required in the prescribed Performa?	
e)	Does the Bank Guarantees compare verbatim with the Performa prescribed in the Bid Documents?	
f)	Are the factual details such as Bid Document No. / Specification No., / LOI No. (if applicable) / Amount of BG and Validity of BG correctly mentioned in the BG	
g)	Whether overwriting/cutting if any on the BG have been properly authenticated under signature & seal of executants?	
h)	Contact details of issuing bank including email id, mobile number etc.	

(Sign and Seal of Bidder)

Page 89 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Format-6

POWER OF ATTORNEY

To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

Power of Attorney to be provided by the Bidding Company in favour of its representative as evidence of authorized signatory's authority.

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

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

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

Signed by the within named

(Sign and Seal of Bidder)

Page 90 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018
Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

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

through the..... hand of Mr.
duly authorized by the Board to issue such Power of Attorney

Dated this day of

Accepted

.....

Signature of Attorney

(Name, designation and address of the Attorney)

Attested

.....

(Signature of the executant)

(Name, designation and address of the executant)

.....

Signature and stamp of Notary of the place of execution

Common seal of has been affixed in my/our presence pursuant to Board

of Director's Resolution dated

WITNESS:

1)

2)

(Sign and Seal of Bidder)

Page 91 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Notes:

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

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

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



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Format 7

**FINANCIAL ELIGIBILITY CRITERIA REQUIREMENT (As per clause 5.2, Part II)
(To be submitted on letterhead of the bidding company)**

To,

Gujarat Industries Power Company Limited
PO: Petrochemicals
Dist: Vadodara
Gujarat 391346

Dear Sir,

**Sub: Bid for Implementation of Grid connected Roof Top Solar PV System scheme in response to the
RFS No: GIPCL/RTS/DEV/2018 18.01.2018**

We submit our Bid/Bids for the total capacity of _____ KWp, in CAPEX Model put together for which details of our Financial Eligibility Criteria Requirements are as follows. Further, we certify that the Financially Evaluated Entity (ies) had an Annual Turnover or

Net worth (strike out whichever is not applicable) of Rs Crore computed as per Instructions provided in Clause 3.3.2 of this RFS based on unconsolidated audited annual accounts (refer Note-1 below) any of the last 3 Years immediately preceding the Bid Deadline.

Name of Financially Evaluated Entity*	Relationship with Bidding Company**	Financial year	Year of Incorporation	Annual Turnover (Rs. Crore)	Net worth as per Clause 3.3.2 (in Rs. Crore)

The Financially Evaluated Entity may be the Bidding Company itself.

** The column for "Relationship with Bidding Company" is to be filled in only in case financial capability of Parent Company and/or Affiliate has been used for meeting Qualification Requirements.

(Sign and Seal of Bidder)

Page 93 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Yours faithfully

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

Place:

Name:

Date:

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

Name:

Date:

Place:

Notes:

Audited consolidated annual accounts of the Bidder may also be used for the purpose of financial criteria provided the Bidder has at least 26% equity in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Bid.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Format-8

Format for certificate of relationship of Parent Company or Affiliate with the Bidding Company.

To,

Dear Sir,

Sub: Bid for Implementation of Grid connected Roof Top Solar PV System Scheme.

We hereby certify that M/s,M/s ,M/s are the Affiliate(s) /Parent Company of the Bidding Company as per the definition of Affiliate/Parent Company as provided in this RFS and based on details of equity holding as on seven (7) days prior to the Bid Deadline.

The details of equity holding of the Affiliate/Parent Company/Bidding Company or vice versa as on seven (7) days prior to the Bid Deadline are given as below:

Name of Bidding Company	Name of the Affiliate of the Bidding Company/ Name of the Parent Company of the Bidding Company	Name of the Company having common control on the Affiliate and the Bidding Company	Percentage of Equity Holding of Parent Company in the Bidding Company

(Insert Name and Signature of Statutory Auditor or practising Company Secretary of the

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Bidder)

Format-9

**Undertaking from the Financially Evaluated Entity or its Parent Company/
Ultimate Parent Company**

**(On the Letter Head of the Financially Evaluated Entity or its Parent
Company/Ultimate Parent Company)**

Name:

Full Address:

Telephone No.:

E-mail address:

Fax/No.:

To,

.....

Dear Sir,

We refer to the RFS No dated for "Implementation of Grid connected Solar Roof
Top PV System Scheme.

"We have carefully read and examined in detail the RFS, including in particular, Clause of the RFS,
regarding submission of an undertaking, as per the prescribed Format 9 of the RFS.

We confirm that M/s (Insert name of Bidding Company/) has been authorized by us to
use our financial capability for meeting the Financial Eligibility as specified in Clause.... of the RFS
referred to above.

We have also noted the amount of the Performance Guarantee required to be submitted as per
Clause....of the RFS the..... (Insert the name of the Bidding Company) in the event of it being
selected as the Successful Bidder".

(Sign and Seal of Bidder)

Page 96 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

In view of the above, we hereby undertake to you and confirm that in the event of failure of
.....(Insert name of the Bidding Company) to submit the Performance Guarantee in full or in part at any
stage, as specified in the RFS, we shall submit the Performance Guarantee not submitted by
.....(Insert name of the Bidding Company)".

We have attached hereto certified true copy of the Board Resolution Whereby the Board of Directors of our
Company has approved issue of this Undertaking by the Company.

All the terms used herein but not defined, shall have the meaning as ascribed to the said terms under the RFS.

Signature of Authorised Signatory

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

WITNESS

.....

(Signature)

Name

Designation

.....

Signature)

Name

Designation

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Annexure-A

DOCUMENTS REQUIRED FOR PROJECT SANCTION

Following documents will be required to be submitted for project sanction:

1. Agreement between the bidder and the owner of the Project and Building/Roof top (Notarised original agreement on stamp paper of appropriate value should be enclosed).
2. All Agreement shall generally have reference to the GIPCL's RFS No.... and Letter of Allocation and provisions as per terms and conditions, technical specification and performance parameter in line with the GIPCL's RFS Document against which Letter of Allocation has been issued. In addition, it shall indicate the price / tariff payable by the roof top Owner to the developer, payment terms, completion period along with other conditions of contract like insurance, warranty, force majeure, arbitration, jurisdiction, governing law, site access for the developer, and, site access for GIPCL officials for the entire plant life, obligation of the roof top owner regarding providing of data to GIPCL as per the RFS Document etc.
3. No Objection Certificate from the concerned DISCOM for grid connectivity or CEIG approval (In case CEIG approval is suffice for grid connectivity). Undertaking of Successful Bidder on stamp Paper for indemnification of GIPCL shall be furnished in case approval of CEIG is only furnished for grid connectivity.
(Not mandatory during project identification, however mandatory for project commissioning/operation).
4. Summary Project Report (2-3 pages only) as per Format at **Annexure F**.
5. **GIPCL Service Charges:** DD / Bankers cheque for an amount as per clause no 2.2 of Part-IV (GCC), drawn in favour of Gujarat Industries power Company Limited, Vadodara against payment of GIPCL Service Charges.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

List of Banks

Annexure B

SCHEDULED COMMERCIAL BANKS

A SBI AND ASSOCIATES

1. State Bank of India
2. State Bank of Bikaner & Jaipur
3. State Bank of Hyderabad
4. State Bank of Mysore
5. State Bank of Patiala
6. State Bank of Travancore

B NATIONALISED BANKS

1. Allahabad Bank
2. Andhra Bank
3. Bank of India
4. Bank of Maharashtra
5. Canara Bank
6. Central Bank of India
7. Corporation Bank
8. Dena Bank
9. Indian Bank
10. Indian Overseas Bank
11. Oriental Bank of Commerce
12. Punjab National Bank
13. Punjab & Sind Bank



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

14. Syndicate Bank
15. Union Bank of India
16. United Bank of India
17. UCO Bank
18. Vijaya Bank
19. Bank of Baroda
20. Bhartiya Mahila Bank

C SCHEDULED PRIVATE BANKS (INDIAN BANKS)

- 1 Catholic Syrian Bank
- 2 City Union Bank
- 3 Dhanlaxmi Bank Ltd.
- 4 Federal Bank Ltd
- 5 Jammu & Kashmir Bank Ltd
- 6 Karnataka Bank Ltd
- 7 Karur Vysya Bank Ltd
- 8 Lakshmi Vilas Bank Ltd
- 9 Nainital Bank Ltd
- 10 Kotak Mahindra Bank
- 11 RBL Bank Ltd
- 12 South Indian Bank Ltd
- 13 Tamilnadu Mercantile Bank Ltd
- 14 ING Vysya Bank Ltd
- 15 Axis Bank Ltd.
- 16 IndusInd Bank Ltd
- 17 ICICI Bank
- 18 HDFC Bank Ltd.
- 19 DCB Bank Ltd
- 20 Yes Bank Ltd



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

21 IDFC Bank Ltd.

22 Bandhan Bank Ltd

D SCHEDULED PRIVATE BANKS (FOREIGN BANKS)

1 Abu Dhabi Commercial Bank Ltd

2 Bank of America NA

3 Bank of Bahrain & Kuwait B.S.C.

4 Mashreq Bank p.s.c.

5 Bank of Nova Scotia

6 Crédit Agricole Corporate and Investment Bank

7 BNP Paribas

8 Barclays Bank

9 Citi Bank N.A.

10. Deutsche Bank A.G.

11. The HongKong Shanghai Banking Corporation Ltd

12. Societe Generale

13. Sonali Bank Ltd.

14. Standard Chartered Bank

15. J.P. Morgan Chase Bank, National Association

16. State Bank of Mauritius Ltd.

17. DBS Bank Ltd.

18. Bank of Ceylon

19. Bank Internasional Indonesia

20. A B Bank

21. Shinhan Bank.

22. CTBC Bank Co. Ltd.

23. Mizuho Bank Ltd

24. Krung Thai Bank Public Company Ltd.



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

25. KBC Bank N.V.
26. The Bank of Tokyo-Mitsubishi UFJ Limited.
27. Austalia & Newzealand Banking Group Limited
28. Sumitomo Mitsui Banking Corporation
29. American Express Banking Corporation
30. Common Wealth Bank of Australia
31. Credit Suisse A.G.
32. First Rand Bank Ltd.
33. Industrial & Commercial Bank of China Ltd.
34. JSC VTB Bank
35. National Australia Bank
36. Rabobank International
37. Sberbank
38. UBS AG
39. United Overseas Bank Ltd.
40. Westpac Banking Corporation
41. Woori Bank
42. The Royal Bank of Scotland N.V.
43. Doha Bank Qsc
44. Industrial Bank of Korea
45. Korea Exchange Bank Co. Ltd.

E OTHER PUBLIC SECTOR BANKS

1. IDBI Bank Ltd



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Annexure-D

Operation and Maintenance Guidelines of Grid Connected PV Plants

For the optimal operation of a PV plant, maintenance must be carried out on a regular basis.

All the components should be kept clean. It should be ensured that all the components are fastened well at their due place.

Maintenance guidelines for various components viz. solar panels, inverter, wiring etc. are discussed below:

1. SOLAR PANELS

Although the cleaning frequency for the panels will vary from site to site depending on soiling, it is recommended that

- a) The panels are cleaned at least once every fifteen days.
- b) Any bird droppings or spots should be cleaned immediately.
- c) Use water and a soft sponge or cloth for cleaning.
- d) Do not use detergent or any abrasive material for panel cleaning.
- e) Iso-propyl alcohol may be used to remove oil or grease stains.
- f) Do not spray water on the panel if the panel glass is cracked or the back side is perforated.
- g) Wipe water from module as soon as possible.
good time for module cleaning.
- j) Check if there are any shade problems due to vegetation or new building. If there are, make arrangements for removing the vegetation or moving the panels to a shade-free place.
- k) Ensure that the module terminal connections are not exposed while cleaning; this poses a risk of electric shock.
- l) Never use panels for any unintended use, e. g. drying clothes, chips etc.
- m) Ensure that monkeys or other animals do not damage the panels.

2. CABLES AND CONNECTION BOXES

- a) Check the connections for corrosion and tightness.

(Sign and Seal of Bidder)

Page 103 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

- b) Check the connection box to make sure that the wires are tight, and the water seals are not damaged.
- c) There should be no vermin inside the box.
- d) Check the cable insulating sheath for cracks, breaks or burns. If the insulation is damaged, replace the wire.
- e) If the wire is outside the building, use wire with weather-resistant insulation.
- f) Make sure that the wire is clamped properly and that it should not rub against any sharp edges or corners.
- g) If some wire needs to be changed, make sure it is of proper rating and type.

3. INVERTER

- a) The inverter should be installed in a clean, dry, and ventilated area which is separated from, and not directly above, the battery bank.
- b) Remove any excess dust in heat sinks and ventilations. This should only be done with a dry cloth or brush.
- c) Check that vermin have not infested the inverter. Typical signs of this include spider webs on ventilation grills or wasps' nests in heat sinks.
- d) Check functionality, e.g. automatic disconnection upon loss of grid power supply, at least once a month.
- e) Verify the state of DC/AC surge arrestors, cable connections, and circuit breakers.

4. SHUTTING DOWN THE SYSTEM

- a) Disconnect system from all power sources in accordance with instructions for all other components used in the system.
- b) Completely cover system modules with an opaque material to prevent electricity from being generated while disconnecting conductors.
- c) To the extent possible, system shutdown will not be done during day time or peak generation.

INSPECTION AND MAINTENANCE SCHEDULE

Component	Activity	Description	Interval	By
PV Module	Cleaning	Clean any bird droppings/ dark spots on module	Immediately	User/Technician
	Cleaning	Clean PV modules with plain water or mild dishwashing detergent. Do not use brushes, any types	Fortnightly or as per the site conditions	User/Technician

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

		of solvents, abrasives, or harsh detergents.		
	Inspection (for plants > 100 kWp)	Use infrared camera to inspect for hot spots; bypass diode failure	Annual	Technician

Component	Activity	Description	Interval	By
PV Array	Inspection	Check the PV modules and rack for any damage. Note down location and serial number of damaged modules.	Annual	User/Technician
	Inspection	Determine if any new objects, such as vegetation growth, are causing shading of the array and move them if possible.	Annual	User/Technician
	Vermin Removal	Remove bird nests or vermin from array and rack area.	Annual	User/Technician
Junction Boxes	Inspection	Inspect electrical boxes for corrosion or intrusion of water or insects. Seal boxes if required.	Annual	Electrician

(Sign and Seal of Bidder)

Page 105 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

		Check position of switches and breakers. Check operation of all protection devices.		
Wiring	Inspection	Inspect cabling for signs of cracks, defects, loose connections, overheating, arcing, short or open circuits, and ground faults.	Annual	Electrician
Inverter	Inspection	Observe	Monthly	Electrician
Component	Activity	Description	Interval	By
		instantaneous operational		
		indicators on the faceplate		
		of the inverter to ensure		
		that the amount of power		
		being generated is typical		
		of the conditions.		
		Inspect Inverter housing or		
		shelter for physical		
		maintenance, if required.		
Inverter	Service	Clean or replace any air	As needed	Electrician
		filters.		
Instruments	Validation	Spot-check monitoring	Annual	PV Specialist

(Sign and Seal of Bidder)

Page 106 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

		instruments (pyranometer		
		etc.) with standard		
		instruments to ensure that		
		they are operational and		
		within specifications.		
Transformer	Inspection	Inspect transformer oil	Annual	Electrician
		level, temperature		
		gauges,		
		breather, silica gel,		
		meter,		
		connections etc.		
	Inspection	Inspect gears, gear boxes,	Annual	Technician
Tracker (if				
		bearings as required.		
present)				
	Service	Lubricate tracker	Bi-annual	Technician
		mounting		
		bearings, gearbox as		
		required.		
Plant	Monitoring	Daily Operation and	Daily	Site in charge
		Performance		
		Monitoring		
Component	Activity	Description	Interval	By
Spare Parts	Management	Manage inventory of	As needed	Site in charge
		spare		
		parts.		



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Log Book	Documentation	Document all O&M	Continuous	Site in charge
		activities in a workbook		
		available to all service		
		personnel		



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Annexure-E

Quality Certification, Standards and Testing for Grid-connected Rooftop Solar PV Systems/Power Plants

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

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 (NH ₃) 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

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)
--------------------------	---

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

IEC/IS 61683 (as applicable)	Photovoltaic Systems - Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)
IEC 62116/ UL 1741/ IEEE 1547 (as applicable)	Utility-interconnected Photovoltaic Inverters - Test Procedure of Islanding Prevention Measures
IEC 60255-27	Measuring relays and protection equipment - Part 27: Product safety requirements
IEC 60068-2 / IEC 62093 (as applicable)	Environmental Testing of PV System - Power Conditioners and Inverters

Fuses

IS/IEC 60947 (Part 1, 2 & 3), EN 50521	<p>General safety requirements for connectors, switches, circuit breakers (AC/DC):</p> <ul style="list-style-type: none"> 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
	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">(Sign and Seal of Bidder)</div> <div>Page 110 of 124</div> </div>



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

IEC 60269-6

Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for
the protection of solar photovoltaic energy systems

Surge Arrestors

BFC 17-102:2011

Lightening 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 6164311:2011	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 (as applicable)	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) (as applicable)	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 electrodes IEC 62561-7 Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds

(Sign and Seal of Bidder)

Page 111 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

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
Energy Meter	
IS 16444 or as specified by the DISCOMs	A.C. Static direct connected watt-hour Smart Meter Class 1 and 2 — Specification (with Import & Export/Net energy measurements)
Solar PV Roof Mounting Structure	
(IS 2062/IS 4759)	Material for the Structure Mounting

Note- Equivalent standards may be used for different system components of the plants. In case of clarification following person/agencies may be contacted.

- Ministry of New and Renewable Energy (Govt. of India)
- National Institute of Solar Energy
- The Energy & Resources Institute
- TUV Rheinland
- UL



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Annexure-F

PROJECT REPORT FORMAT

Format for Summary Project Report for Grid Connected Rooftop and Small SPV Power Plants

1. Name of Bidder
2. Rfs no.
3. Project details (Site location & Address)
4. Brief about the Rooftop Solar Power Generation System
5. Details of the beneficiary
6. Specifications of the Components and Bill of Material/ Quantities

Sl. no	Component	Specifications	Quantity	Make
A	Solar PV module			
A.1	Aggregate Solar PV capacity (kWp)			
B	Grid Tie inverter (Type and Capacity)			
B.1	Aggregate Inverter capacity (kVA)			
C	Module mounting structure (Certified by a Structural Engineer (Mandatory for 101 kWp to 500 kWp)			
D	Array Junction Box			
E	AC Distribution Board			
F	Cable (All type)			
G	Earthing Kit (maintenance free)			
H	Meters			
I	Online monitoring system			
J	Any other component			
K	Transformer			

7. Cost benefit analysis, payback period

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

8. Expected output/annum
9. Respective drawings for layout, electrical wiring connections, earthing, components etc.
10. Connectivity details with grid and metering arrangement (with sketch diagram)
11. Copy of electricity bill of the beneficiary and consumer number
12. Any other information.
13. Unit cost of solar power generation.
14. Documentary proof regarding beneficiary type as per clause 1.2 of the RfS,

(The above information should be limited up to 2-3 pages only)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Annexure G

Monthly O & M Report

Month and year:

Name of the bidder:

RFS ref no:

Project Capacity:

Address of the site:

For CAPEX

Component	Activity	Description	Date	Name / Signature	*Remarks
PV Module	Cleaning	Immediately clean any bird droppings/ dark spots on module.			
	Cleaning	Clean PV modules with plain water or mild dishwashing detergent.			
	Inspection (for plants > 100 kWp)	Infrared camera inspection for hot spots; bypass diode failure.			
PV Array	Inspection	Check the PV modules and rack for any damage.			
	Inspection	If any new objects, such as vegetation growth etc., are causing shading of the array. Remove if any.			
	Vermin Removal	Remove bird nests or vermin from array and rack area.			
Junction Boxes	Inspection	Inspect electrical boxes for corrosion, intrusion of water			

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

		or vermin. Check position of switches and breakers. Check status of all protection devices.			
Wiring	Inspection	Inspect cabling for signs of cracks, defects, loose connections, corrosion,			
Component	Activity	Description	Date	Name / Signature	*Remarks
		overheating, arcing, short or open circuits, and ground faults.			
Inverter	Inspection	<ul style="list-style-type: none"> • Observe instantaneous operational indicators on the faceplate. • Inspect Inverter housing or shelter for any physical maintenance. • Check for connection tightness. 			
Inverter	Service	Clean or replace any air filters.			
Instruments	Validation	Verify monitoring instruments (pyranometer etc.) with standard instruments to verify their operation within tolerance limits.			
Transformer	Inspection	Inspect transformer oil level, temperature gauges, breather, silica gel, meter, connections etc.			
Plant	Monitoring	Daily Operation and Performance Monitoring.			
Spare Parts	Management	Manage inventory of spare			

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

		parts.			
Log Book	Documentation	Maintain daily log records.			
Tracker (if any)	Inspection	Inspect gears, gear boxes, bearings, motors.			
	Service	Lubricate bearings, gear as required.			

*Provide details of any replacement of systems/components, damages, plant/inverter shut down (planned/forced), breakdown, etc under remarks.

*Daily register is to be maintained by the bidder at each location greater than 50 kWp. The same may be inspected by GIPCL or its authorised representative at any time 5 years of O&M period. The Register will have the information about the daily generation, Inverter downtime if any, Grid outages.

Date	Generation kWh	Grid outage (hh:mm)	Inverter down period (hh:mm)	Remarks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

Total generation for the month in kWh:

Cumulative generation since commissioning in kWh:

CUF for month in %:

Cumulative CUF since commissioning in %:

Date:

Signature of the Authorised
signatory of the Bidder



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Annexure H

Project Completion Report for Grid-Connected Rooftop			
Financial year * :			
Approval No. * :			
Proposal Title :			
Installed by agency :			
Project initiated by :			
Title of the Project* :		Capacity (kWp)*:	
Category of the organization / beneficiary* :		Name of the contact person* :	
Address of contact person* :			
State* :		District/City* :	
Mobile* :		Email* :	
Telephone No. :	STD code-	Website :	
Other info			
Electricity Distribution Company Name :			
Electricity consumer account no. as per electricity bill :		as on Date :	
Bank Details of Beneficiary			
Name of A/c holder :			
Name of Bank :			
Name of Branch and Address :			
Bank IFSC Code :			
9 Digit Micr Code :			
Type of Account :			
Account No. :			
Adhar Card Number :			
Technology Description & System Design /Specification			
(Compliance to BIS/IEC Standards is mandatory)			
1. Module			
Capacity/Power of each PV Module(Wp)* :	1. Capacity/Power 2. Capacity/Power		1. Nos: 2. Nos:
Cumulative Capacity of Modules(KWp):			
Solar cell technology :			
Module efficiency (in Percentage) :			
2. Inverters			

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Type of inverter :			
Make of inverter :			
Capacity/Power of each PCU/inverters (VA)* :	Capacity / Power Nos.		
Capacity/Power of PCU / inverters (KVA) :			
Inverter efficiency (Full load) :			
(in percentage)			
3. Metering Arrangement			
Details of Metering			
Type of Meter* :			
Make of Meter :			
4.. Other informations			
Units of electricity generated by the solar plant as per meter (in KWh):			
Monitoring Mechanism :			
No. of personnel to be trained in O&M			
Task & Expected Schedule(in Months)			
Grid connectivity level			
Grid connectivity level phase* :		Grid connectivity level Voltage* :	
Costing of Project			
Hardware cost :	Rs.	Total Cost of Installation :	Rs.
Means of Finance			
Envisaged Central Financial Assistance from MNRE*	Rs.		

(Sign and Seal of Bidder)

Page 120 of 124



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Subsidy from states if any	Rs.		
Contribution of Beneficiaries*	Rs.		
Other Source (s) of Funding	Rs.		



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

Annexure I

Intimation to DISCOM for Implementation of Grid Connected Rooftop Solar PV Plant

Date:

To,

.....
.....
.....

(Designated Officer, DISCOM)

1.	Name of SPD/Implementing Agency	
2	Name of the Consumer*	
Site Details*		
3	Address of the Rooftop Project Site:*	H No: Street Name: Village Name: District Name: State: Pin Code:
4	Phone / Mobile no. *	
5	Email Id:	
6	Electricity Consumer No. *	
7	Category (Please) *	Residential, Commercial, Industrial, Educational ,Government Others, Specify
8	Installed Plant Capacity (kWp)*	
9	Connected load (kVA)*	
10	Voltage level at interconnection*	415 V, 11 Kv, above 11 kV
11	Nearest Transformer Details	Location: Capacity:
12	Details of Inverter with Anti-Islanding Protection* Phase (0): (Please) Galvanic Isolation (Please)	Make: Capacity: Single phase ,3-Phase ,Inside Inverter, Outside Inverter
14	Both AC and DC components of the SPV power plants Earthed*:	
15	CEIG Inspection required*	Yes/ No

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)

16	If, Yes, Inspection date * (Attach copy of CEIG Certificate)	
18	Bank Account details	Account No. Bank Branch
19	Date of Grid Synchronisation*	
20.	Net metering and grid connectivity	Applied on:
	Attach acknowledgement from DISCOM), if received	Fees Deposited On:

to be provided mandatorily

It is certified that the information furnished above is true to the best of my knowledge.

Consumer / Authorised Signatory of Implementing Agency on behalf of consumer

Copy To: Engineer- In -Charge ,Gujarat Industries Power Company Limited

(Sign and Seal of Bidder)



Tender No. GIPCL/RTS/DEV/2018 Dated: 15.02.2018

Design, Engineering, Procurement, Supply, Erection, Testing, Commissioning
and O&M of 25 KWp Solar Roof Top Projects at NABL , Gurgaon (Under Capex Model)
