

**NTPC VIDYUT VYAPAR NIGAM LIMITED**  
(A wholly owned Subsidiary of NTPC Limited)



**BIDDING DOCUMENTS**

**FOR**

**DEVELOPMENT OF 25651 KW GRID CONNECTED  
ROOFTOP SOLAR POWER PROJECT FOR DELHI  
POLICE AND OTHER GOVT. BUILDING IN DELHI &  
ADJOINING DISTRICTS**

**BIDDING DOCUMENT NO.: NVVN/C&M/RE-307/2024-25**

**(This Document is meant for the exclusive purpose of bidding against this Bid Document No./ Specification and shall not be transferred, reproduced or otherwise used for purposes other than that for which it is specifically issued)**

DEVELOPMENT OF 25651 KW GRID CONNECTED  
ROOFTOP SOLAR POWER PROJECT FOR DELHI POLICE  
AND OTHER GOVT. BUILDING IN DELHI

BIDDING DOCUMENT NO. NVVN/ C&M /RE-307 /2024-25  
SECTION - I (IFB)

ABRIDGED INVITATION

**NTPC VIDYUT VYAPAR NIGAM LIMITED**

(A wholly owned Subsidiary of NTPC Limited)



**CONTRACTS & MATERIALS**

**INVITATION FOR BIDS (IFB)**

**FOR**

**DEVELOPMENT OF 25651 KW GRID CONNECTED  
ROOFTOP SOLAR POWER PROJECT FOR DELHI  
POLICE AND OTHER GOVT. BUILDING IN DELHI**

**BID DOCUMENT NO: NVVN/C&M/RE-307/2024-25**

NTPC VIDYUT VYAPAR NIGAM LIMITED (NVVN) invites online Bids from eligible bidders on '**Single Stage Two Envelope**' bidding basis (Envelope-I: Techno-Commercial Bid & Envelope- II: Price Bid) for aforesaid Package.

For the detailed IFB and Bidding Documents please visit at e-procurement portal <https://eprocurrentpc.nic.in> or may contact Sr. Manager (Contracts), NTPC VIDYUT VYAPAR NIGAM LIMITED, Engineering Office Complex, Plot No. A-8A Sector 24, Block A, Noida, Uttar Pradesh 201301, Email: [nvvncontracts@ntpc.co.in](mailto:nvvncontracts@ntpc.co.in); Tel No: 0120-4948575

Registered office: NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003, Corporate Identification Number: U40108DL2002GOI117584, Website: [www.nvvn.co.in](http://www.nvvn.co.in)

DEVELOPMENT OF 25651 KW GRID CONNECTED  
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BIDDING DOCUMENT NO. NVVN/ C&M /RE-307 /2024-25  
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**BIDDING DOCUMENTS  
FOR  
DEVELOPMENT OF 25651 KW GRID CONNECTED ROOFTOP SOLAR POWER  
PROJECT FOR DELHI POLICE AND OTHER GOVT. BUILDING IN DELHI  
BID DOCUMENT NO.: NVVN/C&M/RE-307/2024-25**

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## Acronyms

BDS	Bid Data Sheet
CIF	Cost, Insurance and Freight
CIP	Carriage and Insurance paid to (place)
CPM	Critical Path Method
EDI	Electronic Data Interchange
EXW	Ex factory, ex works or ex warehouse
FCA	Free Carrier
FOB	Free on Board
FOR	Free on Rail / Road
FP	Bid Forms, Procedures & attachments
GCC	General Conditions of Contract
ICC	International Chamber of Commerce
IFB	Invitation for Bids
ITB	Instructions to Bidders
SCC	Special Conditions of Contract
TS	Technical Specifications and Drawings
UNCITRAL	United Nations Commission on International Trade Law
INCOTERMS	International Rules for interpreting Trade Terms.

**Note :** The terms EXW, CIF, etc. shall be governed by the rules prescribed in the current edition of INCOTERMS, published by the international chambers of commerce, 38, Cours Atbert 1er. 75008, Paris, France.

**SECTION - I**

**INVITATION FOR BIDS (IFB)**

**DEVELOPMENT OF 25651 KW GRID CONNECTED  
ROOFTOP SOLAR POWER PROJECT FOR DELHI POLICE  
AND OTHER GOVT. BUILDING IN DELHI**

**BIDDING DOCUMENT NO. NVVN/ C&M /RE-307 /2024-25  
SECTION - I (IFB)**

# INVITATION FOR BIDS

**NTPC VIDYUT VYAPAR NIGAM LIMITED**  
**(A wholly owned Subsidiary of NTPC Limited)**

## **CONTRACT & MATERIALS**

### **INVITATION FOR BIDS (IFB)** **FOR**

### **DEVELOPMENT OF 25651 KW GRID CONNECTED ROOFTOP SOLAR POWER PROJECT FOR DELHI POLICE AND OTHER GOVT. BUILDING IN DELHI** **(Domestic Competitive Bidding)**

#### **Bidding Document No.: NVVN/ C&M/RE-307/2024-25**

1.0 NTPC VIDYUT VYAPAR NIGAM LTD (NVVN) invites on-line bids at Government e-procurement portal of NIC (GePNIC) at website- <https://eprocurementpc.nic.in/> on Single Stage Two Envelope Basis (i.e. Envelope-I: Techno-Commercial Bid and Envelope-II: Price Bid) from eligible Bidders for aforesaid package, as per the scope of work briefly mentioned hereinafter.

#### **2.0 BRIEF SCOPE OF WORK**

The Solar Photo Voltaic (PV) installation on Rooftop of various/multiple buildings of the Delhi Police and NTPC EOC/ NTPC Township at Noida as mentioned in Annexure-A of Section-VI and other Government Buildings in Delhi and districts of other States adjoining Delhi shall be carried out preferably on shadow free area in such a way that the generation is maximized on each building suitable for installation of Solar PV power plants. The tentative capacity is 25.651 MW. The final plant capacity shall be as per the detailed engineering and approved design of each of the building's rooftops solar.

Permanent MS Staircase/ladder of minimum width 1.0m & finished with primer & weather resistant enamel paint for roof top access must be provided for each building where the Roof Top Solar PV panels are to be installed and roof access is not available.

- A. The successful bidder shall be exclusively responsible for design, engineering, testing and all other relevant activities like preliminary visual assessment of roof, water arrangements, electricity, security and determining optimal capacity for setting up of Solar PV Plants and O&M activities for 10 years.
- B. The project site shall be handed over to the bidder on as is where is basis. Before submitting his bid, the bidder should inspect and examine the site and its surroundings and should satisfy himself as to the nature of the roof, the quantities and nature of work, materials necessary for completion of the work and their availability, means of access to site and in general shall himself obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his offer.
- C. Design, engineering, supply, installation, testing and Commissioning of the Project as per standard design and specifications and connecting to existing Mains / ACDB and interfacing internal electrical loads of Project's License's network/electrical loads. The bidder would have to take approval for the interfacing of the Project with Grid/Electrical Loads from distribution licensee/ CEIG. The bidder shall be responsible for commissioning the project along with Net metering/Net Billing/ Group Net Metering/Behind the meter as per State Regulations.
- D. Commissioning of the system shall refer to the date on which the System at each location / premise starts generating electric energy for Five continuous (05) hours using instruments and meters including Net metering/ net billing/behind the meter.

## INVITATION FOR BIDS

- E. All materials, manpower, scaffolding materials, machinery, tools, and tackles, transportation & loading/unloading, packaging and unpacking, safe storage, watch and ward, etc. all inclusive, shall be arranged by the bidder within the quoted price. Scope shall cover all type of transportation of materials inside the working site and manpower etc. required to execute and complete the work. Underground cabling work, if required to evacuate solar project to the consumer's panels shall also be in the scope of bidder.
- F. Bidder also to provide comprehensive Operation and Maintenance (O&M) of the plants for a period of 10 years from the date of Completion of Facilities. "Completion of Facilities" means that the Facilities at all the premises under the contract have been successfully commissioned and put in a tight and clean condition, and that all work in respect of scope of work has been completed and punch points attended; and Commissioning of all Premises/ locations including PG test under the Contract has been attained as per Technical Specifications.
- G. During O&M period, the bidder shall be responsible for supply of all spare parts as required from time to time for scheduled and preventive maintenance, major overhauling of the plant, replacement of all defective equipment including defective PV Modules, Inverters, Transformers etc. and maintaining log sheets for operation detail, deployment of staff for continuous operations and qualified engineer for supervision of O&M work, complaint logging & its attending. All PV modules shall be cleaned regularly, and water washed at least once a fortnight. The Minimum Annual CUF at evacuation point/delivery point required to be achieved in the first year and subsequent years after acceptable module degradation factor of 0.7% per year are mentioned in Annexure-A of section VI in bid document.
- H. Bidder shall ensure that Project is Remote Monitoring System ("RMS") enabled. Bidder shall also provide API for the RMS system and shall be used for billing and monitoring. The data from such RMS enabled Projects would be monitored or analyzed remotely by NVVN and Procurer. The internal data logger of the RMS system shall work on a store-and-forward mechanism. It should be able to store data in case of connectivity outage and forward the stored data once the connectivity is attained. The Bidder shall ensure data for a minimum period of one year is stored in the data logger. The RMS system must also be capable of interfacing on an open protocol basis with external data loggers as may be installed by NVVN or Procurer. The Bidder shall ensure that the connectivity of the Project RMS with the Procurer and NVVN office is always uninterrupted during O&M period and shall make all necessary arrangements for the same. Procurer or NVVN reserves right to validate the authenticity of such data for which Bidder shall extend full access and its cooperation. The bidder shall arrange for Internet connection (Wi Fi / SIM or any other arrangement) and all necessary accessories for Operation of the RMS throughout the contract period within the quoted price.
- I. The bidder shall provide a suitable Solar PV module cleaning/ water washing system. The bidder shall also arrange water from the nearest service water line with necessary CPVC piping, pumping, metering or any other suitable arrangement and provide adequate number of waters taps with isolating valves depending on the roof area/location. Further bidder shall provide at least one portable water pressure cleaning system for any emergency.
- J. Any fee related to registration of project / NOC / net metering/group net metering/Behind the meter/Net Billing from any of the state departments shall be borne by the bidder.
- K. It should be ensured by the bidder that the roofs are not getting damaged during installation and O&M period. After installation of solar PV system, the roofs should remain waterproof as before. If any damage is caused to the roof by the bidder, the same is to be rectified immediately by the bidder within the quoted price and without any additional cost to NVVN.
- L. Life-Line: The bidder shall provide suitable lifeline arrangement on the roof as per requirement, to enable the safety of workers while working at height during erection and O&M period. The workers working at site should have passed the Vertigo test and should have undergone proper training for safe

## INVITATION FOR BIDS

working at height, should have been trained to use safety PPEs including Safety belts with double hooking system. The bidder shall follow the safety rules of NVVN as mentioned in Bid Document. All safety PPEs like safety shoes, helmet, belt, lifeline, fall arrester etc. are to be provided by the bidder within the quoted price.

- M. Fall arrester: As per site requirement, bidder may also have to install fall arrester and safety net to ensure safe working, the design of fall arrester and specifications of safety net to be installed shall be submitted to NVVN for review prior to start of work to ensure safety of workers during execution.
- N. Walkway: As per site requirement, the bidder must install and maintain G.I. walkway with anti-skid holes on the roof with toe guard to ensure safety during solar project work and during O&M period. The minimum width of the walkway shall be 300mm. Walkway shall be installed on the rooftop before the start of solar project installation work, so that the safety of worker can be ensured and damage to roof sheet can be avoided.
- O. Bidder shall take all necessary safety measures during erection as well as during operation and maintenance including compliance to specific safety guidelines at Chapter X, sl. No 121 of CEA safety regulations 2023.
- P. Bidder has to submit the standard operating procedure (SOP) /Safety protocol before start of work for Engineer-In-Charge/NVVN authorized representative approval. Records of Toolbox Talk and Attendance of Labour shall form part of the supporting documents for claiming amount linked to safety.
- Q. Insurance:
- i. Before commencement of the work, the Bidder shall 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. Liquidation, Death, Bankruptcy etc., shall be the responsibility of Bidder. Further the Bidder may refer to relevant clauses of GCC, SCC and the Contract Agreement of IFB.
- ii. Bidder shall take third party liability insurance for deployed workmen, employees against any damage, loss, injury, or death arising out of the O&M work.
- iii. The Bidder shall further take Fire and peril insurance policy covering the risk of damage, theft of material/ equipment/ properties after completion of the work(s) throughout the O&M period. The insurance shall be for the replacement value of the project to ensure guaranteed minimum generation.
- R. Warranty and guarantees: The Bidder shall warrant that the goods supplied under this IFB are new, unused, of the most recent or latest technology and incorporate all recent improvements in design and materials as per standards specified in the technical specifications of this IFB. The Bidder shall provide warranty covering the rectification of any and all defects in the design of equipment, materials and workmanship including all spare parts for some of the items as stated in schedule C. The responsibility of operation of warranty and guarantee clauses and claims/ settlement of issues arising out of said clauses shall be responsibility of the Bidder and NVVN will not be responsible in any way for any claims whatsoever on account of the above for the period of the contract.
- 3.0 NVVN intends to finance subject Package through External Commercial Borrowings/ Domestic Commercial Borrowings / Own sources.
- 4.0 Detailed specification, scope of work and terms & conditions are given in the Bidding Documents, which are available at the GePNIC (e-tender) portal at <https://eprocurementpc.nic.in/>. The Bidding Schedule\* for the Tender is as under:

Issuance of IFB	As per NIT in GEPNIC portal
Bidding Document Sale Date & Time	As per NIT in GEPNIC portal



## INVITATION FOR BIDS

Last Date for receipt of queries from bidders (if any) **	As per NIT in GEPNIC portal
Bid Submission Start	As per NIT in GEPNIC portal
Bid Submission End Date & Time*	As per NIT in GEPNIC portal
Bid Opening Date & Time for Techno-Commercial Bid*	As per NIT in GEPNIC portal
Price Bid Opening Date & Time	Shall be intimated separately by NVVN.
Cost of Bidding Document	NIL
Bid Security	<b>Rs 2,00,00,000/- (Indian Rupees Two Crores Only)</b>

***\*Bidders are advised to visit the GePNIC (e-tender) portal of NTPC for updated bidding schedule of the Tender.***

\*\*It is to be noted that "No Queries from Bidders, whatsoever, shall be entertained by the Employer beyond the last date of receipt of Queries/ Pre-Bid Conference (if applicable) as specified at GePNIC portal of NTPC".

- 5.0 All bids must be accompanied by Bid Security for an amount of **Rs 2,00,00,000/- (Indian Rupees Two Crores Only)** in the form as stipulated in the Bidding Documents.

**ANY BID NOT ACCOMPANIED BY AN ACCEPTABLE BID SECURITY SHALL BE REJECTED BY THE EMPLOYER AS NON-RESPONSIVE AND SHALL NOT BE OPENED.**

### 6.0 QUALIFYING REQUIREMENTS FOR BIDDERS

In addition to the requirements stipulated under section Instruction to Bidder (ITB), the bidder should also meet the qualifying requirements stipulated hereunder in Clause 1.1 and Clause 1.2.

#### 1.1 TECHNICAL CRITERIA

- 1.1.1 The Bidder should have designed/ engineered, supplied, erected/ supervised erection and commissioned/ supervised commissioning of Solar Photo Voltaic (SPV) based grid connected power plant(s) of cumulative installed capacity of 400 kWp or higher, out of which at least one Solar Photo Voltaic plant should have been of 40 kWp or higher capacity.

The reference plant of 40 kWp or higher capacity must have been in successful operation for at least six (6) months prior to the last date of submission of techno commercial bid.

**OR**

- 1.1.2 The Bidder should be a developer of Solar Photo Voltaic (SPV) based grid connected power plant(s) of cumulative installed capacity of 400 kWp or higher, out of which at least one Solar Photo Voltaic plant should have been of 40 kWp or higher capacity. The reference plant of 40 kWp or higher capacity must have been in successful operation for at least six (6) months prior to the last date of submission of techno commercial bid.

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**OR**

- 1.1.3 (a) The Bidder should have executed in the last ten (10) years an industrial project either as developer or as EPC Contractor in the area of power/ steel/ oil and gas/ petro-chemical/ fertilizer/cement/coal mining including coal handling plant and/ or any other process industry, of a value of INR 40 Million (Indian Rupees Forty Million only) or more in a single project or single work respectively and the same should be in successful operation for at least one (1) year prior to Techno Commercial Bid Opening Date.

**AND**

- 1.1.3 (b) The Bidder should have executed at least one (1) Electrical Sub-station of 11 kV or above voltage level, consisting of equipment such as 11 kV or above voltage level circuit breakers and Power transformer, either as developer or as EPC Contractor which should be in successful operation for at least one (1) year prior to Techno Commercial Bid Opening Date.  
The works referred to clause 1.1.3 (a) & 1.1.3 (b) can be in same or different projects.

**OR**

- 1.1.4 The bidder should be an Indian company registered in India and should be Group company/Holding Company/Subsidiary company of a firm meeting the requirement (s) of Clause 1.1.1 or 1.1.2 or 1.1.3 above.

In such a case, Bidder shall furnish an Undertaking jointly executed by the firm qualified as per clause 1.1.1 or 1.1.2 or 1.1.3 and the Bidder along with its Enlistment Application for complete performance of the contract (in case of award) jointly or severally, as per the format enclosed in the Enlistment document failing which the Bidder's Enlistment application is liable to be rejected.

Notes for clause 1.1:

- a) The reference SPV based grid connected power plant of 40 kWp or higher capacity should be at a single location developed by Bidder for itself or any other client.
- b) Bidder shall submit certificate of successful completion and operation from the Owner.
- c) Projects executed by Bidder's group company, Holding Company or Subsidiary Company shall also be considered as Bidder's experience for meeting the QR, provided Bidder is an Indian company registered in India.
- d) In case the award for the reference works has been received by the Bidder either directly from owner of plant or any other intermediary organization, a certificate from such owner of plant or the intermediary organization shall be required to be furnished by the Bidder along with its Bid in support of its claim of meeting requirement stipulated above. Certificate from owner of the plant shall also be furnished by the Bidder for successful operation of the reference plant.
- e) In case of developer as Bidder in clause 1.1.2 or 1.1.3 the documentary evidence (certified by Chartered Accountant) for value of executed reference work must be submitted by the Bidder.
- f) Developer means an entity who has either executed or got executed the work/ project as owner.