



**Solar Energy Corporation of India Limited  
(A Government of India Enterprise)  
CIN: U40106DL2011GOI225263**

**6<sup>th</sup> Floor, Plate-B, NBCC Office Block  
Tower-2, East Kidwai Nagar, New  
Delhi-110023**

**Tender**

**For**

**The Selection of Agency to carry out Soil Investigation at  
proposed 13 GW RE Project Sites in Leh, UT of Ladakh,  
India**

**Tender No. SECI/C&P/MI/00/0013/2023-24  
Dated: 17.07.2023**

## INDEX

SECTION NO	CONTENTS	PAGE NOS
<b>Section-I</b>	Invitation for Bids (IFB) -- Bid Information Sheet	3-13
<b>Section-II</b>	Scope of Work (SOW) / Technical Specification	14-56
<b>Section-III</b>	Instructions to Bidders (ITB)	57-117
<b>Section-IV</b>	Bid Data Sheet (BDS)	118-123
<b>Section-V</b>	Qualifying Requirements (QR)	124-129
<b>Section-VI</b>	General Conditions of Contract (GCC)	130-146
<b>Section-VII</b>	Special Conditions of Contract (SCC)	147-150
<b>Section-VIII</b>	Forms & Formats	151-186

# **SECTION I**

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

## SOLAR ENERGY CORPORATION OF INDIA LIMITED

(A Government of India Enterprise)



**Tender No: SECI/C&P/MI/00/0013/2023-24**

**Date: 17.07.2023**

Solar Energy Corporation of India Limited (hereinafter called “SECI”), invites bids from the eligible Agencies/Firms/Bidders to participate in the Tender for “**Selection of Agency to carry out Soil Investigation at proposed 13 GW RE Project Sites in Leh, UT of Ladakh, India**”.

For the implementation of above mentioned work, Bidders should submit their Techno Commercial & Price Bids/proposals complete in all respect in separate sealed covers, super-scribed with “**Selection of Agency to carry out Soil Investigation at proposed 13 GW RE Project Sites in Leh, UT of Ladakh, India**” at the following address so as to reach on or before **1400 HRS on 07<sup>st</sup> August, 2023** positively to

**Sh. Umesh Patidar**

**Sr. Engineer (C&P)**

**Solar Energy Corporation of India Limited**

**6<sup>th</sup> Floor, Plate-B, NBCC Office Block Tower-2,**

**East Kidwai Nagar, New Delhi-110023**

**Telephone: 011-24666200**

**E mail: [umesh.patidar@seci.co.in](mailto:umesh.patidar@seci.co.in)**

Bidder shall submit the Tender proposal, complete in all respect as per the Bid Information sheet.

1. The complete Bidding Documents are available at ISN-ETS portal <https://www.bharat-electronictender.com>, Central Public Procurement

portal (CPPP) of GoI at [www.eprocure.gov.in](http://www.eprocure.gov.in) as well as on SECI's website <http://www.seci.co.in>. However, for the purpose of participation, the official copy of the bidding documents shall only be downloaded from SECI's e-tendering portal at <https://www.bharat-electronictender.com>, as per the provisions available therein. Accordingly, the online bid also has to be uploaded by the respective Bidders at <https://www.bharat-electronictender.com> only & no other mode of participation is permitted for this tender document other than ISN-ETS Portal.

2. Interested Bidders have to necessarily register themselves on the portal <https://www.bharat-electronictender.com> through M/s Electronic Tender.com India Pvt Ltd (ETI), New Delhi to participate in the bidding under this invitation for bids. It shall be the sole responsibility of the interested Bidders to get themselves registered at the aforesaid portal for which they are required to contact M/s ETI, New Delhi to complete the registration formalities. The address of M/s ETI is mentioned on the Bid Information Sheet. All required documents and formalities for registering on ETI are mentioned in the subsequent bidding documents.

They may obtain further information regarding this IFB from the registered office of SECI at the address given on the Bid Information Sheet from 10:00 hours to 17:00 hours on all working days till the last date of the Bid Submission.

For proper uploading of the bids on the portal namely <https://www.bharat-electronictender.com> (hereinafter referred to as the 'portal'), it shall be the sole responsibility of the Bidders to apprise themselves adequately regarding all the relevant procedures and provisions as detailed in the portal as well as by contacting M/s Electronic Tender.com India Pvt Ltd (ETI), New Delhi directly, as and when required, for which contact details are also mentioned on the Bid Information Sheet. The Employer in no case shall be responsible for any issues related to timely or properly uploading/ submission of the bid in accordance with the relevant provisions of Section III - ITB of the Bidding Documents.

3. While submitting/ uploading the bids, the system through portal asks to key in the pass-phrase for encryption of the documents. The pass-phrase is required by the owner for opening the bids (Separate for both First Envelopes

as well as Second Envelopes). **The same may be submitted on the portal as per the provisions existing for submission of the pass-phrase and as per the details given in the subsequent bidding document.**

In the event, SECI is unable to open the Bids with the given pass-phrase provided by the Bidders, Employer on its discretion may give an option through the portal, to the Bidder to open its bid as per provisions available on the portal. However, Employer shall not be responsible if bid could not be opened within reasonable time for whatsoever reason. In such a case, the bid shall be sent unopened to 'Archive' on the portal and shall not be considered at all any further.

4. A Single Stage Two Envelope Bidding Procedure will be adopted and will proceed as detailed in the Bidding Documents. Bidding will be conducted through the competitive bidding procedures as per the given provisions of bidding document and the contract shall be executed as per the provisions of the Contract. It shall be noted that the respective rights of the owner and the Bidder/ Contractor shall be governed by the Bidding Documents/ Contract signed between the owner and the Contractor for the mentioned work.
5. Bidders should submit their bid proposal online complete in all aspect on or before last date and time of Bid Submission as mentioned on ETS Portal of ISN-ETS at <https://www.bharat-electronictender.com> and as indicated in the Bid Information Sheet.
6. Bidder shall submit bid proposal along with non-refundable Tender Processing Fees, Earnest Money Deposit (EMD) if applicable/ Bid Securing Declaration complete in all respect as per the Bid Information Sheet. Techno-Commercial bids will be opened as per the Bid Information Sheet in offline/ online presence of authorised representatives of Bidders who wish to be present offline/ online. Bid proposals received without the prescribed Tender Processing Fees and Earnest Money Deposit (EMD, if applicable) or Bid Securing Declaration will be rejected. **In the event of any date indicated is a declared Holiday, the next working day shall become operative for the respective purpose mentioned herein.**
7. Tender documents which include Eligibility Criteria, Technical Specifications, various Conditions of Contract, Formats etc. can be

downloaded from ETS Portal of ISN-ETS at <https://www.bharat-electronictender.com>. It is mandatory to download official copy of Tender Document from ISN-ETS Portal to participate in the Tender. Any amendment(s)/ corrigendum(s)/ clarification(s) with respect to this Tender shall be uploaded on ETI site. The Bidder should regularly check for any Amendment(s)/ Corrigendum(s)/ Clarification(s) on the above mentioned ETI site. The same may also be uploaded on SECI website <http://www.seci.co.in> also. **However, in case of any discrepancy, the information available on ETI site shall prevail.**

8. Bidder selected shall be responsible for the performance of the following scope of work (more detailed in this tender document):

**“Selection of Agency to carry out Soil Investigation at proposed 13 GW RE Project Sites in Leh, UT of Ladakh, India”.**

9. EMD/Bid Securing Declaration shall be enclosed in a sealed envelope and shall be submitted in the office of Employer (offline) whose mailing address is mentioned in the Bid Information Sheet.
10. Performance Securities as per this tender document shall be furnished by the successful Bidder after issuance of Contract Agreement (CA) by the Owner.
11. Employer/ Owner reserves the right to cancel/ withdraw this invitation for bids without assigning any reason and shall bear no liability whatsoever consequent upon such a decision.

### **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 differences between or among the parts of this contract, they shall be interpreted in a harmonious manner so as to give effect to each part.

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.

### **DISCLAMIER**

1. Though adequate care has been taken while preparing the Tender 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 within twenty (20) days from the date of notification of Tender/Issue of the Tender Documents, it shall be considered that the Tender Document is complete in all respects and has been received by the Bidder.
2. Solar Energy Corporation of India Limited (SECI) reserves the right to modify, amend or supplement this Tender Document including all formats and Annexures.
3. While this Tender has been prepared in good faith, neither SECI 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 Tender, even if any loss or damage is caused by any act or omission on their part.



## BID INFORMATION SHEET

The brief details of the tender are as under:

1	Name of Work/ Brief Scope of Work/ Job	Selection of Agency to carry out Soil Investigation at proposed 13 GW RE Project Sites in Leh, UT of Ladakh, India.													
2	Tender No. & Date	Tender No: SECI/C&P/MI/00/0013/2023-24 dated 17.07.2023													
3	Source of Funds	Employer/Owner as defined in the Special Conditions of Contract (SCC) intends to finance the package through domestic funding and own resources.													
4	Type of Tender	<table><tr><td>e-Tender</td><td>Yes</td></tr><tr><td>Manual</td><td></td></tr></table>	e-Tender	Yes	Manual										
e-Tender	Yes														
Manual															
5	Type of Bidding System	<table><tr><td>Single Bid System</td><td></td></tr><tr><td>Two Bid System</td><td>Yes</td></tr></table>	Single Bid System		Two Bid System	Yes									
Single Bid System															
Two Bid System	Yes														
6	Completion/ Contract Period	<p>Total timeline for the subject work will be 08 (Eight) months from the date of signing of Contract Agreement (CA) or Notice to Proceed (NTP), whichever is later.</p> <p>NTP will be provided by SECI in the shortest possible time and all contractual obligations for the project will be started from the date of Notice to Proceed (NTP).</p> <table><tr><th>S.No.</th><th>Milestone</th><th>Timeline</th></tr><tr><td>D0</td><td>Signing of Contract Agreement (CA) or Notice to Proceed (NTP), whichever is later</td><td>D0 (Zero Date)</td></tr><tr><td>D1</td><td>Mobilization Window</td><td>D0 + 30 days</td></tr><tr><td>D2</td><td>Field Work Window</td><td>D1 + 120 days</td></tr></table>		S.No.	Milestone	Timeline	D0	Signing of Contract Agreement (CA) or Notice to Proceed (NTP), whichever is later	D0 (Zero Date)	D1	Mobilization Window	D0 + 30 days	D2	Field Work Window	D1 + 120 days
S.No.	Milestone	Timeline													
D0	Signing of Contract Agreement (CA) or Notice to Proceed (NTP), whichever is later	D0 (Zero Date)													
D1	Mobilization Window	D0 + 30 days													
D2	Field Work Window	D1 + 120 days													

		<table> <tr> <td>D3</td><td>Preparation and Submission of Draft Report</td><td>D2 + 45 days</td></tr> <tr> <td>D4</td><td>Preparation and Submission of Final Report</td><td>D3 + 45 days</td></tr> </table> <p>Zero Date (D0) or the working window will start from the date of signing of Contract Agreement or Notice to Proceed, whichever is later.</p> <p>The tentative working window for this location at Leh, UT of Ladakh spans from April 2024 to November 2024, however the same may change as per the actual weather/Geographical conditions &amp; as per the notifications/discretion of the Local Administrative/ UT Authorities. The NTP will be provided considering these available working windows only. The Contractor shall also keep himself updated regarding the notifications issued by the Local Administrative / UT Authorities regarding opening and closure of access roads.</p> <p>The overall timeline of 08 months for the complete work from CA/NTP will be calculated in the available working window only.</p> <p>In case the working period available (calculated with respect to notifications issued by the Local Administration/ UT Authorities) is less than the duration of activity D1+D2, SECI may review the completion date.</p>	D3	Preparation and Submission of Draft Report	D2 + 45 days	D4	Preparation and Submission of Final Report	D3 + 45 days
D3	Preparation and Submission of Draft Report	D2 + 45 days						
D4	Preparation and Submission of Final Report	D3 + 45 days						
7	JV/Consortium	<b>NOT ALLOWED</b>						
8	Number of Bids per Bidder	01						

9	Cost of Bidding Documents	Free of cost				
10	Bid Validity	180 days				
11	Bid Currency	INR				
12	Tender Processing Fee (NON-REFUNDABLE)	<table><tr><td>APPLICABLE</td><td>Yes</td></tr><tr><td>NOT APPLICABLE</td><td></td></tr></table> <p><b>Amount: INR 14,000/- (Indian Rupees Fourteen Thousand Only)</b> inclusive of GST @ 18% per bid to be submitted in the form of either through NEFT/ RTGS transfer in the account of SECI or Demand Draft/ Banker’s Cheque in favour of “<b>Solar Energy Corporation of India Limited, New Delhi</b>” Payable at New Delhi. Bid Processing Fee is to be deposited along with the Bid document submission.</p>	APPLICABLE	Yes	NOT APPLICABLE	
APPLICABLE	Yes					
NOT APPLICABLE						
13	Earnest Money Deposit (EMD)	<table><tr><td>APPLICABLE</td><td>Yes</td></tr><tr><td>NOT APPLICABLE</td><td></td></tr></table> <p><b>Amount: INR 6,00,000 (Indian Rupees Six Lakhs only)</b> in the form of ‘either through NEFT/ RTGS transfer in the account of SECI or Demand Draft/ Banker’s Cheque in favor of “<b>Solar Energy Corporation of India Limited</b>”, <b>New Delhi</b> Payable at New Delhi or in the form of Bank Guarantee as per the prescribed format (With a validity of 180 days from the Due date of Bid Submission). EMD to be deposited along with the Bid document submission.</p>	APPLICABLE	Yes	NOT APPLICABLE	
APPLICABLE	Yes					
NOT APPLICABLE						

14	Contract Performance Security	<table><tr><td>APPLICABLE</td><td>Yes</td></tr><tr><td>NOT APPLICABLE</td><td></td></tr></table>	APPLICABLE	Yes	NOT APPLICABLE	
APPLICABLE	Yes					
NOT APPLICABLE						
15	Date, Time & Venue of Pre-Bid Meeting	A Pre-Bid/clarification Meeting conference shall be held as per notification on SECI's website <a href="http://www.seci.co.in">www.seci.co.in</a> which will be conducted Online/Offline at SECI office, 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023/Or at the location as notified by SECI. Only two persons from the Bidder company are allowed to attend the same.				
16	Last date & Time of Submission of Bids	07.08.2023, 1400 HRS				
17	Opening of Techno Commercial Bids	07.08.2023, 1600 HRS				
18	Financial Bid Opening	To be intimated after the shortlisting of Techno Commercial Bids.				
19	Name, Designation, Address and other details (For Submission of Response to NIT)	<p><b>Sh. Umesh Patidar</b> <b>Sr. Engineer (C&amp;P)</b> <b>Solar Energy Corporation of India Limited</b> <b>6<sup>th</sup> Floor, Plate-B, NBCC Office Block Tower-2,</b> <b>East Kidwai Nagar, New Delhi-110023</b> <b>Telephone: 011-24666200</b> <b>E mail: <a href="mailto:contracts@seci.co.in">contracts@seci.co.in</a></b></p>				
20	Details of persons to be contacted in case of any assistance required	<p>1) Sh. Kaustuv Roy General Manager (Projects) Ph: 011-24666 323</p> <p>2) Sh. Umesh Patidar Senior Engineer (C&amp;P) Ph:01124666 366</p>				

21	<b>CONTACT DETAILS OF ETI</b>	<p>M/s Electronic Tender.com (India) Pvt Ltd  Registered Office: 6, Jain Mandir Road, New Delhi-110001  Corporate Office: 1001, City Court, M. G. Road, Gurugram - 122002, Haryana  Contact Person: ETS Support Team  Contact No.: +91-124-4229071, 4229072  Email: support@isn-ets.com</p>
----	---------------------------------------	---

### **Important Note**

- 1.0 Any Bidder, who meets the Qualifying Requirement and wishes to quote against this tender, may download the complete bidding document along with its amendment(s) if any from ETS Portal of ISN-ETS (<https://www.bharat-electronictender.com>) and submit their Bid complete in all respect as per terms & conditions of Tender Document on or before the due date of bid submission.
- 2.0 Clarification(s)/Corrigendum(s) if any shall also be available on above referred websites.
- 3.0 Prospective Bidder are requested to remain updated for any notices/amendments/clarifications etc. to the Tender Document from ETS Portal and/ or SECI website. (No separate notifications will be issued for such notices/amendments/clarification etc. in the print media or individually. All the information related to this Tender Document shall be updated in the ETS Portal of ISN-ETS (<https://www.bharat-electronictender.com>) and/ or SECI website ([www.seci.co.in](http://www.seci.co.in)) only.

## **SECTION II**

# **SCOPE OF WORK / TECHNICAL SPECIFICATION**

## **1. INTRODUCTION**

- 1.1 Solar Energy Corporation of India Limited (hereinafter called “SECI”) is a Government of India Enterprise, under the administrative control of the Ministry of New & Renewable Energy (MNRE). One of the main objectives of the Company is to assist the Ministry and function as the implementing and facilitating arm of the Jawaharlal Nehru National Solar Mission (JNNSM) for development, promotion, and commercialization of solar energy technologies in the country.
- 1.2 SECI is looking to hire a reputed, experienced, and financially sound Agency having experience in Soil Investigation. Detailed requirements are specified in the eligibility criteria mentioned in this document.
- 1.3 The Bidders are advised to read carefully all instructions and conditions appearing in this document and understand them fully. All information and documents required as per the Tender Document must be furnished. Failure to provide the information and/ or documents as required may render the bid unacceptable.
- 1.4 The Bidders shall be deemed to have examined the Tender 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 work 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. CONTRACTOR’S SCOPE OF SERVICES/WORK**

### **2.1 INTENT OF SPECIFICATION**

This specification covers the technical requirements for a “Geotechnical investigation and submission of report”. Geotechnical investigation shall be carried out to provide the designer with sufficiently accurate information both general and specific about the substrata profile and relevant soil and rock parameters at site on the basis of which the foundation for wind

turbines, solar plant structures and other associated facilities shall be designed.

## **2.2 SCOPE**

- a) The work shall include mobilization of all necessary equipment, providing necessary engineering supervision and technical personnel, skilled and unskilled labour, arranging water for drilling, etc., as required carrying out the entire field as well as laboratory investigations, analysis and interpretation of test data collected and preparation of a geotechnical report. The entire field as well as laboratory investigation work shall be supervised by a graduate in civil engineering with at least 3 years of site experience in respective areas of geotechnical investigation work. A geologist shall also be deputed at site during investigation whenever rock drilling is undertaken. The scheduling of laboratory tests, analysis and interpretation of test results, drafting of report and recommendations shall be carried out by a postgraduate in geotechnical engineering with at least 5 years of relevant experience.
- b) The Contractor shall make his own arrangements for locating the co – ordinates and position of bore holes, trial pits and other field tests as per the drawings/sketches supplied to him and for determining the reduced levels at these locations with respect to a single benchmark indicated by the Engineer. The Contractor has to provide at the site all the required instruments to the satisfaction of the Engineer so that the work can be carried out accurately according to the specification and drawings
- c) All the field data shall be recorded in the proforma recommended in BIS Codes. The Contractor shall submit two copies of the field bore-logs to the Engineer soon after the completion of each bore hole. All the investigations are to be carried out by the Contractor as per the priority requirements of the Engineer.
- d) The Contractor shall intimate the Engineer, giving reasons, if any additional specific tests he considers necessary to be carried out duly considering local sub-soil conditions before starting of such tests



- e) Whenever the Contractor is unable to extract undisturbed samples he should immediately inform the Engineer. In such a case payment for boring charges shall be subject to the Engineer being satisfied that adequate effort has been made to extract undisturbed samples
- f) All the laboratory test data shall be recorded in the proforma recommended in the BIS standards. Whenever desired during the progress of work the Engineer may visit the laboratory where the Contractor is arranging for execution of the laboratory tests. A few formats are appended in the Annexure which may be used when no information is available or is inadequate in BIS Standards. All the laboratory tests shall be carried out in NABL accredited laboratory only.
- g) The Contractor shall submit detailed geotechnical report after incorporating the comments (if any) on the draft report.

## **2.3 TENDER DRAWING**

Tender drawing comprises of Layout plan indicating grids with in which the testing locations are envisaged. Final test locations shall be as per the discretion of the Engineer. As per the actual investigation at site, the location, extent and depth of bore holes & field tests/area(s) shall be indicated in the As-built drawing to be submitted as part of the Geotechnical Investigation Report.

## **2.4 GENERAL REQUIREMENTS**

- a) The Contractor shall make use of information gathered from quarries, unlined wells, cuttings from nearby areas etc. The general topology of the surrounding areas will often give some indication about the variation of the soil conditions which are likely to exist.
- b) The Contractor shall gather data regarding the removal of overburden by excavation, erosion or landslides in the areas which may give an idea of the amount of reconsolidation that the soil strata has undergone. Similarly, data regarding recent fills shall also be studied to determine the characteristics of the fill as well as the original strata. The water level in streams and water courses if any in the neighborhood shall be noted.

Reliable information regarding ground water level shall also be gathered from water level in the nearby wells.

- c) The Contractor shall make enquiries and verify regarding earlier use of the site which can have important bearing on its suitability for the proposed structures. This is important particularly in areas where there have been underground works e.g. worked out ballast pits, quarries, old brick fields, mines, mineral workings, etc.
- d) It is essential that the equipment/instruments are properly calibrated through NABL accredited laboratory at the commencement of the work so that they represent true values and submit the calibration test reports to the engineer for verification. If the engineer so desires, the Contractor shall arrange for having the instruments tested in presence of the engineer at an approved laboratory at the Contractor's cost and the test reports shall be submitted to the engineer.
- e) When blasting with explosives is involved, agency/Contractor shall arrange statutory clearance and also the portable magazine for storing / carrying the explosives. Only licensee shall handle these explosives.
- f) The bidder is supposed to be acquainted with working conditions at site and the nature, type, scope of work and involvement.

## 2.5 CODES AND STANDARDS

- a) All standards, specification and codes of practice referred to herein shall be the latest editions including all applicable official amendments and revisions.
- b) In case of conflict between this specification and codes and standards referred to herein, the former shall prevail.

All work shall be carried out as per the specification and the following standards and codes.

IS: 1080	Code of practice for design and construction of simple spread foundations
IS: 1498	Classification and identification of soils for general engineering purposes
IS: 1888	Method of load test on soils

IS: 1892	Code of practice for subsurface Investigation for foundation
IS: 1904	Code of practice for design and construction of foundations in soils: General requirements
IS: 2131	Method of standard penetration test for soils
IS: 2132	Code of practice for thin-walled tube sampling of soils
IS: 2470	Code of practice for design and construction of septic tanks Part-I
IS: 2720	Method of test for soils (Relevant parts)
IS: 2809	Glossary of terms and symbols relating to soil engineering
IS: 2810	Glossary of terms relating to soil dynamics
IS: 2911	Code of practice for design and construction of pile foundations (Relevant parts)
IS: 2950	Code of practice for design and construction of raft foundation (Part- I)
IS: 3025	Methods of sampling and testing (Physical and chemical) for water used in Industry
IS: 3043	Code of practice for earthing
IS: 4078	Code of practice for indexing and storage of drill cores
IS: 4434	Code of practice for in-situ vane shear test for soils
IS: 4453	Code of practice for exploration by pits, trenches, drifts and shafts
IS: 4464	Code of practice for presentation of drilling information and core description in foundation investigation
IS: 4968	Method for subsurface sounding for soils- Dynamic method using cone and bentonite slurry (Part –II)
IS: 4968	Method for subsurface sounding for soils-Static cone penetration test Part-III
IS: 5249	Method of test for determination of in-situ dynamic properties of soil
IS: 5313	Guide for core drilling observations
IS: 5529	Code of practice for in-situ permeability test – Test in overburden

Part-I

IS: 5529 Code of practice for in-situ permeability test - Test in bed rock

Part-II

IS: 6403 Code of practice for determination of allowable bearing pressure on shallow foundation

IS: 6926 Code of practice for diamond core drilling for site investigation of river valley projects

IS: 6935 Method of determination of water level in a bore hole

IS: 6955 Code of practice of subsurface exploration for earth and rock fill dams

IS: 7422 Symbols and abbreviations for use in geological maps sections and subsurface exploratory logs (Relevant parts)

IS: 8009 Code of practice for calculation of settlement of foundation subjected to symmetrical Part-I vertical loads - Shallow foundations

IS: 8009 Code of practice for calculation of settlement of foundation subjected to symmetrical Part-II vertical loads – Deep foundations

IS: 8763 Guide for undisturbed sampling of sands

IS: 8764 Method for determination of point load strength index of rocks

IS: 9143 Method for the determination of unconfined compressive strength of rock materials

IS: 9179 Method for preparation of rock specimen for laboratory testing

IS: 9198 Compaction rammer for soil testing

IS: 9214 Determination of modulus of sub-grade reaction in field

IS: 9259 Specifications for liquid limit apparatus

IS: 9640 Specifications for split spoon sampler

IS: 9669 Specifications for CBR mould and its accessories

IS: 10050 Method for determination of slake durability index of rocks

IS: 10060	Code of practice for subsurface investigation for powerhouse sites
IS: 10074	Specification for compaction mould assembly for light and heavy compaction
IS: 10108	Code of practice for sampling by thin wall sampler with stationary piston
IS: 10589	Equipment for determination of subsurface sounding of soils
IS: 10837	Specifications of moulds for determination of relative density and its accessories
IS: 11229	Specifications for shear box testing of soils
IS: 11315	Description of discontinuities in rock mass – Core recovery and rock quality Part- II
IS: 12070	Code of practice for design and construction of shallow foundations on rocks
IS: 13372	Seismic testing of rock mass – Code of practice (Part I & II)

## 2.6 FIELD INVESTIGATION – SOIL

### 2.6.1 Boring

#### I. General Requirements

- Bore holes shall be drilled at specified locations to obtain information about the sub-soil profile, its nature, strength and to collect soil samples for strata identification and conducting laboratory tests. The minimum diameter of the bore hole shall be 150 mm. Boring shall be carried out in accordance with the provisions of IS: 1892 and as per this specification.
- All bore holes shall extend up to the depths shown on the construction drawings or as directed by the engineer-in-charge. If the strata with standard penetration test (SPT) 'N' value greater than 100 with characteristics of rock is met with earlier, the bore hole shall be advanced further by chiseling. Chiseling shall be continued for a maximum depth of 20 cm or up to 2 hours whichever is earlier. During chiseling rock fragments/rock cores shall be collected. Identification of rock strata shall be on the basis of visual examination of SPT sample and rock fragments. After it is established that rock is met with, the borehole shall be

advanced further by drilling in rock as specified in clause 9.0 and cores shall be collected. When the bore hole is terminated in soil strata, an additional standard penetration test shall be carried out at the termination depth.

- c) Casing pipe shall be used in the borehole to support its sides when side fall is suspected to occur inside the borehole. When casing pipe is used, it shall be ensured that its bottom end is at all times 15 cm above the bottom of the bore hole. In case of cohesion less soils the advancement of the casing pipe shall be such that it does not disturb the soil to be tested or sampled. The casing shall be advanced by slowly turning the casing pipe and not by driving.
- d) In-situ tests and collection of undisturbed samples (UDS) shall be carried out at regular intervals and at change of strata or as decided by the engineer-in-charge. Representative disturbed and undisturbed samples shall be preserved for conducting various tests in the laboratory. Water table in the borehole shall be carefully recorded and reported. No water/drilling mud shall be added while boring above ground water table. For cohesion less soil below water table, the water level in the borehole shall all times be maintained at slightly above the water table.
- e) The bore hole shall be cleaned using suitable tools up to the depth of testing or sampling ensuring that there is minimum disturbance of soil at the bottom of the bore hole. The process of jetting through an open tube sampler shall not be permitted. In cohesive soils, the borehole may be cleaned using a bailer with a flap valve. Gentle circulation of drilling fluid shall be done when rotary mud circulation boring is adopted.
- f) On completion of the borehole, the portion drilled in soil shall be backfilled with sand unless otherwise directed by the engineer-in-charge. Wash boring shall not be adopted.

## **II. Auger Boring**

Auger boring can be adopted in soft to stiff cohesive soils above water table. Augers shall be of helical or post hole type which may be manually or power operated. While boring care shall be taken to minimize the disturbance to the deposits below the bottom of the borehole. The cuttings brought up by the auger shall be carefully examined in the field and the description of all

the strata shall be duly recorded in the field bore log as per IS: 1498. No water shall be used while auger boring.

### **III.Shell and Auger Boring**

Shell and Auger boring can be used in all types of soil free from boulders. For cohesionless soil below ground water table, the water level in the bore hole shall always be maintained at or above the ground water level. The use of chisel bit shall be permitted in hard strata with SPT-N value greater than 100. Chisel bits may also be used to extend the borehole through local obstruction such as old construction, boulders, rocky formations etc. All other requirements in clause 2.6.1 (II) above shall apply for this type of boring also.

### **IV.Percussion Drilling**

This method can be adopted in soil with gravel and boulders when the boring has to be done at a faster rate. This method consists of breaking of the strata by repeated blows from a chisel or drilling bit and bailing out the debris at intervals by adding water into the bore hole. This method is not suitable for careful and very reliable sampling operation because of the disturbance caused during boring. This method shall not be adopted unless otherwise specified or permitted by the engineer.

### **V.Rotary Mud Circulation Drilling**

This method can be used in all types of soil below water table. In this method boring shall be done by rotating the bit fixed at the bottom of the drill rod. Proper care shall be taken to keep a firm contact between the bit and the bottom of the borehole. Bentonite or mud laden fluids shall be used as the drilling fluid to serve as the protective surface inside the borehole.

#### **2.6.2 Standard Penetration Test (SPT)**

This test shall be conducted in all types of soil deposits met within the bore hole to find the variation in the soil stratification by correlating with the number of blows required for unit penetration of a standard penetrometer. This test shall be conducted at 1.5m intervals, at every change of strata, at depths wherever undisturbed soil samples could not be collected and as per



the directions of the engineer. The starting depth of performing SPT shall be 1.0m & 2.5m below ground level in alternate boreholes unless otherwise specified elsewhere. This depth shall be staggered in alternate boreholes. The depth interval between the top level of standard penetration test and to that of (next) undisturbed sampling shall not be less than 1m. The specification for equipment and other accessories, procedure for conducting the test, presentation of test results and collection of disturbed soil samples etc. shall conform to IS: 2131.

This test shall be carried out by driving a standard split spoon sampler in the borehole by means of a 650 N hammer having a free fall of 0.75m. The sampler shall be driven using the hammer for 450 mm penetration. While driving, the number of blows for every 150 mm penetration and the penetration for every 50 blows shall be recorded. The number of blows for the last 300 mm drive shall be reported as 'N' value. This test shall be discontinued when the blow count is equal to 100 and the penetration shall be recorded. Refusal shall be considered to be met with when the blow count is equal to 100. At the location where the test is discontinued, the penetration and the corresponding number of blows shall be reported. Sufficient quantity of disturbed soil samples shall be collected from the split spoon sampler for identification and laboratory testing. The samples shall be visually classified & recorded at the site and shall be properly preserved and labeled for future identification & testing.

### **2.6.3 Sampling**

#### **I.General**

- a) Sufficient number of soil samples shall be collected for reliable estimation of soil properties. The samples collected shall be either disturbed or undisturbed. Disturbed soil samples shall be collected for field identification and conducting laboratory tests such as sieve analysis, index properties, specific gravity, chemical analysis etc. Undisturbed samples shall be collected to estimate physical, strength and settlement properties of the soil.



- b) All the accessories required for sampling and the method of sampling shall conform to IS: 2132. All disturbed and undisturbed samples collected in the field shall be classified at site as per IS: 1498.
- c) All the samples shall be identified with date, bore hole or trial pit number, depth of sampling etc. It is also essential to mark an arrow pointing towards the top surface of the undisturbed sample as the soil was in-situ. Care shall be taken to keep the undisturbed soil samples and box samples vertically with the arrow directing upwards. The tube samples shall be properly trimmed at both ends and suitably sealed with molten paraffin wax at both ends immediately after extracting the samples from the bore hole/trial pit and suitably capped on both sides.
- d) When the Contractor fails to collect undisturbed soil sample at a specified depth, the borehole shall be advanced by 0.50m and shall be performed with a standard penetration test. The reason for not obtaining the undisturbed soil sample shall be indicated in the bore log.
- e) Precaution shall be taken to ensure that there shall not be any change in moisture content and disturbance of the soil samples and they shall be placed in a temporary store at the end of the day's work. All the samples shall be kept over a bed of sand, jute bags, saw dust etc. and covered over the top with similar material. The bed and top cover shall be kept moist till they are properly packed in wooden boxes. The Contractor shall be responsible for packing and transporting of all the samples from site to the laboratory within seven days after sampling with proper protection against loss and damage.
- f) All the samples shall be suitably packed in wooden boxes using sand, saw dust etc all around the samples before transporting to the laboratory for testing.

## **II. Disturbed Samples**

- a) Disturbed soil samples shall be collected from cuttings and from split spoon sampler in boreholes at regular intervals to provide complete description of soil profile and its variation. The samples shall be immediately stored in airtight jars or polythene bags and labeled with borehole/trial pit number and depth.

- b) In elevated areas, if superficial material is available in plenty, then bulk samples from a depth of about 0.5m below ground level shall be collected to establish all required properties to use it as a fill material. Disturbed samples weighing about 250N shall be collected at shallow depths and immediately stored in polythene bags as per IS:1892. The bags shall be sealed properly and shall be kept in wooden boxes.

### III.Undisturbed Samples

In each borehole undisturbed sample (UDS) and SPT shall be taken alternate at regular intervals of 1.5 m and as directed by the engineer. The starting depth of collecting UDS shall be 1.0m (with starting depth of SPT at 2.5m below GL) and 2.5m (with starting depth of SPT at 1.0m below GL) or as directed by the engineer. The depth of Sample & SPT shall be staggered in alternate boreholes. Undisturbed samples shall be of 100 mm diameter and 450mm length. Samples shall be collected in such a manner that the structure of soil and its moisture content do not get altered. The specification for the accessories required for sampling and the sampling procedure shall conform to IS:1892 and IS:2132. Undisturbed sampling in sand shall be done using compressed air technique as mentioned in IS: 8763. Thin-walled sampler shall be used to collect undisturbed samples by pushing the tube into the soil. The sampling tube shall have a smooth finish on both surface and minimum effective length of 450mm. The area ratio of sampling tubes shall be less than 12.5%. However, in case of very stiff soils, area ratio up to 20% shall be permitted.

- a) Undisturbed Sampling in Cohesive Soil –

Undisturbed samples in soft to stiff cohesive soils shall be obtained using a thin-walled sampler. In order to reduce wall friction, suitable precautions such as oiling the surfaces shall be taken. The bore hole shall be cleaned and the depth of sampling below ground level shall be noted. The sampler shall then be attached to the bottom of boring rods and lowered into the borehole. The sampler shall be pushed into the clay layer by hand or by jacking and soil sample of specified length shall be collected without disturbing the soil. The distance by which the sampler penetrates into the soil strata shall be checked. Care shall be taken to ensure that the sampler is not driven too far as this will compress the soil.

The sampler shall be rotated to break the core at bottom of the sampler and then steadily drawn up.

b) Undisturbed Sampling Using Piston Sampler -

Undisturbed samples in very loose saturated sandy & silty soils and very soft clays shall be obtained by using a piston sampler consisting of a sampling cylinder and piston system. In soft clays and silty clays with water standing in the casing pipe, piston sampler shall be used to collect undisturbed samples. During this method of sampling expert supervision is called for. The interior surface of the sampler shall be smooth, clean and corrosion resistant. Its cutting edge and the ring seals shall be inspected for wear and rejected if worn. Check shall be done to ensure that the moving parts of the sampler function freely before the sampler is lowered into the borehole. While pushing the system into the soil and till the beginning of the sampling operations, the bottom of the piston shall be flushed with the cutting edge of the sampler. At the depth of sampling, the piston should be fixed relative to the ground and the sampler cylinder shall be independently pressed down smoothly and continuously into the ground. If an obstruction is met, the sampler shall be withdrawn and another sample be taken after the obstruction is removed. Accurate measurements of the depth of sampling, height of sampler, stroke and length of sample recovery shall be noted and recorded. After the sampler is pushed to the required depth, both the sampler cylinder and the piston system shall be drawn up together ensuring that there shall not be any disturbance to the sample which shall then be protected from changes in moisture content.

c) Undisturbed Sampling in Non cohesive Soil -

Undisturbed samples in cohesion less soil shall be obtained as per the procedure given in IS: 8763. Compressed air sampler shall be used to take the samples of cohesion less soil below water table. Precautions shall be taken to clean the borehole before sampling. Thin-walled tube samplers of 60mm internal diameter shall be used. The height and other dimensions of the sampler shall be recorded before use. Proper care shall be taken to maintain the water level in the bore hole slightly above the ground water table before and during sampling operations. Immediately after the sample is obtained, the ends of the sample shall be waxed and capped to avoid moisture content changes.

#### IV. Relaxation during Sampling

- a) The sampler shall be pushed into the soil and driving of sampler shall be resorted to only when it cannot be pushed into the soil. This shall be done only with the permission of the engineer and all the details about the same shall be recorded in the bore logs.
- b) In clays when 'N' value is greater than 50, the undisturbed sampling may be replaced by standard penetration test.

#### 2.6.4 Ground Water

- a) One of the following methods shall be adopted for determining the ground water table in bore holes as per IS: 6935 and as per the instructions of the engineer.
- b) In permeable soils, the water level in borehole shall be allowed to stabilize after lowering it adequately by bailing. When water level inside the borehole is found to be stable, the depth of water level below ground level shall be measured. Stability of sides and bottom of the borehole shall be ensured at all times.
- c) For both permeable and impermeable soils, the following method shall be suitable.
- d) The borehole shall be filled with water and then bailed out to various depths. Observation on the rise or fall of water level shall be made at each depth. The level at which neither a fall nor a rise is observed shall be considered as the water table elevation. This shall be established by three successive readings of water level taken at an interval of two hours.
- e) In case any variation in the ground water level is observed in any specific boreholes then the water level in these bore holes shall be recorded daily during the course of field investigation. Levels in nearby wells, streams etc. if any shall also be noted whenever these readings are taken. If so called for, observation wells shall be drilled for the purpose of long term studies on the fluctuation in ground water levels and pressure. Either stand pipe or piezometer shall be installed at the specified depths in the selected previously drilled bore holes or specially drilled bore holes for this purpose as per the specification and instructions of the engineer. Daily water level readings shall be recorded immediately following the

installation upto the time of leaving the site. At the end of fieldwork, these installations shall be handed over in satisfactory working condition to the engineer without disturbing their position so that the owner can continue further observations.

- f) Stand pipes and piezometers shall consist of 19mm internal diameter rigid un-plasticized (UPVC) tubing. All the joints in the tubing shall be made of coupling sleeves. The top of UPVC tubing shall be enclosed in a 75mm diameter galvanized steel pipe of 1.5m length having a galvanized steel screw cap with well-greased threads and the caps shall be tightened such that it would be impossible to loosen by hand. The lower end of the pipe shall have four legs of 6mm thick and 100mm long and welded to have projection of 25mm. The pipe shall be sealed into the ground with cement grout so that it does not rotate. The top end of the pipe shall project about 300mm above ground level unless otherwise specified by the engineer-in-charge. The perforated tubing for the porous element shall be surrounded by a response zone of well graded sand from 500mm below to 150mm above the lower end of the stand pipe or piezometer and the bore hole above the response zone shall be back filled with natural soil or well graded sand. The latter shall compose of particles that vary in amount according to the size in such a manner that the void space formed by the larger particles can be filled by smaller size particles.
- g) Stand pipe - Stand pipes shall be installed to measure the water level in soils with high permeability such as sand and gravel. The stand pipe shall consist of perforated tubing attached to the bottom of the UPVC tubing. The perforated tube shall be 150mm long having perforations of diameter not greater than 1mm.
- h) Piezometers - Piezometers shall be installed to measure the pore pressures in soil with medium to low permeability. Piezometer shall consist of a porous filter attached to the bottom of the UPVC tubing. The filter shall be 300mm in length and shall be placed in the bore hole and sealed at top and bottom by grouting. Hydraulic piezometers with double line are to be used to remove the air trapped in the system.
- i) Sub-Soil Water Samples

- Sub-soil water samples shall be collected for carrying out chemical analysis. Representative samples of ground water shall be collected when it is first encountered in boreholes before the addition of water to aid boring or drilling. Water samples shall not be collected when bentonite slurry or mud has been used for drilling operations. If water has been added for drilling purposes or if ground water has been diluted by surface rain water, then the bore hole shall be dewatered and water be allowed to rise from which the sample may be taken
- The sampling apparatus shall be such that the water at the desired depth can be collected directly without any disturbance and any change in concentration of constituents like dissolved gases etc.
- Undue agitation shall be avoided. An ordinary suction pump with its suction end inserted upto the required depth in the borehole shall be used for this purpose.
- The sample shall be collected in a clean vessel and allowed to settle so that the supernatant liquid can be poured into a clean well rinsed glass or polythene bottle. Sufficient quantity and number of samples shall be collected to carry out the chemical analysis and sent to a laboratory in airtight bottles with proper labeling. Chemical analysis of water samples shall include determination of pH value, turbidity, sulphates, carbonates, nitrates & chloride contents, presence of organic matter and suspended solids etc.
- In some cases, constituents may be mixed and analyzed later as specified in the specific test methods. Chemical preservatives may be added to the sample for cases as specified in the test method/IS codes. This shall only be done if analysis cannot be conducted within an hour of collection and shall have the prior written permission and approval of the engineer.

### **2.6.5 In-situ Permeability Test**

In-situ permeability test shall be conducted to determine the water percolation capacity of overburden soil. This test shall be performed inside the bore hole/trial pit at specified depths or in each layer or as per the directions of the engineer. The type of test shall be either pump-in or



pump-out test depending on the subsoil and ground water conditions. Pump-in test shall be conducted whether ground water in borehole exists or not. Pump-out test shall be conducted to obtain data for dewatering purposes when ground water is met in the borehole. The specification for equipment required for the test and the procedure of testing shall be in accordance with IS: 5529, Part-1. When it is required to carry out the permeability test for a particular section of the soil strata above ground water table, bentonite slurry shall not be used while boring.

### **I. Pump-in-Test**

Pump-in test shall be conducted in the bore hole/trial pit by allowing water to percolate into the soil. Choice of the method of testing shall depend on the soil permeability and prevailing ground water level.

Only clear water shall be used for conducting the test. Before conducting the test, the borehole shall be cleaned as specified in clause 2.8 Water shall be allowed to percolate through the test section for sufficient period of time to saturate the soil before starting the observation.

#### **a) Constant Head Method (In Bore Hole)**

This test shall be conducted in boreholes where soil has a high permeability. Water shall be allowed into the borehole through a metering system ensuring gravity flow at constant head so as to maintain a steady water level in the borehole. A reference mark shall be made at a convenient level which can be easily seen in the casing pipe to note down the fluctuations of water level. The fluctuations shall be counteracted by varying the quantity of water flowing into the borehole. The elevation of water shall be observed at every 5 minute interval. When three consecutive readings show constant value, the necessary observations such as flow rate, elevation of water surface above test depth, diameter of casing pipe etc. shall be made and recorded as per the proforma recommended in IS: 5529, Part-1, Appendix-A.

#### **b) Falling Head Method (In Bore Hole)**

This method shall be adopted for soils of low permeability and which can stand without casing. The test section shall be sealed at the bottom of the borehole and a packer at the top of the test section. If the test has to be conducted at an intermediate section of a pre-bored hole, then double

packers shall be used. Access to the test section through the packer shall be by means of a pipe which shall extend above the ground level. Water shall be filled into the pipe upto the level marked just below the top of the pipe and water be allowed to drain into the test section. The water level in the pipe shall be recorded at regular intervals as mentioned in IS: 5529, Part-1, Appendix-B. The test shall be repeated till constant records of water level are achieved.

c) Percolation Test (In Trial Pit)

Percolation test shall be conducted in trial pit in areas where water/effluent is stored/ discharged in ground level tanks. The loss of water due to percolation into the soil shall be estimated by the soil absorption capacity.

## II. Pump-Out Test

This test shall be carried out at site to determine the co-efficient of permeability of soil below water table. This test shall be conducted by continuous pumping out of water from a well so as to maintain a steady water level at the desired depth in the well. The fluctuations in the water level shall be counteracted by varying the quantity of water pumped out of the well. The specification for the equipment & accessories required for performing the test, the procedure of testing, field observations and reporting of results shall conform to IS: 5529, Part-1. The well shall be of 400mm in diameter to be installed with a 250mm diameter perforated GI/MS pipe. Observation pipes of 50mm diameter shall be installed at regular intervals along three radial lines extending from the well at 120 degrees to each other. Length of these pipes shall depend upon the ground level, estimated depth of lowering the ground water and the distance from the well. Sufficient number of observation pipes shall be installed along each of the radial lines so as to assess the zones of influence due to dewatering. Draw down depth in the well shall be as specified in the drawing.

### 2.6.6 Trial Pit

- a) Trial pits shall be of 3m x 3m size so as to permit easy access for visual examination of walls of the pit and to facilitate sampling and in-situ testing operations. Pits shall be excavated upto a maximum depth of 4m



below ground level or as per the directions of the engineer-in-charge. Precautions shall be taken to ensure the stability of pit walls including provision of shoring if necessary as per IS: 4453. Precautions shall be taken to prevent surface water draining into the pit. Arrangements shall be made for dewatering if the pit is extended below water table. Trial pits shall be kept dry and a ladder shall be provided for easy access to the bottom of the pit. In-situ tests shall be conducted and undisturbed samples shall be collected immediately on reaching the specified depth so as to avoid substantial changes in moisture content of the subsoil. Arrangements shall be made for barriers, protective measures and lighting necessary for the period the pits remain open.

- b) A note on the visual examination of soil strata shall be prepared. This should include the nature, colour, consistency and visual classification of the soil, thickness of soil strata, thickness of expansive soil & ground water table if any etc.
- c) Undisturbed samples shall be collected at 1m, 2m, 3m depth and at the termination depth in all the pits.

- **Chunk Samples**

In cohesive soils, undisturbed samples of regular shapes shall be collected. The samples shall be cut and trimmed to a size of 0.3m x 0.3m x 0.3m. A square area of 0.35m x 0.35m shall be marked at the center of the levelled surface at the bottom of the pit. Without disturbing the soil inside the marked area, the soil around this marking shall be carefully removed upto a depth of 0.35m. The four vertical faces of the soil block protruding at the center shall be trimmed slowly so that its size reduces to 0.3m x 0.3m. Wax paper cut to suitable size shall be wrapped uniformly and covered with two layers of thin cloth over all the five exposed surfaces of the soil block and sealed properly using molten wax. A firmly constructed wooden box of size 0.35m x 0.35m x 0.35m (internal dimensions) with the top and bottom open shall be placed around the soil block and held such that its top edge protrudes just above the surface of the block. The space between the soil block and the box shall be filled uniformly and tightly with moist saw dust. The top surface shall also be covered with saw dust before nailing the wooden lid to cover the box firmly taking care that the soil block

is not disturbed. The area of contact between the bottom portion of the block and the ground shall be reduced slowly by removing soil in small quantities using small rods so that the block can be separated from the ground slowly without disturbance. After inverting the wooden box along with the soil block, the bottom portion shall be trimmed and covered with wax paper, cloth and to be sealed with molten wax. A wooden lid shall be nailed to the box after providing proper saw dust cushion below it. An arrow mark shall be made on the vertical face of the wooden box to indicate the top surface of the sample along with the location, date and depth of sampling.

- **Tube Samples**

Undisturbed tube samples may also be obtained by means of 100mm diameter sampling tubes with a cutting edge. The sampler shall be slightly oiled or greased inside and outside to reduce friction. The sampler shall be pushed into the soil and while doing so, soil around the tube shall be carefully removed. In case it is not possible to push the sampler it may be driven by light blows from a "monkey".

- d) In case it is not possible to collect undisturbed samples in the pit, in- situ density of soil shall be determined by sand replacement method. The specification, equipment, accessories etc. required for the test and the procedure of testing shall be in accordance with IS: 2720, Part-XXVIII. No separate payment shall be made for this test.
- e) After the completion of the test, sampling and visual examination, the pit shall be suitably backfilled as directed by the engineer. Unless otherwise specified excavated soil shall be used for this purpose.

### **2.6.7 Vane Shear Test**

Field vane shear test shall be performed inside the borehole to determine the shear strength of cohesive soils, especially of soft and sensitive clays which are highly susceptible to sampling disturbance. This test shall be conducted by advancing a four winged vane of suitable size (75mm or 100mm diameter as per the soil condition) into the soil upto desired depth

and measuring the torque required to rotate the vane. The specification for equipment & accessories required, the test procedure and field observations etc. shall be as per IS: 4434. This test may also be conducted by direct penetration from the ground surface. If the cuttings at the test depth in the bore hole show any presence of gravel, sand, shells, decomposed wood etc. which are likely to influence the test results substantially, the test at that particular depth may be omitted with the permission of the engineer-in-charge. However, the test shall be conducted at a depth where these obstructions cease to occur. On completion of the test the results shall be reported in an approved proforma as specified in IS: 4434, Appendix-A.

### **2.6.8 Static Cone Penetration Test (SCPT)**

Static cone penetration test shall be conducted to know the soil stratification and to estimate the various physical and engineering properties of soil. The cone penetrometer shall be advanced by pushing and the static force required for unit penetration shall be determined. The test shall be conducted using a 200kN capacity mechanically operated equipment upto the specified depth or refusal whichever is earlier. For this test, 'refusal' means meeting very hard strata which cannot be penetrated at the rate of at least 0.3cm/sec even when the equipment is loaded to its full capacity.

The specification for the equipment and accessories required for performing the test, test procedure, field observation and reporting of results shall conform to IS: 4968, Part-III. At the ground level, pre-boring up to 0.5m depth shall be permitted if the overlying strata are very hard. No extra payment shall be made on account of this pre-boring. Continuous record of the penetration resistance shall be maintained. On completion of the test, the results shall be reported in an approved proforma as in IS: 4968, Part-III, Appendix-A.

### **2.6.9 Dynamic Cone Penetration Test (DCPT)**

Dynamic cone penetration test shall be conducted using bentonite slurry by driving a standard size cone attached to the bottom of a string of drill rods. The test shall be conducted up to the specified depth or refusal whichever is earlier. Refusal shall be considered when the blow count

exceeds 150 for 300mm penetration. The specification for the equipment and accessories required for performing the test, test procedure, field observations and reporting of results shall conform to IS:4968, Part-II. The driving system shall comprise of a 650N weight having a free fall of 0.75m. The cone shall be of 65mm diameter provided with vents for continuous flow of bentonite slurry through the cone and rods in order to avoid friction between the rods and soil. On completion of the test, the results shall be presented as a continuous record of number of blows required for every 300mm penetration of the cone into the soil in a suitable chart supplemented by a graphical plot of blow count for 300mm penetration vs depth.

#### **2.6.10 Plate Load Test (PLT)**

- a) Plate load test shall be conducted to determine the bearing capacity and load/settlement characteristics of soil at shallow depth by loading a plane and leveled steel plate kept at the desired depth and measuring the settlement under different loads until a desired settlement takes place or failure occurs. The specification for equipment and accessories required for conducting the test, the test procedure, field observations and reporting of results etc. shall conform to IS: 1888. The location and depth of the test shall be as given in the drawing or as indicated by the engineer. Undisturbed tube samples as specified in clause 2.6.6 (c) shall be collected at 1 m and 2.5 m depths from the ground level for carrying out laboratory tests.
- b) The size of pit shall not be less than five times the plate size and the depth shall be as specified. All provisions regarding excavation and visual examination of pit under clause 2.6.6 (a) and 2.6.6 (b) shall apply here also.
- c) If the ground water table is at a depth higher than the specified test depth, the ground water table shall be lowered and maintained at the test depth for the entire duration of the test. Dewatering shall be at the cost of the Contractor.
- d) Unless otherwise specified the reaction method of loading shall be adopted. Settlement shall be recorded from dial gauges placed at four diametrically opposite ends of the test plate. The test plate shall be of 600mm x 600mm size and at least 25mm thick. The bottom of the pit

shall be leveled before placing the plate in position for conducting the test.

- e) A seating load of 7kN/Sqm shall be applied and after the dial gauge readings are stabilized, the load shall be released and the initial readings of the dial gauges be recorded after they indicate constant reading. The load shall be increased in stages. These stages shall be 20, 40, 70, 100, 150, 200, 250, 300, 400, 500, 600 and 800kN per Sqm or as directed by the Engineer. Under each loading stage, record of 'time vs. settlement' shall be kept as specified in IS: 1888.
- f) In case of cohesive soils, each load increment shall be maintained until the settlement is less than 0.02mm/minute or 6 hours whichever is later. Dial gauge readings for settlement shall generally be taken at 1, 2.25, 4, 6.25, 9, 16, 25, 60, 90 and 120 minutes from the start of each stage of loading. Thereafter the readings shall be taken at hourly interval up to a further 4 hours and at two-hour interval thereafter for another 6 hours.
- g) Other than cohesive soils, each stage loading shall be maintained for a minimum duration of one hour or till the settlement rate reduces to 0.02mm/minute whichever is later. No extrapolation of settlement rate from periods less than one hour shall be permitted. The final loading shall be maintained for 24 hours. During unloading, reading of dial gauge shall be recorded for each stage of unloading.
- h) Loading shall be carried out in stages as specified above till one of the following conditions occurs.
  - i. Failure of soil under the plate i.e. the settlement of the plate at constant load becomes progressive and reaches a value of 40 mm or more.
  - ii. Load intensity of 800 kN/sqm is reached without failure of the soil.

Backfilling of the pit shall be carried out as per the directions of the Engineer-in-charge.

Unless otherwise specified the excavated soil shall be used for this purpose.

### **2.6.11 Cyclic Plate Load Test (CPLT)**

This test shall be carried out to determine the dynamic soil properties required for the analysis of foundation subjected to dynamic loads. This test shall be conducted on similar lines as the ordinary plate load test with an addition that unloading shall also be done before each stage of loading. Test set up, load increment and maximum load intensity etc. shall be as per clause 2.6.10.

After each stage of loading, the load shall be removed in a minimum of two stages and as directed by the Engineer. After each stage of reduction of load, dial gauge readings and settlements shall be taken for at least one hour until the readings stabilize. There after the next loading stage shall commence. Recording and analysis of test data shall be as per IS: 5249.

### **2.6.12 California Bearing Ratio Test (CBR Test)**

This test shall be carried out to obtain the properties of soil required for the design of roads. The equipment and accessories required for carrying out the test, test procedure, recording of observations and presentation of results shall conform to IS: 2720 part XXXI. The test locations and depth shall be as specified in the drawings or as directed by the Engineer.

### **2.6.13 Electrical Resistivity Test (ERT)**

This test shall be conducted to determine the electrical resistivity of soil required for designing safety grounding system for the entire power plant area. The specification for the equipment and other accessories required for performing the test, test procedure and reporting of field observations shall conform to IS: 3043. The test shall be conducted using Wenner's four electrode method as specified in IS:1892, Appendix-B2. Unless otherwise specified, at each test location the test shall be conducted along two perpendicular lines parallel to the co-ordinate axes. On each line a minimum of 8 to 10 readings shall be taken by changing the spacing of the electrodes from an initial small value of 0.5m up to a distance of 10m.

### **2.6.14 Seismic Refraction Test**

- a) This test shall be carried out to establish the rock and soil profiles of varying density. The dynamic shear modulus of the soil shall also be



obtained from the results of this test. The specification for the equipment and other accessories, procedure for carrying out the test, recording and analysis of results and their presentation shall conform to IS: 1892.

- b) This test shall be carried out by inducing shock waves into the soil by striking a plate placed on the ground surface with a hammer. The shock waves shall be picked up through geophones placed on the ground surface at regular intervals in line with the plate along a straight line. The time elapsed before the waves reach the geophones shall be recorded to an accuracy of one millisecond or better.
- c) The distance between the shock point and the geophones shall be increased to cover a wider area. Alternatively, multiple geophones shall be used simultaneously using multiple channel seismographs to record the arrival time and intensity of waves reaching the geophones. The spacing of geophones shall be 5m. As the distance between geophones and the shock producing point are increased, the time lapse for the waves passing through different underlying strata and reaching the geophone shall be recorded. The wave forms shall be recorded for each test using multiple channel seismographs.
- d) The test shall be conducted along traverses in two orthogonal directions as specified in the drawing or as directed by the Engineer. During testing, proper care shall be taken to avoid disturbance caused due to the movement of vehicles or other working operations around the test location. The type of wave (compression or shear) shall be analyzed properly using the data recorded during the test.

### **2.6.15 Cross Hole Shear Test (CHST)**

This test shall be generally carried out in accordance with IS: 13372 (Part-2) to establish the dynamic elastic properties of soil and rock. In this test, the seismic waves are to be picked up in two adjacent receiver boreholes. The spacing of boreholes shall be determined so as to obtain good results. The boreholes shall be uncased in the portion carrying the geophones. However, it should be kept filled with water or drilling mud in order to ensure perfect contact between the borehole wall and the geophone. In case of cased hole preferably a low velocity material such as a high impact PVC should be used for casing and it is essential that it should be well grouted behind in order to make an intimate contact with the soil. The

charge shall be installed within the depth as specified and the waves shall be picked up from the geophones installed at required depths in receiver boreholes. Knowing the travel time from shot hole to receiver hole and corresponding distance, the velocity of the waves is determined which enables to estimate dynamic elastic modulus, shear modulus and Poisson's ratio. In each receiver borehole multiple geophones shall be provided at depth of 2m, 4m, 7m, 10m, 15m, 20m and 25m below ground level (with starting depth as 2m below ground level) to cover the depth and various strata as specified. Intensity of the waves shall be recorded by multiple channel seismographs.

### 2.6.16 Pressure meter Test

- a) This test shall be conducted in bore holes at desired depth to obtain the in-situ stress- strain characteristics and strength parameters of soil/rock layer by measuring the deformation of the probe at different pressures of the volume meter. The location and depth of the test shall be at 4 depths (3m, 10m, 20m and 35m below GL) or as per the directions of the Engineer.
- b) All precautions shall be taken to ensure a smooth bore hole of required diameter with minimum disturbance to the surrounding soil. In soft, loose and sensitive soils, the bore hole shall be predrilled deeper than the testing depth for enough so that the cuttings settling at the bottom of the bore hole shall not interfere with the test.
- c) The equipment shall be calibrated for pressure losses (membrane correction/air calibration) and volume or radius changes (line calibration/thick wall rigid steel cylinder test) before starting of test and at regular intervals as per the manufacturer's specification. Maximum value of pressure correction shall not be more than 50% of limit pressure. The total volume losses in the system shall not exceed 0.5% of the static probe volume per 100kPa. Volume correction may be neglected in soil if it is less than 0.1% of probe volume per 100 kPa.
- d) The test shall be performed by expanding a cylindrical probe to obtain a pressure vs. volume or pressure vs. radius curve as specified in IS:1892. The probe may be of Ax, Bx or Nx size. However, the size of the borehole shall be compatible to the size of pressure meter probe. Hose pipe connecting the probe with the surface unit shall be of flexible tubing



of single or coaxial type. The equipment should be able to reach a maximum pressure of 5000kPa for testing in soil and 8000kPa for testing in rock. The accuracy of measuring device shall be such that a change of 0.2% of static probe volume or 0.1% of probe radius is measurable as specified in IS: 1892.

- e) The probe shall be lowered down to the required depth as soon as the boring is completed so as to limit the expansion of soil due to release of stresses. The probe shall be held by a clamping device ensuring that it is not located at the interface of two different soil/rock layers.
- f) The pressure shall be increased in at least 20 equal stages as directed by the Engineer. At each stage the pressure shall be maintained for a period of at least 60 seconds and volume reading shall be taken for 7 to 14 minutes. The volume of water sent into the probe during this period shall be measured up to an accuracy of 0.01cum. In case the water level in the volume meter drops rapidly, it is necessary to close the volume meter valve quickly so that the reservoir does not empty and allow air or gas into the tubing.
- g) The test shall be carried out in stages till one of the following conditions occurs.
  - The volume of the probe is doubled
  - Ultimate failure of soil/rock occurs
  - Load intensity of 5000kPa for soil and 8000kPa for rock is reached without failure.
- h) If the shape of uncorrected pressure vs. volume curve drastically varies from the ideal test curve, the test shall be repeated at no extra cost to the owner at a different depth as decided by the Engineer. On completion of the test, all results mentioned in clause 2.9.2 shall be reported.

## 2.7 FIELD INVESTIGATION - ROCK

### 2.7.1 Rock Drilling

Drilling in rock shall be done at specified locations or as per the directions of the Engineer. Rocks shall be drilled at least 3m into the rock. Before commencing drilling, it shall be proved that characteristics of rock have been met with as mentioned in clause 2.6.1 (I(b)). The starting depth of drilling in rock as mentioned in clause 2.6.1 (I(b)) shall be certified by the

Engineer. The portion drilled in rock shall be backfilled with 1 part of cement: 3 part of sand (1:3) grout unless otherwise directed by the Engineer.

### **I. Equipment**

- a) Core drilling shall be done by rotary motion using diamond bit. The feed or thrust to the drilling bit shall be actuated by hydraulic system. The rotary core drilling equipment and procedure for drilling shall conform to IS: 6926. The equipment shall be provided with necessary facilities to regulate the spindle speed, bit pressure and water pressure during core drilling to get a good core recovery.
- b) Drilling shall be carried out with Nx size diamond tipped drill bits or impregnated diamond bits depending on the type of rock encountered. Double tube swivel core barrel of Type B conforming to IS: 6926 shall be used to ensure a good core recovery and to pick up cores from all layers of rock. Suitable core catchers shall be used to ensure continuous and good core recovery.

### **II. Procedure**

- a) The drilling fluid shall be clean water. Circulation of drilling fluid shall be started before the core barrel reaches the bottom of the hole to prevent cuttings or sludge from entering the core barrel at the start of coring. Drilling fluid shall be circulated continuously down the hollow rods and the sludge conveying the rock cuttings to the surface shall be collected.
- b) When drilling through soft/weathered/fractured rock, water circulation must be reduced so as to avoid shattering/breaking of core.
- c) The rotational speed of the bit (spindle speed), the amount of downward pressure applied on the bit (bit pressure) and water pressure shall be suitably adjusted and properly monitored so that the core is collected with least disturbance and to avoid shearing of the core from its base. Bit speed, bit pressure, water pressure for the type of bit for various rock types shall be as per Appendix A of IS: 6926.
- d) No drill run shall exceed 0.75m in length. This can be increased to 1.5m provided the core recovery observed is more than 80% in two successive 0.75m drill runs and on approval from the Engineer. If the core recovery

is less than 20% then SPT shall be performed before commencing the next drill run as explained in clause 2.6.2.

- e) If at any time blocking of the bit or grinding of the core is observed, the core barrel shall be immediately withdrawn from the borehole regardless of the length of drill run completed.

### **III.Observations**

- a) The color of return water at regular intervals, the depth at which any change of color of return water is observed, the depth of occurrence and amount of flow of hot water if encountered shall be recorded.
- b) The depths through which a uniform rate of penetration was maintained, the depth at which a marked change in rate of penetration or sudden fall of drill rod occurs, the depth at which any blockage of drill bit causing core loss if any etc. shall be recorded.
- c) Any heavy vibration or torque noticed during drilling should be recorded together with the depth of occurrence.
- d) Special conditions like the depth at which grouting was done during drilling, presence of artesian conditions, loss of drilling fluid, observation of gas discharge with return water etc. shall also be observed and recorded.
- e) During drilling operation, observation on return water, rate of penetration etc. shall be recorded in a proforma as given in IS: 5313, Appendix-A.

### **IV.Core Samples**

- a) Core samples shall be extracted by the application of a continuous pressure at one end of the core with the barrel held horizontally without vibration. Friable cores shall be extracted from the barrel directly into a suitable sized half round plastic channel section. Care shall be taken to maintain the direction of extrusion of sample same as that while coring to avoid stress reversal.
- b) Immediately after withdrawal from the core barrel, the cores shall be placed in a tray and transferred into boxes specially prepared for the purpose. The boxes shall be made from seasoned timber or any other

durable material and shall be indexed on top of the lid as per IS: 4078. The cores shall be numbered serially and arranged in the boxes in a sequential order. The description of the core samples shall be recorded as per IS: 4464. Where no core is recovered, it shall be recorded as specified in the continuous record of core recovery and RQD in the core log as per IS: 11315, Part-II.

- c) The basic information for the description of rocks shall cover the followings:
- i. Degree of weathering
  - ii. Discontinuity spacing
  - iii. Strength
  - iv. Colour
  - v. Grain size
  - vi. Structural condition, the mineralogy of the grains and cementing material
  - vii. Rock name, special features like major joint planes, features/laminations, faults etc.

### **2.7.2 Standard Penetration Test**

The relevant hardness of rocks shall be tested in boreholes after every drill run of 0.75m in rock if core recovery observed is less than 20% or as directed by the Engineer-in-charge. The testing equipment and arrangement shall be conforming to IS: 2131. The number of blows for each 75mm penetration to a total penetration of 450mm shall be recorded. Penetration for every 50 blows shall be recorded and the test shall be stopped at a total of 100 blows.

### **2.7.3 Plate Load Test**

The test shall be conducted as described under clause 2.6.11 for soil subject to the following changes.

The test plate shall be of size 450mm x 450mm and at least 25mm thick. The maximum load shall be 2500 kN/Sqm to be applied in stages of 25, 50, 100, 150, 200, 300, 400, 600, 800, 1000, 1500, 2000 and 2500 kN per

Sqm. Under each load the “time Vs settlement” shall be recorded and plotted.

#### **2.7.4 Pressure meter Test**

This test shall be conducted as described under clause 2.6.17 for soil subject to the following changes. The test shall be carried out till one of the following conditions occurs.

- a) The volume of the probe is doubled
- b) Ultimate failure of rock
- c) Load intensity of 8000 kN/Sqm is reached without failure.

#### **2.7.5 Cross Hole Shear Test**

This test shall be conducted as described under clause 2.6.16 for soil.

#### **2.7.6 Permeability Test**

Permeability test shall be conducted in bed rock inside the bore hole by pumping in water under pressure to determine the percolation capacity of the rock strata. This test shall be conducted in uncased and ungrouted sections of the drill hole. Clear and clean water shall be used for the purpose of both drilling and testing. The specification for the equipment and other accessories, test procedure etc. shall conform to IS: 5529, part-II. The length of the test section shall be either 1.5m or 3m as per field conditions and as per the directions of the Engineer-in-charge. The level of water table (if any) in the bore hole shall be recorded and the drill hole shall be cleaned before the start of the test. Depending upon the depth of the test section, single or double packer method shall be adopted. Care shall be taken to maintain water tightness of all the joints and connections during testing.

##### **I. Single Packer method**

This method shall be adopted when the bottom elevation of the test section is the same as the bottom of the drill hole. The packer shall be fixed at the top level of test section such that only the test section lies below the packer. Water shall then be pumped through a pipe into the test section under a required pressure and maintaining it till a constant

quantity of water intake is observed. The amount of water percolating through the hole shall be recorded at every 5minute interval. The test shall be repeated by increasing the pressure at regular intervals up to a pressure limit as specified in IS: 5529, part- II. The details and observations shall be recorded in a proforma as recommended in IS: 5529, part-II, Appendix-B.

## **II. Double Packer method**

This method shall be adopted when the permeability of an isolated section inside a drill hole is to be determined. Packers shall be fixed both at the top and bottom of the test section such that their spacing is exactly equal to the length of the test section. The test shall then be conducted as specified in clause 2.7.6 (I)

## **2.8LABORATORY INVESTIGATION**

### **2.8.1 Essential Requirements**

- a) All laboratory tests shall be conducted in NABL approved laboratory using approved apparatus complying with the requirements and specifications of Indian standards or other approved standards for this class of work. It shall be checked that the apparatus is in good working condition before starting the laboratory tests. Calibration of all the instruments and their accessories shall be done carefully and precisely.
- b) Depending on the type of sub strata encountered, appropriate laboratory tests shall be conducted on soil and rock samples collected in the field. Laboratory tests shall be scheduled and performed by qualified and experienced personnel who are thoroughly conversant with the work. Tests indicated in the schedule of items shall be performed on soil, rock and water samples as per relevant BIS codes. One copy of all the laboratory test data records shall be submitted to the owner progressively every week. Laboratory tests shall be carried out concurrently with field investigation since initial laboratory test results could be useful in planning the later part of field work. A schedule of laboratory tests shall be established by the Contractor and the same shall be submitted and got approved by the Engineer before starting of laboratory tests.
- c) All samples whether undisturbed or disturbed shall be extracted, prepared and examined by a competent personnel properly trained and

experienced in soil sampling, examination, testing and in using the apparatus as per the specified standards.

- d) Undisturbed soil samples retained in liners or seamless tube samplers shall be taken out without causing any disturbance to the samples using suitably designed extruder just prior to actual testing. If the extruder is horizontal, proper support shall be provided to prevent the sample from breaking. For screw type extruders the pushing head shall be free from the screw shaft so that no torque is applied to the soil sample in contact with the pushing head. For soft clay samples, the sample tube shall be cut by means of a high speed hacksaw to specified test length and placed over the mould before pushing the sample into it with a suitable piston.
- e) While extracting a sample from a liner or tube, care shall be taken to see that its direction of movement is the same as that during sampling to avoid stress reversal.
- f) On all undisturbed soil samples tested for bulk density, water content, grain size distribution, liquid limit and plastic limit tests shall also be performed.
- g) On all rock samples tested for unconfined compression test, bulk density and water content tests shall also be performed.

### **2.8.2 Tests**

Tests as indicated in this specification (BOQ) and as called for by the Engineer shall be conducted. The tests shall include the following.

- a) Tests on Undisturbed and Disturbed Soil Samples
  - i. Visual and Engineering classification
  - ii. Sieve analysis and hydrometer analysis
  - iii. Liquid, plastic and shrinkage limits
  - iv. Specific gravity
  - v. Chemical analysis
  - vi. Swell pressure and free swell index determination
  - vii. Proctor compaction
  - viii. California bearing ratio
- b) Tests on Undisturbed Soil Samples



- i. Bulk density and moisture content
- ii. Relative density (for sand)
- iii. Unconfined compression test
- iv. Box shear test
- v. Tri-axial shear tests (depending on the type of soil and field conditions on undisturbed or re-moulded samples)
  - Unconsolidated undrained
  - Consolidated undrained with the measurement of pore water pressure
  - Consolidated drained
- vi. One dimensional consolidation test

c) Tests on Rock Samples

- i. Visual classification
- ii. Water absorption, porosity and density
- iii. Specific gravity
- iv. Hardness
- v. Slake durability
- vi. Unconfined compression test (both at saturated and at in-situ water content)
- vii. Point load strength index
- viii. Deformability test (both on saturated and dry samples)

d) Chemical Analysis of Sub-soil and Ground Water

### 2.8.3 Salient Test Requirements

- a) Re-moulded soil specimen whenever desired shall be fully reworked at field density and natural moisture content. For conducting CBR test and tri-axial test for road material the sample shall be re-moulded to 95% of standard proctor density.
- b) Tri-axial shear test shall be conducted on undisturbed soil samples saturated by the application of backpressure. Only if the water table is at sufficient depth such that chances of it's rising to the base of the footing are meager or nil, the tri-axial tests shall be performed on the specimens at natural moisture content. Each test shall be carried out on a set of three

test specimens from one sample at cell pressures equal to 100,200 and 300kN/Sqm or as required depending on the soil conditions.

- c) Effective stress tri-axial shear test shall be consolidated undrained with pore water pressure measurement. The test shall be conducted at cell pressures of 100, 200 and 300kN/Sqm ensuring complete consolidation at each stage.
- d) Direct shear test shall be conducted on undisturbed soil samples. The three normal vertical stresses for each test shall be 100, 200 and 300 kN/Sqm or as required depending on the soil conditions.
- e) Consolidation test shall have loading stages of 10, 25, 50, 75, 100, 200, 400 and 800 kN/Sqm. Rebound curve shall be recorded for all the samples by unloading the specimen at the in-situ stress of the specimen. Additional rebound curves shall also be recorded whenever desired by the Engineer.
- f) Chemical analysis of sub-soil shall include determination of pH value, carbonate, sulphate (both S03 and S04), chloride and nitrate contents, organic matter, salinity and any other chemicals harmful to the foundation material. The contents in soil shall be indicated as percentage.
- g) Chemical analysis of sub-soil water sample shall include the determination of the properties such as colour, odor, turbidity, pH value and chemical contents such as carbonate, sulphate (both S03 and S04), chloride, nitrate, organic matter and any other chemicals harmful to the foundation material. The contents such as sulphate etc. shall be indicated as ppm by weight.
- h) The laboratory CBR test shall be performed on undisturbed or on re-moulded sample as per the drawing or as directed by the Engineer in soaked and unsoaked conditions.

## 2.9REPORT

### 2.9.1 General

- a) On completion of all the field and laboratory works, the Contractor shall submit a draft report containing geological information of the region, procedure adopted for investigation, field observations, summarized test data, conclusion and recommendations. The report shall include detailed

bore logs, sub-soil sections, field test results, laboratory observations and test results in both tabular as well as graphical forms, practical and theoretical considerations for the interpretation of test results, the supporting calculations for the conclusions drawn etc. Initially, the Contractor shall submit two copies (one soft + one hard copy) of the report in draft form for the owner's review. The abstract of the sub-soil stratification of the project shall also be included in the report.

- b) The Contractor's qualified Geotechnical Engineer shall discuss the draft report based on the comments of the Owner. During the discussions, it shall be decided as to the modifications that need to be done in the draft report. Thereafter the Contractor shall incorporate in the report the agreed modifications as suggested by the Engineer and submit the revised draft report for Engineer's approval. Upon Engineer's approval three hard copies of the detailed final report shall be submitted along with soft copy. The approved report shall also be submitted on 2CDs. Any expenditure on account of redrafting, finalizing the report etc. shall be deemed to have been included in the quoted rates.
- c) The detailed final report based on field observations, in-situ and laboratory tests shall encompass theoretical as well as practical considerations for foundation of different type of structures envisaged in the area under investigation. The Contractor shall acquaint himself about the type of structures, foundation loads and other information required from the Engineer.

### **2.9.2 Data to be Furnished**

The report shall also include but not be limited to the following.

- a) A plot plan showing the location and reduced levels of all field tests e.g. bore holes, trial pits, plate load tests etc. properly drawn to scale and dimensioned with reference to the established grid lines.
- b) Geological information of the area such as geomorphology, geological structure, lithology, stratigraphy and tectonic faults, seismicity of the region and site, core recovery and rock quality designation etc.
- c) Past observations and historical data if available for the area or for other areas with similar soil profile for similar structures in the surrounding areas.

- d) A true cross section of all individual boreholes and trial pits with reduced levels and co-ordinates showing the classification and thickness of individual stratum, position of ground water table, various in-situ tests conducted and samples collected at different depths and the rock stratum if met with.
- e) Plot of standard penetration test 'N' values (both uncorrected and corrected) with depth for identified areas.
- f) Results of all field tests in tabular as well as in graphical forms.
- g) Results of all laboratory tests summarized
  - i) for each sample as well as
  - ii) a consolidated table giving the layer-wise soil and rock properties. All the relevant charts, tables, graphs, figures, supporting calculations, conclusions and photographs of representative rock cores and trial pits shall be furnished.
- h) For all tri-axial shear tests, "stress vs strain" diagrams as well as Mohr's circle envelopes shall be furnished. If back pressure is applied for saturation, the magnitude of the same shall be indicated. The value of modulus of elasticity 'E' shall be furnished for all tests along with relevant calculations.
- i) For all consolidation tests the following curves shall be furnished.
  - "e vs. log P"
  - "e vs P"
  - "Compression vs log t or square root of t" (depending upon shape of the plot for proper determination of coefficient of consolidation)
 The point showing initial condition ( $e_o$ ,  $P_o$ ) of the soil shall be marked on the curves.
- j) Values of compression index, coefficient of volume compressibility etc. shall be furnished. The procedure adopted for calculating the compression index from the field curve and settlement of soil strata shall be clearly specified. The time required for 50% and 90% primary consolidation along with secondary settlement if significant shall also be calculated.

k) For pressure meter tests, the following shall be furnished.

- Calibration record including description of membrane and sheath on probes, dimensions of thick walled cylinder, length of flexible tubing, calibration curves and temperature etc.
- Drilling record including borehole number, method of making borehole, log with soil type and condition, depth of water table in the borehole, weather and temperature etc.
- Test record including type of test, date and time, depth of centre point of probe, volume readings at 30 and 60 second elapsed time and corresponding pressure readings and notes on any deviation from standard test procedure etc.
- Field pressure meter, creep and air calibration curves indicating  $P_o$ ,  $P_f$  and  $P_i$ . Corrected pressure meter and creep curves indicating  $P_o$ ,  $P_f$ ,  $P_i$  along with calculation for the corrections.

l) Values of cohesion, angle of internal friction, pressure meter modulus, shear modulus and co-efficient of sub-grade reaction along with sample calculations. Calculation for allowable bearing pressures and corresponding total settlements for shallow foundations and load carrying capacity calculation of piles in various modes (Compression, Pull out and Lateral) etc.

m) Analysis and discussion of test results.

### 2.9.3 Recommendations

Recommendations shall be given area wise duly considering the type of soil/rock, structure, foundation type and ground water table, etc., in the area. The recommendations shall include but not limited to the following.

- a) Type of foundation to be adopted for various structures duly considering the sub strata characteristics, water table, total settlement permissible for the structures and equipment, minimum depth and width of foundation etc.
- b) For shallow foundations the following shall be indicated with comprehensive supporting calculations.
  - i) Net safe bearing pressure for isolated square/rectangular footings and continuous strip footings of sizes 1, 2, 3, m at

- different founding depths of 1, 2, 3 & 4 m below ground level considering both shear failure and settlement criteria (25mm and 40mm) giving reasons for the type of shear failure adopted in the calculation.
- ii) Net safe bearing pressure for raft foundation of widths greater than 6m at 2, 3, 4m below ground level considering both shear failure and settlement criteria.
  - iii) Modulus of sub-grade reaction and modulus of elasticity from plate load test results along with time-settlement curves and load-settlement curves in both natural and log-log graph.
- c) As piling is envisaged the following shall be furnished with comprehensive supporting calculations.
- i) Type of pile and reasons for recommending the same duly considering the sub strata characteristics.
  - ii) Suitable founding strata for the pile.
  - iii) Considering the expected loads of various structures of the proposed SPV Plant, pile capacities for minimum 3 different diameters, with minimum 3 different lengths for each assumed diameter shall be calculated and estimated.
  - iv) Safe lateral and tensile load carrying capacities of each pile with supporting calculations.
  - v) Magnitude of negative skin friction if any.
- d) Coefficient of permeability of various sub-soil and rock strata based on in-situ permeability tests.
- e) Electrical resistivity of sub-soil based on electrical resistivity tests including electrode spacing vs. cumulative resistivity curves.
- f) Physical properties of soil such as  $c$ ,  $\phi$  etc.
- g) Dynamic soil properties such as dynamic shear modulus and Poisson's ratio etc. from cross-hole shear and seismic refraction tests and coefficient of elastic uniform compression from cyclic plate load tests.
- h) Suitability of the soil for construction of roads and embankments, their stable slopes for shallow and deep excavations, active and passive earth pressures, earth pressure at rest and modulus of elasticity as a function

of depths for the design of underground structures etc. Method of improvement of soil if necessary.

- i) Suitability of locally available soils at site for filling and back filling purposes.
- j) If expansive soil is met with, then recommendation on removal or retaining of the same under the structures/roads etc. shall be given. In the latter case, detailed specifications of any special treatment required including specification for materials to be used, construction method, equipment to be deployed etc. shall be furnished.
- k) Protective measures based on chemical nature of soil and ground water with due regard to the potential deleterious effects on concrete, steel and other building materials etc. Remedial measures for sulphate attack and acidity shall be dealt in detail like type of cement, grade of concrete, any anticorrosive treatment for reinforcement bars etc.
- l) Susceptibility of sub soil strata to liquefaction in the event of earthquake. If so, recommendation for remedial measures.
- m) Identification of any other potential geotechnical problems & their remedial measures.
- n) Description of measures required for erosion control.
- o) Identification of corrective measures required for the improvement of sub surface conditions such as removal of poor sub soil/material and in-situ densification etc. If ground improvement is recommended then its detailed specification, specification for the materials to be used, construction method, equipment to be deployed etc. shall be furnished.

## 2.10 QUALITY ASSURENCE

Quality Plan shall be submitted for approval for every item to be executed in this contract by the Contractor which shall include type of test, frequency of test and acceptance values and relevant standards and codes. Once approved, the Contractor shall strictly adhere to the approved plan. In all items, approval and witnessing personnel shall be mentioned, mentioning the activity of the Engineer in the approval process.



## 2.11 RATES & MEASUREMENTS

### 2.11.1 Rates

- a) The item of work in the schedule of quantities describes the work very briefly. The various items of the schedule of quantities shall be read in conjunction with the corresponding sections in the technical specification including amendments and additions if any. For each item in the schedule of quantities, the bidder's rates shall include all the activities covered in the description of the items as well as for all necessary operations in details described in the technical specification.
- b) No claims shall be entertained if the details shown on the released for construction drawings differ in any way (e.g. location and depth of tests, number of tests etc.) from those shown on the tender drawings.
- c) The unit rates quoted shall include minor details which are obviously and fairly intended and which may not have been included in these documents but are essential for the satisfactory completion of the work.
- d) The bidders quoted rates shall be inclusive of providing all equipment, men, materials, skilled and unskilled labour, making observations, establishing the ground level and coordinates at location of each bore hole, test pit etc. by carrying levels from one established bench mark and distances from one set of grid lines furnished by the Engineer. Also no extra payments shall be made for conducting the standard penetration tests, collection, packing and transportation of all the samples and cores, recording of all results and submitting them in approved formats etc.
- e) The quoted rates for trial pits/plate load tests/ cyclic plate load tests shall be inclusive of dewatering and backfilling etc.
- f) The quoted rates for drilling in rock shall satisfy the requirements as furnished in Tech. specification.
- g) The rates quoted for conducting pump out test shall be inclusive of boring a well of 400mm diameter, providing and installation of perforated GI/MS pipes and observation pipes etc.
- h) The rates quoted for conducting cross hole shear test shall be inclusive of necessary boring, providing PVC pipes, grouting, geo- phones, backfilling the holes after completion of testing etc.

- i) The rates quoted for laboratory tests shall include preparation of samples, performing tests, recording, analysis and submission of data etc.
- j) The bidder shall submit a scheme showing the arrangement and equipment proposed to be used for conducting the site work along with rates.

### 2.11.2 Measurements

- a) All measurements shall be in SI Units.
- b) Length shall be measured in meters (m) correct to two places of decimals. Areas shall be worked out in square meters (Sqm) and volume in cubic meters (Cum) rounded off to two decimals.
- c) Certain tests have to be conducted in the bore hole and trial pit etc. Such bore hole and trails pit etc. shall be measured once only and not again just because the tests are conducted therein.
- d) The depth of penetration due to SPT at the bottom of bore hole shall not be considered for the measurement of bore hole depth.
- e) Pits shall be measured in Cum.
- f) Coring in rock with diamond bit shall be measured in length (meter) correct to two places of decimal for the actual cored length satisfying the criteria of Tech. specification.
- g) Measurement for the item of pump out test shall be in numbers.
- h) Pre-boring done for carrying out Static Cone Penetration Test shall not be measured.

# **SECTION III**

## **INSTRUCTIONS TO BIDDERS**

## Preamble

This part (Section - III) of the Tender Documents provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Employer/ Owner. It also provides information on bid submission and uploading the bid on portal <https://www.bharat-electronictender.com>, bid opening, evaluation and on contract award. This Section (Section - III) contains provisions that are to be used unchanged unless Section - VII (Special Conditions of Contract), which consists of provisions that supplement, amend, or specify in detail, information or requirements included in ITB and that are specific to each procurement, states otherwise.

However, provisions governing the performance of the Contractor, payments under the contract or matters affecting the risks, rights and obligations of the parties under the contract are not included in this section but instead under Section - VI (General Conditions of Contract) and/ or Section - VII (Special Conditions of Contract).

Bidders may note that the respective rights of the Employer/ Owner and Bidders/ Contractors shall be governed by the Tender Documents and Contracts signed between the Employer/ Owner and the Contractor. The provisions of Tender Documents shall always prevail over any other documents in case of contradiction.

Further in all matters arising out of the provisions of this Tender document, the laws of the Union of India shall be the governing laws and the respective courts of Owner/Site shall have exclusive jurisdiction.

## **TABLE OF CONTENTS**

### **[A] GENERAL:**

1. SCOPE OF BID
2. BIDS FROM CONSORTIUM/ JOINT VENTURE
3. NUMBER OF BIDS PER BIDDER
4. COST OF BIDDING & TENDER PROCESSING FEE

### **[B] BIDDING DOCUMENTS:**

5. CONTENTS OF TENDER DOCUMENTS
6. CLARIFICATION OF TENDER DOCUMENTS
7. AMENDMENT OF TENDER DOCUMENTS

### **[C] PREPARATION OF BIDS:**

8. LANGUAGE OF BID
9. DOCUMENTS COMPRISING THE BID
10. SCHEDULE OF RATES/ PRICE SCHEDULE/ BID PRICES
11. GOODS & SERVICE TAX
12. BID CURRENCIES
13. BID VALIDITY
14. EARNEST MONEY DEPOSIT
15. CONTRACT PERFORMANCE SECURITY
16. PRE-BID MEETING
17. SIGNING OF BID/TENDER DOCUMENTS
18. ZERO DEVIATION & REJECTION CRITERIA
19. E-PAYMENT

### **[D] SUBMISSION OF BIDS:**

20. SUBMISSION, SEALING AND MARKING OF BIDS
21. DEADLINE FOR SUBMISSION OF BIDS
22. LATE BIDS
23. MODIFICATION AND WITHDRAWAL OF BIDS

**[E] BID OPENING AND EVALUATION:**

24. EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS
25. BID OPENING
26. CONFIDENTIALITY
27. CONTACTING THE EMPLOYER/ OWNER
28. EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS
29. CORRECTION OF ERRORS
30. CONVERSION TO SINGLE CURRENCY FOR COMPARISON OF BIDS
31. EVALUATION OF BIDS

**[F] CONTRACT AGREEMENT:**

32. AWARD
33. NOTIFICATION
34. SIGNING OF CONTRACT AGREEMENT
35. CANCELLATION OF CONTRACT
36. PROCEDURE FOR ACTION IN CASE CORRUPT/ FRAUDULENT/ COLLUSIVE/ COERCIVE PRACTICES
37. PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISE (MSEs)
38. RISK OF REJECTION
39. INCOME TAX & CORPORATE TAX

**[G] ANNEXURES:**

1. ANNEXURE-I: PROCEDURE FOR ACTION IN CASE CORRUPT/ FRAUDULENT/ COLLUSIVE/ COERCIVE PRACTICES
2. ANNEXURE-II: ADDENDUM TO INSTRUCTIONS TO BIDDERS (INSTRUCTION FOR PARTICIPATION IN E-TENDER)

## **[A] – GENERAL**

### **1. SCOPE OF BID**

- 1.1 The Employer/ Owner wishes to receive Bids as described in the Bidding documents/ Tender documents issued by Employer/ Owner.
- 1.2 The Scope of Work/ Services shall be as defined in the Tender documents.
- 1.3 The successful Bidder will be expected to complete the entire scope of work within the period stated in Bid Information Sheet (Section-I, Invitation for Bids).
- 1.4 Day' means 'Calendar Day' and 'Singular' also means 'Plural'.

### **2. BIDS FROM CONSORTIUM/ JOINT VENTURE**

As specified in the Bid Information Sheet attached under Section - I (Invitation for Bids, IFB).

### **3. NUMBER OF BIDS PER BIDDER**

Unless otherwise specified in the Bid Information Sheet attached under Section - I (Invitation for Bids, IFB), a Bidder shall submit only 'one [01] Bid' in the same Bidding Process. A Bidder who submits or participates in more than 'one [01] Bid' will cause all the proposals in which the Bidder has participated to be disqualified.

### **4. COST OF BIDDING & TENDER PROCESSING FEE**

#### **4.1 COST OF BIDDING**

The Bidder shall bear all costs associated with the preparation and submission of the Bid including but not limited to Bank charges, all courier charges including taxes & duties etc. incurred thereof. Further, Employer/ Owner will



in no case, be responsible or liable for these costs, regardless of the outcome of the bidding process.

#### **4.2 TENDER PROCESSING FEE (NON-REFUNDABLE)**

A non- refundable Tender Processing Fee, if applicable, is to be submitted in the form of ‘either through NEFT/ RTGS transfer in the account of SECI or Demand Draft/ Banker’s Cheque in favor of “Solar Energy Corporation of India Limited, New Delhi” payable at New Delhi. The Tender Processing Fee is to be submitted along with the bid for the amount as mentioned in the Bid Information Sheet attached under Section - I (Invitation for Bids, IFB). Bids submitted without payment of requisite Tender Processing Fee will be treated as non-responsive and shall be liable for rejection.

#### **4.3 The Tender Processing Fee and EMD, if applicable is exempted for MSME Vendors registered under NSIC/ Udyog Aadhaar/DIC Category only. To avail the exemption in Tender Processing Fee in case of consortium/ JV, all the members should be registered as MSME Vendors under NSIC/ Udyog Aadhaar Category/DIC.**

#### **4.4 In case of any discrepancy/ non-submission of either offline or online bid documents by the Bidder, the tender processing fee will be deemed as Bidder’s consent for participation in the bidding process. Henceforth, the tender processing fee shall be retained by Employer and shall not be returned under any circumstances. No plea in this regard shall be entertained by the Employer/ Owner. However, EMD, if applicable will be returned in this case.**

#### **4.5 In the event of a particular tender being cancelled at any stage, the tender processing fee will be refunded to the concerned Bidders without any interest charges within 30 days from the date of notification of cancellation of tender.**

No plea in this regard shall be entertained by the Employer/ Owner. EMD, if applicable will also be returned in this case.

## **[B] - BIDDING DOCUMENTS**

### **5. CONTENTS OF TENDER DOCUMENTS**

5.1 The contents of Tender Documents are those stated below, and should be read in conjunction with any 'Addendum/ Corrigendum' issued in accordance with "ITB: Clause-7":

- Section-I : Invitation for Bids [IFB]
- Section-II. : Scope of Work [SOW] / Technical Specifications [TS]
- Section-III : Instructions to Bidders [ITB]
- Section-IV : Bid Data Sheet [BDS]
- Section-V : Qualifying Requirements [QR]
- Section-VI : General Conditions of Contract [GCC]
- Section-VII : Special Conditions of Contract [SCC]
- Section-VIII : Forms and Formats

5.2 The Bidder is expected to examine all instructions, forms, terms & conditions in the Tender Documents. The entire Tender Documents together with all its amendments, clarifications, and attachments thereto, shall be considered to be read, understood and accepted by the Bidders. Failure to furnish all information required by the Tender Documents or submission of a Bid not substantially responsive to the Tender Documents in every respect will be at Bidder's risk and may result in the rejection of his Bid. However, Employer/ Owner at its sole discretion may seek clarifications from the Bidders to adjudge the exact content and facts of the Tender Documents.

### **6. CLARIFICATION OF TENDER DOCUMENTS**

6.1 A prospective Bidder requiring any clarification(s) of the Tender Documents may notify Employer in writing by e-mail or at Employer's mailing address indicated in the Bid Information Sheet no later than 02 (Two) working days after the pre-bid meeting (in cases where pre-bid meeting is scheduled) or 15 (Fifteen)

days prior to the bid closing date (in cases where pre-bid meeting is not held). Employer reserves the right to ignore the bidders request for clarification if received beyond the aforesaid period. Employer may respond in writing to the request for clarification. Employer's response including an explanation of the query, but without identifying the source of the query will be uploaded on ETS Portal of ISN-ETS <https://www.bharat-electronictender.com> and/ or Employer's website [www.seci.co.in](http://www.seci.co.in).

6.2 Any clarification or information required by the Bidder but same not received by the Employer at clause 6.1 above is liable to be considered as "no clarification/ information required".

6.3 Clarifications sought by the bidders are to be mandatorily submitted in the SECI provided format only provided along with the Tender document. Pre-Bid queries submitted in any other format will not be considered.

## **7. AMENDMENT OF TENDER DOCUMENTS**

7.1 At any time prior to the 'Bid Due Date', Employer/ Owner may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Tender Documents by addenda/ corrigendum.

7.2 Any addendum/ corrigendum thus issued shall be part of the Tender Documents and shall be hosted on ETS Portal of ISN-ETS <https://www.bharat-electronictender.com> and/ or Employer's website [www.seci.co.in](http://www.seci.co.in). Bidders must consider all such addendum/ corrigendum before submitting their bid.

7.3 The Employer, if consider necessary, may extend the date of submissions of Bid to allow the Bidders a reasonable time to furnish their most competitive bid considering the amendment issued thereof.

## **[C] - PREPARATION OF BIDS**

### **8. LANGUAGE OF BID:**

The bid prepared by the Bidder and all correspondence/ drawings and documents relating to the bid exchanged by Bidder and Employer/ Owner

shall be written in English language alone. Any printed literature furnished by the Bidder may be written in another language if accompanied by an ENGLISH translation duly authenticated by the Chamber of Commerce/ Certified Translator of Bidder's country, in which case, for the purpose of interpretation of the bid, the ENGLISH translation shall govern.

In the event of submission of any document/ certificate by the Bidder in a language other than English, the English translation of the same duly authenticated by Chamber of Commerce/ Certified Translator of Bidder's country shall be submitted by the Bidder.

## **9. DOCUMENTS COMPRISING THE BID**

The bid shall be submitted by the Bidder under “**Single Stage - Two Envelope**” procedure of bidding. Under this procedure, the bid submitted by the Bidder in two envelopes - **First Envelope** (also referred to as Techno - Commercial Part) and **Second Envelope** (also referred to as Price Part) shall comprise of the following documents:

### **9.1 Hard Copy**

Hard copy of the bid shall comprise of following documents/ programmed file-Attachments to be submitted in sealed envelope, as part of First Envelope. **The envelope shall bear {the name of Tender, the Tender No. and the words ‘DO NOT OPEN BEFORE’ (due date & time)}.**

**Sh. Umesh Patidar**  
**Sr. Engineer (C&P)**  
**Solar Energy Corporation of India Limited**  
**6<sup>th</sup> Floor, Plate-B, NBCC Office Block Tower-2,**  
**East Kidwai Nagar, New Delhi-110023**  
**Telephone: 011-24666200**  
**E mail: [contracts@seci.co.in](mailto:contracts@seci.co.in)**

- a. Original Non-Refundable Tender Processing Fee as per clause no. 04 of ITB
- b. Original Non-Refundable Cost of Tender Document, if applicable

- c. 'Covering Letter' on Bidder's 'Letterhead' (in Original) clearly specifying the enclosed
- d. EMD, in original as per Clause 14 of ITB as per 'Form F-IV' or as prescribed.
- e. Power of Attorney for authorized signatory in non-judicial stamp paper (as per 'Form F-XII')
- f. Copy of Board Resolution
- g. The Passphrase to decrypt the relevant Bid-Parts (for both Techno-Commercial and Financial) in separate sealed envelopes before the start date and time of the Tender Opening Event (TOE)

**Bidder shall also upload the scanned copies of all the above mentioned original documents as Programmed File Attachments during online Bid Submission as a part of First envelope.**

**“Bidder should explicitly note that no hard copies are to be submitted as a part of Second envelope”.**

## 9.2 Soft Copy

Online documents/Soft copy of the bid shall comprise of following documents to be uploaded on the ISN-ETS portal <https://www.bharat-electronictender.com> as per provisions therein.

### **a. As part of First Envelope**

DOCUMENTS LISTED BELOW ARE TO BE SUBMITTED IN ON-LINE MODE AS SOFT COPIES:

- I. Covering Letter as per Format I.
- II. Original Non-Refundable Tender Processing Fee as per clause no. 04 above, if applicable.
- III. General particulars of the Bidder as per the Format II
- IV. Contract Performance Security as per the Format III, if applicable
- V. Earnest Money Deposit as per the Format IV, if applicable
- VI. Financial Proposal as per Format V

- VII. Schedule of Rate (SOR) / Price Bid as per Format VI
- VIII. Technical Proposal as per Format VII
- IX. Annual reports along with a certification of turnover of last 03 years as per Format VIII\*
- X. No Deviation Confirmation as per Format IX
- XI. E-Banking Mandate Form as per Format X
- XII. Power of Attorney as per Format XII or Board Resolution as per format XI for such authorization.
- XIII. Declaration Regarding Banning, Liquidation, Court Receivership etc. as per Format XIII
- XIV. "Format of Payment on Order Instrument to be issued by IREDA/REC/PFC (In lieu of BG towards EMD)" as per 'Form F-14'
- XV. "Format of Payment on Order Instrument to be issued by IREDA/REC/PFC (In lieu of BG towards PBG)" as per 'Form F-15'
- XVI. Copy of GST registration No, PAN Card and Income Tax Registration,
- XVII. An undertaking that the Bidder has not been blacklisted by any Government Department/Autonomous bodies/any organization as on the date of submission of the bid.
- XVIII. Duly attested documents in accordance with the "Qualifying Requirements (QR)" establishing the qualification

\*In case the audited annual accounts for the year previous Financial Year are not available with the Bidder, Minimum Average Annual Turnover shall be considered for the average of its last three preceding years. MAAT shall mean Revenue from Operations as incorporated in the profit & loss account excluding other income, e.g., sale of fixed assets. This must be the individual Company's turnover and not that of any group of Companies. A summarized sheet of average turn over certified by a practicing CA/Statutory Auditor should be compulsorily enclosed along with corresponding annual accounts.

**The Technical Proposal shall not include any financial information relating to the Financial Proposal. The Bidder shall submit Bids in the given Format only.**

**b. As part of Second Envelope**

- I. The Electronic Form of the bid for Second Envelope (Price - Part), as available on the ISN-ETS portal, shall be duly filled. “Termed as **ELECTRONIC FORM**”.
- II. Main Price Bid comprising as per Format-V (Financial Proposal) and Schedule of Rate (SOR) / Price Bid as per Format VI of the Price Schedule duly completed, sealed, and signed/digitally signed shall be uploaded. “Termed as **MAIN BID**”.

**10. SCHEDULE OF RATES (SOR)/ PRICE SCHEDULE (PS)/ BID PRICES**

- 10.1 Unless stated otherwise in the Tender Documents, the Contract shall be for the whole works as described in Tender Documents, based on the rates and prices submitted by the Bidder, and accepted by the Employer/ Owner. The prices quoted by the Bidders should include the Goods & Service Tax (GST) components.
- 10.2 Prices must be filled in format for "Schedule of Rates [SOR]/ Price Schedule [PS]/ Bid Prices" enclosed as part of Tender documents. If quoted in separate typed sheets, such bids may be rejected.
- 10.3 Bidder shall quote for all the items of "SOR/ Price Bid" after careful analysis of cost involved for the performance of the completed item considering all parts of the Tender Document. In case any activity though specifically not covered in description of item under "SOR/ Price Bid" but is required to complete the works as per Specifications, Scope of Work/ Service, Standards,



"GCC", "SCC" or any other part of Bidding Document, the prices quoted shall deemed to be inclusive of cost incurred for such activity.

- 10.4 All Goods & Service Tax (GST) components [applicable for both Centre and state] payable by the Bidder under the Contract, or for any other cause, shall be included in the "SOR/ Price Bid".
- 10.5 Prices quoted by the Bidder, shall remain FIRM and Fixed and valid until completion of the Contract and will not be subject to variation on any account.
- 10.6 In case of any variation (positive/ negative) in existing rates of taxes/ duties/ levies or a new tax/ duty/ levy is introduced or any existing tax/ duty/ levy is abolished or application of any Tax in the course of the performance of this Contract, which will/ may impact the overall pricing in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to factor any such change by addition to the Contract Price or deduction therefrom, as the case may be. All these adjustments would be carried out by considering the base price of taxes equivalent to the amount mentioned under taxes and duties column of the SOR/ PS.
  - a. The term Change in Law shall refer to the occurrence of any of the following events pertaining to this tender only after the last date of the bid submission, including (i) the enactment of any new law; or (ii) an amendment, modification, or repeal of an existing law; or (iii) any change in the rates of any Taxes including any duties and cess or introduction of any new tax made applicable for setting up the tender.
  - b. However, Change in Law shall not include (i) any change in taxes on corporate income or (ii) any change in any withholding tax on income or dividends distributed to the shareholders of the Contractor, or (iii) any change on account of regulatory measures by the Appropriate Commission.

## 11. GOODS & SERVICE TAX (GST)

Contractor shall mandatorily obtain the registration under GST Law at Central level and/or in respective State as may be required. Further, Contractor shall mandatorily file returns under GST before their due date & comply with the

requirements of the Law within timelines. Before releasing the payment to the Contractor. Owner shall not be responsible for any delay in payment release to the contractor in case the GST compliance is not fulfilled from the contractor side in any manner.

Contractor shall be responsible to comply with all the requirements of applicable provisions of GST. Contractor has to mandatorily get registered under GST at Central and relevant State(s). Contractor shall file all the returns on timely basis and upload all the Invoices and acceptance thereof as may be required under the provisions of GST. In case, it is found that Owner is not able to take Input Tax Credit (ITC) benefit of the taxes due to any fault of the Contractor, Owner shall be constrained to deduct the amount from the payments to be made to the Contractor or recover the same in any other manner.

Bidders are required to submit a copy of the GST Registration Certificate or GST provisional certificate while submitting the bids wherever GST tax is applicable.

- 11.1 The responsibility of payment of GST lies with the Service Provider only. Contractor providing taxable service shall issue an Invoice, a Bill or as the case may be, a Challan which is signed, serially numbered and in accordance with rule GST Law. The invoice shall also contain the following:
- (a) Name, Address & Registration No. of such Person/ Contractor
  - (b) Name & Address of the Person/ Contractor receiving Taxable Service
  - (c) Description, Classification & Value of Taxable Service provided
  - (d) GST Amount, if any.
  - (e) HSN code of the Goods/Services.
  - (f) Payments to Service Provider for claiming GST amount will be made provided the above formalities are fulfilled. Further, Employer/ Owner may seek copies of challan and certificate from Chartered Accountant for deposit of GST collected from Employer/ Owner.
- 11.2 In case CBIT (Central Board of Indirect Taxes and Customs) brings to the notice of Employer/ Owner that the contractor has not remitted the amount towards GST collected from Employer/ Owner to the government exchequer, then, that contractor may be debarred from bidding in future tenders of Employer/ Owner for given period as per the sole discretion of Employer/ Owner.
- 11.3 In case of statutory variation in GST during currency of the Contract, the Contractor shall submit a copy of the 'Government Notification' to evidence the date of revision. Claim for payment of GST / Statutory variation in GST, should be raised within two [02] months from the date of issue of 'Government Notification' for payment of differential (in %) GST, otherwise claim in respect of above shall not be entertained for payment of arrears. The following may also be noted: -
- Any increase in the rate of non-ITC based GST beyond the contractual completion period shall be to contractor's account whereas any decrease in the rate shall be passed on to the Employer/ Owner.
- 11.4 Owner will reimburse the GST to the Contractor at actuals against submission of ITC based invoices issued in accordance with GST rules. In case of any

variation in the executed quantities, the amount on which the GST is applicable shall be modified in same proportion.

- 11.5 Owner will reimburse the GST to the Contractor at actuals against documentary evidence subject to the ceiling amount of GST as quoted by the Bidder, subject to any statutory variations. In case of any variation in the executed quantities (If directed and/ or certified by the Engineer-In-Charge) the ceiling amount on which GST is applicable will be modified on pro-rata basis.
- 11.6 Contractor shall ensure timely submission of correct invoice(s) with all required supporting document(s) so to enable Owner to avail Input Tax Credit (ITC) (If applicable).

## 12. **BID CURRENCIES**

Bidders must submit bid in the currency as mentioned in Bid Information Sheet (Section-I, IFB).

## 13. **BID VALIDITY**

- 13.1 Bids shall be kept valid for period specified in Bid Information Sheet (Section-I, IFB) from the final 'Bid Opening Date'. A Bid valid for a shorter period may be rejected by Employer as 'non-responsive'.
- 13.2 In exceptional circumstances, prior to expiry of the original 'Bid Validity Period', the Employer may request the Bidders to extend the 'Period of Bid Validity' for a specified additional period. The request and the responses thereto shall be made in writing or by email. A Bidder may refuse the request without forfeiture of his 'EMD, if applicable will '. A Bidder agreeing to the request will not be required or permitted to modify his Bid but will be required to extend the validity of its 'EMD, if applicable will ' for the period of the extension and in accordance with "ITB: Clause-14" in all respects.

**Note:** In case of extension(s) of last due date of the Tender submission, the latest extension issued shall be considered as the final due date of Tender submission and accordingly the Tender validity should be calculated and sufficed. The validity of the Tender need to be revised by respective Bidders

in case the bids are already submitted prior to the last due date of the initial Tender submission deadline.

#### 14. EARNEST MONEY DEPOSIT(EMD)

- 14.1 The applicability/Non-applicability of Earnest Money Deposit (EMD) is specified under Bid Information Sheet (Section-I, IFB).
- 14.2 The Bids must be accompanied with '**Earnest Money Deposit (EMD)**' in the form of either through NEFT/ RTGS transfer in the account of SECI or '**Demand Draft**' or '**Banker's Cheque**' in favour of **Solar Energy Corporation of India limited, New Delhi payable at New Delhi]** or '**Bank Guarantee**' as per the format of the bidding documents. Bidders shall ensure that EMD, having a validity of at least 30 (Thirty) Days beyond the validity of the bid, must accompany the Bid in the format(s) made available in the Tender Document. In case of any extension in validity of bid, the EMD shall be extended suitably. The EMD shall be submitted in Indian Rupees only.
- 14.3 The '**EMD**' is required to protect Employer/ Owner against the risk of Bidder's conduct, which would warrant the EMD's forfeiture, pursuant to "ITB: Clause-14.8".
- 14.4 Employer/ Owner shall not be liable to pay any Bank charges, commission, or interest etc. on the amount of 'EMD'. In case 'EMD' is in the form of a 'Bank Guarantee', the same shall be from any scheduled Bank as specified in the List of Banks enclosed at Section-VIII of Tender documents or a branch of an International Bank situated in India and registered with 'Reserve Bank of India' as Scheduled Foreign Bank. However, in case of 'Bank Guarantee' from Banks other than the Nationalized Indian Banks, the Bank must be

commercial bank having net worth more than INR 500 Crores (Indian Rupees Five Hundred Crores Only).

- 14.5 Bid not accompanied with required amount of EMD shall be liable for rejection.
- 14.6 'Earnest Money Deposit' of all the unsuccessful Bidders disqualified at the stage of evaluation, will be discharged/ returned as promptly as possible, but not later than '30 [thirty] days' of their respective disqualification.
- 14.7 The successful Bidder's (L1 Bidder) 'Earnest Money Deposit' will be discharged upon the Bidder's signing the 'Contract Agreement' and furnishing the 'Performance Security duly vetted by the Bank'.
- 14.8 Notwithstanding anything contained herein, the 'EMD' may also be forfeited in any of the following cases:
- a. If a Bidder withdraws or varies his Bid during the 'Period of Bid Validity'
  - b. If a Bidder has indulged in corrupt/ fraudulent/ collusive/ coercive practice
  - c. Violates any other condition, mentioned elsewhere in the tender document including deviations or conditional bid.
  - d. In the case of a successful Bidder, if the Bidder fails to:
    - i. acceptance of the Contract Agreement.
    - ii. to furnish "Performance Security.
    - iii. to accept 'arithmetical corrections' as per provision of the clause 29 of ITB.
- 14.9 In case EMD is in the form of 'Bank Guarantee', the same must indicate the Bid Document No and the Work for which the Bidder is quoting. This is essential to have proper correlation later. The 'EMD' should be in the form provided at 'Form F-IV'.
- 14.10 MSMEs (Micro, Small and Medium Enterprises) registered under NSIC/ DIC/ Udyog Aadhar Only are exempted from submission of EMD. In order to avail the exemption in EMD in case of Consortium/ JV, all the**

**members of the Consortium/ JV should be registered as MSME Vendors under NSIC/ DIC/ Udyog Aadhaar Category.**

**Note:** In case of extension(s) of last due date of the Tender submission, the latest extension issued shall be considered as the final due date of Tender submission and accordingly the Earnest Money Deposit validity and Bid validity should be calculated and sufficed. The validity of the submitted EMD and bid validity need to be revised by respective Bidders in case the bids are already submitted prior to the last due date of the initial Tender submission deadline.

## **15. CONTRACT PERFORMANCE SECURITY**

- 15.1 Against the work, within 30 (Thirty) days from the issuance of the Contract Agreement (CA) from Owner, the successful Bidder shall furnish an unconditional and irrevocable Contract Performance Security in accordance with Special Conditions of the Contract. The Contract Performance Security shall be in the form of either Banker's Cheque or Demand Draft or Bank Guarantee and shall be in the currency of the Contract and will be issued in the name of the Owner as specified in the SCC. The Contract Performance Security shall be for an amount equal to specified in Special Conditions of Contract (SCC) towards faithful performance of the contractual obligations, performance of equipment and shall cover entire Contract. The validity of Contract Performance Security shall be in conjunction with the provisions mentioned under Section - VII, Special Conditions of Contract (SCC).
- 15.2 Bank Guarantee towards Contract Performance Security shall be from any scheduled bank as specified in the List of Banks enclosed at Section - VIII, Sample Forms and Formats of Tender documents or a branch of an International Bank situated in India and registered with Reserve Bank of India as scheduled foreign bank in case of Indian Bidder. However, in case of Bank Guarantees from Banks other than the Nationalized Indian banks, the Bank must be a commercial Bank having net worth more than INR 500 Crores and a declaration to this effect should be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead. This Bank Guarantee



shall be valid for a period in conjunction with the provisions mentioned under Section - VII, Special Conditions of Contract (SCC).

- 15.3 The Contract Performance Security may also be submitted in the form of 'crossed payee accounts only' Demand Draft/ Banker's Cheque in favor of as mentioned in the BDS/SCC.
- 15.4 In case of default or failure of the successful Bidder to comply with the requirements of this article shall constitute sufficient grounds for the cancellation of the award and forfeiture of the EMD, if applicable.

***In case of default or failure of the Contractor to comply with the requirements of any of the Obligations covered under this Tender Document and/ or Contract Agreement shall constitute sufficient grounds for forfeiture of the Contract Performance Security.***

- 15.5 The Contract Performance Security has to cover the entire contract value including extra works/ services also. As long as the Contract Performance Security submitted at the time of award takes care of the extra works/ services executed and total executed value are within the awarded contract price, there is no need for additional Contract Performance Security. As soon as the total executed value exceeds the ceiling of awarded contract price by more than 0.5%, the Contractor shall furnish additional Contract Performance Security on proportionate basis of the percentage as defined in the Special Conditions of Contract (SCC) for the additional amount in excess to the original contract value.
- 15.6 Further, any delay beyond 30 (Thirty) days shall attract interest @ 1.25% per month on the total Contract Performance Security amount, calculated on pro-rata basis accordingly. Owner at its sole discretion may cancel the CA & forfeit 100% of EMD if applicable in case Contract Performance Security is not submitted within 45 (Forty-five) days from issuance of CA. However, total project completion period shall remain same. Part Security shall not be accepted. The Zero Date shall be counted from the date signing of Contract Agreement (CA).
- 15.7 If the Contractor/ Sub-Contractor or their employees or the Contractor's agents and representatives shall damage, break, deface or destroy any

property belonging to the Employer or others during the execution of the Contract, the same shall be made good by the Contractor at his own expenses and in default thereof, the Engineer-in-Charge may cause the same to be made good by other Bidders and recover expenses from the Contractor (for which the certificate of the Engineer-in-Charge shall be final).

- 15.8 All compensation or other sums of money payable by the Contractor to the Owner under terms of this Contract may be deducted from or paid by the encashment of a sufficient part of his Contract Performance Security or from any sums which may be due or may become due to the Contractor by the Owner of any account whatsoever and in the event of his Contract Performance Security being reduced by reasons of any such deductions or sale of aforesaid, the Contractor shall within 10 (Ten) days thereafter make good in cash, bank drafts as aforesaid any sum or sums which may have been deducted from or realized by encashment of his Contract Performance Security, or any part thereof. No interest shall be payable by the Owner for sum deposited as Contract Performance Security.

## **16. PRE-BID MEETING**

- 16.1 The Bidder(s) or his designated representative are invited to attend a "Pre-Bid Meeting" which will be held at address specified in Bid Information Sheet under Section - I, Invitation for Bids, IFB. It is expected that a Bidder shall not depute more than 02 representatives for the meeting.
- 16.2 Purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 16.3 Text of the questions raised, and the responses given, together with any responses prepared after the meeting, will be uploaded on SECI & ETI website against the Tender. Any modification of the Contents of Tender Documents listed in "ITB: Clause-5.1", that may become necessary because of the Pre-Bid Meeting shall be made by the Employer/ Owner exclusively

through the issue of an Addendum/ Corrigendum pursuant to "ITB: Clause-7", and not through the minutes of the Pre-Bid Meeting.

- 16.4 Non-attendance of the Pre-Bid Meeting will not be a cause for disqualification of Bidder.

## **17. SIGNINIG OF BID/TENDER DOCUMENT**

The First and Last Pages of original tender documents including amendments, clarifications if any shall be typed or written in indelible ink [in the case of copies, photocopies are also acceptable] and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder (as per POA) before uploading at ISN-ETS online portal. The name and position held by each person signing, must be typed or printed below the signature.

## **18. ZERO DEVIATION AND REJECTION CRITERIA**

- 18.1 **ZERO DEVIATION:** Deviation to terms and conditions of Tender Documents may lead to rejection of bid. Employer/ Owner will accept bids based on terms & conditions of Tender Documents only. Bidder may note Employer/ Owner will determine the substantial responsiveness of each bid to the Tender Documents pursuant to provision contained in clause 28 of ITB. For purpose of this, a substantially responsive bid is one which conforms to all terms and conditions of the Tender Documents without deviations or reservations. Employer's/ Owner's determination of a bid's responsiveness is based on the content of the bid itself. Employer/ Owner reserves the right to raise technical and/ or commercial query(ies), if required. The response(s) to the same shall be in writing, and no change in the price(s) or substance of the bids shall be sought, offered or permitted. The substance of the bid includes

but not limited to prices, completion, scope, technical specifications, etc. Bidders are requested to not to take any deviation.

**18.2 REJECTION CRITERIA:** Notwithstanding the above, deviation to the following clauses of Tender document shall lead to summarily rejection of Bid:

- a. Eligibility Criteria including General, Technical and Financial QR
- b. Firm Price, Tender Processing Fees and Earnest Money Deposit
- c. Tender Document Fees, if applicable
- d. Specifications & Scope of Work
- e. Schedule of Rates (SOR)/ Price Schedule (PS)
- f. Duration/ Period of Contract/ Completion schedule
- g. Period of Validity of Bid
- h. Warrantee/Guarantee/ Defect Liability Period
- i. Arbitration/ Resolution of Dispute/ Jurisdiction of Court
- j. Force Majeure & Applicable Laws
- k. Any other condition specifically mentioned in the tender document elsewhere that non-compliance of the clause lead to rejection of bid

**Note: Further, it is once again reminded not to mention any condition in the Bid which is contradictory to the terms and conditions of Tender document.**

## **19. E-PAYMENT**

Owner has initiated payments to Suppliers and Contractors electronically, and to facilitate the payments electronically through '**e-banking**'. The successful Bidder should give the details of his bank account as per the bank mandate

form enclosed at Format F-X in Section-VIII, Forms and Formats of the Tender documents.

### **[D] - SUBMISSION OF BIDS**

#### **20. SUBMISSION, SEALING AND MARKING OF BIDS**

- 20.1 Bids shall be submitted through e-tender mode in the manner specified elsewhere in tender document.
- 20.2 Offline documents (Specific documents only) as mentioned in clause no. 09 of Section - III, Instructions to Bidders (ITB) of the Tender document shall

be submitted in a Sealed Covering Envelope. The Covering Envelope shall have the following Sticker:

<b>Offline Tender Document for “Selection of Agency to carry out Soil Investigation at proposed 13 GW RE Project Sites in Leh, UT of Ladakh, India”</b>	
<b>Tender Document No.</b>	<b>(Enter Bid No &amp; Date given in published bid document)</b>
<b>Last Date of Submission</b>	
<b>Bids Submitted by</b>	<b>(Enter Full name and address of the Bidder)</b>
<b>Authorized Signatory</b>	<b>(Signature of the Authorized Signatory) (Name of the Authorized Signatory) (Stamp of the Bidder)</b>
<b>Bid Submitted to</b>	<b>Solar Energy Corporation of India Limited (A Government of India Enterprise)  6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023, India</b>

20.3 All the bids shall be addressed to the Employer at address specified in the Bid Information Sheet in Section - I, Invitation for Bids (IFB).

20.4 Bids submitted under the name of AGENT/ CONSULTANT/ REPRESENTATIVE/ RETAINER/ ASSOCIATE etc. on behalf of a Bidder/ affiliate shall not be accepted.

## **21. DEADLINES FOR SUBMISSION OF BIDS**

21.1 The bids must be submitted through e-tender mode not later than the date and time specified in the Bid Information Sheet in Section - I, Invitation for Bids (IFB).

21.2 The offline documents of required specific documents must be submitted through courier/ registered post/ by hand not later than the date and time specified in the Bid Information Sheet in Section - I, Invitation for Bids (IFB).

- 21.3 Employer/ Owner may, in exceptional circumstances and at its discretion, extend the deadline for submission of Bids. In which case all rights and obligations of Employer/ Owner and the Bidders, previously subject to the original deadline will thereafter be subject to the deadline as extended. Notice for extension of bid submission date will be uploaded on ETS Portal of ISN-ETS <https://www.bharat-electronictender.com> and/ or Employer's website [www.seci.co.in](http://www.seci.co.in).

## **22. LATE BIDS**

- 22.1 Any bids received after the notified date and time of closing of tenders will be treated as late bids.
- 22.2 E-tendering system shall close immediately after the deadline for submission of bid and no bids can be submitted thereafter.
- 22.3 Unsolicited Bids or Bids received to address other than one specifically stipulated in the tender document will not be considered for evaluation/ opening/ award if not received to the specified destination within stipulated date & time.

## **23. MODIFICATION AND WITHDRAWAL OF BIDS**

- 23.1 Modification and withdrawal of bids shall be as follows: -

The Bidder may withdraw or modify its bid after bid submission but before the due date and time for submission as per tender document with the due written consent from the authorized signatory of the Bidder.

- 23.2 The modification shall also be prepared, sealed, marked, and dispatched in accordance with the provision of the clause 20 of ITB, with the outer and inner envelopes additionally marked modification or withdrawal as appropriate. A withdrawal notice may also be sent by e-mail or fax but followed by a signed confirmation copy post not later than the deadline for



submission of bids. No bid shall be modified/ withdrawn after the deadline for submission of bids.

- 23.3 No bid shall be allowed to be withdrawn/ modified/ substitute in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form. Withdrawal/ Modification/ Substitution of a bid during this interval shall result in the forfeiture of Bidder's EMD, if applicable pursuant to clause 14 of ITB and rejection of bid.
- 23.4 The latest bid hence submitted shall be considered for evaluation and all other bids shall be unconditionally withdrawn.
- 23.5 In case after price bid opening the lowest evaluated Bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, Employer shall forfeit EMD, if applicable paid by the Bidder and such Bidders shall be debarred from participation in re-tendering of the same job(s)/ item(s). Further, such Bidder will be debarred for a given period as decided by Employer/ Owner after following the due procedure.

### **[E] - BID OPENING AND EVALUATION CRITERIA**

#### **24. EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS**

Employer/Owner reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the ground for Employer's/ Owner's action. However, Bidder if so, desire may seek the

reason (in writing) for rejection of their Bid to which Employer/ Owner shall respond quickly.

## **25. BID OPENING**

### **25.1 Unpriced Bid Opening:**

Employer will open bids, in the presence of Bidders' designated representatives who choose to attend, at date, time and location stipulated in the Bid Information Sheet. The Bidders' representatives, who are present shall sign a bid opening register evidencing their attendance. However, the presence of Bidder(s) during unpriced bid opening is subjective and will depend on case-to-case basis against the sole discretion of Employer/ Owner. As it's an online bidding system, Bidder's attendance during the Techno-commercial Bid opening in Employer's Premises is not envisaged, as the same may be observed by the respective Bidders from their online login credentials of the e-tendering portal.

### **25.2 Priced Bid Opening:**

25.2.1 Employer will open the price bids of those Bidders who meet the qualification requirement and whose bids are determined to be technically and commercially responsive.

25.2.2 The price bids of those Bidders who were not found to be techno-commercially responsive shall not be opened.

25.2.3 As it's an online bidding system, Bidder's attendance during the Price Bid opening in Employer's Premises is not envisaged, as the same may be observed by the respective Bidders from their online login credentials of the e-tendering portal. Employer may also intimate the Techno commercial qualified Bidders through mails for the opening of price bids.

## **26. CONFIDENTIALITY**

Information relating to the examination, clarification, evaluation, and comparison of Bids, and recommendations for the award of a Contract, shall

not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence the Employer's/ Owner's processing of Bids or award decisions may result in the rejection of the Bidder's Bid and action shall be initiated as per procedure in this regard.

## **27. CONTACTING THE EMPLOYER/ OWNER**

- 27.1 From the time of Bid opening to the time of award of Contract, if any Bidder wishes to contact the Employer/ Owner on any matter related to the Bid, it should do so in writing. Information relating to the examination, clarification, evaluation & recommendation for award shall not be disclosed.
- 27.2 Any effort by the Bidder to influence the Employer/ Owner in the Employer's 'Bid Evaluation', 'Bid Comparison', or 'Contract Award' decisions may result in the rejection of the offer/Bid and action shall be initiated as per procedure in this regard.

## **28. EXAMINATIONS OF BIDS AND DETERMINATION OF RESPONSIVENESS**

- 28.1 The owner's determination of a bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid:
- (a) Meets the "Bid Evaluation Criteria" of the Bidding Documents.
  - (b) Is accompanied by the required 'Earnest Money Deposit' and 'Tender Processing Fees', if applicable.
  - (c) Is substantially responsive to the requirements of the Tender Documents; and
  - (d) Provides any clarification and/ or substantiation that the Employer/ Owner may require to determine responsiveness pursuant to "ITB: Clause-28.2".
- 28.2 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the Tender Documents without material

deviations or reservations or omissions for this purpose employer defines the foregoing terms below: -

- (a) “Deviation” is departure from the requirement specified in the tender documents.
- (b) “Reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirement in the tender documents.
- (c) “Omission” is the failure to submit part, or all of the information or documentation required in the tender document.

28.3 A material deviation, reservation or omission is one that,

- (a) If accepted would,
  - (i) Affect in any substantial way the scope, quality, or performance of the job as specified in tender documents.
  - (ii) Limit, in any substantial way, inconsistent with the Tender Document, the Employer’s rights or the Bidder’s obligations under the proposed Contract.
- (b) If rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.

28.4 The Employer shall examine all aspects of the bid to confirm that all requirements have been met without any material deviation, reservation, or omission.

28.5 If a Bid is not substantially responsive, it may be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the of material deviation, reservation, or omission.

## 29. **CORRECTION OF ERRORS**

29.1 If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity specified by the Employer, or between subtotals and the total price, the unit or subtotal price shall prevail, and the quantity and the total price shall be corrected. However, in case of items quoted without indicating any quantity or the items for which the quantities are to be estimated by the Bidder, the total price quoted against

such items shall prevail. If there is a discrepancy between words and figures, the amount in words will prevail.

The prices of all such item(s) against which the Bidder has not quoted rates/ amount (viz., items left blank or against which ‘-’ is indicated) in the Price Schedules will be deemed to have been included in other item(s).

The subtotal, total price, or the total bid price to be identified in Bid Form for this purpose, irrespective of the discrepancy between the amount for the same indicated in words or figures shall be rectified in line with the procedure explained above.

The Bidder should ensure that the prices furnished in various price schedules are consistent with each other. In case of any inconsistency in the prices furnished in the specified price schedules to be identified in Bid Form for this purpose, the Employer shall be entitled to consider the highest price for that particular line item for the purpose of evaluation and for the purpose of award of the Contract use the lowest of the prices in these schedules.

- 29.2 The amount stated in the bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors. If the Bidder does not accept the corrected amount of bid, its bid will be rejected.

**30. CONVERSION TO SINGLE CURRENCY FOR COMPARISON OF BIDS**

All bids submitted must be in the currency specified at clause 12 of ITB.

**31. EVALUATION OF BIDS**

Bidders are required to submit their Price quotes as per given Price proposal format. Quoted Prices should be inclusive of Goods & Service Tax (GST)

which shall be reimbursed by SECI on actual against documentary proof based on tax invoices raised by the bidder.

Proposals shall be evaluated as per evaluation criteria mentioned in the clause below.

### **31.1 Evaluation of Techno - Commercial Part (First Envelope)**

The Employer will carry out a detailed evaluation of the bids of the qualified Bidders to determine whether the technical aspects are in accordance with the requirements set forth in the Bidding Documents. To reach such a determination, the Employer will examine the information supplied by the Bidders, pursuant to 'ITB: Clause-9', and other requirements in the Bidding Documents, considering the following factors:

- (a) overall completeness and compliance with the Technical Specifications of the bid. The bid that does not meet minimum acceptable standards of completeness, consistency and detail may be rejected for non-responsiveness,
- (b) compliance with the time schedule,
- (c) any other relevant technical factors that the Employer/ Owner deems necessary or prudent to take into consideration,
- (d) any deviations to the commercial and contractual provisions stipulated in the Tender Documents,
- (e) details furnished by the Bidder in response to the requirements specified in the Tender Documents.

### **31.2 Opening of Second Envelope by Employer**

The Second Envelope i.e., Price Part of only those Bidders shall be opened who are determined as having submitted substantially responsive bids and are ascertained to be qualified to satisfactorily perform the Contract, pursuant to ITB Clause 31.1. In case the bid/offer is rejected, pursuant to ITB Clause 31.1

the Second Envelope submitted by such Bidders shall be sent to archive unopened and the EMD, if applicable shall be returned as per the Tender provisions.

The prices and details as filled up in Electronic Form by the Bidder and opened during the bid opening and recorded in the Bid Opening Statement would not be construed to determine the relative ranking amongst the Bidders, or the successful Bidder, and would not confer any right or claim whatsoever on any Bidder. The successful Bidder (also referred to as the L1 Bidder) shall be determined as per the provisions and considered for award of contract as provided in ITB.

### **31.3 Evaluation of Financial Part (Second Envelope)**

31.3.1 The Employer will examine the Price Part (Second Envelopes) to determine whether they are complete, whether any computational errors have been made, whether the documents have been properly signed/digitally signed, and whether the bids are generally in order.

31.3.2 Financial Proposal Content: After the technical evaluation, the Financial Bids of bidders will be opened and will be ranked in terms of their Total Evaluated Bid Value (TEBV).

31.3.3 Total Evaluated Bid Values (TEBV) for all the Bidders shall be compared to determine the lowest Total Evaluated Bid Value (TEBV) as given under Format of Schedule of Rates (SOR) / Price Bid.

31.3.4 The least TEBV will be ranked as L-1 and the next higher and so on will be ranked as L-2, L-3, etc. Evaluations will be based on documentary evidence submitted by the applicant with respect to evaluation / selection criteria. L1 bidder would be selected on the basis of the TEBV for the contract period as per the price proposal format provided. The lowest (L1) evaluated Bid as such, will be selected for the Notification / Contract Agreement (CA).

31.3.5 The Price Part containing any deviations and omissions from the contractual and commercial conditions and the Technical Specifications which have not been identified in the First Envelope are liable to be rejected.



31.3.6 Arithmetical errors will be rectified in line with Clause no. 29 of ITB.

31.3.7 The comparison shall also include the impact of Goods & Service Tax (GST) in line with the provisions of the Tender Documents.

31.3.8 Total Evaluated Bid Value including all taxes and duties for all the bidders shall be compared to determine the lowest Total Evaluated Bid Value as given under Price proposal Format & the lowest (L1) evaluated offer as such, will be selected for the Notification / Contract Agreement (CA). The evaluation will be done on the total evaluated bid value & not on individual line item/Product wise.

31.3.9 The mentioned Total Evaluated Bid Value will be considered up to 2 decimal places only.

31.3.10 In case only single offer is received, SECI at its sole discretion may take appropriate actions for further process as per SECI policy.

31.3.11 If there is also a tie among any of these bidders, then L-1 will be the bidder who has the highest average annual turnover as per the documents submitted as a part of their bid.

## **[F] - CONTRACT AGREEMENT**

### **32. AWARD**

Subject to "ITB: Clause-28", Owner will award the Contract to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the lowest provided that Bidders, is determined to be qualified to satisfactorily perform the Contract.

### **33. NOTIFICATION**

33.1 Prior to the expiry of 'Period of Bid Validity', Owner will notify the successful bidder in writing, through e-mail/ courier/ registered post, that his Bid has been accepted. Subject to "ITB: Clause-28", Owner

will award the Contract Agreement in line with the forthcoming clauses, to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the lowest provided that bidder, is determined to be qualified to satisfactorily perform the Contract.

- 33.2 The notification shall be issued to successful bidder in duplicate. The successful bidder is required to confirm within 07 days of its issuance including all the Appendix, Annexures as a token of acceptance.
- 33.3 In case the successful bidder fails to acknowledge the acceptance of the notification as mentioned above vide clause no. 33.2, same will be treated as a case of non-responsiveness & default and Owner may take suitable action to get the project successfully executed.
- 33.4 In case of Non-responsive/Non acceptance to the notification by the successful bidder, SECI at its sole discretion may take appropriate actions with the forfeiture of EMD, if applicable & may annul the entire Tendering process at its sole discretion.

#### **34. SIGNING OF CONTRACT AGREEMENT**

- 34.1 Within 30 (Thirty) days of the release of Notification by the owner, the successful Bidder/ Contractor shall be required to execute the 'Contract Agreement' with Owner on a 'non-judicial stamp paper' of appropriate value [cost of the 'stamp-paper' shall be borne by the successful Bidder/ Contractor] and of 'state' specified.
- 34.2 In case the successful Bidder fails to execute the 'Contract Agreement' as mentioned above vide clause no. 34.1, same will be treated as a case of non-responsiveness & default and Employer/ Owner may take suitable action to get the project successfully executed. Same shall constitute sufficient grounds for the forfeiture of EMD, if applicable.
- 34.3 In case of Non-responsive/Non-acceptance to the CA or non-submission of timely Performance Security by the successful Bidder, SECI at its sole

discretion may take appropriate actions with the forfeiture of EMD, if applicable & may annul the entire Tendering process at its sole discretion.

### **35. CANCELLATION OF CONTRACT**

SECI reserves the right to cancel the contract of the selected Bidder and recover expenditure incurred by the SECI on the following circumstances:

- 35.1 The Bidder has made misleading or false representations in the forms, statements, and attachments submitted in proof of the eligibility requirements.
- 35.2 The selected Bidder commits a breach of any of the terms and conditions of the bid/contract.
- 35.3 The Bidder goes into liquidation voluntarily or otherwise during the execution of contract.
- 35.4 The progress regarding execution of the contract, made by the selected Bidder is found to be unsatisfactory.
- 35.5 After the award of the contract, if the selected Bidder does not perform satisfactorily or delays execution of the contract, SECI reserves the right to get the balance contract executed by another party of its choice by giving one month's notice for the same. In this event, the selected Bidder is bound to make good the additional expenditure, which the SECI may have to incur to carry out bidding process for the execution of the balance of the contract. This clause is applicable, if for any reason, the contract is cancelled.
- 35.6 No Bidder is permitted to canvass to SECI on any matter relating to this tender. Any Bidder found doing so may be disqualified and his bid may be rejected.

### **36. PROCEDURE FOR ACTION IN CASE CORRUPT/ FRAUDULENT/ COLLUSIVE/ COERCIVE PRACTICES**

- 36.1 Procedure for action in case Corrupt/ Fraudulent/ Collusive/ Coercive Practices is enclosed at Annexure-I along with this ITB document.

36.2 Annexure-I deliberates in detail all consequences pertaining to clause no. 36.

**36.3 NON-APPLICABILITY OF ARBITRATION CLAUSE IN CASE OF BANNING OF VENDORS/ SUPPLIERS/ CONTRACTORS/ BIDDERS/ CONSULTANTS INDULGED IN FRAUDULENT/ COERCIVE PRACTICES**

Notwithstanding anything contained contrary to "CONTRACT DOCUMENTS", in case it is found that the Vendors/ Suppliers/ Contractors/ Bidders/ Consultants indulged in fraudulent/ coercive practices at the time of bidding, during execution of the contract etc., and/ or on other grounds as mentioned in Employer's/ Owner's "Procedure for action in case Corrupt/ Fraudulent/ Collusive/ Coercive Practices" (Annexure-I), the contractor/ Bidder shall be banned (in terms of aforesaid procedure) from the date of issuance of such order by Employer/ Owner, to such Vendors/ Suppliers/ Contractors/ Bidders/ Consultants.

The Vendor/ Supplier/ Contractor/ Bidder/ Consultant understands and agrees that in such cases where Vendor/ Supplier/ Contractor/ Bidder/ Consultant has been banned (in terms of aforesaid procedure) from the date of issuance of such order by Employer/ Owner, such decision of Employer/ Owner shall be final and binding on such Vendor/ Supplier/ Contractor/ Bidder/ Consultant and other "CONTRACT DOCUMENTS" shall not be applicable for any consequential issue/ dispute arising in the matter.

**37. PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES (MSEs)**

37.1 As per the Public Procurement Policy for Micro and Small Enterprise (MSEs) order 2012, issued vide Gazette Notification number 503, dated 23.03.2012 by Ministry of Micro, Small and Medium Enterprise of Govt. of India, and specific to this tender, MSEs must be registered with any of the following Bidders/ bodies shall be exempted from Tender Processing Fees and EMD

submission, if applicable upon production of valid registration certificate.

- (i) District Industries Centre (DIC)
- (ii) National Small Industries Corporation (NSIC)
- (iii) Udyog Aadhaar Memorandum

MSEs participating in the tender must submit the certificate of registration with any one of the above Bidders. The registration certificate issued from any of the above Bidders must be valid as on close date of the tender.

The MSEs, who have applied for registration or renewal of registration with any of the above Bidders/ bodies, but have not obtained the valid certificate as on close date of the tender, are not eligible for exemption/ preference.

**37.2 In case of JV/ Consortium, in order to avail the exemption to Tender Processing Fees and Earnest Money Deposit (EMD, if applicable), all the members of JV/ Consortium should be registered under any of the Categories mentioned under clause 37.1 above.**

**37.3** In case the Bidder is falling under above category, the Bidder shall submit the documentary evidence satisfying the same.

If the Bidder does not provide the above confirmation or appropriate document or any evidence, then it will be presumed that they do not qualify for any preference admissible in the tender.

### **38. RISK OF REJECTION**

Any Conditional Bid will straight away run into risk of rejection.

### **39. INCOME TAX & CORPORATE TAX**

**39.1** Income tax deduction shall be made from all payments made to the contractor as per the rules and regulations in force and in accordance with the Income Tax Act prevailing from time to time.

**39.2** Corporate Tax liability, if any, shall be to the contractor's account.

**39.3** TDS under GST as may be applicable shall be deducted as per law of

Government of India in vogue.

#### **39.4 MENTIONING OF PAN NO. IN INVOICE BILL**

As per CBDT Notification No. 95/2015 dated 30.12.2015, mentioning of PAN no. is mandatory for procurement of goods/ services/ works/ consultancy services exceeding INR 2 Lacs per transaction.

Accordingly, supplier/ contractor/ service provider/ consultant should mention their PAN no. in their invoice/ bill for any transaction exceeding INR 2 Lacs. As provided in the notification, in case supplier/ contractor/ service provider/ consultant do not have PAN no., they have to submit declaration in Form 60 along with invoice/ bill for each transaction.

Payment of supplier/ contractor / service provider/ consultant shall be processed only after fulfilment of above requirement.

## **Annexure-I**

### **PROCEDURE FOR ACTION IN CASE CORRUPT/ FRAUDULENT/ COLLUSIVE/ COERCIVE PRACTICES**

#### **1. Definitions:**

- 1.1 “Corrupt Practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to improperly influence the actions in selection process or in contract execution.

“Corrupt Practice” also includes any omission for misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained, or an obligation avoided.

- 1.2 “Fraudulent Practice” means and include any act or omission committed by a Bidder or with his connivance or by his agent by misrepresenting/ submitting false documents and/ or false information or concealment of facts or to deceive to influence a selection process or during execution of contract/ order.
- 1.3 “Collusive Practice amongst Bidders (prior to or after bid submission)” means a scheme or arrangement designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- 1.4 “Coercive practice” means impairing or harming or threatening to impair or harm directly or indirectly, any Bidder or its property to influence the



improperly actions of a Bidder, obstruction of any investigation or auditing of a procurement process.

- 1.5 A “Agency/ Vendor/ Supplier/ Contractor/ Consultant/ Bidder” is herein after referred as “Bidder”.
- 1.6 “Competent Authority” shall mean the authority, who is competent to take final decision for Suspension of business dealing with a Bidder and Banning of business dealings with Bidder and shall be the “Committee” concerned.
- 1.7 “Allied Bidder” shall mean all the concerns within the sphere of effective influence of banned/ suspended Bidders. In determining this, the following factors may be taken into consideration:
  - (a) Whether the management is common.
  - (b) Majority interest in the management is held by the partners or directors of banned/ suspended firm.
  - (c) Substantial or majority shares are owned by banned/ suspended Bidder and by virtue of this it has a controlling voice.
- 1.8 “Investigating Bidder” shall mean any department or unit of Employer/ Owner investigating into the conduct of Bidder/ party and shall include the Vigilance Department of the Employer/ Owner, Central Bureau of Investigation, State Police or any other Bidder set up by the Central or state government having power to investigate.

## **2. Actions against Bidder(s) indulging in corrupt /fraudulent/ collusive/ coercive practice**

### **2.1 Irregularities noticed during the evaluation of the bids:**

If it is observed during bidding process/ bids evaluation stage that a Bidder has indulged in corrupt/ fraudulent/ collusive/ coercive practice, the bid of

such Bidder (s) shall be rejected, and its Earnest Money Deposit (EMD, if applicable) shall be forfeited.

Further, such Bidder shall be banned for future business with Employer/ Owner for a period specified in para below from the date of issue of banning order.

## **2.2 Irregularities noticed after award of contract**

### **(a) During execution of contract:**

If a Bidder, is found to have indulged in corrupt/ fraudulent/ collusive/ coercive practices, during execution of contract, the Bidder shall be banned for future business with Employer/ Owner for a period specified in para below from the date of issue of banning order.

The concerned order(s)/ contract(s) where corrupt/ fraudulent/ collusive practices are observed, shall be suspended with immediate effect by Engineer-in-Charge (EIC)/ Employer/ Owner whereby the supply/ work/ service and payment etc. will be suspended. The action shall be initiated for putting the Bidder on banning list.

After conclusion of process, the order(s)/ contract(s) where it is concluded that such irregularities have been committed shall be terminated and Contract Performance Security submitted by Bidder against such order(s)/ contract(s) shall also be forfeited. The amount that may have become due to the contractor on account of work already executed by him shall be payable to the contractor and this amount shall be subject to adjustment against any amounts due from the contractor under the terms of the contract.

No risk and cost provision will be enforced in such cases.

### **(b) After execution of contract and during Defect liability period (DLP)/ Warranty/ Guarantee Period:**

If a Bidder is found to have indulged in corrupt/ fraudulent/ collusive/ coercive practices, after execution of contract and during DLP/

Warranty/ Guarantee Period/O&M Period, the Bidder shall be banned for future business with Employer/ Owner for a period specified in para below from the date of issue of banning order.

Further, the Contract Performance Security submitted by Bidder against such order(s)/ contract(s) shall be forfeited.

**(c) After expiry of Defect liability period (DLP)/ Warranty/ Guarantee Period**

If a Bidder is found to have indulged in corrupt/ fraudulent/ collusive/ coercive practices, after expiry of Defect liability period (DLP)/ Warranty/ Guarantee Period, the Bidder shall be banned for future business with Employer/ Owner for a period specified in para below from the date of issue of banning order.

## **2.3 Period of Banning**

Banning period shall be reckoned from the date of issuance of banning order and shall be for a period as may be decided by the Employer/ Owner based on specific case basis. However, minimum period of ban shall be 06 (Six) months from the date of issuance of banning order.

In exceptional cases where the act of vendor/ contractor is a threat to the National Security, the banning shall be for indefinite period.

## **3. Effect of banning on other ongoing contracts/ tenders**

- 3.1 If a Bidder is banned, such Bidder shall not be considered in ongoing tenders/ future tenders.
- 3.2 However, if such a Bidder is already executing other order(s)/ contract(s) where no corrupt/ fraudulent/ collusive/ coercive practice is found, the Bidder

shall be allowed to continue till its completion without any further increase in scope except those incidentals to original scope mentioned in the contract.

3.3 If a Bidder is banned during tendering and irregularity is found in the case under process:

3.3.1 after issue of the enquiry/ bid/ tender but before opening of technical bid, the bid submitted by the Bidder shall be ignored.

3.3.2 after opening technical bid but before opening the Price bid, the Price bid of the Bidder shall not be opened and EMD, if applicable submitted by the Bidder shall be returned to the Bidder.

3.3.3 after opening of price bid, EMD, if applicable made by the Bidder shall be returned; the offer/Bid of the Bidder shall be ignored & will not be further evaluated. If the Bidder is put on banning list for fraud/ misappropriation of facts committed in the same tender/ other tender where errant Bidder emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.

#### **4. Procedure for Suspension of Bidder**

##### **4.1 Initiation of Suspension**

Action for suspension business dealing with any Bidder shall be initiated by C&P Department when

- (i) Vigilance Department based on the fact of the case gathered during investigation by them recommend for specific immediate action against the Bidder.
- (ii) Vigilance Department based on the input from Investigating Bidder, forward for specific immediate action against the Bidder.
- (iii) Nonperformance of Vendor/ Supplier/ Contractor/ Consultant leading to

termination of Contract/ Order.

## **4.2 Suspension Procedure:**

- 4.2.1 The order of suspension would operate initially for a period not more than six months and is to be communicated to the Bidder and to Vigilance Department. Period of suspension can be extended with the approval of the Competent Authority by one month at a time with a ceiling of six months pending a conclusive decision to put the Bidder on banning list.
- 4.2.2 During the period of suspension, no new business dealing may be held with the Bidder.
- 4.2.3 Period of suspension shall be accounted for in the final order passed for banning of business with the Bidder.
- 4.2.4 The decision regarding suspension of business dealings should also be communicated to the Bidder.
- 4.2.5 If a prima-facie, case is made out that the Bidder is guilty on the grounds which can result in banning of business dealings, proposal for issuance of suspension order and show cause notice shall be put up to the Competent Authority. The suspension order and show cause notice must include that (i) the Bidder is put on suspension list and (ii) why

action should not be taken for banning the Bidder for future business from Employer/ Owner.

The competent authority to approve the suspension will be same as that for according to approval for banning.

#### **4.3 Effect of Suspension of business:**

Effect of suspension on other on-going/ future tenders will be as under:

4.3.1 No enquiry/ bid/ tender shall be entertained from a Bidder as long as the name of Bidder appears in the Suspension List.

4.3.2 If a Bidder is put on the Suspension List during tendering:

4.3.2.1 after issue of the enquiry/ bid/ tender but before opening of technical bid, the bid submitted by the Bidder shall be ignored.

4.3.2.2 after opening technical bid but before opening the Price bid, the Price bid of the Bidder shall not be opened and EMD, if applicable submitted by the Bidder shall be returned to the Bidder.

4.3.3 The existing contract(s)/ order(s) under execution shall continue.

Tenders invited for procurement of goods, works and services shall have provision that the Bidder shall submit an undertaking to the effect that (i) neither the Bidder themselves nor their allied Bidder(s) are on banning list of Employer/ Owner or the Ministry of New & Renewable Energy (ii) Bidder is not banned by any Government Department/ Public Sector.

#### **5. Debarment of Firms from Bidding**

- i. A bidder shall be debarred if he has been convicted of an offence-
  - a. Under the Prevention of Corruption Act, 1988: or
  - b. The Indian penal Code or any other law for the time being in force, for causing any loss of life or property or causing a threat to public health as part of execution of a public procurement contract

- ii. A bidder debarred under sub- section (i) or any successor of the bidder shall not be eligible to participate process of any procuring entity for a period not exceeding Three years Commencing from the date of debarment. Department of Commerce (DGS&D) will maintain such list which also be displayed on the website of DGS&D as well as Central Public procurement Portal.
- iii. A Procuring entity may debar a bidder or any of its successors, from participating in any procurement process undertaken by it, for a period not exceeding two years, if it determines that the bidder has breached the code of integrity. The Ministry/ Department will maintain such list which will also be displayed on their website.
- iv. The bidder shall not be debarred unless such bidder has been given a reasonable opportunity to represent against such debarment.



## **Annexure-II**

### **ADDENDUM TO INSTRUCTIONS TO BIDDERS (INSTRUCTION FOR PARTICIPATION IN E-TENDER)**

#### **1. General**

Special Instructions (for e-Tendering).

**Submission of Online Bids is mandatory for this Tender.**

This section contains detailed instructions regarding bid submission procedure under e-tendering system (e-tender portal). Bidders are required to read the following instructions in addition to various instructions mentioned elsewhere in the bid document for e-tendering. The instructions mentioned herein related to bid submission procedure shall supersede and shall prevail over the conditions enumerated elsewhere in the bid/ tender document.

Bidders who wish to participate in e-tenders must go through the 'instructions in respect of e-Tendering essentially covering security settings required for Bidder's PC/ Laptop, uploading and checking the status of digital signature in the Bidder's PC/ Laptop, obtaining unique login ID and password, re-setting the password, downloading of Tender document and uploading of Offer/ Bid etc.

#### **2. About E-Tender Portal (Web)**

Solar Energy Corporation of India Limited (SECI) has adopted a secured and user friendly e- tender system enabling bidders to Search, View, Download tender document(s) directly from the ETS Portal of M/s ElectronicTender.com (India) Pvt. Limited (<https://www.bharat-electronictender.com>) through ISN Electronic Tender Services Private Limited (referred as ISN-ETS) (referred hereunder as "E-Tender Portal") and also enables the bidders to participate and submit online prices directly in the e-tender portal or uploading of SOR/ Price Schedule (Price Bid) in note and attachment folder, as applicable, and technical bids in secured and transparent

manner maintaining absolute confidentiality and security throughout the tender evaluation process and award.

### **3. Pre-requisite for participation in bidding process**

**The following are the pre-requisite for participation in e-Tendering Process:**

#### **3.1 PC/ Laptop with Windows OS, Internet Explorer**

Bidder must possess a PC/ Laptop with Windows 7 professional operating system and Internet Explorer 8 or 9 for hassle free bidding. Bidder is essentially required to effect the security settings as defined in the portal.

#### **3.2 Internet Broadband Connectivity**

The Bidder must have a high-speed internet connectivity (preferably Broadband) with internet explorer to access ISN-ETS's e-Tender Portal for downloading the Tender document and uploading/ submitting the Bids.

#### **3.3 A valid e-mail Id of the Organization/ Firm**

E-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Now, the Government of India has made e-tendering mandatory. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, SECI has decided to use the portal of M/s Electronic Tender.com (India) Pvt. Limited <https://www.bharat-electronictender.com> through ISN Electronic Tender Services Private Limited (referred as ISN-ETS. This portal is based on the world's most 'secure' and 'user friendly' software from Electronic Tender®. A portal built using Electronic Tender's software is also referred to as Electronic Tender System® (ETS).

Benefits to Suppliers are outlined on the Home-page of the portal.

#### **Tender Bidding Methodology:**

Sealed Bid System

Single Stage Two Envelope

Auction

The sealed bid system would be followed by an 'e-Reverse Auction'

#### **4. Tender Bidding Methodology under Sealed Bid System of Single Stage Two Envelop:**

##### **4.1 Broad Outline of Activities from Bidder's Perspective:**

4.1.1 Procure a Class III Digital Signing Certificate (DSC).

4.1.2 Register on Electronic Tender System® (ETS)

4.1.3 Create Marketing Authorities (MAs), Users and assign roles on ETS. It is mandatory to create at least one MA

4.1.4 View Notice Inviting Tender (NIT) on ETS

4.1.5 For this tender -- Assign Tender Search Code (TSC) to a MA

4.1.6 Download Official Copy of Tender Documents from ETS Note: Official copy of Tender Documents is distinct from downloading 'Free Copy of Tender Documents'. To participate in a tender, it is mandatory to procure official copy of Tender Documents for that tender.

4.1.7 Clarification to Tender Documents on ETS

a) Query to SECI (Optional)

b) View response to queries posted by SECI

4.1.8 Bid-Submission on ETS

4.1.9 Respond to SECI Post-TOE queries

4.1.10 Participate in reverse auction if invited

For participating in this tender online, the following instructions are to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the ETS.

##### **4.2 Digital Certificates**

For integrity of data and authenticity/ non-repudiation of electronic records, and to be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC), also referred to as Digital Signature Certificate (DSC), of Class III, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [refer <http://www.cca.gov.in>]

### 4.3 Registration

To use the Electronic Tender® portal <https://www.bharat-electronictender.com>, vendors need to register on the portal. Registration of each organization is to be done by one of its senior persons who will be the main person coordinating for the e-tendering activities. In ETS terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the website/ portal, and click on the ‘Supplier Organization’ link under ‘Registration’ (on the Home Page), and follow further instructions as given on the site. Pay Annual Registration Fee as applicable.

After successful submission of Registration details and payment of Annual Registration Fee, please contact ISN-ETS/ ETS Helpdesk (as given below), to get your registration accepted/ activated.

#### Important Note:

Interested bidders have to download official copy of the RfS/ Tender & other documents after login into the ETS Portal of ISN-ETS (<https://www.bharat-electronictender.com>). If the official copy of the documents is not downloaded from ETS Portal of ISN-ETS within the specified period of downloading of RfS/ Tender and other documents, bidder will not be able to participate in the tender.

To minimize teething problems during the use of ETS (including the Registration process), it is recommended that the user should peruse the instructions given under ‘ETS User-Guidance Centre’ located on ETS Home Page, including instructions for timely registration on ETS. The instructions relating to ‘Essential Computer Security Settings for Use of ETS’ and ‘Important Functionality Checks’ should be especially taken into cognizance.

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.

#### ETS Helpdesk

Phone +91-124-4229071, 4229072 E-mail [support@isn-ets.com](mailto:support@isn-ets.com)

## 5. Some Bidding Related Information for this Tender (Sealed Bid)

The bid shall be submitted by the Bidder under “**Single Stage - Two Envelope**” procedure of bidding. Under this procedure, the bid submitted by the Bidder in two envelopes - **First Envelope** (also referred to as Techno - Commercial Part) and **Second Envelope** (also referred to as Price Part) shall comprise of the following documents:

### 5.1 Hard Copy

Hard copy of the bid shall comprise of following documents/ programmed file-Attachments to be submitted in sealed envelope, as part of First Envelope. **The envelope shall bear {the name of Tender, the Tender No. and the words ‘DO NOT OPEN BEFORE’ (due date & time)}.**

**Sh. Umesh Patidar**  
**Sr. Engineer (C&P)**  
**Solar Energy Corporation of India Limited**  
**6<sup>th</sup> Floor, Plate-B, NBCC Office Block Tower-2,**  
**East Kidwai Nagar, New Delhi-110023**  
**Telephone: 011-24666200**  
**E mail: [contracts@seci.co.in](mailto:contracts@seci.co.in)**

- a. Original Non-Refundable Tender Processing Fee as per clause no. 04 of ITB
- b. Original Non-Refundable Cost of Tender Document, if applicable
- c. 'Covering Letter' on Bidder's 'Letterhead' (in Original) clearly specifying the enclosed
- d. EMD, in original as per Clause 14 of ITB as per ‘Form F-IV’ or as prescribed.
- e. Power of Attorney for authorized signatory in non-judicial stamp paper (as per ‘Form F-XII’)
- f. Copy of Board Resolution
- g. The Passphrase to decrypt the relevant Bid-Parts (for both Techno-Commercial and Financial) in separate sealed envelopes before the start date and time of the Tender Opening Event (TOE)

**Bidder shall also upload the scanned copies of all the above mentioned original documents as Programmed File Attachments during online Bid Submission as a part of First envelope.**

**“Bidder should explicitly note that no hard copies are to be submitted as a part of Second envelope”.**

## **5.2 Soft Copy**

Online documents/Soft copy of the bid shall comprise of following documents to be uploaded on the ISN-ETS portal <https://www.bharat-electronictender.com> as per provisions therein.

### **a. As part of First Envelope**

DOCUMENTS LISTED BELOW ARE TO BE SUBMITTED IN ON-LINE MODE AS SOFT COPIES:

- I. Covering Letter as per Format I.
- II. Original Non-Refundable Tender Processing Fee as per clause no. 04 above, if applicable.
- III. General particulars of the Bidder as per the Format II
- IV. Contract Performance Security as per the Format III, if applicable
- V. Earnest Money Deposit as per the Format IV, if applicable
- VI. Financial Proposal as per Format V
- VII. Schedule of Rate (SOR) / Price Bid as per Format VI
- VIII. Technical Proposal as per Format VII
- IX. Annual reports along with a certification of turnover of last 03 years as per Format VIII\*
- X. No Deviation Confirmation as per Format IX
- XI. E-Banking Mandate Form as per Format X
- XII. Power of Attorney as per Format XII or Board Resolution as per format XI for such authorization.

- XIII. "Format of Payment on Order Instrument to be issued by IREDA/REC/PFC (In lieu of BG towards EMD)" as per 'Form F-14'
- XIV. "Format of Payment on Order Instrument to be issued by IREDA/REC/PFC (In lieu of BG towards PBG)" as per 'Form F-15'
- XV. Declaration Regarding Banning, Liquidation, Court Receivership etc. as per Format XIII
- XVI. Copy of GST registration No, PAN Card and Income Tax Registration,
- XVII. An undertaking that the Bidder has not been blacklisted by any Government Department/Autonomous bodies/any organization as on the date of submission of the bid.
- XVIII. Duly attested documents in accordance with the "Qualifying Requirements (QR)" establishing the qualification

\*In case the audited annual accounts for the year previous Financial Year are not available with the Bidder, Minimum Average Annual Turnover shall be considered for the average of its last three preceding years. MAAT shall mean Revenue from Operations as incorporated in the profit & loss account excluding other income, e.g., sale of fixed assets. This must be the individual Company's turnover and not that of any group of Companies. A summarized sheet of average turn over certified by a practicing CA/Statutory Auditor should be compulsorily enclosed along with corresponding annual accounts.

**The Technical Proposal shall not include any financial information relating to the Financial Proposal. The Bidder shall submit Bids in the given Format only.**

**b. As part of Second Envelope**

- I. The Electronic Form of the bid for Second Envelope (Price - Part), as available on the ISN-ETS portal, shall be duly filled. **"Termed as ELECTRONIC FORM"**.
- II. Main Price Bid comprising as per Format-V (Financial Proposal) and Format VI (Price Schedule) duly completed, sealed, and



signed/digitally signed shall be uploaded. **“Termed as MAIN BID”**.

## 6. Special Note on Security and Transparency of Bids

Security related functionality has been rigorously implemented in ETS in a multidimensional manner. Starting with 'Acceptance of Registration by the Service Provider', provision for security has been made at various stages in Electronic Tender's software. Specifically, for Bid Submission, some security related aspects are outlined below:

As part of the Electronic Encrypted<sup>®</sup> functionality, the contents of both the 'Electronic Forms<sup>®</sup>' and the 'Main-Bid' are securely encrypted using a Pass-Phrase created by the Bidder himself. Unlike a 'password', a Pass-Phrase can be a multi-word sentence with spaces between words (e.g. I love this World). A Pass-Phrase is easier to remember, and more difficult to break. It is mandatory that a separate Pass-Phrase be created for each Bid-Part. This method of bid-encryption does not have the security and data-integrity related vulnerabilities which are inherent in e-tendering systems which use Public-Key of the specified officer of a Buyer organization for bid-encryption. Bid-encryption in ETS is such that the Bids cannot be decrypted before the Public Online Tender Opening Event (TOE), even if there is connivance between the concerned tender-opening officers of the Buyer organization and the personnel of e-tendering service provider.

**CAUTION:** All bidders must fill Electronic Form for each bid-part sincerely and carefully, and avoid any discrepancy between information given in the Electronic Form and the corresponding Main-Bid.

**If any variation is noted between the price mentioned in the Electronic Form and the Main Bid (Refer Clause above for the definitions of**

Electronic Form and Main Bid), the price mentioned in the Main Bid shall prevail.

In case of any discrepancy between the values mentioned in figures and in words, the value mentioned in words will prevail.

*The bidder shall make sure that the Pass-Phrase to decrypt the relevant Bid-Part is submitted into the ‘Time Locked Electronic Key Box (EKB)’ after the deadline of Bid Submission and before the commencement of the Online TOE of Technical Bid.* The process of submission of this Pass-Phrase in the ‘Time Locked Electronic Key Box’ is done in a secure manner by first encrypting this Pass-Phrase with the designated keys provided by the Employer.

Additionally, the bidder shall make sure that the Pass-Phrase to decrypt the relevant Bid-Part is submitted to Employer in a sealed envelope before the start date and time of the Tender Opening Event (TOE).

## 7. Other Instructions

For further instructions, the vendor should visit the home-page of the portal <https://www.bharat-electronictender.com>, and go to the User-Guidance Centre.

The help information provided through ‘ETS User-Guidance Centre’ is available in three categories – Users intending to Register/ First-Time Users, Logged-in users of Buyer organizations, and Logged-in users of Supplier organizations. Various links (including links for User Manuals) are provided under each of the three categories.

**Important Note:** It is strongly recommended that all authorized users of Supplier organizations should thoroughly peruse the information provided

under the relevant links, and take appropriate action. This will prevent hiccups, and minimize teething problems during the use of ETS.

## **8. Seven CRITICAL DO'S AND DON'TS FOR BIDDERS**

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

1. Obtain individual Digital Signing Certificate (DSC or DC) of Class III well in advance of your tender submission deadline on ETS.
2. Register your organization on ETS well in advance of the important deadlines for your first tender on ETS 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 -- Marketing Authority (MA) [ie a department within the Supplier/ Bidder Organization responsible for responding to tenders], users for one or more such MAs, assigning roles to them, etc. It is mandatory to create at least one MA. This unique feature of creating an MA enhances security and accountability within the Supplier/ Bidder Organization.
3. Get your organization's concerned executives trained on ETS well in advance of your first tender submission deadline on ETS
4. For responding to any particular tender, the tender (ie its Tender Search Code or TSC) has to be assigned to an MA. Further, an 'Official Copy of Tender Documents' should be procured/ downloaded before the expiry of Date and Time of Closure of Procurement of Tender Documents. Note: Official copy of Tender Documents is distinct from downloading 'Free Copy of Tender Documents'. Official copy of Tender Documents is the equivalent of procuring physical copy of Tender Documents with official receipt in the paper-based manual tendering system.
5. Submit your bids well in advance of tender submission deadline on ETS (There could be last minute problems due to internet timeout, breakdown,

etc)

6. It is the responsibility of each bidder to remember and securely store the Pass-Phrase for each Bid-Part submitted by that bidder. The bidders are required to submit correct, valid and operative Pass-Phrase 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 pass-phrase submitted by bidder, Employer may ask for re-submission/clarification for correct pass-phrase. If bidder fails to submit correct pass-phrase immediately as requested by Employer, the Tender Processing Fee and Tender Document Fee, if applicable, shall be forfeited and bid shall not be opened, and EMD, if applicable shall be refunded. No request on this account shall be entertained by Employer/ Owner.
7. ETS will make your bid available for opening during the Online Public Tender Opening Event (TOE) 'ONLY IF' the status pertaining Overall Bid-Submission is 'COMPLETE'. For the purpose of record, the bidder 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'

#### NOTE:

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

## 9. Content of Bid

### Un-Priced Bid

The Un-Priced Bid (i.e., Part I - Technical Bid, refer ITB of tender for details) to be uploaded using Link "TECHNICAL DOCUMENT". ***Bidders are advised to not upload duly filled Schedule of Rates (SOR)/ Price Schedule (PS) at this link.***

Before the bid is uploaded, the bid comprising of all relevant documents mentioned in the tender document should be digitally signed in accordance

with the Indian IT Act 2000. If any modifications are required to be made to a document thereafter the modified documents shall be again digitally signed before uploading.

Bidders are required to upload all Tender forms and supporting documents which form part of the bid/ tender in the Collaboration Folder (C-Folder) under tender document of e-tender portal.

Uploading the documents relevant to bid before the bid submission date and time is the sole responsibility of the bidder.

The complete bid (each page) shall be continuously numbered in sequence, from start till end i.e. 1, 2, 3... n. The bid shall be uploaded along with proper index and indicating page numbers against each category of documents. A sample is suggested as under:

Sub-folder in C-Folder	Documents	Page nos. (for ref.)
1. INDEX	Index	1 to a
2. TENDER DOC	Tender Document, Corrigendum etc.	a+1 to b
3. B.E.C	BEC documents (including order, completion/ execution certificate, balance sheet, etc.)	b+1 to c
4. UN-PRICED COMMERCIAL	Un-priced Commercial offer/bid	c+1 to d
5. EMD/POA	Scanned copy of EMD/POA	d+1 to e
6. FORMATS	Formats of tender duly filed-in, signed and stamped and other	e+1 to f
7. TENDER FEE	Scanned copy of Tender Fee/ Integrity Pact (I.P.)	f+1 to f
8. OTHERS	Any other document	g+1 to n

The above shall ensure that there are no missing documents and traceability of relevant section is ensured.

**Note:**

- i) Bidder may save/ store the bid documents in the PC/ Laptop before submitting the bid into in e-tender portal.
- ii) Bidder is required to fill up the price(s)/ rate(s) strictly in the Schedule of Rate (SOR)/ Price Schedule (PS) attached with the tender.

Inadvertently, if a document is uploaded in Collaboration Folder (C Folder) by the bidders, such document can be deleted by the bidder and can be

replaced by a digitally signed new/ modified document prior to due date & time.

Un-priced techno-commercial bid document should be placed in the private area earmarked in the C-folder of Tender Document in e-tender portal.

### **Price Bid**

The Price Bid (i.e. Part II - Price Bid, refer ITB for details) to be uploaded using Link given under ISN portals & and NOT using link “TECHNICAL DOCUMENT”. ***Bidders are advised not to upload any other documents and same shall be ignored.*** For detailed instructions, refer tender document and instructions as given above.

Employer/ Owner shall not be responsible for any failure on the part of the bidder in submission of Priced Bid.

Instructions mentioned under “PRICE BID [Online]” shall be applicable in case Bidders have been asked to quote their prices on-line directly in the ISN’s e-tender portal in addition to uploading of scanned copy of SOR/ PS or only the on-line price submission in the portal, as the case may be.

### **10.Submission of documents**

Bidders are requested to upload small sized documents preferably (upto 10 MB) at a time to facilitate easy uploading into e-tender portal. Employer/ Owner shall not be responsible in case of failure of the bidder to upload documents/ bids within specified time of tender submission.

### **11.Last date for submission of bids**

System does not allow for submission or modification of bids beyond the deadline for bid submission. However, if the bidder for some reason intends to change the bid already entered, he may change/ revise the same on or before the last date and time of submission. The system time displayed on ISN’s e-tender webpage shall be final and binding on the bidders for all purposes

pertaining to various events of the subject tender and no other time shall be taken into cognizance.

Bidders are advised in their own interest to ensure that bids are uploaded in e-tender system well before the closing date and time of bid.

## **12. Internet connectivity**

If bidders are unable to access ISN's e-tender portal or Bid Documents, the bidders may please check whether they are using proxy to connect to internet or their PC is behind any firewall and may contact their system administrator to enable connectivity. Please note that Port SSL/ 443 should be enabled on proxy/firewall for HTTPS connectivity. Dial-up/ Broad and internet connectivity without Proxy settings is another option.



## **SECTION IV**

# **BID DATA SHEET**

### **BID DATA SHEETS (BDS)**

The following bid specific data for the Plant and Equipment to be procured shall amend and/ or supplement the provisions in the Section - III, Instruction to Bidders (ITB).

Sl. No.	ITB Clause Ref. No.	Bid Data Details
1.	Earnest Money Deposit (EMD) (ITB clause 14)	<p><b><u>Add following to the existing clause:</u></b></p> <p><b><u>14.11 Payment on Order Instrument (POI) against EMD:</u></b></p> <p>As an alternative to submission of EMD, the bidder also has an option to submit a letter of undertaking issued by either of the following three organizations, viz. (i) Indian Renewable Development Agency Limited (IREDA) or (ii) Power Finance Corporation Limited or (iii) REC Limited. This Letter of Undertaking shall be issued as “Payment on Order Instrument” (POI), wherein the POI issuing organization undertakes to pay in all scenarios under which the EMD would be liable to be encashed by SECI within the provisions of tender. This instrument would have to be furnished as per Format 14 of the tender document, within the timelines, for the amount and validity period as per the clause above.</p> <p><b>The term “Bank Guarantee (BG) towards/against EMD” occurring in the entire tender document shall be read as “e-PBG/Bank Guarantee (BG)/ Payment on Order Instrument (POI) towards/ against EMD”.</b></p>
2.	Contract Performance Security (ITB clause 15)	<p><b><u>Replace the existing clause by following:</u></b></p> <p><b><u>15. CONTRACT PERFORMANCE SECURITY</u></b></p> <p><b>15.1 Against the contract of the project, within 30 (Thirty) days from the issuance of the CA/NTP from</b></p>

Sl. No.	ITB Clause Ref. No.	Bid Data Details
		<p><b>SECI, the successful Bidder shall furnish an unconditional and irrevocable Contract Performance Security as per Format attached and which shall be for 5% of the Contract Value and shall be valid up to 11 (Eleven) months from the date of signing of Contract Agreement or Notice to Proceed (whichever is later). The Contract Performance Security shall be in the form of either Banker's Cheque or Demand Draft or Bank Guarantee or NEFT and shall be in the currency of the Contract and will be issued in the name of the owner (Solar Energy Corporation of India Limited).</b></p> <p>Bank Guarantee towards Contract Performance Security shall be from any scheduled bank or a branch of an International Bank situated in India and registered with Reserve Bank of India as scheduled foreign bank. However, in case of Bank Guarantees from Banks other than the Nationalized Indian banks, the Bank must be a commercial Bank having net worth in excess of INR 500 Crores and a declaration to this effect should be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.</p> <p>The Contract Performance Security may also be submitted in the form of 'crossed payee accounts only' Demand Draft/ Banker's Cheque in favour of "Solar Energy Corporation of India Limited".</p> <p>15.2 The Contract Performance Security has to cover the entire contract value including extra works/ services also. As long as the Contract Performance Security submitted at the time of award takes care the extra works/ services executed and total executed value are within the awarded contract price, there is no need for additional Contract Performance Security. As soon as</p>

Sl. No.	ITB Clause Ref. No.	Bid Data Details
		<p>the total executed value is likely to burst the ceiling of awarded contract price, the Bidder should furnish additional Contract Performance Security on proportionate basis of the percentage for the additional amount in excess to the original contract value. The Contract Performance Security shall be towards faithful performance of the contractual obligations and performance of equipment.</p> <p>15.3 Further, any delay beyond 30 (Thirty) days shall attract interest @ 1.25% per month on the total Contract Performance Security amount, calculated on pro-rata basis accordingly. Owner at its sole discretion may cancel the Contract, in case Contract Performance Security is not submitted within 40 (Forty) days from the date of signing of Contract Agreement. However, total project completion period shall remain same. Part Security shall not be accepted.</p> <p>15.4 If the Bidder or their employees or the Bidder's agents and representatives shall damage, break, deface or destroy any property belonging to the Employer or others during the execution of the Contract, the same shall be made good by the Bidder at his own expenses and in default thereof, the Engineer-in-Charge may cause the same to be made good by other Bidders and recover expenses from the Bidder (for which the certificate of the Engineer-in-Charge shall be final).</p> <p>15.5 All compensation or other sums of money payable by the Bidder to the Owner under terms of this Contract may be deducted from or paid by the encashment or sale of a sufficient part of his Contract Performance Security or from any sums which may be due or may become due to the Bidder by the Owner</p>

Sl. No.	ITB Clause Ref. No.	Bid Data Details
		<p>of any account whatsoever and in the event of his Contract Performance Security being reduced by reasons of any such deductions or sale of aforesaid, the Bidder shall within 10 (Ten) days thereafter make good in cash, bank drafts as aforesaid any sum or sums which may have been deducted from or realized by sale of his Contract Performance Security, or any part thereof. No interest shall be payable by the Owner for sum deposited as Contract Performance Security.</p> <p>15.6 The Contract Performance Guarantee (CPG) submitted shall be released to the contractor without any interest not later than 90 days after the successful completion of the contract subject to the approval and acceptance by the owner (Solar Energy Corporation of India Limited).</p> <p>15.7 Payment on Order Instrument (POI) against PBG:</p> <p>As an alternative to submission of PBG as above, the successful bidder also has an option to submit a letter of undertaking issued by either of the following three organizations, viz. (i) Indian Renewable Development Agency Limited (IREDA) or (ii) Power Finance Corporation Limited or (iii) REC Limited. This Letter of Undertaking shall be issued as “Payment on Order Instrument” (POI), wherein the POI issuing organization undertakes to pay in all scenarios under which the PBG would be liable to be encashed by SECI within the provisions of tender. This instrument would have to be furnished as per Format 15 of the tender document, within the timelines, for the amount and validity period as per clause above. In case the successful contractor chooses to submit POI, delay in submission of the POI beyond the timeline stipulated above, will be applicable in this case too.</p>

Sl. No.	ITB Clause Ref. No.	Bid Data Details
		The term “Performance Bank Guarantee (PBG)” occurring in the entire tender document shall be read as e-PBG/ “Performance Bank Guarantee” (PBG)/Payment on Order Instrument (POI)”.

## **SECTION V**

# **QUALIFYING REQUIREMENTS**



## **1. ELIGIBILITY CRITERIA**

Qualification of the Bidder(s) will be based on their meeting the minimum eligibility criteria specified below regarding the Bidder's General Standards, Technical Experience and Financial eligibility as demonstrated by the Bidder's responses in the corresponding Bid documents.

### **1.1 GENERAL ELIGIBILITY CRITERIA**

The bidder should be an Indian company registered in India and may be an Affiliate or Holding Company or Subsidiary company of a company meeting the financial eligibility requirement (s) as set forth in this section. Government owned Enterprises registered and incorporated in India are allowed to participate in this tender. Further, Limited Liability Partnerships Firms, Proprietorships Firms and Partnerships Firms are also allowed to participate in this tender. However, the bidders against whom sanction/debarment/blacklisting for conducting business is imposed by Government of India, are not allowed to participate. The subsidiary of a foreign company, which is registered in India under Companies Act, 1956 or 2013 prior to the bid submission deadline, is eligible to participate.

In case of registered Companies, the copies of Certificate of Incorporation (CoI), Article of Association (AoA), and Memorandum of Association (AoA) shall be provided along with the bid documents.

It shall be the sole responsibility of the bidder to inform Owner in case the bidder is debarred from bidding by any organisation. Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders.

The Bidder should not be under any liquidation court receivership or similar proceedings on the due date of submission of bid.

The Bid Processing Fees and EMD are exempted for MSME bidders registered under NSIC/ DIC/ Udyog Aadhaar Category only.

NGOs, Charitable Trusts, and Educational Societies are not allowed to participate in the bidding process (either individually or in Joint Venture/ Consortium).

As the NGOs, Charitable Trusts, Educational Societies in any form are not allowed to participate in the tendering process, hence any such firm/entity having MSME status is also not eligible to participate in the bidding process.

## **1.2 TECHNICAL ELIGIBILITY CRITERIA**

The Bidder can participate through below mentioned qualifying Criteria. The Bidder shall be considered meeting Technical criteria as mentioned below: -

**1.2.1** The Bidder should be a NABL accredited agency.

**1.2.2** The bidder must have at least three years' experience (ending month of March prior to the bid opening) of providing similar type of services to Central/State Government/ PSUs/ Nationalised Banks/ Reputed Organisations.

**1.2.3** “Similar Works / Services” means the services rendered as service provider for the “Geotechnical Investigation or Soil Investigation or Soil Analysis or Investigation of Soil Strata / Soil Survey” to the Govt. / CPSUs/ JVCs of CPSUs/Private organizations / Autonomous Bodies / Companies / Institutes/ MNCs.

(Document Required: Proof of documentation conforming above experience details/Client work order/LOI/PO/Completion Certificate/ with Successful Order execution confirmation from client side)

### **1.2.4 Further,**

The bidder must have successfully executed/completed similar, over the last three years i.e. the current financial year and the last three financial years:-

One similar completed service costing not less than the amount equal to **INR 2,27,00,000 (Indian Rupees Two Crore Twenty Seven Lakhs only)**

**OR**

Two similar completed services costing not less than the amount equal to **INR 1,42,00,000 (Indian Rupees One Crore Forty Two Lakhs only)**

OR

Three similar completed services costing not less than the amount equal to **INR 1,14,00,000 (Indian Rupees One Crore Fourteen Lakhs only)**

**1.2.5** Out of the similar works undertaken by the contractor, at least one of them should be for Central/ State Government/ Central/ State Autonomous Bodies/ Public Sector Undertaking.

**1.2.6** Bidder should have among its clients, reputed institutes/centres or corporate in public/private sector, for whom they have been providing the similar services. Names and addresses of such clients along with details regarding nature, amount and period of the contracts should be furnished. Certificates from the clients regarding the quality and duration of service rendered shall also be furnished.

**1.2.7 Equipment and Managerial Capability:**

a) Ownership/ proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment.

b) A Contract Manager with five years' experience in Services of an equivalent nature and volume, including no less than three years as Manager.

Non-compliance of any of the above conditions will result in technical disqualification of the party. Financial bid of the technically disqualified party(ies) will not be considered.

**1.3 FINANCIAL ELIGIBILITY CRITERIA**

**1.3.1** The Minimum Average Annual Turnover (MAAT) of the Bidder in the last three financial years (i.e. FY 2020-21, 2021-22 & 2022-23) should be **INR 1,14,00,000 (Indian Rupees One Crore Fourteen Lakhs only)**.

*\* MAAT shall mean Revenue from Operations as incorporated in the profit & loss account excluding other income, e.g. sale of fixed assets. This must be the individual Company's turnover and not that of any group of Companies.*

*A summarized sheet of average turnover, certified by a practicing Chartered Accountant/Statutory Auditor should be compulsorily enclosed along with corresponding annual accounts. In case of tender having the submission deadline up to 30th September of the relevant financial year and audited financial results of immediate 3 preceding financial years being not available, the Bidder has an option to submit the audited financial results of three years immediately prior to relevant financial year. In case the bid submission deadline is after 30th September of the relevant financial year, Bidder has to compulsorily submit the audited financial results of immediately preceding three financial years.*

Financial data for latest last three audited financial years have to be submitted by the Bidder in the attached Format in Forms & Formats of the tender document along with audited balance sheets. The financial data in the prescribed format shall be certified by Chartered Accountant with his/her stamp and signature.

- 1.3.2** The net worth for the last financial year should be positive. “Net Worth” of the Bidder shall be calculated as per Company Act 2013.
- 1.3.3** The bidder should have a minimum Working Capital of **INR 71,00,000/- (Indian Rupees Seventy One lakhs only)** as per the last audited financial statement. If the bidder’s working capital is inadequate, the bidder should supplement this with a letter from the bidder’s bank, having net worth not less than INR 500 Crores, confirming availability of the line of credit for more than or equal to **INR 71,00,000/- (Indian Rupees Seventy One lakhs only)** to meet the working Capital requirement of this particular Project.

The tender submission of bidders, who do not qualify the technical eligibility criteria & Financial criteria stipulated in the clauses above, shall not be considered for further evaluation and therefore would be rejected. However, SECI may seek clarifications from the Bidders so as to ascertain the correctness of facts & documents as presented by the Bidder. The mere fact that the bidder is qualified as mentioned in the financial criteria shall not imply that its bid shall automatically be accepted. The same should contain all technical data as required for consideration of tender as prescribed.

Notwithstanding anything stated above, Owner reserves the right to assess the Bidder's capability and capacity to perform the contract should the circumstances warrant such assessment necessary in its overall interest. Bidder may have to produce originals of documents submitted to qualify against the wo, which shall be returned after verification & shall not be retained by Owner. Authenticity of documents submitted by Bidders may also be verified by Owner as deemed fit through its own sources.

**IN CASE ANY DOCUMENT BY A BIDDER IS FOUND TO BE FORGED OR FAKE, OWNER RESERVES ITS RIGHT TO TAKE APPROPRIATE ACTIONS FOR SUCH MALPRACTICES INCLUDING FOREFEITURE OF EMD AND/ OR BANNING OF BUSINESS/ BLACKLISTING ETC.**

## **SECTION VI**

# **GENERAL CONDITIONS OF CONTRACT (GCC)**

## **TABLE OF CONTENTS**

### **[A] DEFINITIONS:**

#### **1. DEFINITION & ABBREVIATIONS**

### **[B] GENERAL INFORMATION:**

#### **2. INTERPRETATIONS**

#### **3. APPLICATION**

#### **4. BID LANGUAGE**

### **[C] GENERAL OBLIGATIONS:**

#### **5. CONTRACTORS LIABILITY**

#### **6. NON-DISCLOSURE**

#### **7. SUCCESSFUL VENDOR/BIDDER INTEGRITY**

#### **8. DEFAULTS IN CONTRACTS OBLIGATIONS**

#### **9. FORCE MAJEURE**

#### **10. RISK PURCHASE CLAUSE**

#### **11. TERMINATION OF CONTRACT**

### **[D] APPLICABLE LAW AND SETTLEMENT OF DISPUTES**

#### **12. ARBITRATION**

#### **13. JURISDICTION**



## [A] DEFINITIONS

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

### 1 DEFINITION & ABBREVIATIONS

In this TENDER (as here-in-after defined) the following words and expressions shall have the meanings hereby assigned to them except where the context otherwise required.

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 **APPROVED** shall mean approved in writing including subsequent written confirmation of previous verbal approval and "APPROVAL" means approval in writing including as aforesaid.

1.3 **APPOINTING AUTHORITY** for the purpose of arbitration shall be the any person so designated by the Owner.

1.4 **ARBITRATOR** means the person or persons appointed by agreement between the owner and the Contractor to make a decision on or to settle any dispute or difference between the owner and the Contractor referred to him or her by the parties.

1.5 **BID** means the Techno Commercial and Price Bid submitted by the Bidder along with all documents/ credentials/ attachments/ annexure etc., in response to the Tender, in accordance with the terms and conditions hereof.

- 1.6 **BIDDER** means Bidding Company/ Expert submitting the Bid. Any reference to the Bidder includes Bidding Company/ Experts including its successors, executors and permitted assigns as the context may require.
- 1.7 **CHARTERED ACCOUNTANT** means 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.
- 1.8 **COMPANY** means a body incorporated in India under the Companies Act, 1956 or Companies Act, 2013 including any amendment thereto.
- 1.9 **CONTRACT** shall mean the Agreement between the Owner and the Contractor for the execution of the works including therein all contract documents.
- 1.10 **CONTRACT DOCUMENTS** mean collectively the Limited Tender Documents, Specification, Schedule of Quantities and Rates, Letter of Acceptance and agreed variations if any, and such other documents constituting the Limited Tender and acceptance thereof.
- 1.11 **CONTRACTOR/ SUCCESSFUL BIDDER** means the person or the persons, firm or Company or corporation whose tender has been accepted by the Owner and includes the Contractor's legal representatives his/ her successors and permitted assigns.
- 1.12 **CONTROLLING OFFICER** means the authorized Controlling Person/body of the contract from Human Resource P&A Department of designation not below the rank of General manager or as suitably appointed by Solar Energy Corporation of India Limited to perform the duties delegated by the Owner.
- 1.13 **DAY** means a day of 24 hours from midnight to midnight irrespective of the number of hours worked in that day.
- 1.14 **EARNEST MONEY DEPOSIT (EMD)** means the unconditional and irrevocable Tender Security in the form of Demand Draft/ Banker's Cheque/ Bank Guarantee to be submitted along with the Bid by the Bidder as prescribed in the Tender.

- 1.15 **ENGINEER/ ENGINEER-IN-CHARGE** shall mean the person designated from time to time by Solar Energy Corporation of India Limited/ Owner and shall include those who are expressly authorized by him to act for and on his behalf for operation of this Contract.
- 1.16 **EFFECTIVE DATE** means the date of issuance of Notification of Award/ Letter of Allocation from which the Time for Completion shall be determined.
- 1.17 **FINANCIAL BID/PRICE BID** means the price quotation submitted by the Service Provider for the complete Limited Tender scope of work as per the format provided under Schedule of Rates (SOR).
- 1.18 **NOTICE IN WRITING OR WRITTEN NOTICE** shall mean a notice in written, typed or printed characters sent (unless delivered personally or otherwise proved to have been received by the addressee) by registered post to the latest known private or business address or registered office of the addressee and shall be deemed to have been received in the ordinary course of post it would have been delivered.
- 1.19 **NOTIFICATION** means the official notice issued vide Letter/ E-mail by the owner notifying the Contractor that his bid has been accepted.
- 1.20 **OFFICER IN CHARGE** means the authorized representative appointed by Solar Energy Corporation of India Limited to perform the duties delegated by the Owner.
- 1.21 **OWNER** means here in the context of this Tender Document as Solar Energy Corporation of India Limited, New Delhi shall include the legal successors or permitted assigns of the Owner.
- 1.22 **PARENT COMPANY** means a company that holds more than Fifty Percent (50%) of the paid-up equity capital directly or indirectly in the Bidding Company as the case may be.
- 1.23 **SECI** means Solar Energy Corporation of India Limited, New Delhi (A Government of India Enterprise) under MNRE.

**TENDER** means the process whereby Owner invite bids for Projects/ Works/ Facilities that are submitted within a finite deadline by the Bidder/ Contractor.

1.24 **WEEK** means a period of any consecutive seven days.

1.25 **WORKING DAY** means any day which is not declared to be holiday or rest day by the Owner.

## **[B] GENERAL INFORMATION**

### **2 INTERPRETATIONS**

2.1 Words comprising the singular shall include the plural & vice versa

2.2 An applicable law shall be construed as reference to such applicable law including its amendments or re-enactments from time to time.

2.3 A time of day shall save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.

2.4 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.

2.5 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.

### **3 APPLICATION**

These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

## 4 BID LANGUAGE

The bid prepared by the Service Provider, as well as all correspondence and documents relating to the Bid exchanged by the Service Provider and SECI, shall be written in English language only. Supporting documents and printed literature furnished by the Service Provider may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language duly certified by the Service Provider, in which case, for purposes of interpretation of the Bid, the translation shall govern.

### [C] GENERAL OBLIGATIONS

## 5 CONTRACT LIABILITY

### **Contractors' liability towards indemnity**

The successful Bidder shall submit an indemnity bond, indemnifying SECI from the following, on a stamp paper of Rs. 100 duly signed by the authorized signatory within 30 working days from the date of Contract Agreement, and before commencement of work:

- (i) All claims, demands, actions, proceedings, losses, damages, liabilities, cost, charges, expenses or obligations that are occasioned to or may occasion to the Bidder as a result of nonpayment of any statutory dues levied/Taxes e.g. leviable on the Bidder or the Bidder committing breach of any of the rules, regulations, orders, directives, instructions that may be issued by any authority under the Central Government/State Govt. or any statute or law for the time being in force.
- (ii) Any damages, loss, death or expenses due to or resulting from any negligence or breach of duty on his/his employee/representative part.

## 6 NON-DISCLOSURE

The successful Bidder shall safeguard and keep the Confidential Information of SECI in confidence. The Bidder shall not, without the prior written consent

of the owner (SECI), disclose Confidential Information to any person or entity except to Bidder's employees, officers and directors who have a need to know such Confidential Information for the Purpose and who are bound by the confidentiality obligations. The successful Bidder shall ensure that each of such employees, officers and directors are made aware of the nature of the confidential information and shall at all times remain liable for the wrongful disclosure by such persons. Further, the Bidder shall ensure not to disclose the Confidential Information to its affiliates, Holding Company/ Parents as well as Group Companies.

## **7 SUCCESSFUL BIDDER INTEGRITY**

The Successful Bidder is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state-of-the-art methods and economic principles and exercising all means available to achieve the performance specified in the Contract.

## **8 DEFAULT IN CONTRACTS OBLIGATION**

8.1 In case of any default or delay in performing any of the contract obligation, SECI reserves the right to forfeit the Performance Security/recover the actual damages/loss from the successful Bidder but in any case, total liability of the Successful Bidder under this contract shall not exceed total contract value/price.

8.2 In addition to above clause, SECI may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Successful Bidder, terminate the Contract in whole or part as following:

- if the Successful Bidder fails to deliver any or all of the Work as required by SECI or
- if the Successful Bidder fails to perform any other obligation(s)/duties under the Contract or
- If the Successful Bidder, in the judgment of SECI has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

## 9 FORCE MAJEURE

9.1 A 'Force Majeure' means any event or circumstance or combination of events those stated below that wholly or partly prevents or unavoidably delays an Affected Party in the performance of its obligations under this Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices:

- Act of God, including, but not limited to lightning, fire not caused by Contractors' negligence and explosion (to the extent originating from a source external to the site), earthquake, volcanic eruption, landslide, unprecedented flood, cyclone, typhoon, or tornado. {Only if it is declared / notified by the competent state / central authority / agency (as applicable)},
- Any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action, quarantine.
- Radioactive contamination or ionizing radiation originating from a source in India or resulting from another Force Majeure Event mentioned above.

### 9.2 Force Majeure Exclusions

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:

- Delay in the performance of any contractor, sub-contractor, or their agents.
- Non-performance resulting from normal wear and tear typically experienced in power generation materials and equipment.
- Insufficiency of finances or funds or the agreement becoming onerous to perform including any commercial hardships faced; and
- Non-performance caused by, or connected with, the Affected Party's:



- o Negligent or intentional acts, errors, or omissions.
- o Failure to comply with an Indian Law; or
- o Breach of, or default under this Contract Agreement.

- Normal rainy seasons and monsoon

- 9.3 In the event of either party being rendered unable by Force Majeure to perform any obligation required to be performed by them under this Contract, relative obligation of the party affected by such Force Majeure shall be treated as suspended during the period which the Force Majeure clause last.
- 9.4 Upon occurrence of such causes, the party alleging that it has been rendered unable as aforesaid, thereby, shall notify the other party in writing by registered notice within 7 (Seven) Days of the alleged beginning thereof giving full particulars and satisfactory evidence in support of its claim. Further, within 14 (Fourteen) days, the contractor will furnish a detailed Contingency Plan to overcome the effects of the incident after cessation of the effect of Force Majeure.
- 9.5 The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event of Force Majeure on the performance of its rights or obligations under this Agreement, as soon as practicable after becoming aware of each of these cessations.
- 9.6 Time for Performance of the relative obligation suspended by the force majeure shall stand extended by the period for which such Force Majeure clause lasts.
- 9.7 If supply is suspended by Force Majeure conditions lasting for more than two months, the Owner shall have the option of cancelling this Contract in whole or part thereof, at its discretion.
- 9.8 The Contractor will not be entitled to claim any compensation for Force Majeure conditions and shall take appropriate steps to insure its men and materials utilized by it under the Contract.

- 9.9 To the extent not prevented by force majeure event, the affected party shall continue to perform its obligations pursuant to this Agreement. The Affected Party shall use its reasonable efforts to mitigate the effect of any Force Majeure Event as soon as practicable.

## **10 RISK PURCHASE CLAUSE**

In case the contractor is not able, in the judgment of SECI, to maintain satisfactory work progress and it appears that he will not be able to render the services within the time schedule and achieve the target completion date, SECI shall be at liberty to either:

- a) Continue as per the Contract Agreement with due liquidated damages (if applicable) for late delivery.
- or
- b) Engage any other contractor, parallel to existing contractor, to complete part of the balance order at the risk and cost of the existing contractor.
- or
- c) Cancel the Contract Agreement and get the balance work done from third party at the risk and cost of the existing contractor.

## **11 TERMINATION OF CONTRACT**

### **11.1 Termination for Owner's Convenience**

11.1.1 The Owner may at any time terminate the Contract for any reason by giving the Contractor a notice of termination that refers to this GCC Sub-Clause 11.1.

11.1.2 Upon receipt of the notice of termination under GCC Sub-Clause 11.1.1, the Contractor shall either immediately or upon the date specified in the notice of termination

- (a) cease all further services, except for such services as the Owner may specify in the notice of termination for the sole purpose of protecting that part of the services already executed.

- (b) terminate all subcontracts, except those to be assigned to the Owner pursuant to paragraph (c) (ii) below
- (c) subject to the payment specified in GPC Sub-Clause 11.1.3,
  - (i) deliver to the Owner the parts of the services executed by the Contractor up to the date of termination
  - (ii) to the extent legally possible, assign to the Owner all right, title and benefit of the Contractor as of the date of termination, and, as may be required by the Owner, in any subcontracts concluded between the Contractors and its Subcontractor; and

11.1.3 In the event of termination of the Contract under GPC Sub-Clause 11.1.1, the Owner shall pay to the Contractor the following amounts:

- (a) the Contract Price, properly attributable to the supplies executed by the Contractor as of the date of termination
- (b) any amounts to be paid by the Contractor to its Subcontractors in connection with the termination of any subcontracts, including any cancellation charges

## **11.2 Termination for Contractors' Default**

11.2.1 Neither the Owner nor the Contractor may assign the Contract or any part thereof, or any right, benefit, obligation, or interest therein or thereunder, to any third party without the express prior written consent of the other Party, which consent shall not be unreasonably withheld, except that the Contractor shall be entitled to assign any monies due and payable to it or that may become due and payable to it under the Contract, either absolutely or by way of charge.

11.2.2 The Owner, without prejudice to any other rights or remedies it may possess, may terminate the Contract forthwith in the following circumstances by giving a notice of termination and its reasons therefor to the Contractor, referring to this GPC Sub-Clause 11.2:

- (a) if the Contractor becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, if the Contractor is a corporation, a resolution is passed or order is made for its winding up, other than a voluntary liquidation for the purposes of amalgamation or resupply, a receiver is appointed over any part of its undertaking or assets, or if the Contractor takes or suffers any other analogous action in consequence of debt
- (b) if the Contractor assigns or transfers the Contract or any right or interest therein in violation of the provision of GPC Clause 11.2.1.
- (c) if the Contractor, in the judgment of the Owner has engaged in Fraud and Corruption in competing for or in executing the Contract.

#### 11.2.3 If the Contractor

- (a) has abandoned or repudiated the Contract
- (b) has without valid reason failed to commence services promptly or has suspended the progress of Contract performance for more than twenty-eight (28) days after receiving a written instruction from the Owner to proceed
- (c) persistently fails to execute the Contract in accordance with the Contract or persistently neglects to carry out its obligations under the Contract without just cause

then the Owner may, without prejudice to any other rights it may possess under the Contract, give a notice to the Contractor stating the nature of the default and requiring the Contractor to remedy the same. If the Contractor fails to remedy or to take steps to remedy the same within fourteen (14) days of its receipt of such notice, then the Owner may terminate the Contract forthwith by giving a notice of termination to the Contractor that refers to this GPC Sub-Clause 11.2.

11.2.4 Upon receipt of the notice of termination under GPC Sub-Clauses 11.2.2 or 11.2.3, the Contractor shall, either immediately or upon such date as is specified in the notice of termination,

- (a) cease all further services, except for such services as the Owner may specify in the notice of termination for the sole purpose of protecting that part of the services already executed.
- (b) terminate all subcontracts, except those to be assigned to the Owner pursuant to paragraph (c) below
- (c) to the extent legally possible, assign to the Owner all right, title and benefit of the Contractor as of the date of termination, and, as may be required by the Owner, in any subcontracts concluded between the Contractors and its Subcontractor.

11.2.5 The Owner may expel the Contractor, and complete the services itself or by employing any third Party. The Owner may, to the exclusion of any right of the Contractor over the same, take over and use with the payment of a fair rental rate to the Contractor, with all the maintenance costs to the account of the Owner and with an indemnification by the Owner for all liability including damage or injury to persons arising out of the Owner's use of such services.

11.2.6 Subject to GPC Sub-Clause 11.2.7, the Contractor shall be entitled to be paid the Contract Price attributable to the services executed as of the date of termination. Any sums due the Owner from the Contractor accruing prior to the date of termination shall be deducted from the amount to be paid to the Contractor under this Contract.

11.2.7 If the Owner completes the services, the cost of completing the services by the Owner shall be determined.

If the sum that the Contractor is entitled to be paid, pursuant to GPC Sub-Clause 11.2.6, plus the reasonable costs incurred by the Owner in completing the services, exceeds the Contract Price, the Contractor shall be liable for such excess.

If such excess is greater than the sums due the Contractor under GPC Sub-Clause 11.2.6, the Contractor shall pay the balance to the Owner, and if such excess is less than the sums due the Contractor under GPC Sub-Clause 11.2.6, the Owner shall pay the balance to the Contractor.

The Owner and the Contractor shall agree, in writing, on the computation described above and the manner in which any sums shall be paid.

## **[D] APPLICABLE LAW AND SETTLEMENT OF DISPUTES**

### **12 Mutual Consultation**

If any dispute of any kind whatsoever shall arise between the owner and the Contractor in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the Facilities, whether during the progress of the Facilities or after their completion and whether before or after the termination, abandonment or breach of the Contract, the parties shall seek to resolve any such dispute or difference by mutual consultation. If the parties fail to resolve such a dispute or difference by mutual consultation, then the dispute may be settled through Arbitration / other remedies available under the applicable laws.

### **13 Arbitration**

#### **a. Settlement of Dispute**

- i. If any dispute or difference or claim occurs between the Owner and the Contractor in connection with or arising out of the contract including without prejudice to the generality of the foregoing, any question regarding the formation, existence, validity termination or breach, the parties shall seek to resolve any such dispute or difference by mutual consent.
- ii. 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.

#### **b. In Case the Contractor Is a Public Sector Enterprise or A Government Department.**

- i. In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between

CPSEs and Governmental Departments/ Organizations (other than those related to taxation matters), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 4(1)/2013-DPE (GM)FTS-1835 dated 22-05-2018, 04.07.2018 and 11.07.2018; and DPE-GM-056i0003/2019-FTSA-10937 dated 20.02.2020 and as amended from time to time.

**c. In All Other Cases**

- i. 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.
- ii. The owner 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.
- iii. 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.
- iv. 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. Such a re-constituted Tribunal may, at its discretion, proceed with the reference from the stage at which it was left by the previous Arbitrator (s).
- v. Arbitration proceedings shall be conducted with The Arbitration and Conciliation Act, 1996 and the rules made thereunder and for the time being in force.
- vi. The venue or arbitration shall be New Delhi.



- vii. The award of the arbitrator shall be final and binding on the parties to this contract.
- viii. 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.
- ix. The Arbitrator(s) shall give reasoned award.
- x. Notwithstanding any reference to the Arbitration herein, the parties shall continue to perform their respective obligations under the contract unless they otherwise agree.
- xi. Cost of arbitration shall be equally shared between the Owner and the Contractor.
- xii. The fees payable to the Arbitrator and the manner of payment of the fees shall be such as may be governed by the Fourth Schedule of the Arbitration and Conciliation Act 1996.
- xiii. The Courts in Delhi alone shall have jurisdiction to entertain any application or other proceedings in respect of anything arising under this Contract and any award or awards made by Arbitration Tribunal hereunder shall be filed (if so required) in the concerned Courts in Delhi only.
- xiv. The language of the proceedings will be in English.
- xv. This Arbitration Clause shall continue to survive termination, completion, or closure of the Main contract for 120 days thereafter.

## **14 Jurisdiction**

The Contract shall be governed by and interpreted in accordance with laws in force in India. The Courts of Delhi shall have exclusive jurisdiction in all matters arising under the Contract.

## **SECTION VII**

# **SPECIAL CONDITIONS OF CONTRACT (SCC)**

### SPECIAL CONDITIONS OF CONTRACT (SCC)

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Wherever there is a conflict, the provisions herein shall prevail over those in the GCC. The corresponding Clause number(s) of the GCC is/are indicated in parentheses.

SCC No.	GCC Clause Ref. No. (If Applicable)	Details/ Description/ Special Conditions									
1.	Definitions (GCC clause 1)	<p><b>The Owner / Employer is:</b></p> <p><b>Solar Energy Corporation of India Limited,</b> 6th Floor, Plate-B, NBCC Office Block Tower-2, East Kidwai Nagar, New Delhi-110023, India</p> <p>Kind Attn.: AGM (C&amp;P) / Sr Manager (C&amp;P) Telephone Nos.: - 0091-(0)11-24666220/ 24666231 Fax No.: - 0091-(0)11-24666220 E-mail: - <a href="mailto:contracts@seci.co.in">contracts@seci.co.in</a></p>									
2.	Payment terms (GCC clause 15)	<p><b><u>Add following to the existing clause's:</u></b></p> <p>Payment for the work will be released as follows:</p> <table> <tr> <th>S.No.</th><th>Payment Head</th><th>Percentage of Payment Released</th></tr> <tr> <td>1</td><td>Completion of Field Work</td><td>40% of amount against items 1-7 of Schedule of Items</td></tr> <tr> <td>2</td><td>Acceptance of Draft Report</td><td>(i) 60% of amount against items 8-10 and (ii) 30% against items 1-7 of</td></tr> </table>	S.No.	Payment Head	Percentage of Payment Released	1	Completion of Field Work	40% of amount against items 1-7 of Schedule of Items	2	Acceptance of Draft Report	(i) 60% of amount against items 8-10 and (ii) 30% against items 1-7 of
S.No.	Payment Head	Percentage of Payment Released									
1	Completion of Field Work	40% of amount against items 1-7 of Schedule of Items									
2	Acceptance of Draft Report	(i) 60% of amount against items 8-10 and (ii) 30% against items 1-7 of									

REVER

SCC No.	GCC Clause Ref. No. (If Applicable)	Details/ Description/ Special Conditions		
				Schedule of items
		3	Acceptance of Final Report	(i) 30% against items 1-7 (ii) 40% against items 8-10 and (iii) 100% against item 11
		<p><i>* Contract shall submit with the bid the following information:</i></p> <ul style="list-style-type: none"><li>• <i>Mobilization Plan</i></li><li>• <i>L2 Network</i></li><li>• <i>Manpower list</i></li><li>• <i>Machinery list</i></li></ul> <p>A payment to be taken through “TReDS” or directly from SECI is a sole discretion of the vendor. SECI shall not intervene in the vendor’s decision to place their invoices on “TReDS” Platform or directly taking payments from SECI.</p> <p>“TReDS” option shall only be given to the MSME vendors and any other vendor “NOT” registered as MSME with SECI, cannot avail this facility.</p>		
3.	Liquidated Damages  (GCC clause 16)	<p><b><u>Add following to the existing clause’s:</u></b></p> <p>16.1 Subject to Force Majeure Clause, if the Contractor fails to comply with the working timeline or any extension thereof in accordance with timelines as mentioned in the tender document, then the Contractor shall pay to the Owner a sum equivalent to half percent (0.5%) per week of the complete value of the contract Price as liquidated damages for such default and not as a penalty, without</p>		

SCC No.	GCC Clause Ref. No. (If Applicable)	Details/ Description/ Special Conditions
		<p>prejudice to the Owner's other remedies under the Contract subject to the maximum limit of five percent (05%) of Contract Price for the whole of the Contract. The Owner may, without prejudice to any other method of recovery, deduct the amount of such damages from any amount due or to become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligation to complete the work, or from any other of his obligations and liabilities under the Contract. Once the maximum limit is reached, Owner may consider the termination of contract and/or shall have the discretion of getting executed the work from the Contractor with the maximum limit of Liquidated damages. Any such recovery on account of the Liquidated damages can be done from the running bills of the Contractor by Owner.</p> <p>16.2 The Owner shall at its sole discretion upon reaching the maximum LD limit , as an alternative to the Liquidated Damages at its option, get work executed from elsewhere at the risk and cost of the Contractor irrespective of the fact whether the scope of Contract is identical to the original scope of Contract and in case the Owner chooses the alternative course as mentioned, it will be entitled to recover compensation/ damages from the Contractor irrespective of maximum limit prescribed under Clause 16.1.</p> <p>16.3 The Owner may by giving (01) one-month notice to the Contractor cancel the Contract without prejudice to the Owner's right under Clauses 16.1 and 16.2 or any other provisions contained in the Contract to determine the Contract and claim damages from the Contractor.</p>

## **SECTION VIII**

# **FORMS & FORMATS**

<b><u>LIST OF FORMS &amp; FORMAT</u></b>	
<b>Form No.</b>	<b>Description</b>
Format-I	COVERING LETTER
Format-II	GENERAL PARTICULARS OF THE BIDDER
Format-III	FORMAT FOR CONTRACT PERFORMANCE BANK SECURITY
Format-IV	FORMAT FOR EARNEST MONEY DEPOSIT
Format-V	FINANCIAL PROPOSAL
Format-VI	SCHEDULE OF RATES (SOR)/PRICE BID
Format-VII	TECHNICAL PROPOSAL <b>(NOT APPLICABLE)</b>
Format-VIII	Format for Turnover for last 03 (Three) financial years
Format-IX	"NO DEVIATION" CONFIRMATION
Format-X	E-Banking Mandate Form
Format-XI	FORMAT FOR BOARD RESOLUTIONS
Format-XII	FORMAT FOR POWER OF ATTORNEY
Format-XIII	DECLARATION REGARDING BANNING, LIQUIDATION, COURT RECEIVERSHIP ETC.
Format-XIV	"Format of Payment on Order Instrument to be issued by IREDA/REC/PFC (In lieu of BG towards EMD)" as per 'Form F-14'
Format-XV	"Format of Payment on Order Instrument to be issued by IREDA/REC/PFC (In lieu of BG towards PBG)" as per 'Form F-15'
<b>LIST OF BANKS</b>	



**Covering Letter**

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

Date: \_\_\_\_\_

Reference No: \_\_\_\_\_

From: \_\_\_\_\_ (Insert name and address of Bidding Company)

Tel. #:

Fax #:

E-mail address #

To

**Solar Energy Corporation of India Limited**

**6th Floor, Plate-B, NBCC Office Block Tower- 2**

**East Kidwai Nagar, New Delhi- 110023**

Sub: Response to Bid Document-----dated ----- for Bid document for  
..... at SECI.

Dear Sir,

We, the undersigned ..... [*insert name of the 'Bidder'*] having read, examined and understood in detail the Bid Document hereby submit our response to Bid Document. We confirm that in response to the aforesaid Bid Document, we including have not submitted more than one response to Bid Document including this response to bid Document. We are submitting application for Bidder for ..... at SECI.

1. We give our unconditional acceptance to the Bid Document, dated ..... [*Insert date in dd/mm/yyyy*], issued by SECI. In token of our acceptance to the Bid Document, the same have been initialled by us and enclosed with the response to bid Document.

2. Processing Fees

We have enclosed a Bid Processing Fees of INR..... (Insert Amount), in the form of NEFT/Demand Draft/ Banker's Cheque no..... (Insert UTR reference no/ reference of the DD/ Banker's Cheque) dated..... (Insert date of UTR/DD/ banker's cheque) from ..... (Insert name of Bank providing DD/ banker's cheque) and valid up to and including ..... in terms of Clause ..... of this tender

3. Earnest Money Deposit

We have enclosed an Earnest Money Deposit of INR..... (Insert Amount), in the form of 'Demand Draft' or 'Banker's Cheque' or NEFT or bank guarantee no..... (Insert reference of the bank guarantee) dated..... (Insert date of bank guarantee) as per Format-IV from ..... (Insert name of Bank providing BG) and valid up to and including ..... in terms of Clause ..... of this tender.

4. We have submitted our response strictly as per (Forms & Formats) of this Bid, without any deviations, conditions and without mentioning any assumptions or notes in the said Formats.

5. We hereby unconditionally and irrevocably agree and accept that the decision made by SECI in respect of any matter regarding or arising out of the bid Document shall be binding on us. We hereby expressly waive and withdraw any deviations and all claims in respect of this process.

6. 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 response to Bid Document, in the event of our selection as Successful Bidder.

7. We are enclosing herewith our response to the bid Document with formats duly signed as desired by you in the Bid Document for your consideration.

8. It is confirmed that our response to the Bid Document is consistent with all the requirements of submission as stated in the Bid Document and subsequent communications from SECI.

9. The information submitted in our response to the Bid Document is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our response to the Bid Document.
10. We hereby declare that our company has not been debarred / black listed by any Central/State Govt. Ministry or Department/Public Sector company/Government autonomous body.
11. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of one hundred eighty (180) days from the date of opening of limited tender or as per the published bid document.

12. Contact Person

Details of the representative to be contacted by SECI are furnished as under:

Name : .....  
Designation: .....  
Company : .....  
Address : .....  
Phone Nos.: .....  
Mobile Nos.: .....  
Fax Nos.: .....  
E-mail address: .....

13. We have neither made any statement nor provided any information in this Bid, which to the best of our knowledge is materially inaccurate or misleading. Further, all the confirmations, declarations and representations made in our Bid are true and accurate. In case this is found to be incorrect after our selection as Successful Bidder, we agree that the same would be treated as a Seller's event of default.

Dated the \_\_\_\_\_ day of \_\_\_\_\_, 20...

Thanking you,

Yours faithfully,

(Name, Designation and Signature of Authorized Person)

**Format-II**

**GENERAL PARTICULARS OF THE BIDDER**

Name of the Consulting Bidder/Firm (Bidder)	
Registered Office Address	
Address of the Bidder	
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.	
Bank Details (Name, Account No, IFSC Code)	
PAN No	
Whether the Bidder/company is having any conflict of interest from participating in the proposed empanelment	Yes No
GST ID (Proof to be submitted – GST No acknowledgement OR Email from GoI)	
GSTN Address	

(Signature of Authorized Signatory)

**Format-III**

**FORMAT FOR CONTRACT PERFORMANCE BANK SECURITY**

(To be submitted by successful bidder)

*(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of  
Appropriate Value should be in the name of the issuing Bank)*

Bank Guarantee No.: .....

Date: .....

WO/ Contract No.....

..... *[Name of Contract]* .....

To:

Solar Energy Corporation of India Limited

(A Government of India Enterprise) 6th Floor, Plate-B, NBCC Office Block Tower-  
2, East Kidwai Nagar, New Delhi- 110023

Dear Sir / Madam,

We refer to the Contract ("the Contract") signed on .....(*insert date of the  
Contract*) ..... between you and M/s ..... (*Name of Vendor*) .....,  
(or)

vide notification of award issued on ..... (*insert date of the notification of award*)  
.... by you to M/s ..... (*Name of Vendor*) ..... having its Principal place  
of business at ..... (*Address of Vendor*) ..... and Registered  
Office at ..... (*Registered address of Vendor*)  
..... ("the Vendor") concerning  
..... (*Indicate brief scope of work*) ..... for the  
complete execution of the ..... (*insert name of Package along with name of the  
Project*) .....

By this Bank Guarantee, we, the undersigned, ..... (*insert name & address of the  
issuing bank*) ....., a Bank (which expression shall include its successors,

administrators, executors and assigns) organized under the laws of ..... and having its Registered/ Head Office at ..... (*insert address of registered office of the bank*) ..... do hereby irrevocably guarantee payment to you up to .....(*insert amount of PBG in figures & words*) ..... upto and inclusive of ..... (dd/mm/yy).

We undertake to make payment under this Bank Guarantee upon receipt by us of your first written demand signed by your duly authorized officer or authorized officer of the Owner declaring the Vendor to be in default under the Contract and without cavil or argument any sum or sums within the above-named limits, without your need to prove or show grounds or reasons for your demand and without the right of the Vendor to dispute or question such demand.

Our liability under this Bank Guarantee shall be to pay to you whichever is the lesser of the sum so requested or the amount then guaranteed hereunder in respect of any demand duly made hereunder prior to expiry of the Bank Guarantee, without being entitled to inquire whether or not this payment is lawfully demanded.

This Bank Guarantee shall remain in full force and shall be valid from the date of issuance upto and inclusive of ..... (dd/mm/yy) and shall be extended from time to time for such period (not exceeding one year), as may be desired by M/s Solar Energy Corporation of India Limited on whose behalf this Bank Guarantee has been given.

Except for the documents herein specified, no other documents or other action shall be required, notwithstanding any applicable law or regulation.

Our liability under this Bank Guarantee shall become null and void immediately upon its expiry, whether it is returned or not, and no claim may be made hereunder after such expiry or after the aggregate of the sums paid by us to you shall equal the sums guaranteed hereunder, whichever is the earlier.

All notices to be given under shall be given by registered (airmail) posts to the addressee at the address herein set out or as otherwise advised by and between the parties hereto.

We hereby agree that any part of the Contract may be amended, renewed, extended, modified, compromised, released or discharged by mutual agreement between you and the Bidder, and this security may be exchanged or surrendered without in any way impairing or affecting our liabilities hereunder without notices to us and without the necessity for any additional endorsement, consent or guarantee by us, provided, however, that the sum guaranteed shall not be increased or decreased.

No action, event or condition which by any applicable law should operate to discharge us from liability hereunder shall have any effect and we hereby waive any right we may have to apply such law so that in all respects our liability hereunder shall be irrevocable and, except as stated herein, unconditional in all respects.

Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed \_\_\_\_\_ (*value in figures*) \_\_\_\_\_ [*value in words* \_\_\_\_\_].
2. This Bank Guarantee shall be valid upto \_\_\_\_\_ (*validity date*) \_\_\_\_\_.
3. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only & only if we receive a written claim or demand on or before \_\_\_\_\_ (*validity date*) \_\_\_\_\_.”

For and on behalf of the Bank

[*Signature of the authorised signatory(ies)*]

Signature\_\_\_\_\_

Name\_\_\_\_\_

Designation\_\_\_\_\_

POA Number\_\_\_\_\_

Contact Number(s): Tel.\_\_\_\_\_Mobile\_\_\_\_\_

Fax Number\_\_\_\_\_

email \_\_\_\_\_

Common Seal of the Bank\_\_\_\_\_

**Witness:**

Signature\_\_\_\_\_

Name\_\_\_\_\_

Address\_\_\_\_\_

Contact Number(s): Tel.\_\_\_\_\_Mobile\_\_\_\_\_

email \_\_\_\_\_

**Note :**

1. For the purpose of executing the Bank Guarantee, the non-judicial stamp papers of appropriate value shall be purchased in the name of Bank who issues the 'Bank Guarantee'.
2. The Bank Guarantee shall be signed on all the pages by the Bank Authorities indicating their POA nos. and should invariably be witnessed.
3. The Bank Guarantee should be in accordance with the proforma as provided. However, in case the issuing bank insists for additional paragraph regarding applicability of ICC publication No: 758, the following may be added at the end of the proforma of the Bank Guarantee [*i.e., end paragraph of the Bank Guarantee preceding the signature(s) of the issuing authority(ies) of the Bank Guarantee*]:

“This Guarantee is subject to Uniform Rules for Demand Guarantee, ICC publication No. 758 except that article 15(a) is hereby excluded.”



**FORMAT FOR EARNEST MONEY DEPOSIT**

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

Ref. \_\_\_\_\_

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

Date: \_\_\_\_\_

In consideration of the -----[Insert name of the Bidder] (hereinafter referred to as 'Bidder') submitting the response to NIT inter alia for selection of the Project in response to the NIT No. \_\_\_\_\_ dated \_\_\_\_ issued by Solar Energy Corporation of India Limited (hereinafter referred to as SECI) and SECI considering such response to the NIT of .....[insert the name of the Bidder] as per the terms of the NIT, the \_\_\_\_\_ [insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [Insert Name of the Place from the address of SECI] forthwith on demand in writing from SECI or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees -----[Insert amount]only, on behalf of M/s. \_\_\_\_\_ [Insert name of the Bidder] .

This guarantee shall be valid and binding on this Bank up to and including \_\_\_\_\_[insert date of validity in accordance with NIT] 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. \_\_\_\_\_ (Rs. \_\_\_\_\_ only). Our Guarantee shall remain in force until \_\_\_\_\_ [insert date of validity in accordance with NIT]. SECI shall be entitled to invoke this Guarantee till \_\_\_\_\_ [Insert date which is 30 days after the date in the preceding sentence].

The Guarantor Bank hereby agrees and acknowledges that the SECI 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 by SECI, made in any format, raised at the above-

mentioned address of the Guarantor Bank, in order to make the said payment to SECI.

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

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at Delhi 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 SECI shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder or to enforce any security held by SECI or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. \_\_\_\_\_ (Rs. \_\_\_\_\_ only) and it shall remain in force until \_\_\_\_\_ [Date to be inserted on the basis of this NIT] with an additional claim period of thirty (30) days thereafter. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if SECI serves upon us a written claim or demand.

Signature \_\_\_\_\_

Name \_\_\_\_\_

Power of Attorney No. \_\_\_\_\_

For \_\_\_\_\_ [Insert Name of the Bank] \_\_\_\_\_

Banker's Stamp and Full Address.

Dated this \_\_\_\_ day of \_\_\_\_, 20\_\_

Bank Contact Details & E Mail ID is to be provided

**Format-V**

**FINANCIAL PROPOSAL**  
**(On Bidder's letter head)**

Bid/NIT .No. \_\_\_\_\_

Date: \_\_\_\_\_

From: \_\_\_\_\_ (*Insert name and address of Company/Vendor/Bidder*)

\_\_\_\_\_

\_\_\_\_\_

Tel. #:

Fax #:

E-mail address#

**Solar Energy Corporation of India Limited**  
**6th Floor, Plate-B, NBCC Office Block Tower- 2**  
**East Kidwai Nagar, New Delhi- 110023**

Sub: Response to Bid/NIT no. \_\_\_\_\_ dated \_\_\_\_\_ for: **Selection of Agency to carry out soil investigation at proposed 13 GW RE project sites in Leh, UT of Ladakh, India.**

Dear Sir/ Madam,

I/ We, \_\_\_\_\_ (*Insert Name of the Company/Vendor/Bidder*)  
enclose herewith the Financial Proposal for selection of my/our firm/Vendor/Bidder  
for \_\_\_\_\_.

I/ We agree that this offer shall remain valid for a period of 180 (One Hundred and Eighty) days from the due date of submission of the response to this document.

Dated the \_\_\_\_\_ day of \_\_\_\_\_, 20....

Thanking you,  
We remain,  
Yours faithfully



Name

Designation

Seal and Signature of Authorized Person

**SCHEDULE OF RATES (SOR)/PRICE BID**

**Selection of Agency to carry out soil investigation at proposed 13 GW RE project sites in Leh, UT of Ladakh, India**

**THE SCHEDULE OF RATES (SOR)/PRICE BID FORMAT HAS BEEN ATTACHED SEPRATELY WITH THE TENDER DOCUMENT FOR REFERENCE.**

**NOTE**

- a) The Bidder has to quote in ETS portal and Submit Financial Document indicating price break up in the prescribed price bid format only.
- b) The Bidder has to quote in the prescribed price bid format only. Quoting in any other manner will summarily be liable for rejection.
- c) Tender with over written or erased, illegible rate or rates not shown in figures and words will be liable for rejection.
- d) The offer should be valid for a period of 180 days from the date of opening of tender, failing which the Limited tender will be liable for rejection.
- e) All Goods & Service Tax (GST) components [applicable for both Centre and state] payable by the Contractor under the Contract, or for any other cause, shall be mentioned as per the Price bid format mentioned.
- f) **Prices quoted by the Bidder, shall remain FIRM and Fixed and valid until completion of the Contract and will not be subject to variation on any account. Bidder shall quote Service charge for all the work as per the Scope of work and Specifications as defined under this document.**
- g) In case of any variation (positive/ negative) in existing rates of taxes/ duties/ levies or a new tax/ duty/ levy is introduced or any existing tax/ duty/ levy is abolished or application of any Tax in the course of the performance of this Contract, which will/ may impact the overall pricing in connection with

performance of the Contract, an equitable adjustment of the Contract Price shall be made to factor any such change by addition to the Contract Price or deduction therefrom, as the case may be. All these adjustments would be carried out by considering the base price of taxes equivalent to the amount mentioned under taxes and duties column of the price bid format.

- h) Payment will be made as mentioned in the payment terms.
- i) Variation in taxes, duties, levies etc. after award of job but within the Time schedule as mentioned in the Tender shall be to the account of SECI. Any variation in taxes, duties, levies etc. beyond Time schedule shall be to BIDDER's account. In case of statutory variation in GST during currency of the Contract, the Contractor shall submit a copy of the 'Government Notification' to evidence the rate as applicable on the date of submission of Bid and on the date of revision. Claim for payment of GST / Statutory variation in GST, should be raised within two [02] months from the date of issue of 'Government Notification' for payment of differential (in %) GST, otherwise claim in respect of above shall not be entertained for payment of arrears.
- j) Bidder confirms that he has noted the contents of the Preamble to the Schedule of Rates, Schedule of Rate, Bid Document and quoted his Prices accordingly without any deviation.

**Format-VII**

**TECHNICAL PROPOSAL**

**NOT APPLICABLE**

**Format-VIII**

**Format for Financial Capability of Bidder**  
**(To be submitted on the Letter Head of the Chartered Accountant)**

**ANNUAL TURNOVER OF LAST 3 YEARS:**

S No	Financial Year	Turnover	Remarks
1	2020-21		
2	2021-22		
3	2022-23		

**In addition to the above, the Bidder has to submit the following documents  
/information:**

- i) Copy of audited balance sheet(s) for last 3 Financial Years ending on 31<sup>st</sup> March 2022.
- ii) 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.

**And**

Net worth (strike out whichever is not applicable) of INR.....Crore based on unconsolidated audited annual accounts as per last FY.

**And**



**FINANCIAL DATA FOR LAST AUDITED FINANCIAL YEAR:**

Description	Year _____
	Amount (Currency)
1. Current Assets	
2. Current Liabilities	
3. Working Capital (Current Assets-Current liabilities)	
4. Net Worth (As mentioned under Annexure to BDS)	

Date:

Signature of Chartered

Seal and Signature of Bidder

Accountant with Seal

Witnesses:

**"NO DEVIATION" CONFIRMATION**

To,

M/s SOLAR ENERGY COPORATION OF INDIA LIMITED

---

SUB:

DOCUMENT NO:

**Dear Sir,**

We understand that any 'deviation / exception' in any form may result in rejection of Bid. We, therefore, certify that we have not taken any 'exception / deviation' anywhere in the Bid and we agree that if any 'deviation / exception' is mentioned or noticed, our Bid may be rejected.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

**E-Banking Mandate Form**  
**(To be issued on Bidder letter head)**

1. Vendor/Vendor/Bidder/customer Name :
2. Vendor/Vendor/Bidder/customer Code:
3. Vendor/Vendor/Bidder /customer Address:
4. Vendor/Vendor/Bidder/customer e-mail id:
5. Particulars of bank account
  - a) Name of Bank
  - b) Name of branch
  - c) Branch code:
  - d) Address:
  - e) Telephone number:
  - f) Type of account (current/saving etc.)
  - g) Account Number:
  - h) RTGS IFSC code of the bank branch
  - i) NEFT IFSC code of the bank branch
  - j) 9 digit MICR code

I/We hereby authorize Limited to release any amount due to me/us in the bank account as mentioned above. I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, we would not hold the SECI responsible.

(Signature of Vendor/ Vendor/ Bidder/ customer)

**FORMAT FOR BOARD RESOLUTIONS****(To be submitted on the Letter Head of the Bidding Company)**

The Board, after discussion, at the duly convened Meeting on ..... [*Insert date*], with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956 or Companies Act 2013, as applicable, passed the following Resolution:

**1. RESOLVED THAT** Mr./Ms....., be and is hereby authorized to do on our behalf, all such acts, deeds and things necessary in connection with or incidental to our response to the “**Selection of Agency to carry out soil investigation at proposed 13 GW RE project sites in Leh, UT of Ladakh, India**” including signing and submission of all documents and providing information/response to bid of Solar Energy Corporation of India Limited (SECI), representing us in all matters before SECI, and generally dealing with SECI in all matters in connection with our bid for the said Project.

**Certified True Copy**

-----  
**(Signature, Name and Stamp of Director/Company Secretary)**

**Notes:**

- 1) This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary/ Director.
- 2) The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.
- 3) This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act, 1956 or Companies Act, 2013 as applicable may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions follow the applicable laws of

the respective jurisdictions of the issuing Company and the authorizations granted therein are true and valid.

**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 in response to the NIT No ..... dated ..... issued by **Solar Energy Corporation of India Limited (SECI), New Delhi** 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 SECI may require us to submit. The aforesaid Attorney is further authorized for making representations to the Solar Energy Corporation of India Limited, New Delhi and providing information / responses to SECI, New Delhi representing us in all matters before SECI, New Delhi and generally dealing with SECI, New Delhi in all matters in connection with Bid till the completion of the bidding process as per the terms of the above-mentioned NIT. 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 NIT.

**Signed by the within named**

..... **(Insert the name of the executant 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. ....

**(Signature)**

**Name.....**

**Designation .....**

2. ....

**(Signature)**

**Name.....**

**Designation .....**

**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).



**DECLARATION REGARDING BANNING, LIQUIDATION, COURT  
RECEIVERSHIP ETC.**

**(To be submitted on the Letter Head of the Bidding Company)**

To,

M/s SOLAR ENERGY CORPORATION OF INDIA LIMITED

---

Bid No:

Date:

**Sub: Bid for “Selection of Agency to carry out soil investigation at proposed 13 GW RE project sites in Leh, UT of Ladakh, India”.**

Dear Sir / Madam,

We hereby confirm that we are not on Banning List by Owner or Public Sector Project Management due to “poor performance” or “corrupt and fraudulent practices” or any other reason or banned by Government department/ Public Sector on due date of submission of bid.

Further, we confirm that neither we nor our allied Bidder/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of Owner or the Ministry of New & Renewable Energy.

We also confirm that we are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'.

In case it comes to the notice of Owner that we have given wrong declaration in this regard, the same shall be dealt as ‘fraudulent practices’ and action shall be initiated as per the Procedure for action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices.

Further, we also confirm that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to Owner by us.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

**Format XIV**

**FORMAT OF PAYMENT ON ORDER INSTRUMENT TO BE ISSUED BY IREDA/REC/PFC (IN LIEU OF BG TOWARDS EMD)**

No.

SECI,

\_\_\_\_\_

\_\_\_\_\_

Date

Registered

Reg: M/s \_\_\_\_\_ (insert name of the Bidder) – Issuance of Payment on Order Instrument for an amount of Rs. \_\_\_\_\_

Dear Sir,

1. It is to be noted that M/s \_\_\_\_\_ (*insert name of the POI issuing Agency*) (**'IREDA/REC/PFC'**) has sanctioned a non-fund based limit loan of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) to M/s \_\_\_\_\_ under the Loan Agreement executed on \_\_\_\_\_ to execute Renewable Energy Projects.
2. At the request of M/s \_\_\_\_\_, on behalf of \_\_\_\_\_ (insert name of the Bidder), this Payment on Order Instrument (POI) for an amount of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ (in words)). This Payment on Order Instrument comes into force immediately.
3. In consideration of the \_\_\_\_\_ [*Insert name of the Bidder*] (hereinafter referred to as 'Bidder') submitting the response to tender document for **Tender for Selection of Agency to carry out soil investigation at proposed 13 GW RE project sites in Leh** have bid for the said tender in response to the Tender No. \_\_\_\_\_ dated \_\_\_\_\_ issued by Solar Energy Corporation of India Limited (hereinafter referred to as SECI) and SECI considering such response to the Tender of .....[*Insert the name of the Bidder*] as per the terms of the Tender, the \_\_\_\_\_ [*Insert name & address of IREDA/PFC/REC*] hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [*Insert Name of the Place from the address of SECI*] forthwith without demur on demand in writing from SECI or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees \_\_\_\_\_ [*Insert EMD amount as per the package capacity quoted in line with the tender document*], only, on behalf of M/s \_\_\_\_\_ [*Insert name of the Bidder*].

4. In consideration of the above facts, IREDA/REC/PFC, having its registered office at \_\_\_\_\_, agrees to make payment for the sum of Rs. \_\_\_\_\_ lakhs (in words.....) to SECI on the following conditions: -
- (a) IREDA/REC/PFC agrees to make payment of the above said amount unconditionally, without demur and without protest within a period of \_\_\_\_\_ days of receipt of request from SECI within the validity period of this letter as specified herein;
  - (b) The commitment of IREDA/REC/PFC, under this Payment of Order Instrument will have the same effect as that of the commitment under the Bank Guarantee issued by any Public Sector Bank and shall be enforceable in the same manner as in the case of a Bank Guarantee issued by a Bank and the same shall be irrevocable and shall be honored irrespective of any agreement or its breach between IREDA/REC/PFC or its constituents notwithstanding any dispute that may be raised by the against SECI;
  - (c) The liability of IREDA/REC/PFC continues to be valid and binding on IREDA/REC/PFC and shall not be terminated, impaired and discharged, by virtue of change in its constitution and specific liability under letter of undertaking shall be binding on its successors or assignors;
  - (d) The liability of IREDA/REC/PFC shall continue to be valid and binding on IREDA/REC/PFC and shall not be terminated/ impaired/ discharged by any extension of time or variation and alternation made given or agreed with or without knowledge or consent of the parties (SECI and Bidding Party), subject to the however to the maximum extent of amount stated herein and IREDA/REC/PFC is not liable to any interest or costs etc;
  - (e) This Payment of Order Instrument can be invoked either partially or fully, till the date of validity;
  - (f) IREDA/REC/PFC agrees that it shall not require any proof in addition to the written demand by SECI made in any format within the validity period. IREDA/REC/PFC shall not require SECI to justify the invocation of the POI against the bidder, to make any claim against or any demand against the bidder or to give any notice to the bidder;
  - (g) The POI shall be the primary obligation of IREDA/REC/PFC and SECI shall not be obliged before enforcing the POI to take any action in any court or arbitral proceedings against the bidder;
  - (h) Neither SECI is required to justify the invocation of this POI nor shall IREDA/REC/PFC have any recourse against SECI in respect of the payment made under letter of undertaking;

5. Notwithstanding anything contrary contained anywhere in this POI or in any other documents, this POI is and shall remain valid upto \_\_\_\_\_ and IREDA/REC/PFC shall make payment thereunder only if a written demand or request is raised within the said date and to the maximum extent of Rs. .... and IREDA/REC/PFC shall in no case, be liable for any interest, costs, charges and expenses and IREDA's/REC's/PFC's liability in no case will exceed more than the above amount stipulated.
6. In pursuance of the above, IREDA/REC/PFC and SECI have signed an Umbrella Agreement dated \_\_\_\_ setting out the terms and conditions for issue of letter of undertaking by IREDA/REC/PFC to SECI and the said terms and conditions shall be read as a part of this letter of undertaking issued for the project of the project of PP mentioned above.

Thanking you,  
Yours faithfully  
For and on behalf of

M/s. \_\_\_\_\_  
(Name of the POI issuing agency).

( )  
General Manager (TS)

Copy to:-

M/s. \_\_PP\_\_\_\_\_

\_\_\_\_\_ As per their request

( )  
General Manager (TS)

**Format XV**

**FORMAT OF PAYMENT ON ORDER INSTRUMENT TO BE ISSUED BY IREDA/REC/PFC (IN LIEU OF PBG)**

No.  
SECI,

Date  
Registered

\_\_\_\_\_,  
\_\_\_\_\_

Reg: M/s \_\_\_\_\_ (insert name of the Bidder) (Tender No. \_\_\_\_\_ (insert project ID issued by SECI) – Issuance of Payment on Order Instrument for an amount of Rs. \_\_\_\_\_

Dear Sir,

1. It is to be noted that M/s \_\_\_\_\_ (insert name of the POI issuing Agency) **(‘IREDA/REC/PFC’)** has sanctioned a non-fund based limit loan of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) to M/s \_\_\_\_\_ under the Loan Agreement executed on \_\_\_\_\_ to execute Renewable Energy Projects.
2. At the request of M/s \_\_\_\_\_, on behalf of \_\_\_\_\_ (insert name of the Bidder), this Payment on Order Instrument (POI) for an amount of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ (in words)). This Payment on Order Instrument comes into force immediately.
3. In consideration of the \_\_\_\_\_ [Insert name of the Bidder] (hereinafter referred to as successful Bidder) submitting the response to tender document for **Selection of Agency to carry out soil investigation at proposed 13 GW RE project sites in Leh** have bid for the said tender in response to the Tender No. \_\_\_\_\_ dated \_\_\_\_\_ issued by Solar Energy Corporation of India Limited (hereinafter referred to as SECI) and SECI considering such response to the Tender of .....[insert the name of the successful bidder] (which expression shall unless repugnant to the context or meaning thereof include its executors, administrators, successors and assignees) and issuing Letter of Award No \_\_\_\_\_ to (Insert Name of successful bidder) as per terms of Tender and the same having been accepted by the selected successful bidder for execution of supply [from successful bidder, M/s \_\_\_\_\_]. As per the terms of the Tender, the \_\_\_\_\_ [insert name & address of IREDA/PFC/REC] hereby agrees unequivocally, irrevocably and unconditionally to pay to SECI at [Insert Name of the Place from the address of the SECI] forthwith on demand in

writing from SECI or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees----- [Total Value] only, on behalf of M/s \_\_\_\_\_ [Insert name of the successful bidder].

4. In consideration of the above facts, IREDA/REC/PFC, having its registered office at \_\_\_\_\_, agrees to make payment for the sum of Rs. \_\_\_\_\_ lakhs (in words.....) to SECI on the following conditions:-

- (a) IREDA/REC/PFC agrees to make payment of the above said amount unconditionally, without demur and without protest within a period of \_\_\_\_\_ days of receipt of request from SECI within the validity period of this letter as specified herein;
- (b) The commitment of IREDA/REC/PFC, under this Payment of Order Instrument will have the same effect as that of the commitment under the Bank Guarantee issued by any Public Sector Bank and shall be enforceable in the same manner as in the case of a Bank Guarantee issued by a Bank and the same shall be irrevocable and shall be honored irrespective of any agreement or its breach between IREDA/REC/PFC or its constituents notwithstanding any dispute that may be raised by the against SECI;
- (c) The liability of IREDA/REC/PFC continues to be valid and binding on IREDA/REC/PFC and shall not be terminated, impaired and discharged, by virtue of change in its constitution and specific liability under letter of undertaking shall be binding on its successors or assignors;
- (d) The liability of IREDA/REC/PFC shall continue to be valid and binding on IREDA/REC/PFC and shall not be terminated/ impaired/ discharged by any extension of time or variation and alternation made given or agreed with or without knowledge or consent of the parties (SECI and Bidding Party), subject to the however to the maximum extent of amount stated herein and IREDA/REC/PFC is not liable to any interest or costs etc;
- (e) This Payment of Order Instrument can be invoked either partially or fully, till the date of validity;
- (f) IREDA/REC/PFC agrees that it shall not require any proof in addition to the written demand by SECI made in any format within the validity period. IREDA/REC/PFC shall not require SECI to justify the invocation of the POI against the successful bidder, to make any claim against or any demand against the successful bidder or to give any notice to the successful bidder;

- (g) The POI shall be the primary obligation of IREDA/REC/PFC and SECI shall not be obliged before enforcing the POI to take any action in any court or arbitral proceedings against the successful bidder;
- (h) Neither SECI is required to justify the invocation of this POI nor shall IREDA/REC/PFC have any recourse against SECI in respect of the payment made under letter of undertaking;
5. Notwithstanding anything contrary contained anywhere in this POI or in any other documents, this POI is and shall remain valid upto\_\_\_\_\_ and IREDA/REC/PFC shall make payment thereunder only if a written demand or request is raised within the said date and to the maximum extent of Rs.....and IREDA/REC/PFC shall in no case, be liable for any interest, costs, charges and expenses and IREDA's/REC's/PFC's liability in no case will exceed more than the above amount stipulated.
6. In pursuance of the above, IREDA/REC/PFC and SECI have signed an Umbrella Agreement dated \_\_\_\_ setting out the terms and conditions for issue of letter of undertaking by IREDA/REC/PFC to SECI and the said terms and conditions shall be read as a part of this letter of undertaking issued for the project of the project of PP mentioned above.

Thanking you,

Yours faithfully  
For and on behalf of

M/s. \_\_\_\_\_  
(Name of the POI issuing agency).

( )  
General Manager (TS)

Copy to:-

M/s. \_\_PP\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_ As per their request

( )  
General Manager (TS)



### List of Banks

1. SCHEDULED COMMERCIAL BANKS	2. OTHER PUBLIC SECTOR BANKS
<b>SBI AND ASSOCIATES</b>	1. IDBI Bank Ltd.
1. State Bank of India	<b>3. FOREIGN BANKS</b>
2. State Bank of Indore	1. Bank of America NA
	2. Bank of Tokyo Mitsubishi UFJ Ltd.
	3. BNP Paribas
	4. Calyon Bank
	5. Citi Bank N.A.
	6. Deutsche Bank A.G
<b>NATIONALISED BANKS</b>	7. The HongKong and Shanghai Banking Corpn. Ltd.
1. Allahabad Bank	8. Standard Chartered Bank
2. Andhra Bank	9. Societe Generale
3. Bank of India	10. Barclays Bank
4. Bank of Maharashtra	11. Royal Bank of Scotland
5. Canara Bank	12. Bank of Nova Scotia
6. Central Bank of India	13. Development Bank of Singapore (DBS, Bank Ltd.)
7. Corporation Bank	14. Credit Agricole Corporate and Investment Bank
8. Dena Bank	<b>4. SCHEDULED PRIVATE BANKS</b>
9. Indian Bank	1. Federal Bank Ltd.
10. Indian Overseas Bank	2. ING Vysya Bank Ltd.
11. Oriental Bank of Commerce	3. Axis Bank Ltd.
12. Punjab National Bank	4. ICICI Bank Ltd.
13. Punjab & Sind Bank	5. HDFC Bank Ltd.
14. Syndicate Bank	6. Yes Bank Ltd.
15. Union Bank of India	7. Kotak Mahindra Bank
16. United Bank of India	8. IndusInd Bank Ltd
17. UCO Bank	9. Karur Vysya Bank
18. Vijaya Bank	10. IDFC
19. Bank of Baroda	11. RBL

12.South Indian Bank

**The Performance Security issued by any Scheduled Commercial Banks  
as per RBI shall be acceptable.**