

**Notes:**

1. *There can be only one tariff for all the projects applied for. If the bidder quotes two tariffs or combination thereof for the projects, then the bid shall be considered as non-responsive.*
2. *If the bidder submits the financial bid in the Electronic Form at ETS portal not in line with the instructions mentioned therein, then the bid shall be considered as non-responsive.*
3. *Tariff requirement shall be quoted as a fixed amount in Indian Rupees only. Conditional proposal shall be summarily rejected.*
4. *In the event of any discrepancy between the values entered in figures and in words, the values entered in words shall be considered.*
5. *Tariff should be in Indian Rupee up to two decimal places only.*

**PRELIMINARY ESTIMATE OF COST OF THE PROJECT**

Project Capacity: .....MW/....MWh

Location: .....

Bidder may use any format to provide the break-up.

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

Thanking you,  
We remain,  
Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

**TECHNICAL AND REGULATORY REQUIREMENTS TO BE FOLLOWED FOR  
BATTERY ENERGY STORAGE SYSTEMS****1. Codes and Standards**

The BESS shall comply with the following Codes and Standards or equivalent Indian Standards, as applicable.

<b>Standard/ Code (or equivalent Indian Standards)</b>	<b>Description</b>	<b>Certification Requirements</b>
IEC 62485-2	Safety requirements for secondary batteries and battery installations - to meet requirements on safety aspects associated with the erection, use, inspection, maintenance and disposal: Applicable for Lead Acid and NiCd / NiMH batteries	Applicable only for Lead Acid and NiCd/NiMH batteries
UL 1642 or UL 1973, Appendix E (cell) or IEC 62619 (cell) + IEC 63056 (cell)	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications	Required for Cell
UL 1973 (battery) or (IEC 62619 (battery) + IEC 63056 (battery))	Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER) Applications / Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications	Either UL 1642 or UL1973 or (IEC 62619 + IEC 63056) for the Battery level
IEC 62281 / UN 38.3	Safety of primary and secondary lithium cells and batteries during transport: Applicable for storage systems using Lithium Ion chemistries	Required for both Battery and Cell.
IEC 61850/ DNP3	Communications networks and management systems. (BESS control system communication)	
UL 9540 or (IEC TS 62933-5-1 + IEC 62933-5-2)	Electrical energy storage (EES) systems - Part 5-1: Safety considerations for grid-integrated EES systems – General specification / Standard for Energy Storage Systems and Equipment	Either UL9540 or (IEC 62933-5-1 + IEC 62933-5-2) is required for BESS system level
IEC 62933-2-1	Electrical energy storage (EES) systems - Part 2-1: Unit Parameters and testing methods - General Specification	Tests for Class B applications: 1. Duty Cycle Round Trip Efficiency Test 2. Equipment and Basic Function Test 3. Available energy Test 4. Insulation test

<b>Power Conditioning Unit Standards for BESS</b>	
IEC 62477-1	Safety requirements for power electronic converter systems and equipment - Part 1: General
IEC 62477-2	Safety requirements for power electronic converter systems and equipment - Part 2: Power electronic converters from 1 000 V AC or 1 500 V DC up to 36 kV AC or 54 kV DC
IEC 61000-6-2 Ed. 2	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments
IEC 61000-6-4 Ed. 2.1	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
IEC 62116 Ed. 2	Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures
IEC 60068-2-1:2007	Environmental testing - Part 2-1: Tests - Test A: Cold
IEC 60068-2-2:2007	Environmental testing - Part 2-2: Tests - Test B: Dry heat
IEC 60068-2-14:2009	Environmental testing - Part 2-14: Tests - Test N: Change of temperature
IEC 60068-2-30:2005	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)

## **2. System Testing and Commissioning**

The BESS shall be commissioned as per commissioning criteria and procedures specified by the CEA.

## **3. Identification and Traceability**

Cells/Racks/Packs Assembly shall meet seismic requirement for the plant location of the BESS. Labelling of cells/batteries shall include manufacturer's name, cell type, name-plate rating, date of manufacture and date of expiry of parts and labour warranty.

## **4. Other Sub-systems/Components**

Other subsystems/components used in the BESS must also conform to the relevant international/national Standards for Electrical Safety for ensuring Expected Service Life and Weather Resistance.

## **5. Fire Protection**

The BESSD shall design and install a fire protection system that conforms to national and local codes. The fire protection system design and associated alarms shall take into account that the BESS will be unattended at most times. For high energy density technologies, the BESSD shall also obtain thermal runaway characterization of the battery storage systems.

## 6. Authorized Test Centres

Batteries/ Power Conditioning Units deployed in the power plants must have valid test certificates for their qualification as per above specified IEC/ BIS Standards by one of the ILAC member signatory accredited laboratories. In case of module types/ BESS/equipment for which such Test facilities may not exist in India at present, test certificates from reputed ILAC Member body accredited Labs abroad will be acceptable.

## 7. Warranty

BESSD shall procure performance guarantees from the OEM to ensure minimum performance levels for predefined application(s) as per the terms of the RfS. The Warranty shall clearly indicate life expectancy given discharge profiles provided for the application.

## 8. Performance Monitoring

As part of the performance monitoring, the following shall be carried out:

- a) The BESSD must install necessary equipment to continuously measure BESS operating parameters (including but not limited to voltage, current, ambient conditions etc.) as well as energy input into and energy output from the BESS along with Metering arrangement in accordance with extant regulations. They will be required to submit this data to SECI and POSOCO on line and/or through a report on regular basis every month for the entire duration of contract.
- b) The BESSD shall provide access to SECI/MNRE or their authorized representatives for installing any additional monitoring equipment to facilitate on-line transfer of data.
- c) All data shall be made available as mentioned above for the entire duration of the Contract.
- d) The plant SCADA should be OPC version 2.0a (or a later version including OPC UA) compliant and implement appropriate OPC-DA server as per the specification of OPC Foundation. All data should be accessible through this OPC server for providing real time online data (BESS parameters) to SECI/ MNRE. This time series data shall be available from the Project SCADA system to facilitate monitoring and should include among others as stated before, below parameters to facilitate daily, monthly and annual Report for performance monitoring.
- e) Web-based monitoring should be available, which should not be machine dependent. The web-based monitoring should provide the same screens as available in the plant. Also, it should be possible to download reports from a remote web-client in PDF or Excel format.

## 9. Other necessary criteria

- a) BESS shall be capacity of operating in the frequency range of 47.5 Hz to 52 Hz and be able to deliver rated output in the frequency range of 49.5 Hz to 50.5 Hz.
- b) BESS shall be capacity of operating when voltage at the interconnection point on any or all phases dips/rises to the high or low levels. The levels applicable for wind/solar inverter-based generation may be referred as available in Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations.

- c) The safe and reliable operation of power system is ensured by frequency control as well as voltage control. BESS to be implemented shall have provisions for Primary frequency control with a droop which can be set as per system requirement between 1-3 percent. The BESS performs regulations in one or several pre-defined ways (e.g. regulating its own output power according to the orders given by SCADA system) to achieve an active power balance between generation and demand to maintain the power system frequency within a reasonable range.
- d) BESS shall operate to maintain voltages as per specified voltage ranges in Grid standards. BESS shall have feature to detect the voltage of interconnection point, and regulate voltage independently. The response time of the BESS shall not exceed the value specified in relevant standards or grid codes.
- e) BESS shall operate in a manner to promote the power system reliability and improve the power quality. When power quality problems, such as voltage dip, flicker, unsatisfactory power factor, etc., occur in power system, the BESS could eliminate these problems by flexible active and reactive power output in this function.
- f) The BESS should provide reliable protection and not be limited to as an overvoltage/under-voltage protection, overcurrent protection, low-temperature/over-temperature protection of battery, DC insulation monitoring, etc.
- g) BESS is required to have the following basic functions:
- i) Monitoring: Monitor operational parameters, equipment status and communication status, alarm and faults of main equipment and BESS system, etc.
  - ii) Information exchange: Receive and process information with RLDC/NLDC including operation parameters, switching information, various alarms and alerts, protective action signals, control information, etc.
  - iii) Control: Including control mode and parameter setting with RLDC/NLDC.
- h) The Automatic Generation Control (AGC) is an important feature and BESS shall have capability to operate in AGC. The details regarding AGC signals required by not limited to, are given (the conventional power plant signal link) at the link, <https://posoco.in/download/detailed-signal-list-for-connecting-generators-under-agc/?wpdml=29546>. BESS shall be able to operate in AGC and be able to comply with the requirements desired by system operators. Some of the BESS signal list for implementation of AGC can be like below (list is indicative only):
- i) Maximum MW permissible (dynamic or user entry)
  - ii) Minimum MW permissible (dynamic or user entry)
  - iii) Ramp rate up permissible (dynamic or user entry)
  - iv) Ramp rate down permissible (dynamic or user entry)
  - v) Actual MW
  - vi) Actual MVAR
  - vii) Auxiliary Consumption MW
  - viii) Scheduled MW (dynamic or user entry)
  - ix) BESS Temperature (for monitoring and correlation)
  - x) Ambient Temperature (for monitoring and correlation)
  - xi) Cycle limits (0-100%) per day (user entry)

- xii) Circuit breaker status
  - xiii) Local/Remote status
  - xiv) AGC Set Point MW from NLDC to BESS
  - xv) Voltage (kV) at grid level
  - xvi) Voltage (V) at BESS LV side
- i) The static information like detailed write-up on present operation methodology of BESS, forbidden zones, number of cycle limits, Auxiliary consumption details, capability curve, simulation models (RMS/PSCAD) alongwith description or any specific information about BESS shall also be furnished as and when required by RLDC/NLDC.

**10. Safe Disposal of unit Batteries from the BESS**

The Developer will comply with the requirements under Hazardous & other Waste (Management and Transboundary Movement) Rules, 2016, as amended from time to time, as applicable. The BESSD shall ensure that all Unit Battery modules from the plant after their ‘end of life’ (when they become defective/ non-operational/ non-repairable) are disposed in accordance with the “e-waste (Management and Handling) Rules, 2016” notified by the Government and as revised and amended from time to time and Battery Waste Management Rules, as and when notified by the Government of India.

**CHECK LIST FOR FINANCIAL CLOSURE**

(To be signed by the Authorized signatory of the BESSD)

**(RfS No. \_\_\_\_\_ dated \_\_\_\_\_ )**

**Last Date for submission of documents related to Financial Closure – \_\_\_\_\_  
(9 months from Effective Date of BESPA)**

Project Company Name \_\_\_\_\_

Project ID:- \_\_\_\_\_

LOA No. - \_\_\_\_\_ . Dtd. - \_\_\_\_\_

Effective Date of BESPA - \_\_\_\_\_

Scheduled Commissioning Date: - \_\_\_\_\_

**1.0 Financial Closure - (Clause 22 of the RfS, including subsequent amendments & clarifications)**

<b>Details</b>	<b>Presently given in BESPA</b>
<b>Location</b>	
<b>Technology</b>	
<b>Certificate from all financial institutions</b>	<b><u>In case of tie up through Bank / Financial Institutions: -</u></b> Document from Bank / Financial Institutions certifying arrangement of necessary funds by way of sanction of Loan (to be enclosed as <b><u>Annexure-I</u></b> ).  <b><u>In case of Internal Resources: -</u></b> Copy of Board Resolution, Audited/Certified Balance sheet, Profit & Loss Account Statement, Bank Statement and Cash Flow Statement in support of availability of Internal resources of the Project Company and of the Company other than Project Company (in case the required funding will be raised from Company other than Project Company) (to be enclosed as <b><u>Annexure-I</u></b> ). <i>Performa for the cases where funding will be from Company other than Project Company is at 'A-I'.</i>

**Note:-**

- (i) Copy of Final Detailed Project Report (DPR) is to be enclosed as **Annexure – II A**.
- (ii) Undertaking by the Project Company that all Consents, clearances and permits required for supply of Power to SECI as per the terms of BESPA have been obtained is to be enclosed as **Annexure – II B**

**2.0** Copy of Agreement/ MOU entered into / Purchase Order with acceptance, for the supply of Plants and Equipment (to be enclosed as **Annexure-III**)

**3.0 Technical Parameters of the Project (Clause 38 of the RfS)**

**3.0.1** Certificate from Project Company that Technical specifications and directives given in Annexure-A of the RfS will be adhered to (to be enclosed as **Annexure-IV A**)

**3.0.2** Proposed Project configuration as part of DPR of the Project (to be enclosed as **Annexure-IV B**)

**4.0 Ownership of the BESSD:** Latest Shareholding Pattern of the Project Company (including Compulsorily Convertible Debentures (CCDs), Compulsorily Convertible Preferential Shares (CCPS) of the Project Company certified by Chartered Accountant (to be enclosed as **Annexure V A**)

**Shareholding pattern is not required to be submitted by a Listed Company.**

**Note:** Declaration of Shareholding Pattern of the Project Company is to be submitted to SECI on monthly basis, i.e., by the 10<sup>th</sup> day of every month for shareholding status of the Company upto the end of the previous month, till 3 years from the date of commissioning of the project.

**5.0** The above checklist is to facilitate financial closure of projects. For any interpretation the respective provision of RfS / BESPA shall prevail.

**SPECIAL INSTRUCTIONS TO BIDDERS FOR  
e-TENDERING AND REVERSE AUCTION**

**GENERAL**

The Special Instructions (for e-Tendering) supplement 'Instructions to Bidders', as given in these RfS Documents. Submission of Online Bids is mandatory for this RfS.

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, *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 e-tendering portal of M/s Electronic Tender.com (India) Pvt. Limited <https://www.bharat-electronictender.com> through ISN-ETS. This portal is based on the world's most 'secure' and 'user friendly' software from ElectronicTender®. A portal built using ElectronicTender's software is also referred to as ElectronicTender System® (ETS).

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

**INSTRUCTIONS**

**Tender Bidding Methodology:**

Sealed Bid System

Single Stage Two Envelope

Auction

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

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

1. Procure a Class III Digital Signing Certificate (DSC).
2. Register on ElectronicTender System® (ETS)
3. Create Marketing Authorities (MAs), Users and assign roles on ETS. It is mandatory to create at least one MA
4. View Notice Inviting Tender (NIT) on ETS
5. For this tender -- Assign Tender Search Code (TSC) to a MA
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.
7. Clarification to Tender Documents on ETS
  - Query to SECI (Optional)
  - View response to queries posted by SECI
8. Bid-Submission on ETS
9. Attend Public Online Tender Opening Event (TOE) on ETS
  - Opening of relevant Bid-Part

#### 10. Post-TOE Clarification on ETS (Optional)

- Respond to SECI Post-TOE queries

#### 11. Participate in e-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.

### 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>].

### Registration

To use the ElectronicTender® 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 Helpdesk (as given below), to get your registration accepted/ activated.

#### Important Note:

1. Interested bidders have to download official copy of the RfS & other documents after login into the e-tendering Portal of ISN-ETS <https://www.bharat-electronictender.com>. If the official copy of the documents is not downloaded from e-tendering Portal of ISN-ETS within the specified period of downloading of RfS and other documents, bidder will not be able to participate in the tender.
2. 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.

<b>ISN-ETS/ Helpdesk</b>	
<b>Telephone/ Mobile</b>	<i>Customer Support: +91-124-4229071, 4229072</i>

RfS for Procurement of 500 MW/1000 MWh Pilot Projects of Battery Energy Storage Systems in India under Tariff-based Global Competitive Bidding (ESS-I)	RfS No. SECI/C&P/IPP/15/0001/22-23 dated: 13.04.2022	Page 110 of 123
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	<i>(From 1000 HRS to 1800 HRS on all Working Days i.e. Monday to Friday except Government Holidays)</i>
<b>Email-ID</b>	<a href="mailto:support@isn-ets.com">support@isn-ets.com</a> [Please mark CC: <a href="mailto:support@electronicstender.com">support@electronicstender.com</a> ]

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

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

- Submission of Bid-Parts
  - Envelope I (Techno-commercial-Bid)
  - Envelope II (Financial-Bid)
- *Submission of digitally signed copy of Tender Documents/ Addendum*

In addition to the above, the bidders are required to submit certain documents physically offline also as per Clause 30 of the RfS, failing which the technical bids will not be opened.

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

### **Internet Connectivity**

If bidders are unable to access ISN-ETS'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

### **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 'ElectronicForms<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 ElectronicForms<sup>®</sup> for each bid-part sincerely and carefully, and avoid any discrepancy between information given in the ElectronicForms<sup>®</sup> and the

corresponding Main-Bid. For transparency, the information submitted by a bidder in the ElectronicForms® is made available to other bidders during the Online Public TOE. If it is found during the Online Public TOE that a bidder has not filled in the complete information in the ElectronicForms®, the TOE officer may make available for downloading the corresponding Main-Bid of that bidder at the risk of the bidder. **If variation is noted between the information contained in the ElectronicForms® and the ‘Main-Bid’, the contents of the ElectronicForms® 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 SECI.

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

There is an additional protection with SSL Encryption during transit from the client-end computer of a Supplier organization to the e-Tendering Server/ Portal.

### **PUBLIC ONLINE TENDER OPENING EVENT (TOE)**

ETS offers a unique facility for ‘Public Online Tender Opening Event (TOE)’. Tender Opening Officers, as well as, authorized representatives of bidders can simultaneously attend the Public Online Tender Opening Event (TOE) from the comfort of their offices. Alternatively, one/ two duly authorized representative(s) of bidders (i.e. Supplier organization) are requested to carry a Laptop with Wireless Internet Connectivity, if they wish to come to SECI’s office for the Public Online TOE, if applicable for the RfS.

Every legal requirement for a transparent and secure ‘Public Online Tender Opening Event (TOE)’, including digital counter-signing of each opened bid by the authorized TOE-officer(s) in the simultaneous online presence of the participating bidders’ representatives, has been implemented on ETS.

As soon as a Bid is decrypted with the corresponding ‘Pass-Phrase’ as submitted by the bidder himself during the TOE itself, or as per alternative methods prescribed in the Tender Documents, salient points of the Bids (as identified by the Buyer organization) are simultaneously made available for downloading by all participating bidders. The tedium of taking notes during a manual ‘Tender Opening Event’ is therefore replaced with this superior and convenient form of ‘Public Online Tender Opening Event (TOE)’.

ETS has a unique facility of ‘Online Comparison Chart’ which is dynamically updated as each online bid is opened. The format of the chart is based on inputs provided by the Buyer for each Bid-Part of a tender. The information in the Comparison Chart is based on the data submitted by the Bidders. A detailed Technical and/ or Financial Comparison Chart enhances Transparency. Detailed instructions are given on relevant screens.

ETS has a unique facility of a detailed report titled ‘Minutes of Online Tender Opening Event (TOE)’ covering all important activities of the ‘Online Tender Opening Event (TOE)’. This is available to all participating bidders for ‘Viewing/ Downloading’, as per the NIT configured by the bidding agency.

There are many more facilities and features on ETS. For a particular tender, the screens viewed by a Supplier will depend upon the options selected by the concerned Buyer.

### **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 Center**

The help information provided through ‘ETS User-Guidance Center’ 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.

### **SEVEN CRITICAL DOs 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.)

**Note:** Bid-submission in ETS can consist of submission of multiple bid-components, which vary depending upon the situation and requirements of the Buyer. Successful receipt of a bid in an e-tendering scenario takes place if all the required bid-components are successfully 'received and validated' in the system (ETS) within the scheduled date and time of closure of bidding. ETS/ Service Provider is not responsible for what happens at an end-user's end, or while a submission made by an end-user is in transit, until the submission is successfully 'received and validated' in ETS.

6. It is the responsibility of each bidder to remember and securely store the Pass-Phrase for each Bid-Part submitted by that bidder. In the event, the bids are not opened with the pass-phrase submitted by bidder, SECI may ask for re-submission/ clarification for correct pass-phrase. In the event of a bidder forgetting the Pass-Phrase before the expiry of deadline for Bid-Submission, facility is provided to the bidder to 'Annul Previous Submission' from the Bid-Submission Overview page and start afresh with new Pass-Phrase(s). If bidder fails to submit correct pass-phrase immediately as requested by SECI, the Tender Processing Fee and Tender Document Fee, if applicable, shall be forfeited and bid shall not be opened, and EMD shall be refunded. No request on this account shall be entertained by SECI.
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.*

**ADDITIONAL DOs AND DON'Ts FOR BIDDERS PARTICIPATING IN e-REVERSE AUCTION**

1. Get your organization's concerned executives trained for e-Reverse Auction related processes on ETS well in advance of the start of e-Reverse Auction.
2. For responding to any particular e-Reverse Auction, the e-Reverse Auction (i.e. its Reverse Auction Search Code or RASC) has to be assigned to an MA.

3. It is important for each bidder to thoroughly read the ‘rules and related criterion’ for the e-Reverse Auction as defined by the Buyer organization.
4. It is important to digitally-sign your ‘Final bid’ after the end of e-Reverse Auction bidding event.
5. During an e-auction, it is recommended that a bidder submits a bid well before the scheduled time of ‘Date and Time of Closure of Reverse-Auction’. Submission of a bid near the closing time of an auction may result in failure due to any of the various factors at that instant, such as – slow internet speed at the bidder’s end, slow running of computer at bidder’s end, nervousness of the bidder in the last few seconds, etc. This could lead to delay in submission of data from the bidder’s computer to the server. Even if the delay is of a fraction of second after the scheduled closing time, it will result in failure of bid submission. Further, please note that a bid can be submitted even if the bidding-page has not been refreshed manually, or otherwise depending on the conditions of the e-auction.

**Note:** Successful receipt of Bid in an e-auction scenario takes place if the bid is successfully ‘received and validated’ in the system (ETS) within the scheduled date and time of closure of bidding. ETS/ Service Provider is not responsible for what happens at an end-user’s end, or while a submission made by an end-user is in transit, until the submission is successfully ‘received and validated’ in ETS.

**6. Pre-requisite for participation in bidding process**

- 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.
- 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.
- A valid e-mail ID of the Organization/ Firm

Vendors Training Program

One day online training (10:00 to 17:00) is provided by ISN-ETS. Training is optional. In case, any bidder is interested, he may send a request to [support@isn-ets.com](mailto:support@isn-ets.com). Vendors are requested to arrange their own Laptop, Digital Certificate and Wireless Connectivity to the Internet.

## TERMS & CONDITIONS OF REVERSE AUCTION

After opening of Financial bids and short-listing of bidders based on the tariff and total capacity of project of qualified Project(s), SECI shall resort to “REVERSE AUCTION PROCEDURE”. Reverse Auction shall be conducted as per methodology specified in Section-V and other provisions of Reverse Auction in RfS Documents and their subsequent Addenda/ Amendments/ Clarifications. Bidders in their own interest, are advised to go through the documents in entirety. The Terms & Conditions and Business Rules mentioned hereunder are in brief and may not give complete explanations. Further these are supplementary in nature.

1. Bidders shall ensure online submission of their ‘Bid Price’ within the auction period.
2. Bidders shall ensure to take all necessary training and assistance before commencement of reverse auction to the interested bidders on chargeable basis to be paid directly to ISN-ETS.
3. Business rules for Reverse Auction like event date, time, bid decrement, extension etc. shall be as per the business rules, enumerated in the RfS document or intimated later on, for compliance.
4. Reverse auction will be conducted on scheduled date & time, as mentioned in the RfS document.
5. Bidders should acquaint themselves of the ‘Business Rules of Reverse Auction’, which is enclosed separately in the RfS document.
6. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant SECI guidelines, shall be initiated by SECI.
7. The Bidder shall not divulge either his Bids or any other exclusive details of SECI to any other party.
8. Period of validity of Prices received through Reverse Auction shall be same as that of the period of validity of bids offered.
9. Bidders should also note that:
  - a) Although extension time is ‘8’ minutes, there is a time lag between the actual placing the bid on the local computer of the bidder and the refreshing of the data on to the server for the visibility to the Owner. Considering the processing time for data exchange and the possible network congestion, bidders must avoid the last minute hosting of the Financial Bid during reverse auction.
  - b) Participating bidder will agree to non-disclosure of trade information regarding the purchase, identity of SECI, bid process, bid technology, bid documentation and bid details.
  - c) It is brought to the attention of the bidders that the bid event will lead to the final price of bidders only.
  - d) Technical and other non-commercial queries (not impacting price) can only be routed to the SECI contact personnel indicated in the RfS document.
  - e) Order finalization and post order activities such issue of LOA, signing of BESPAs etc. would be transacted directly between successful bidder(s) and SECI.
  - f) LOA shall be placed outside the ETS e-portal & further processing of the LOA shall also be outside the system.

- g) In case of any problem faced by the bidder during Reverse Auction and for all Bidding process related queries, bidders are advised to contact the persons indicated in Annexure - C of the RfS document.
- h) Bidders are advised to visit the auction page and login into the system well in advance to identify/ rectify the problems to avoid last minute hitches.
- i) SECI will not be responsible for any PC configuration/ Java related issues, software/ hardware related issues, telephone line glitches and breakdown/ slow speed in internet connection of PC at Bidder's end.
- j) Bidders may note that it may not be possible to extend any help, during Reverse Auction, over phone or in person in relation to rectification of PC/ Internet/ Java related issues and Bidder may lose the chance of participation in the auction.

10. For access to the Reverse Auction site, the following URL is to be used:  
<https://www.bharat-electrontender.com>.

11. No queries shall be entertained while Reverse Auction is in progress.

### **BUSINESS RULES OF REVERSE AUCTION**

Reverse Auction shall be conducted as per methodology specified in Section - V and other provisions of Reverse Auction in RfS documents and their subsequent Amendments/ Clarifications/ Addenda. Bidders, in their own interest, are advised to go through the documents in entirety.

The following would be parameters for e-Reverse Auction:

<b>Sl. No.</b>	<b>Parameter</b>	<b>Value</b>
1.	Date and Time of Reverse-Auction Bidding Event	To be intimated Later to Eligible Bidders
2.	Duration of Reverse-Auction Bidding Event	30 minutes
3.	Automatic extension of the 'Reverse-Auction closing Time', if last bid received is within a 'Predefined Time-Duration' before the 'Reverse-Auction Closing Time'	Yes
3.1	Pre-defined Time-Duration	08 Minutes
3.2	Automatic extension Time-Duration	08 Minutes
3.3	Maximum number of Auto-Extension	Unlimited Extension
4.	Entity-Start-Price	Tariff quoted by the bidders in Financial Bid (Second Envelope)

Online Reverse Auction shall be conducted by SECI on pre-specified date and time, while the bidders shall be quoting from their own offices/ place of their choice. Internet connectivity shall have to be ensured by bidders themselves.

During the Reverse Auction, any requests for extension of time will not be considered by SECI. Bidders are therefore requested to make all the necessary arrangements/ alternatives whatever required so that they are able to participate in the Reverse Auction successfully. Failure of power or loss of connectivity at the premises of bidders during the Reverse Auction cannot be the cause for not participating in the Reverse Auction. SECI shall not be responsible for such eventualities.

Bidders are advised to get fully trained and clear all their doubts such as refreshing of Screen, capacity/ no. of projects being auctioned, auction rules etc.

SECI reserves the right to cancel/ reschedule/ extend the Reverse Auction process/ tender at any time, before ordering, without assigning any reason.

SECI shall not have any liability to bidders for any interruption or delay in access to the auction website irrespective of the cause. In such cases, the decision of SECI shall be binding on the bidders.

Other terms and conditions shall be as per bidder's techno-commercial offers and as per the RfS document and other correspondences, if any, till date.

**ILLUSTRATIONS**  
*(Please refer Clause 8 of the RfS)*

**Illustration**

**a. System Availability**

Under a BSSPA between an off-taker ‘X’ and BESSD ‘Y’ for a capacity ‘C’, the Schedule and Actual Injection into/Drawl from the Grid from the Project, as per the DSM/ UI Reports published by the Regional RPC for a Sample day is shown below:

<b>date</b>	<b>block</b>	<b>Drawl (from Grid) Mus (Charging) (X)</b>	<b>Injection (into Grid) MUs (Discharging) (Y)</b>	<b>Scheduled Mus (Z)</b>	<b>Time-block Availability, (TA) = (Xi/Zi) + (Yi/Zi)</b>
01-May-22	1	0.088	0	0.088	1.00
01-May-22	2	0.088	0	0.088	1.00
01-May-22	3	0.075	0	0.088	0.85
01-May-22	4	0	0	0	NA
01-May-22	5	0	0	0	NA
01-May-22	6	0	0	0	NA
01-May-22	7	0	0	0	NA
01-May-22	8	0	0	0	NA
01-May-22	9	0	0	0	NA
01-May-22	10	0	0	0	NA
01-May-22	11	0	0	0	NA
01-May-22	12	0	0	0	NA
01-May-22	13	0	0	0	NA
01-May-22	14	0	0	0	NA
01-May-22	15	0	0	0	NA
01-May-22	16	0	0	0	NA
01-May-22	17	0	0	0	NA
01-May-22	18	0	0	0	NA
01-May-22	19	0	0	0	NA
01-May-22	20	0	0	0	NA
01-May-22	21	0	0	0	NA
01-May-22	22	0	0	0	NA
01-May-22	23	0	0	0	NA
01-May-22	24	0	0.075	0.075	1
01-May-22	25	0	0.075	0.075	1
01-May-22	26	0	0.075	0.075	1
01-May-22	27	0	0.075	0.075	1
01-May-22	28	0	0.075	0.075	1
01-May-22	29	0	0.075	0.075	1
01-May-22	30	0	0.06	0.075	0.8
01-May-22	31	0	0.05	0.075	0.67
01-May-22	32	0	0	0	NA
01-May-22	33	0	0	0	NA
01-May-22	34	0	0	0	NA

01-May-22	35	0	0	0	NA	
01-May-22	36	0	0	0	NA	
01-May-22	37	0	0	0	NA	
01-May-22	38	0	0	0	NA	
01-May-22	39	0	0	0	NA	
01-May-22	40	0	0	0	NA	
01-May-22	41	0	0	0	NA	
01-May-22	42	0	0	0	NA	
01-May-22	43	0	0	0	NA	
01-May-22	44	0.088	0	0.088		1.00
01-May-22	45	0.08	0	0.088		0.91
01-May-22	46	0.08	0	0.088		0.91
01-May-22	47	0.088	0	0.088		1.00
01-May-22	48	0.088	0	0.088		1.00
01-May-22	49	0.088	0	0.088		1.00
01-May-22	50	0.088	0	0.088		1.00
01-May-22	51	0.088	0	0.088		1.00
01-May-22	52	0	0	0	NA	
01-May-22	53	0	0	0	NA	
01-May-22	54	0	0	0	NA	
01-May-22	55	0	0	0	NA	
01-May-22	56	0	0	0	NA	
01-May-22	57	0	0	0	NA	
01-May-22	58	0	0	0	NA	
01-May-22	59	0	0	0	NA	
01-May-22	60	0	0	0	NA	
01-May-22	61	0	0	0	NA	
01-May-22	62	0	0	0	NA	
01-May-22	63	0	0	0	NA	
01-May-22	64	0	0	0	NA	
01-May-22	65	0	0	0	NA	
01-May-22	66	0	0	0	NA	
01-May-22	67	0	0	0	NA	
01-May-22	68	0	0	0	NA	
01-May-22	69	0	0	0	NA	
01-May-22	70	0	0	0	NA	
01-May-22	71	0	0	0	NA	
01-May-22	72	0	0	0	NA	
01-May-22	73	0	0	0	NA	
01-May-22	74	0	0	0	NA	
01-May-22	75	0	0	0	NA	
01-May-22	76	0	0	0	NA	
01-May-22	77	0	0	0	NA	
01-May-22	78	0	0	0	NA	
01-May-22	79	0	0	0	NA	
01-May-22	80	0	0.075	0.075		1.00
01-May-22	81	0	0.075	0.075		1.00
01-May-22	82	0	0.075	0.075		1.00
01-May-22	83	0	0.075	0.075		1.00
01-May-22	84	0	0.075	0.075		1.00

01-May-22	85	0	0.075	0.075	1.00
01-May-22	86	0	0.075	0.075	1.00
01-May-22	87	0	0.07	0.075	0.93
01-May-22	88	0	0	0	NA
01-May-22	89	0	0	0	NA
01-May-22	90	0	0	0	NA
01-May-22	91	0	0	0	NA
01-May-22	92	0.088	0	0.088	1
01-May-22	93	0.088	0	0.088	1
01-May-22	94	0.088	0	0.088	1
01-May-22	95	0.088	0	0.088	1
01-May-22	96	0.088	0	0.088	1
<b>Total</b>		<b>1.379</b>	<b>1.155</b>		

i is the i<sup>th</sup> Timeblock in the day.

The System Availability for the day is calculated as the mean of **Column TA**, for all time-blocks where **Column Z is not zero**.

From the above table, Day's System Availability = 0.97

Similarly, the System availability shall be calculated for 35040 time-blocks (96\*365) in a year, excluding time-blocks where Grid is unavailable or in case of Force Majeure.

Assuming the following parameters:

- Total Contract Capacity = 300 MW, **C**
- Quoted monthly Capacity charges = 5 lakhs/MW/month, **D**
- Annual system availability (as per procedure above) is calculated to be 0.93, **B**
- n = 12

Liquidated Damages on account of shortage in annual system Availability, as calculated from formula provided in Clause 8.2:

$$\begin{aligned} \text{Liquidated damages} &= (A - B) \times C \times D \times n \times 2 \\ &= (0.95-0.93) \times 300 \times 5 \times 12 \times 2 \\ &= 720 \text{ lakhs} \end{aligned}$$

#### b. System Efficiency

The present illustration is for calculating the Daily System Efficiency as demonstration only. The same methodology shall be used for calculation of monthly system efficiency as per Clause 8.1.d.iii.

$$\text{System Efficiency} = \frac{\text{Total of Column (Y)}}{\text{Total of Column (X)}} = \frac{1.155}{1.379} = 0.837 \sim 0.84 \text{ (rounded off to 2 decimal places).}$$

Assuming:

- monthly System Efficiency = 0.84,

b. Total Monthly Drawl form Grid (Charging Power) = 41.1 MUs

Liquidated Damages is calculated @ Rs. 2 for excess loss of energy considering expected System Efficiency to be 85%

Excess conversion losses =  $(0.85-0.84) \times$  Total Drawl from the grid in the month (i.e. Charging Energy)

**Liquidated Damages for the month** = Rs.  $0.01 \times 41.1 \times 2$   
= Rs. 0.822 Millions  
= Rs. **8.22 lakhs**

**PROJECT LOCATION DETAILS**

**(Bidders are requested to contact the Transmission licensee for further details, if required)**

The details have been uploaded on the ETS website as addendum to the RfS.