

No. SECI/SD/EoI/Blend-RE/2019

27.12.2019

## **Expression of Interest for Purchasing & Blending of Battery, Conventional and Hydro Power with Renewable Energy from different sources in India**

### **1. About SECI:**

SECI, under the administrative control of Ministry of New and Renewable Energy (MNRE) was established in the year 2011 with the mission to build a ‘Green India’ through harnessing abundant solar radiation and wind resource, thereby achieving energy security for the country. SECI is the implementing agency for various schemes of MNRE/GoI including VGF, Solar Park, and UMREPP for the development of solar, wind and hybrid power. As of November 2019, SECI has successfully awarded over 27 GW of renewable power capacity under various schemes across the country, out of which 16.251 GW is solar power, 9.36 GW is wind power and 1.44 GW is hybrid power. SECI is also set to make a mark in several emerging technologies. SECI has already floated tenders for 150 MW floating solar in Uttar Pradesh, 400 MW Round the Clock Power, 1200 MW Solar with Energy Storage for Peak Power Supply, 7500 MW Solar Projects in Leh and Kargil (J&K), and a 7000 MW Solar Plant linked with manufacturing facilities. SECI is a Category I Trading Licensee from Central Electricity Regulatory Commission (CERC) to carry out power trading on pan-India basis. In FY 2019-20, 5268.95 MU (till September 2019) of electricity have been traded across states and union territories. As per the PPAs already signed, SECI will trade around 48000 MU by 2022. SECI has a PSM and a PSF of 500 Cr specially sanctioned by GoI. SECI has a rating of AA+ from the ICRA.

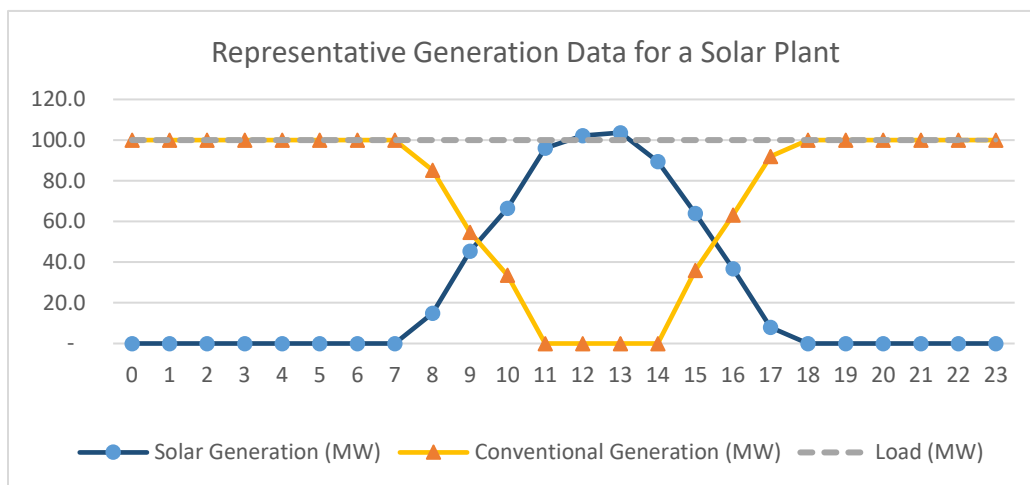
### **2. Background of EOI:**

India is home to one of the world’s largest renewable energy programs, with a target of 175 GW of installed renewable energy capacity by 2022. Recently, the Prime Minister has also pledged to increase the country’s renewable energy capacity to constitute 450 GW of the country’s installed capacity by 2030. RPO obligations have also been drawn up for every state to meet this target.

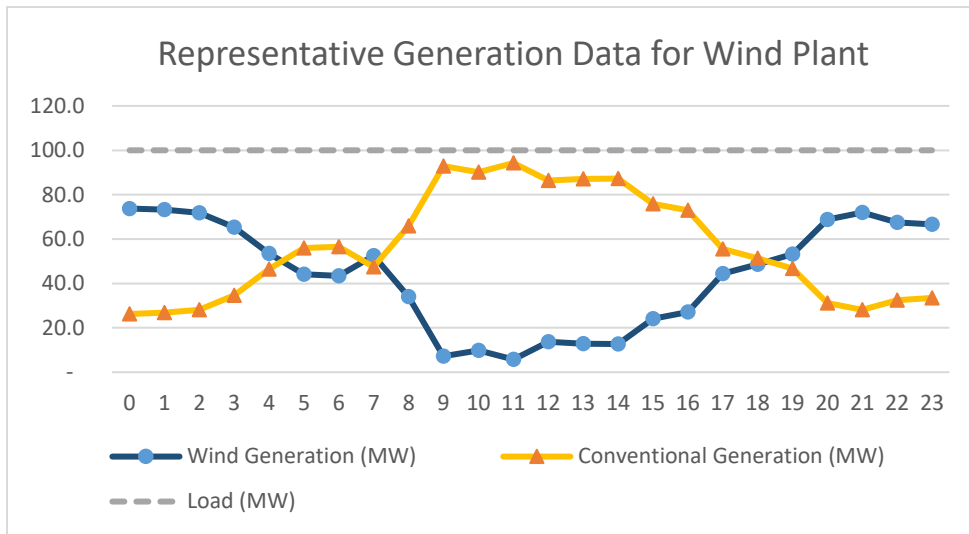
Renewable generation is inherently infirm subject to intermittency and seasonal and diurnal variation. Solar power generation is possible only during sunshine hours with peak generation around noon and the generation is higher during the months of March to June. Wind power peaks in the evening hours, and is generally higher during the monsoon. This places a considerable risk on the security and stability of the grid, since with higher renewable penetration the probability of voltage and power swings in the network will increase. In addition, Commercial and Industrial (C&I) consumers require firm power because of their operational requirement.

This challenge can be met by supplementing the renewable power sources with power from conventional and hydro power plants (“Other Generators”) and/or with Battery Energy Storage Systems (BESS). In the event of poor renewable generation, Other Generators/BESS could feed the load, maintaining the continuity of supply to the consumers. Stranded/operational plants with low PLF and without long term PPA can come in as other generators and supplement RE power during times of non-availability of RE and enable SECI to provide firm power to its customers.

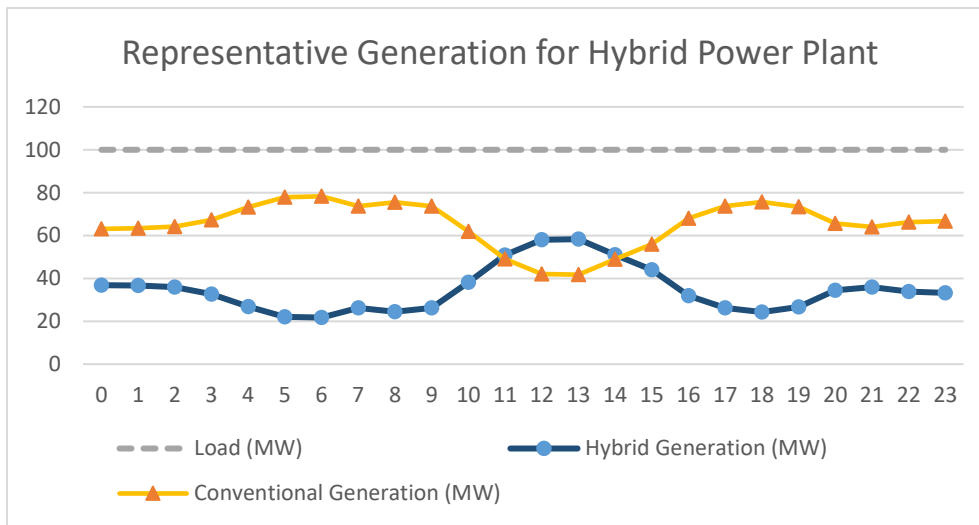
Representative generation data for solar, wind and hybrid plants’ generation profiles has been provided for reference below (Only for reference purposes). Sources like hydro/pumped storage/gas/thermal power can supply during the periods of inadequate generation to meet load requirement; thereby providing round the clock supply.



(Solar CUF ~ 25%, Conventional CUF ~ 75%)



(Wind CUF ~ 35%, Conventional CUF ~ 65%)



(Hybrid CUF ~ 40-50%, Conventional CUF ~ 50-60%)

As on date, SECI is engaged in conducting auctions for purchase of renewable power, being the implementing agency for the MNRE grid connected Wind/Solar scheme. The power is procured regularly from Wind, Solar and Hybrid power projects at very competitive rates less than Rs. 3/kWh at CTU periphery of generating State and the same is offered to DISCOMs/States/UTs to meet their energy demands. It may be noted that the response of the States to this scheme (NSM)

has been overwhelming and all the power offered for sale has been purchased. We expect the same trend to continue in the future. However, keeping in mind the requirements of customers, i.e. C&I and DISCOMs, to provide them firm power on a Round the Clock basis, SECI intends to float tenders for “Other Generators” to supply conventional power to supplement the RE power being/to be supplied by it in order to provide firm power on Round the Clock basis to DISCOMs and C&I consumers.

### **3. Objective of EOI:**

Accordingly, SECI now invites Expression of Interest from the interested Generators involved in the field of Generation & supply of power from Hydro, Pumped Storage, Gas, Battery storage, and Thermal Generating stations (including group captive plants) to supply power to SECI at their nearest STU/CTU substation in order to enable SECI to blend it with different Renewable sources like Wind, Solar & Hybrid (Wind & Solar). The ultimate objective of blending is to make it Round the clock and firm in order to meet the requirements of various DISCOMs and/or Commercial and Industrial(C&I) consumers (hereafter collectively referred to as consumers). The other main objectives of blending are as follows:

- i. To provide RTC supply to consumers to meet their base load and enhance the renewable penetration at DISCOM/other consumers level.
- ii. To cater to the requirements of consumers by providing them Round the Clock Firm power, blending the RE power with the power from Hydro, Gas, Pumped Storage, Thermal sources of energy.
- iii. The C&I consumers who have captive plants can meet their RPO requirement through purchase of RE through long/medium term open access.

The inputs received from this EOI will be used by SECI to prepare the tender for procurement of power from Other Generators to balance the RE power purchased by it and to supply firm power to its customers.

### **4. Salient Features**

- i. SECI may sign PPA with the “other Generators” ,the period of which may vary from 1 to 25 years as per the “consumer” requirements and shall be for those blocks in a day where the

existing RE power is falling short of meeting the conditions of round the clock firm power.(The rough idea on the profile of RE Generators as mentioned in Clause 2 may be referred for further clarity on same)

- ii. Existing RE power shall be made available by SECI, selecting the prospective power developers through Open tender.
- iii. The consumers for this scheme can be located anywhere in the country and may be connected to CTU or elsewhere. The supply of power awarded through competitive bidding shall commence about 18 to 20 months after date of signing of PPA with RE generators.
- iv. Medium/Long term open access is to be applied by the RE generator (Wind/Solar/Hybrid) in combination with other Generators (Generating power from Hydro, Gas, Pumped Storage and Thermal Generating stations) as blended power shall be supplied through SECI to the consumers.

#### **5. Selection of Other Generators**

1. SECI will invite tenders amongst the “Other generators” based on the inputs received from this EOI. SECI may decide the rates through Open tender.
2. The RE capacity for blending shall be made available in 18-20 months and their rates shall be arrived after competitive bidding.
3. The RE power shall be bundled with the power from other Generators to make it firm power supply, available on round the clock basis.
4. The firm power will be sold by SECI to DISCOMS and other consumers as per their requirements.

**PPA:** The PPA will be signed by SECI with the “Other Generators” at the tariff arrived through competitive bidding process for a period decided upon with the beneficiary ,which may range from 1 year to 25 years.

#### **6. Implementation**

SECI will be implementing agency of this project. It will issue the necessary bid documents, invite bids, finalize bids and sign PPA with selected bidders. SECI shall be the monitoring and

implementing agency and shall also facilitate in the delivery of the RTC firm power. SECI may provide the necessary payment security mechanism (including LC) on back to back basis to give comfort to the bidders. It will also provide facilitation services to the successful bidders for their other statutory clearances.

## **7. Submission of EOI**

- Interested Generators are required to submit the response with the complete information in all respects as per enclosed format (Refer *Annexure-1*). The furnished information shall be supported with relevant documents if any.
- Prospective parties may submit their ‘Expression of Interest’ duly signed by the authorized signatory along with relevant details as sought in the data sheets latest by **31.01.2019 till 17:30 hrs.** in a sealed cover super scribing “**Expression of Interest for Purchasing & Blending of Conventional and Hydro Power with Renewable Energy from different sources in India**”, to

**Dr Y.B.K Reddy**  
**Additional General Manager (PV)**  
Solar Energy Corporation of India Limited,  
1<sup>st</sup> Floor, A-Wing, Prius Platinum  
D-3, District Centre,  
Saket, New Delhi-110017

For any clarification, prospective parties are requested to contact 011-71 989 230/238/315 or Email to [ybkreddy@seci.gov.in](mailto:ybkreddy@seci.gov.in), [avnish.parashar@seci.co.in](mailto:avnish.parashar@seci.co.in), [arjun.p@seci.co.in](mailto:arjun.p@seci.co.in).

The date of any discussion meeting after receipt of EOIs, will be informed to the respondents by e-mail / through SECI website.

**DISCLAIMER:**

**Prospective respondent (Applicants) to this EOI acknowledges and agrees that:**

- Solar Energy Corporation of India Limited (SECI) has issued this Expression of Interest with the best intention to explore the market for eligible and interested bidders and has no compulsions to enter into definitive contractual agreements. This EOI does not guarantee conversion of this EOI into any definitive contractual agreements.
- It is also agreed that SECI in its sole discretion, may reject any and all proposals made by respondent(s), may change the conditions relating to the EOI or cancel this EOI at any time without assigning any reason.
- Prospective respondent(s) acknowledge and agree that response to the EOI is purely voluntary action on their part and for any expenditure on this account shall be borne by the respondent(s).
- SECI will have no obligation or liability to the respondent(s) in the event of cancellation of EOI.

**Note: Applicants are requested to keep themselves updated with the website [www.seci.co.in](http://www.seci.co.in) on regular basis for any addition / deletion / modification / clarification or notification in respect of this, at EOI stage and at bidding stage. No separate notification will be issued in any other media.**

**Annexure - 1**

**Details of the other Generators**

S. No.	Parameters	Details
i.	<b>Name of the Company</b>	
ii.	<b>Country where the company is registered</b>	
iii.	<b>Status of the Company:</b> a) Whether registered under the Companies Act 1956 / the Companies Act 2013 b) If not, other details(like sole proprietorship firm/partnership firm etc )	
iv.	<b>Nature(Thermal/Hydro/Gas/Pumped Storage/Battery storage etc) and Location of Plant with capacity</b>	
v.	<b>If the plant is operational:</b> <ul style="list-style-type: none"> <li>• How long has it been operational?</li> <li>• What is the current PLF of the plant? Also, mention the capacity and location of plant?</li> <li>• Whether the plant is involved in any litigations?</li> <li>• How much capacity power can be supplied after 18-20 months</li> </ul>	



	<ul style="list-style-type: none"> <li>• Any existing signed PPA? If so, how long is the PPA valid and signed with whom?</li> <li>• How is the procurement of fuel done (in case of Thermal, Gas)? In the case of thermal, are there any tie-ups with coal plants in place?</li> <li>• Any issue in coal or Gas supply?</li> </ul>	
vi.	<p><b>If the plant is not operational:</b></p> <ul style="list-style-type: none"> <li>• When it can be made operational. Also, mention the capacity and location of upcoming plant??</li> <li>• Any PPA for the future capacity?</li> <li>• How much capacity power can be supplied after 18-20 months</li> <li>• Nature of plant(Type of power plant)</li> <li>• PLF details</li> <li>• Fuel source</li> <li>• Any fuel source Agreement</li> <li>• Any issue in coal or Gas supply?</li> <li>• Whether the plant is involved in any litigations?</li> </ul>	
vii.	<p><b>Can you supply the power after 18-20 months as per SECI requirements? If</b></p>	

**Solar Energy Corporation of India Limited**  
**New Delhi-110017**



	<b>no, mention constraints with their remedial measures?</b>	
viii.	<b>Indicative tariff (Rs /kWh at CTU periphery), since this has to be finally discovered in the bidding, a tentative figures may be provided. Applicants may indicate that this information may be kept confidential, if they wish so.</b>	
ix.	<b>Generation capacity that you may like to bid and blend with RE.</b>	

**Note: Soft copies in excel and pdf format can also be provided in DVD**

**Annexure 2: Suggestions from the Other Generators for power blending and to make it low cost firm power.**

Any suggestions with respect to this EOI may be provided in a separate sheet