



Ref: SECI/181.5GW/ CTUIL/2022/49677

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To
Sh. P C Garg, COO
Central Transmission Utility of India Limited
Saudamini, Plot 2, Sector-29
Gurugram – 122001 (Haryana)

Subject: ISTS network expansion scheme for integration of additional RE potential for providing RE power on RTC basis/ load following basis and wind generation in windy states

Dear Sir,

Govt. of India has set a target of 500 GW capacity addition from non-fossil fuel-based generation by 2030. In this direction, MNRE has identified the 181.5 GW of RE Potential in the states of Andhra Pradesh, Telangana, Karnataka, Rajasthan, Madhya Pradesh and Tamil Nadu (Offshore), vide their letter dated 15.02.2022

2. As the major addition of generation capacity in the country will be from renewable energy-based sources, all continuous load and the peak loads will be met through renewable energy supplied on Round the Clock (RTC) basis. The RTC projects will comprise of wind generators, solar generators and storage elements, either co-located or separately located. Further, during the recent discussions with some of the States, it has been ascertained that power requirement of State as per their load curve need to be matched for every 15 minutes' time block by RE power. Such RE project shall have the power availability of more than 90% of requirement. One of the basic necessities for providing RE power is to select wind and solar resources at more than 2-3 places so that impact of change of local weather conditions may not affect the total generation schedule for RTC generation sources.

3. Therefore, development of RE projects with wind, solar and storage elements have to be taken up on equal priority. Combination of these three elements can provide very optimum solution to deliver RTC as well as Load Following power.

4. In view of same, there may be requirement of opening of number of new ISTS stations at different places so that developer shall have choice to select the combination of S/s in different states as per the generation profile of that area to supply power on RTC basis as per the demand of various states.

5. In some of the recent discussions at MNRE, it has been intimated that shortly, the wind project tenders shall be issued specific to the individual windy states and SECI may have to issue tenders for all major windy states so that equal development of wind resources can be ensured. This will also require opening of new ISTS stations in all windy states so that such type of tenders can be issued.

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6. After the discussion with the various states, SECI has planned to come out with 3 bids for RTC power, 2 bids for load curve following power and bids for setting up wind power generation in six states as per Table 1.

Sl No	Tenders under pipeline / to be ordered	Tender capacity (MW)	Connectivity required (MW)	WTG capacity for connectivity (MW)
1.	RTC bid of RE power with 90 % availability	1500	4500	3150
2.	RE power bid with 90%availability including Hydro	1500	4500	3150
3.	RE power bid with 90% availability including Thermal Power	2500	5000	3150
4.	RE power bid for Punjab & Delhi following load pattern	6000	18000	12600
5.	SECI ISTS- Wind (6 bids of 6 states, each of 1200MW)	7200	7200	7200
	Total	18,700	39,200	29,250

Table 1: RTC and Wind Energy tenders from SECI in pipeline

7. As per the Table 1, it can be seen that the major contribution for the RTC shall be the wind resources and due to different profile of different states, it is necessary to ensure availability of connectivity of ISTS stations in all windy states.

8. As a first step to provide RTC power, we have identified certain locations with high potential of wind and solar energy where work on the RE evacuation system may be taken up immediately. The same is provided in Table 2 below:

Proposed location of ISTS pooling station	Capacity available under 66.5GW RE Plan	RE development proposed under 181.5GW plan	Capacity of RE Evacuation to be taken up on priority
Anantapur, AP	2.5 GW	20 GW (wind + Solar)	10 GW
Kurnool, AP	5.5 GW	23 GW (wind + Solar)	10 GW
Koppal, KA	Utilized fully	4 GW (wind + solar)	4GW
Gadag, KA	Utilized fully	4 GW (wind + solar)	4GW
Bidar, KA	2.5 GW	-	1GW
Davangere / Chitradurga, KA	-	4 GW (wind + solar)	4GW
Bijapur, KA	-	2 GW (wind)	2GW
Pachora, MP	1.5 GW	-	1.5 GW
Neemuch, MP	0.5 GW	2 GW (wind)	2GW
Solapur, MH	2.5 GW	1 GW (solar)	1 GW
Dhule, MH	-	2 GW (wind + solar)	2GW
Kallam / Parli, MH	0.6 GW	2 GW (wind + solar)	2GW
Medak, TS	-	3.5GW	3.5 GW