

List of Connectivity Margin in ISTS Substations available by Mar-27 (all fig. in MW, as on 30-09-2023)

Sr. No.	Pooling Station	RE Potential (MW)			Expected CoD of Pooling Station	Connectivity Granted/Agreed			Connectivity Under Process			Margin for Connectivity			Additional Margin for Connectivity requiring ICT Augmentation / additional Tr. System			Effectiveness of GNA for Capacity mentioned under "Margin for Connectivity"
		RE Potential (MW) [A]	BESS (MW) [B]	Re Potential - BESS [A-B]		220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	
Northern Region																		
A. Existing RE Pooling Stations																		
1	Bhadla Complex	8430	0	8430	Existing	7325	2050	9375	50	0	50	100	0	100	0	0	0	4755MW: Existing 1470MW: Mar'24 : (Ph-II Part-D) 1600MW: Sep'24 (Ph-II Part-E) 1700MW:Feb'25 onwards (Ph-III) (upto Feb'26)
a	Bhadla	3380	0	3380	Existing	3580	0	3580	0	0	0	0	0	0	0	0	0	Existing Tr. System
b	Bhadla-II*	5050	0	5050	Existing	3745	2050	5795	50	0	50	100	0	100	0	0	0	1175MW: Existing 1470MW: Mar'24 : (Ph-II Part-D) 1600MW: Sep'24 (Ph-II Part-E) 1700MW: Feb'25 onwards (Ph-III) (upto Feb'26)
2	Fatehgarh Complex	7700	0	7700	Existing	4460	2200	6660	0	0	0	500	500	1000	0	0	0	5140MW: Existing 720MW: Jul'24 (Ph-II Part-D) 1800MW: Sep'24 (Ph-II Part-E) (upto Feb'26)
a	Fatehgarh	2200	0	2200	Existing	0	2200	2200	0	0	0	0	0	0	0	0	0	Existing Tr. System
b	Fatehgarh-II	5500	0	5500	Existing	4460	0	4460	0	0	0	500	500	1000	0	0	0	2940MW: Existing 720MW: Jul'24 (Ph-II-D) 1800MW: Sep'24 (Ph-II-E) (upto Feb'26)
a	Bikaner	1850	0	1850	Existing	1235	2640	3875	0	0	0	0	350	350	0	0	0	2865MW: Existing 110MW: Mar'24 (Ph-II-G) 300MW : May'24 (Bhin bypass) 370MW: 4th ICT Bikaner (Dec'24) 580MW: Sep'25 (upto Mar'26) (Ph-IV Part-I)
	Sub-Total (Existing)	17980	0	17980	Existing	13020	6890	19910	50	0	50	600	850	1450	0	0	0	
a	Bikaner-II	7000	3000	4000	Commissioned	3785	1000	4785	0	0	0	675	0	675	0	0	0	300MW: May'24 (Bhinmal - Zerda) 1527MW : Dec'24 (4th Bikaner ICT) 3433MW: Sep'25 (Upto Feb'26) (Ph-IV Part-I) (The Commission directed the CTUIL not to allocate 675MW at Bikaner- II S/s to any other entity till the next date of hearing in 114/MP/2023)
b	Fatehgarh-III* (Section-I)	1900	0	1900	Sep'23	1980	0	1980	0	0	0	0	0	0	0	0	0	200MW: Sep'23 (Ph-II) 1780MW: Mar'24 to Jul'24(Ph-II), BESS of 2x250MW is also agreed for connectivity
	Sub-Total (June'23 to Dec'23)	8900	3000	5900		5765	1000	6765	0	0	0	675	0	675	0	0	0	
C. Commissioning between Jan'24 - Jun'24																		
	NIL																	
D. Commissioning between Jul'24 - Jun'25																		
a	Bhadla-III	6500	0	6500	Mar'25	3240	1000	4240	560	0	560	700	1000	1700	0	0	0	3700MW : Mar'25 onwards (Upto Mar'26): cumulative at Ramgarh & Bhadla-III: Raj. (Ph-III) Beyond 3700MW : Bhadla HVDC (Dec'27 Pole-1 & Jun'28 Pole-2)
	Fatehgarh Complex	8100	0	8100	Fatehgarh-III (Section-II): Feb'25 Fatehgarh-IV (Section-I): Feb'25	4105	3567	7672	0	0	0	40	0	40	0	0	0	Feb'25 onwards (Ph-III) (Upto Feb'26)

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		RE Potential (MW) [A]	BESS (MW) [B]	Re Potential - BESS [A-B]		220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	
a	Fatehgarh-III* (Section-II)	6000	0	6000	Feb'25	2080	3567	5647	0	0	0	40	0	40	0	0	0	Feb'25 onwards- (Ph-III) (Upto Feb'26)
b	Fatehgarh-IV (Section-I)	2100	0	2100	Feb'25	2025	0	2025	0	0	0	0	0	0	0	0	0	Feb'25 onwards (Ph-III) (Upto Feb'26)
a	Ramgarh	2900	0	2900	Feb'25	0	650	650	0	0	0	3100	250	3350	0	0	0	3700MW : Mar'25 onwards (Upto Mar'26): cumulative at Ramgarh & Bhadla-III: Raj. (Ph-III) Beyond 3700MW : Bhadla HVDC (Dec'27 Pole-1 & Jun'28 Pole-2)
Sub-Total (June'24 to Jun'25)		17500	250	17250		7345	5217	12562	560	0	560	3840	1250	5090	0	0	0	
Sub-Total NR (By Jun'25)		44380	500	43880		26130	13107	39237	610	0	610	5115	2100	7215	0	0	0	
E. Commissioning between Jul-25 to Mar-27																		
1	Bikaner-III	7000	3000	4000	Oct'25	1517	2400	3917	0	0	0	83	0	83	0	0	0	Oct'25 (Ph-IV, Part-I) (Upto Feb'26)
2	Fatehgarh-IV (Section-II)	9000	4000	5000	Feb'26	3430	0	3430	0	600	600	50	0	50	0	900	900	RE Potential : 9GW (Wind:3GW, Solar:6GW) 4000MW: Feb'26 (Ph-IV, Part-II) For evacuation of balance 1000MW power at Fatehgarh-IV, additional Tr. System is under planning and expected by Sep'26.
3	Barmer-I	5500	1500	4000	Feb'26	700	0	700	700	0	700	0	0	0	800	1800	2600	RE Potential: 5.5GW (Wind:1.5GW, Solar:4GW), 1500MW: Feb'26 (Ph-IV, Part-II) For evacuation of balance 2500MW power at Barmer-I, additional Tr. System is under planning and expected by Sep'26.
4	Bikaner-IV#	6000	1000	5000	Sep'26	0	0	0	1750	0	1750	0	0	0	1450	1800	3250	#RE potential and BESS need to be confirmed by MNRE/SECI. Additional Tr. System is under planning and expected by Sep'26
Sub-Total NR (Beyond Jun'25)		21500	8500	13000		5647	2400	8047	700	600	1300	133	0	133	800	2700	3500	
Total (NR)		65880				31777	15507	47284	1310	600	1910	5248	2100	7348	800	2700	3500	
Southern Region																		
A. Existing RE Pooling Stations																		
1	NP Kunta	1500	0	1500	Existing	1500	0	1500	100	0	100	0	0	0	200	0	200	1500 MW : Existing Tr. System 300 MW: 5th ICT (to be identified)
2	Pavagada	3050	0	3050	Existing	3150	0	3150	0	0	0	0	0	0	200	0	200	2050 MW : Existing Tr. System 1000 MW : Jul'24 : Narendra-Pune 300 MW : Jun'25 : 7th & 8th ICT
3	Tuticorin-II GIS (erstwhile Tirunelveli (PG))	2500	0	2500	Existing	2170	0	2170	0	0	0	205	0	205				1330 MW : Existing Tr. System 540 MW: Sept/Oct'23 : 4th ICT 300 MW: Jul'24 : Narendra-Pune 205 MW: Apr'25 : 6th ICT
Sub-Total (Existing)		7050				6820	0	6820	100	0	100	205	0	205	400	0	400	
B. Commissioning between Jul'23 - Dec'23																		
4	Koppal/ Gadag Complex	5000	0	5000	Jun'23 to Sep'23	5138	0	5138	0	0	0	0	0	0				1720 MW : Existing Tr. System 3418 MW: Jul'24 : Narendra-Pune
a	Koppal PS	2500	0	2500	Jun'23	2753	0	2753	0	0	0	0	0	0				1260 MW : Existing Tr. System 1493 MW: Jul'24 : Narendra-Pune 300 MW opted for surrender under GNA.

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		RE Potential (MW) [A]	BESS (MW) [B]	Re Potential - BESS [A-B]		220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	
b	Gadag PS	2500	0	2500	Sep'23	2385	0	2385	0	0	0	0	0	0				460 MW : Existing Tr. System 1925 MW: Jul'24 : Narendra-Pune
5	Karur PS (Phase-1)	1000	0	1000	Jul'23	420	0	420	198	0	198	382	0	382				100 MW : Existing Tr. System 320 MW: Jul'24 : Narendra-Pune
	Sub-Total (June'23 to Dec'23)	6000	0	6000	-	5558	0	5558	198	0	198	382	0	382				
C. Commissioning between Jan'24 - Jun'24																		
	NIL																	
D. Commissioning between Jul'24 - Jun'25																		
6	Ananthapuram/ Kurnool complex	9000	0	9000	Nov'24 to Jun'25	450	600	1050	270	0	270	3180	0	3180	4500	0	4500	Nov'24
a	Kurnool-III PS	4500	0	4500	Nov'24	450	600	1050	270	0	270	3180	0	3180				Nov'24
	Expansion with ICTs	4500	0	4500								0	0	4500	0	4500		• Augmentation of ICTs and transmission line, if any, can be taken up on receipt of application
7	Karur PS (with transformer augmentation under Phase-II)	1500	0	1500		0	0	0	0	0	0	1500	0	1500				• Can be taken up with 18 month schedule on receipt of application
	Sub-Total (June'24 to June'25)	10500	0	10500		450	600	1050	270	0	270	4680	0	4680	4500	0	4500	
	Sub-Total SR (by June'25)	23550	0	16500		12828	600	13428	568	0	568	5267	0	5267	4900	0	4900	
E. Commissioning between Jul-25 to Mar-27																		
8	Koppal-II/ Gadag-II Complex	14000	3000	11000	2025-26	4331	1400	5731	892	0	892	2777	2500	5277	7500	0	7500	2025-26
a	Koppal-II PS	4000	1000	3000	Sept'25 (exptd)	1908	0	1908	790	0	790	302	0	302	1500		1500	Sept'25 (exptd)
b	Gadag-II PS	4000	1000	3000	Sept'25 (exptd)	2124	1400	3524	102	0	102	274	0	274	1500		1500	Sept'25 (exptd)
c	Bijapur	2000	0	2000	2025-26	300	0	300	0	0	0	700	1000	1700	2500		2500	2025-26
d	Davangere	4000	1000	3000	2025-26	0	0	0	0	0	0	1500	1500	3000	2000		2000	2025-26 No application
9	Bidar PS	2500	0	2500	Jun'25 (exptd)	0	0	0	0	0	0	2500	0	2500	1000		1000	Jun'25 No application
a	Bidar Expansion with ICTs	1000	0	1000											1000	0	1000	• Augmentation of ICTs and transmission line, if any, can be taken up on receipt of application
10	Ananthapuram/ Kurnool complex	13500	0	13500	Progressivly from Sept'25 to 2026-27	445	3110	3555	0	0	0	5045	4000	9045	4000	3500	7500	Progressivly from Sept'25 to 2026-27
a	Ananthapuram PS	3500	0	3500	Sept'25 (exptd)	445	3110	3555	0	0	0	545	0	545				Sept'25 (expt)
	Expansion with only ICTs	1500	0	1500											1000	0	1000	• Augmentation of ICTs and transmission line, if any, can be taken up on receipt of application

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		RE Potential (MW) [A]	BESS (MW) [B]	Re Potential - BESS [A-B]		220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	
b	Ananthapuram PS-II	4000	0	4000	2026-27	0	0	0	0	0	0	2000	2000	4000	1500	2000	3500	2026-27 No application
c	Kurnool-IV	4500	0	4500	2026-27	0	0	0	0	0	0	2500	2000	4500	1500	1500	3000	2026-27 No application
11	Tumkur-II	1500	0	1500	2026-27	0	0	0	0	0	0	1500	0	1500	3000	0	3000	2026-27 No application Augmentation of ICTs and transmission line, if any, can be taken up on receipt of application
12	Nizamabad Complex	5000	0	5000	2026-27	0	0	0	0	0	0	5000	0	5000	8500	0	8500	2026-27 No application
a	Nizamabad-II	2000	0	2000	2026-27	0	0	0	0	0	0	2000	0	2000	2500		2500	2026-27 No application Augmentation of ICTs and transmission line, if any, can be taken up on receipt of application
b	Medak	1500	0	1500	2026-27	0	0	0	0	0	0	1500	0	1500	3000		3000	2026-27 No application Augmentation of ICTs and transmission line, if any, can be taken up on receipt of application
c	Rangareddy	1500	0	1500	2026-27	0	0	0	0	0	0	1500	0	1500	3000		3000	2026-27 No application Augmentation of ICTs and transmission line, if any, can be taken up on receipt of application
Sub-Total SR (Beyond Jun'25)		37500	3000	34500		4776	4510	9286	892	0	892	16822	6500	23322	24000	3500	27500	
Total (SR)		61050	3000	51000		17604	5110	22714	1460	0	1460	22089	6500	28589	28900	3500	32400	
Western Region																		
A. Existing RE Pooling Stations																		
1	Bhuj complex	6000		6000	Existing	4765	0	4765	1353	0	1353	109	0	109	1574	0	1574	Existing Tr. System
a	Bhuj PS	4000		4000	Existing	3066		3066	625		625	109	0	109				Existing Tr. System
b	Bhuj-II PS	2000		2000	Existing	1699		1699	728		728	0	0	0	1574	0	1574	Existing Tr. System. However, for 728MW application which is under process, augmentation of 400/220kV ICTs shall be required.
2	Radhanesda PS	950		950	Existing	700		700	250		250	0	0	0				Existing Tr. System
3	Jam Khambhaliya PS	1500		1500	Existing	519		519	1325		1325	0	0	0	500	0	500	Existing Tr. System. Under Process applications may require additional transmission system augmentation (Jamnagar scheme)
Subtotal (Existing)		8450		8450		5984	0	5984	2928	0	2928	109	0	109	2074	0	2074	
B. Commissioning between Jul'23 - Dec'23																		
4	Kallam PS	1000		1000	Oct-23 (1GW)	917	0	917	0	0	0	0	0	0				1GW: Oct-23
5	Pachora PS	1500		1500	Nov23-1.5GW	1398		1398	0		0	0	0	0				1.5GW: Nov-23
Subtotal (Jun-23 to Dec-23)		2500		2500		2315	0	2315	0	0	0	0	0	0				
C. Commissioning between Jan'24 - Jun'24																		
6	Khavda I PS (Sec-I)	3000		3000	Jan'24		3000	3000			0	0	0	0				Ph-1: 3GW - Jan'25 (KPS1) / Jan'25 (KPS2)
7	Kallam PS	2250		2250	May-24 (1GW)	1044	158	1202	0	601	601	0	491	491				2.25GW: Jun-25 (exptd)
8	Neemuch PS	1000		1000	Feb'24	500		500			0	450	0	450	500	0	500	Feb'24

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		RE Potential (MW) [A]	BESS (MW) [B]	Re Potential - BESS [A-B]		220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	
9	Solapur S/s	2000		2000	Mar'24		973	973		0	0		1027	1027				Mar-24: Under Scope of applicant (ReNew)
	Subtotal (Dec-23 to Jun-24)	8250		8250		1544	4131	5675	0	601	601	450	1518	1968	500	0	500	
D. Commissioning between Jul'24 - Jun'25																		
10	Khavda complex	10500		10500	KPS1 (Sec-II): Jan-25 KPS2 (Sec-I & II): Jan-25	0	10500	10500	0	0	0	0	0	0				•Ph-2: 5GW- Mar'25 •Ph-3: 7GW- Nov'25 (Under bidding - 24 months from SPV transfer)
a	Khavda I PS (Sec II)	4500		4500	Sec-I: Jan'24 Sec-II: Jan'25		4500	4500			0	0	0	0				•Ph-2: 5GW- Mar'25 •Ph-3: 7GW- Nov'25 (Under bidding - 24 months from SPV transfer)
b	Khavda II PS (Sec-I & II)	3000		3000	Sec-I & II: Jan'25		3000	3000			0	0	0	0				
c	Khavda III PS (Sec-I)	3000		3000	Jan'25		3000	3000			0	0	0	0				
11	Chhatarpur PS	1500		1500	Dec-24 (exptd)	0		0			0	1500	0	1500				Jun-25: Under Advance stage of Bidding No application
12	Parli (New) S/s	700		700	Jun'25 (exptd)		300	300		50	50		350	350				Jun'25
	Subtotal (Jun-24 to Jun-25)	12700		12700		0	10800	10800	0	50	50	1500	350	1850				
	Sub-Total (WR) by Jun'25	31900		31900		9843	14931	24774	2928	651	3579	2059	1868	3927	2574	0	2574	
E. Commissioning between Jul-25 to Mar-27																		
13	Khavda complex	16500		16500	KPS1 (Sec-I): Dec-25 KPS2 (Sec-I & II): Dec-25 KPS2 (Sec-I): Mar'27 KPS3 (Sec-I & II): Dec-25 KPS3 (Sec-II): Mar'27	0	11200	11200	0	0	0	0	5300	5300				•Ph-1: 3GW - Jan'25. However, 2GW at KPS2 using Ph-I system would also require KPS2 S/s (Jan'25) •Ph-2: 5GW- Mar'25 •Ph-3: 7GW- Nov'25 (Under bidding - 24 months from SPV transfer) •Ph-4: 7GW-Jan-26 (Under bidding - 24 months from SPV transfer) •Ph-V: 48(Bipole-I) / 54(Biple-II) monthsfrom SPV transfer
a	Khavda I PS (Sec-I)	1500		1500	Sec-I ICT: Dec'25		1500	1500			0	0	0	0				Total transformation capacity at Khavda complex (considering N-1 on each section): KPS1 - Sec-I: 4.5GW ; Sec-2: 4.5GW Total KPS1: 9GW KPS2 - Sec-I: 6GW ; Sec-2: 4.5GW Total KPS2: 10.5GW KPS3 - Sec-I: 4.5GW ; Sec-2: 4.5GW Total KPS3: 9GW Total (KPS1, KPS2 & KPS3): 28.5GW Balance 1.5GW transformation capacity at KPS3 would be taken up matching with progress of RE generation.
b	Khavda II PS (Sec-I & II)	7500		7500	Sec-I & II ICTs : Dec'25 Sec-I ICT: Mar'27		6250	6250		0	0	0	1250	1250				
c	Khavda III PS (Sec-I & II)	7500		7500	Sec-I & II ICTs : Dec'25 Sec-II ICT: Mar'27		3450	3450			0	0	4050	4050				
14	Solapur PS (1.5GW)	1500		1500	Sep-25 (exptd)	560		560	190		190	750	0	750	1500	0	1500	Dec-25 (exptd) : Under Bidding
15	Pachora PS	1000		1000	Sep-25 (exptd)	150		150	510		510	340	0	340	1000	0	1000	1GW: Dec-25 (exptd) : Under Bidding
16	Mandsaur PS	2000		2000	Dec-25 (exptd)	0		0			0	2000	0	2000	2000	0	2000	Jan-26 : Under approval

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		RE Potential (MW) [A]	BESS (MW) [B]	Re Potential - BESS [A-B]		220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	220kV	400kV	Total (MW)	
17	Dhule PS	2000		2000	Aug-25 (exptd)	50		50	0		0	1950	0	1950	2000	0	2000	Dec-25 : Under Bidding
18	Jamnagar S/s	0		0	Mar-26 (exptd)	0		0	400		400	550	0	550	0	0	0	Jamnagar S/s has been agreed in 15th NCT meeting held on 25.08.2023 with time-line of 24 months from SPV transfer
	Subtotal WR (Beyond Jun'25)	23000		23000		760	11200	11960	700	0	700	5040	5300	10340	6500	0	6500	
	Total (WR)	54900		54900		10603	26131	36734	3628	651	4279	7099	7168	14267	9074	0	9074	

In WR, Tr. System has been planned w/o considering BESS capacity of 1.1GW in Maharashtra

North Eastern Region

A. Commissioning between Jul-25 to Mar-27

18	Bokajan	1000			Dec-25 (exptd)	0	1000	1000	0	0	0	0	0	0	1500	0	1500	Dec-25 : Under approval
	Subtotal NER (Beyond Jun'25)	1000				0	1000	1000	0	0	0	0	0	0	1500	0	1500	
	Total (All India)	182830				59985	47748	107733	6398	1251	7649	34436	15768	50204	40274	6200	46474	
	By Jun'25	99830				48801	28638	77439	4106	651	4757	12441	3968	16409	7474	0	7474	
	Commissioning between Jul-25 to Mar-27	83000				11183	19110	30293	2292	600	2892	21995	11800	33795	32800	6200	39000	

*In ROP dated 26/09/23 on petition no. 268/MP/2023 & 269/MP/2023, Hon'ble Commission directed the CTUIL and Petitioners to carry out a joint consultation (with the Petitioners i.e. M/s Eden and other project developers) to explore the feasibility/possibility shifting the Connectivity of the Petitioners to the Fatehgarh-III or Bhadla-II PS maintaining the Petitioners' priority

The margins indicated may vary depending on network topology, Load-Generation balance, etc. For any clarification/information, CTU may be contacted.