

List of Connectivity Margin in ISTS Substations available by Mar-27 (all fig. in MW, as on 31-10-2023)

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	0	0	0	150	0	150	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	0	0	0	150	0	150	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	0	0	0	650	850	1500	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: Nov'25 (Upto Feb'26) (Ph-IV Part-I) (The Commission directed the CTUIL not to allocate 675MW at Bikaner- II PS 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	3450	1000	4450	950	1635	2585	0	0	0	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) [As per CERC order 268/MP/23, 269/MP/2023, CTU to reserve 2 nos. 220kV bay. This is commensurate to 600 MW accordingly connectivity under process shall be suitably adjusted at Bhadla-IV, as total quantum exceeded beyond 6500 MW)
	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)
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)

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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	Ramgarh	4000	0	4000	Feb'25	0	650	650	600	0	600	1400	250	1650	200	900	1100	650MW : Mar'25 onwards (Upto Mar'26): 650MW-2900MW : Bhadla HVDC (Dec'27 Pole-1 & Jun'28 Pole-2) Beyond 2900MW : additional corridor would be required
Sub-Total (June'24 to Jun'25)		18600	3000	15600		7555	5217	12772	1550	1635	3185	1440	250	1690	200	900	1100	
Sub-Total NR (By Jun'25)		45480	3000	42480		26340	13107	39447	1550	1635	3185	2765	1100	3865	200	900	1100	
E. Commissioning between Jul-25 to Mar-27																		
1	Bikaner-III	7000	3000	4000	Nov'25	1617	2400	4017	0	0	0	0	0	0	0	0	0	Nov'25 (Ph-IV, Part-I) (Upto Feb'26)
2	Fatehgarh-IV (Section-II)	9000	4000	5000	Feb'26	3430	600	4030	0	300	300	0	0	0	50	600	650	RE Potential : 9GW (Wind:3GW, Solar:6GW) 4030MW: Feb'26 (Ph-IV, Part-II) For evacuation of balance 950MW power at Fatehgarh-IV, additional Tr. System is under planning , which shall have schedule (sch.upto Feb'29).
3	Barmer-I	5500	1500	4000	Feb'26	1400	0	1400	1400	0	1400	0	0	0	300	900	1200	RE Potential: 5.5GW (Wind:1.5GW, Solar:4GW), 1500MW: Feb'26 (Ph-IV, Part-II) For evacuation of >1500MW power at Barmer-I, additional Tr. System is under planning with , which shall have schedule (sch.upto Feb'29).
4	Bikaner-IV Ph-1 (3.6 GW)- AC; Ph-2 >3.6 GW- AC/HVDC	6000	0	6000	Jul'26	1000	650	1650	1150	1300	2450	0	0	0	250	1650	1900	Tr. System for 3.6GW is under approval and expected by Jul'26. Applications for more than 3.6GW shall require additional EHVAC/HVDC Tr. System, which shall be planned (sch.upto Feb'29)
Sub-Total NR (Beyond Jun'25)		27500	8500	19000		7447	3650	11097	2550	1600	4150	0	0	0	600	3150	3750	
Total (NR)		72980	11500	61480		33787	16757	50544	4100	3235	7335	2765	1100	3865	800	4050	4850	
Southern Region																		
A. Existing RE Pooling Stations																		
1	NP Kunta	1500	0	1500	Existing	1600	0	1600	0	0	0	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	200	0	200	0	0	0	0	0	0	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	150	0	150	55	0	55				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		7050		6920	0	6920	350	0	350	55	0	55	200	0	200	
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.
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	618	0	618	0	0	0	382	0	382				100 MW : Existing Tr. System 518 MW: Jul'24 : Narendra-Pune
Sub-Total (June'23 to Dec'23)		6000	0	6000	-	5756	0	5756	0	0	0	382	0	382				
C. Commissioning between Jan'24 - Jun'24																		
NIL																		

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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)	
D. Commissioning between Jul'24 - Jun'25																		
6	Ananthapuram/ Kurnool complex	9000	0	9000	Nov'24 to Jun'25	720	600	1320	600	400	1000	2780	0	2780	4500	0	4500	Nov'24
a	Kurnool-III PS	4500	0	4500	Nov'24	720	600	1320	600	400	1000	2780	0	2780				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		1500				• Can be taken up with 18 month schedule on receipt of application
	Sub-Total (June'24 to June'25)	10500	0	10500		720	600	1320	600	400	1000	4280	0	4280	4500	0	4500	
	Sub-Total SR (by June'25)	23550	0	23550		13396	600	13996	950	400	1350	4717	0	4717	4700	0	4700	
E. Commissioning between Jul-25 to Mar-27																		
8	Koppal-II/ Gadag-II Complex	14000	3000	11000	2025-26	5223	1400	6623	850	0	850	2002	2500	4502	7424	0	7424	2025-26
a	Koppal-II PS	4000	1000	3000	Sept'25 (exptd)	2698	0	2698	250	0	250	52	0	52	1500		1500	Sept'25 (exptd)
b	Gadag-II PS	4000	1000	3000	Sept'25 (exptd)	2226	1400	3626	350	0	350	0	0	0	1424		1424	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	250	0	250	1250	1500	2750	2000		2000	2026-27
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	Progressively from Sept'25 to 2026-27	445	2510	2955	50	1000	1050	4595	4000	8595	4000	3500	7500	Progressively from Sept'25 to 2026-27
a	Ananthapuram PS	3500	0	3500	Sept'25 (exptd)	445	2510	2955	50	1000	1050	95	0	95				Sept'25 (expt)
	Expansion with only ICTs	1500	0	1500					0	0	0				1000	0	1000	• Augmentation of ICTs and transmission line, if any, can be taken up on receipt of application
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	250	0	250	1250	0	1250	3000	0	3000	2025-26
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

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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)	
c	Rangareddy	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
	Sub-Total SR (Beyond Jun'25)	37500	3000	34500		5668	3910	9578	1150	1000	2150	15347	6500	21847	23924	3500	27424	
	Total (SR)	61050	3000	58050		19064	4510	23574	2100	1400	3500	20064	6500	26564	28624	3500	32124	
Western Region																		
A. Existing RE Pooling Stations																		
1	Bhuj complex	6000		6000	Existing	5844	0	5844	487	0	487	404	0	404	1266	0	1266	Existing Tr. System
a	Bhuj PS	4000		4000	Existing	3471		3471	125		125	404	0	404				Existing Tr. System. 9th ICT at Bhuj PS shall be required for Oct-23 applications and beyond.
b	Bhuj-II PS	2000		2000	Existing	2373		2373	362		362	0	0	0	1266	0	1266	Existing Tr. System. However, for capacity beyond 2000MW, augmentation of 765/400kV & 400/220kV ICTs is required.
2	Radhanesda PS	950		950	Existing	950		950			0	0	0	0				Existing Tr. System
3	Jam Khambhaliya PS	1500		1500	Existing	2244	0	2244	150	255	405	0	0	0	106	0	106	Existing Tr. System. Under Process applications shall require additional transmission system augmentation (Jamnagar scheme). Beyond margin of 106MW, all new applications would be granted at Jamnagar S/s (agreed in 15th NCT meeting)
	Subtotal (Existing)	8450		8450		9038	0	9038	637	255	892	404	0	404	1371	0	1371	
B. Commissioning between Jul'23 - Dec'23																		
4	Kallam PS	1000		1000	Nov-23 (1GW)	917	0	917	0	0	0	0	0	0				1GW: Nov-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	Kallam PS	2250		2250	May-24 (1GW)	1044	709	1753	0	400	400	0	141	141				2.25GW: Aug-25 (exptd)
7	Neemuch PS	1000		1000	Feb'24	500		500			0	450	0	450	500	0	500	Feb'24
8	Solapur S/s	2000		2000	Existing		973	973		100	100		927	927				Jun-24: Under Scope of applicant (ReNew)
	Subtotal (Jan-24 to Jun-24)	5250		5250		1544	1682	3226	0	500	500	450	1068	1518	500	0	500	
D. Commissioning between Jul'24 - Jun'25																		
10	Khavda complex	13500		13500	KPS1 (Sec-II): Jan-25 KPS2 (Sec-I & II): Jan-25 KPS3 (Sec-I): Jan-25	0	13500	13500	0	0	0	0	0	0				•Ph-1: 3GW - Jan'25 (KPS1) / Jan'25 (KPS2) •Ph-2: 5GW- Mar'25 •Ph-3: 7GW- Nov'25 (Under bidding - 24 months from SPV transfer)
a	Khavda I PS (Sec II)	7500		7500	Sec-I: Jan'25 Sec-II: Jan'25		7500	7500			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	Jun-25 (exptd)	0		0			0	1500	0	1500				Jun-25: Under Advance stage of Bidding No application
12	Parli (New) S/s	700		700	Existing		300	300			0	0	400	400				Dec'25 (400kV bay under ISTS)
	Subtotal (Jun-24 to Jun-25)	15700		15700		0	13800	13800	0	0	0	1500	400	1900				
	Sub-Total (WR) by Jun'25	31900		31900		12897	15482	28379	637	755	1392	2354	1468	3822	1871	0	1871	

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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)	
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			<ul style="list-style-type: none"> •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	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	Dec-25 (exptd)	850		850	53		53	597	0	597	1500	0	1500	Dec-25 (exptd) : Under Bidding
15	Pachora PS	1000		1000	Jan-26 (exptd)	400		400	81		81	621	0	621	1000	0	1000	1GW: Jan-26 (exptd) : Under Bidding
16	Mandsaur PS	2000		2000	Jan-26 (exptd)	0		0			0	2000	0	2000	2000	0	2000	Jan-26 : Under approval
17	Dhule PS	2000		2000	Dec-25 (exptd)	50		50	0		0	1950	0	1950	2000	0	2000	Dec-25 : Under Bidding
	Subtotal WR (Beyond Jun'25)	23000		23000		1300	11200	12500	134	0	134	5168	5300	10468	6500	0	6500	
	Total (WR)	54900		54900		14197	26682	40879	771	755	1525	7522	6768	14290	8371	0	8371	
<i>In WR, Tr. System has been planned w/o considering BESS capacity of 1.1GW in Maharashtra</i>																		
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)	189930				67049	48949	115998	6971	5390	12360	30352	14368	44720	39295	7550	46845	
	By Jun'25	100930				52633	29189	81822	3137	2790	5927	9836	2568	12404	6771	900	7671	
	Commissioning between Jul-25 to Mar-27	89000				14415	19760	34175	3834	2600	6434	20516	11800	32316	32524	6650	39174	

*In ROP of hearing dated 25/10/23 on petition no. 268/MP/2023 & 269/MP/2023, Hon'ble Commission directed CTUIL to maintain the status quo with regard to the grant of connectivity/allocating the bays at Bhadla II PS and reserve 2 No. 220KV bays at Badhla III PS till the next date of hearing

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