

Status of margins available at existing ISTS substations (non RE) for proposed RE integration

All figures are in MW (as on 31-08-2023)

Name of station	Existing / UC/ Planned MVA Capacity	Capacity Allocated/ Under Process (MW)	Additional Margin on existing / UC system		Line Bays required for RE integration		Additional Margin with ICT Augmentation		No. of Trfs required for RE integration	Remarks
			220kV level	400kV level	220kV level	400kV level	220kV level	400kV level		
Gujarat										
Pirana 400/220kV	2x315MVA, 400/220kV	0	300	0	1	0	0	0	0	400kV & 220kV overloading.
Lakadia 765/400kV	2x1500MVA, 765/400kV (Existing) 2x500MVA, 400/220kV (Under Planning)	550	400	0	1	0	0	0	0	
Total GUJ:			700	0	1	0	0	0	0	700
Maharashtra										
Aurangabad 765/400/220kV	2x1500MVA, 765/400kV 2x315MVA, 400/220kV	0	0	1000	1	1	0	0	0	Overloading in 220kV downstream network.
Kolhapur 400kV	400kV Switching Station	0	0	0	0	0	0	0	0	Overloading observed in 400kV Kolhapur (PG)-Kolhapur(MSETCL) D/c line.
Parli (PG) 400/220kV	2x500MVA, 400/220kV	300	0	0	2	0	0	0	0	300MW capacity has been allocated at Parli (PG) S/s. Overloading in 220kV downstream & Parli 400kV network.
Total MAH:			0	1000	3	1	0	0	0	1000
Madhya Pradesh										
Khandwa 400/220kV	2x315+1x500MVA, 400/220kV	300	0	0	2	0	0	0	0	300MW Stage-II connectivity & 300MW LTA from Masaya Solar at Khandwa has also been granted. Overloading in 220kV downstream network.
Indore 765/400/220kV	2x500MVA, 400/220kV + (1x500MVA with sectionalisation at 220kV for RE injection)	441.6	30	0	0	0	0	0	0	500MVA, 400/220kV ICT has been approved in the 2nd WRPC(TP) meeting and all the works have been completed. 324.4MW LTA has been granted on this ICT and New applications located near Rajgarh (117.2MW) are proposed to be granted at Indore S/s due to non-availability of Margins at Rajgarh S/s. Balance 30MW margin is left on the ICT.
Jabalpur PS 765/400	2x1500MVA 765/400kV	0	0	1000	0	1	0	0	0	765/400kV ICT overloading.
Seoni 765/400/220kV	2x315MVA + 1x500MVA 400/220kV	0	0	0	1	0	0	0	0	Overloading in 220kV downstream network.
Rajgarh 400/220kV	2x315MVA, 400/220kV+ (1x500MVA with sectionalisation at 220kV for RE injection)	764	0	0	0	0	10	0	1	Margins at 220kV bay of Srpng: St-II Connectivity of 156.24MW has been granted to Sprng Vayu Vidyut Pvt Ltd. & 100.8+42MW in under process. Overloading in 220kV downstream network. Margins at 400/220kV ICT: St-II Connectivity of 190.2MW has been granted to VEH Jayin Renewables Private Limited through 400/220kV, 500MVA ICT sectionalised at 220kV for RE injection as agreed in 10th CMETS WR held on 30.08.2022 & 75+100+100MW is under process.
Satna 765/400/220kV	2x1000MVA, 765/400kV 2x315+1x500MVA, 400/220kV	0	0	0	1	0	0	0	0	Overloading in 220kV downstream network.
Total MP:			30	1000	4	1	10	0	1	1040
Chhattisgarh										
Dharamjaygarh 765/400kV	2x1500MVA 765/400kV	0	0	900	0	1	0	0	0	765/400kV ICT overloading.
Champa 765/400kV	6x1500MVA 765/400kV	0	0	1500	0	2	0	0	0	765/400kV ICT overloading.
Bilaspur PS 765/400kV	3x1500MVA 765/400kV	0	0	1000	0	1	0	0	0	765/400kV ICT overloading.
Total Chhat:			0	3400	0	4	0	0	0	3400
Total WR			730	5400	8	6	10	0	1	6140
Andhra Pradesh										
Kurnool (New) 765/400kV	2X1500 MVA, 765/400 kV	2714	0	0	0	1	0	250	1	
Total AP:			0	0	0	1	0	250	1	250
Karnataka										
Hiriyur 400/220kV	2x315 MVA, 400/220 kV + 1x500 MVA, 400/220 kV	537.6	60	0	0	0	0	0	0	
Total Kar:			60	0	0	0	0	0	0	60
Kerala										
Palakkad (400/220kV)	2x315 MVA, 400/220 kV + 1x500 MVA, 400/220 kV	0	300	0	2	0	0	0	0	
Total Ker:			300	0	2	0	0	0	0	300
Tamil Nadu										
Pugalur(Existing) 400/230kV	2X315 MVA + 1X500 MVA, 400/230 kV	352.8	240	0	0	0	0	0	0	
Malekottaiyur(Kalivendapattu) 400/230kV	2X315 MVA + 1X500 MVA, 400/230 kV	NIL	500	0	2	0	0	0	0	
Nagapattinam PS 765/400kV	Charged at 400 kV	NIL	0	1000	0	2	0	0	0	
Total TN:			740	1000	2	2	0	0	0	1740

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			220kV level	400kV level	220kV level	400kV level	220kV level	400kV level		
		Total SR	1100	1000	2	3	0	250	1	2350
Rajasthan										
Chittorgarh 765/400kV	765/400kV : 2x1500MVA	NIL	0	0	0	0	0	0	0	
Ajmer 765/400kV	765/400kV : 2x1500MVA	NIL	0	0	0	0	0	0	0	
Bassi	400/220 kV : 2x315MVA +1x500MVA	NIL	0	0	0	0	0	0	0	220kV overloading
Bhiwadi	400/220 kV : 3x315MVA	NIL	0	0	0	0	0	0	0	220kV overloading
Kankroli	400/220 kV : 3x315MVA	NIL	0	0	0	0	0	0	0	220kV overloading
Kota	400/220 kV : 2x315MVA	NIL	0	0	0	0	0	0	0	220kV overloading
Bhinmal	400/220 kV : 2x315MVA+1x315 MVA UC	NIL	0	0	0	0	0	0	0	
Neemarana	400/220 kV : 1x315MVA +1x500MVA	NIL	300	0	1	0	0	0	0	
Sikar	400/220 kV : 2x315MVA +1x500MVA	NIL	0	0	0	0	0	0	0	220kV overloading
Jaipur (South)	400/220 kV : 2x500MVA	NIL	400	0	1	0	0	0	0	
Kotputli	400/220 kV : 2x315MVA+1x500MVA (Planned)	NIL	150	0	1	0	0	0	0	
		Total RAJ	850	350	3	0	0	0	0	1200
Haryana										
Kaithal	400/220 kV : 3x315MVA	NIL	150	0	1	0	0	0	0	
Panchkula	400/220 kV : 2x315MVA+500MVA	NIL	0	0	0	0	500	0	1	
Bahadurgarh	400/220 kV : 315MVA +500MVA+500MVA (UC)	NIL	150	0	1	0	0	0	0	
Sonepat	400/220 kV : 2x315MVA	NIL	0	0	0	0	500	0	1	
Manesar	400/220 kV : 2x500MVA	NIL	250	0	1	0	0	0	0	
		Total HARY	550	0	3	0	1000	0	2	1550
Uttar Pradesh										
Kanpur(New)	765/400 kV : 2x1500MVA+1x1500	NIL	0	1250	0	1	0	0	0	220kV Not available
Fatehpur	765/400kV : 2x1500MVA; 400/220 kV : 2x315MVA	NIL	0	0	0	0	500	0	1	
Mainpuri	400/220 kV : 2x315MVA +500MVA	NIL	150	0	1	0	0	0	0	
Sohawal	400/220 kV : 2x315MVA +500MVA	NIL	100	0	1	0	0	0	0	
Lucknow (new)	765/400 kV : 2x1500MVA	NIL	0	500	0	1	0	0	0	
Balia	765/400 kV : 2x1500MVA	NIL	0	850	0	1	0	0	0	220kV Not available.
Bareilly(New)	765/400 kV : 2x1500MVA	NIL	0	500	0	1	0	0	0	
Varanasi	765/400 kV : 2x1500MVA	NIL	0	500	0	1	0	0	0	
		Total UP	250	3600	2	5	500	0	1	4350
		Total NR	1650	3950	8	5	1500	0	3	7100
Odisha										
Jeypore	400/220kV: 2x630MVA		500	0	0		0	0	0	
Keonjhar	400/220kV: 2x315MVA	0	300	0	1		0	0	0	
Pandiabil	400/220kV: 2x500MVA	0	400	0	3		0	0	0	
Rengali	400/220kV: 2x315MVA	0	100	0	1		0	0	0	
Angul	765/400: 4x1500MVA	0	0	2500		2	0	0	0	
Total		Total Od:	1300	2500	5	2	0	0	0	3800
Jharkhand										
Chaibasa	400/220kV: 2x315MVA	0	400	0	2		0	0	0	
Daltonganj	400/220kV: 2x315MVA	0	400	0	1		0	0	0	
Ranchi	400/220kV: 2x315MVA + 1x500MVA		800		0		400	0	0	Additional 400MW would be available after commissioning of 3rd 400/220kV, 500MVA ICT at Ranchi (expected by Feb 2023)
Ranchi (New)	765/400kV: 2x1500MVA	0	0	900		1	0	0	0	
Chandwa	400kV switching		0	900		1	0	0	0	
Dhanbad	400/200kV: 2x500MVA		300							
Total		Total Jh:	1900	1800	3	2	400	0	0	4100
Bihar										

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			220kV level	400kV level	220kV level	400kV level	220kV level	400kV level		
Banka	400/132kV: 2x200MVA + 1x315MVA (existing) 400/220kV: 2x500MVA (under construction, expected by Oct 2024)	0	100	0	1	0	400	0	0	100MW at 132kV level in the existing system and 400MW at 220kV level with the implementation of "Augmentation of 400/220kV, 2x500MVA ICT at Banka" Scheme expected by Oct 2024
Lakhisarai	400/132kV: 2x200MVA + 1x315MVA	0	200	0	1	0	0	0	0	132kV level
Motihari	400/132kV: 2x200MVA + 1x315MVA	0	500	0	1	0	0	0	0	132kV level
Chandauti	400/220kV: 3x500MVA	0	900	0	2	0	0	0	0	
Muzaffarpur	400/220kV: 2x315MVA + 2x500MVA	0	600	0	2	0	0	0	0	line corridor available for 2 lines
Saharsa	400/220kV: 2x500MVA	0	900	0	2	0	0	0	0	
Sitamarhi	400/220kV: 2x500MVA	0	900	0	2	0	0	0	0	
		Total Bihar:	4100	0	11	0	400	0	0	4500
West Bengal										
Durgapur-B	400/220kV: 3x315MVA		0				300			220kV overloaded in present case under N-1. 300MW margin would be created after reconductoring of Durgapur - Parulia 220kV D/c line by DVC
Maithon-B	400/220kV: 3x500MVA		300							
Subhasgram	400/220kV: 2x315MVA + 1x500MVA	0	600	0	1		300	0	0	Additional 300MW would be available after commissioning of 6th 400/220kV, 500MVA ICT at Subhasgram by CESC (expected by 2024)
Jeerat-New	765/400: 2x1500MVA	0	0	2400			0	0	0	
Medinipur	765/400: 2x1500MVA	0	0	1500			0	0	0	
		Total WB:	900	3900	1	3	600	0	0	5400
		ER-Total	8200	8200	20	7	1400	0	0	17800
	All India	All India Total	11680	18550	38	21	2910	250	5	33390

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