

**National Load Despatch Centre
Total Transfer Capability for June 2014**

Issue Date: 31/05/2014

Issue Time: 1215 hrs

Revision No. 7

Corridor	Date	Time Period (hrs)	Total Transfer Capability (TTC)	Reliability Margin	Available Transfer Capability (ATC)	Long Term Access (LTA)/ Medium Term Open Access (MTOA) #	Margin Available for Short Term Open Access (STOA)	Changes in TTC w.r.t. Last Revision	Comments	
NR-WR *	1st June 2014 to 30th June 2014	00-24	2500	500	2000	297	1703			
WR-NR	1st June 2014 to 30th June 2014	00-17	4700	500	4200	4380	0	500	Revised due to change in Load Generation Balance and Commissioning of Sasan Unit-1.	
		23-24								
		17-23								
NR-ER*	1st June 2014 to 30th June 2014	00-06	1000	200	800	293	507			
		06-17'			800	423	377			
		17-18'	1100		900	423	477			
		18-23			900	293	607			
		23-24			800	293	507			
ER-NR ^{\$}	1st June 2014 to 30th June 2014	00-17	4000	300	3700	2431	1269	200	Revised due to change in Load Generation Balance.	
		23-24					1269			
		17-23					1269			
W3-ER ^{\$}	1st June 2014 to 30th June 2014	00-24	1800	300	1500	551	949			
ER-W3	1st June 2014 to 30th June 2014	00-24	1000	300	700	874	0			
WR-SR	1st June 2014 to 30th June 2014	00-24	1000	0	1000	1000	0			
SR-WR *	1st June 2014 to 30th June 2014	00-24	1000	0	1000	0	1000			
ER-SR	1st June 2014 to 30th June 2014	00-06	2650	0	2650	2158	492			
		18-24				2203	447			
SR-ER *	1st June 2014 to 30th June 2014	00-17	1100	0	1100	197	903			
		23-24					903			
		17-23					903			
ER-NER	1st June 2014 to 30th June 2014	00-06	645	50		595	205	390	95	Revised due to change in Load Generation Balance.
		06-17'	645			595	210	385	95	
		17-18	580			530	210	320	30	
		18-23	580			530	205	325	30	
		23-24	645			595	205	390	95	
NER-ER	1st June 2014 to 30th June 2014	00-17	500	100	400	0	400			
		23-24					350			
		17-23					350			
S1-S2	1st June 2014 to 13th June 2014	00-24	2640	295	2345	2139	206			
	14th June 2014 to 15th June 2014	00-24	2640	295	2345	2340	5			
	16th June 2014 to 30th June 2014	00-24	2920	295	2625	2449	176			
Import of Punjab	1st June 2014 to 30th June 2014	00-24	5700	300	5400	3790	1610			
Import TTC for DD & DNH	1st June 2014 to 30th June 2014	00-24	980	0	980	LTA and MTOA as per ex-pp schedule				
W3 zone Injection	1st June 2014 to 30th June 2014	00-17	9400	200	9200	7050	2150	400	Revised due to change in Load Generation Balance.	
		23-24					2650			
		17-23					2650			

* Fifty Percent (50 %) Counter flow benefit on account of LTA/MTOA transactions in the reverse direction would be considered for advanced transactions (Bilateral & First Come First Serve).

\$ As per Simulations, predominant direction of flow is on West to North Corridor. Hence, in case injection point is in Western Region (W1,W2,W3), STOA/PX transactions from West to North on West-East-North corridor shall not be allowed as such transaction increases congestion in the West to North Corridor.

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- 1) ER-SR TTC declared at Talcher Interconnector and Gazuwaka HVDC B/B seam
 2) S1 comprises of AP and Karnataka; S2 comprises of Tamil Nadu, Kerala and Pondicherry
 3) W3 comprises of the following regional entities :
 a) Chattisgarh Sell transaction, b) Jindal Power Limited (JPL) Stage-I & Stage-II, c) Jindal Steel and Power Limited (JSPL), d) ACBL, e) Lanco Amarkantak
 f) BALCO, g) Sterlite (#1,3,4), h) NSPCL, i) Sipat, j) Sipat, k) KSK Mahanadi, L)DB Power, m) KWPCCL, n)Vandana Vidut

The figure is based on LTA/MTOA approved by CTU and Allocation figures as per RPCs RTA/REA. In actual Operation, due to Units being on Maintenance/ Fuel shortage/New units being commissioned the LTA/MTOA utilized would vary. RLDC/NLDC would factor this situation on day-ahead basis. In the eventuality that net schedules exceed ATC, real time curtailments might be effected by RLDCs/NLDC.

In case of TTC Revision due to any shutdown :

- 1) The TTC value will be revised to normal values after restoration of shutdown.
 2) The TTC value will be revised to normal values if the shutdown is not being availed in real time.

Limiting Constraints

Corridor	Constraint
NR-WR	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak.
WR-NR	High loading of 765 kV Agra-Gwalior (1250 MW SPS setting on each circuit of 765 kV Gwalior-Agra) and Loop flows on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda (power flowing from WR to NR on 765kV Gwalior-Agra D/C and from NR to WR on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda).
NR-ER	(n-1) contingency of 400 kV Allahabad-Pusauli
ER-NR	(n-1) contingency of 400kV Farakka –Malda D/C
W3-ER	(n-1) contingency of 400kV Sterlite-Rourkela S/C
ER-W3	(n-1) contingency of 400kV Raigarh-Jharsuguda-Rourkela
WR-SR & ER-SR	1. Commissioning of 765kV Raichur-Sholapur S/C 2. Based on the operational experience after the synchronization of SR grid with NEW grid and due to inadvertent variation of 765kV Raichur-Sholapur line flow, observation of Low Frequency Oscillations(LFO) 3. ER-SR TTC has been declared assuming more than 1100 MW generation at Talcher Stage-2. In case Talcher Stage-2 generation goes below 1100 MW, then the ER-SR TTC would be revised downward as constraints within ER would emerge.
SR-WR	Bhadrawati HVDC B/B link capacity
SR-ER	(n-1) and (n-1-1) contingencies of 400kV Talcher-Rourkela D/C
ER-NER	(n-1) contingency of 400 kV Balipara – Bongaigaon D/C leading to thermal loading of 220kV BTPS-Agia S/C
NER-ER	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa
S1-S2	(n-1) contingency of 400 kV Kolar-Hosur D/C
Import of Punjab	(n-1) contingency of ICT at Dhuri and (n-1) contingency of 220kV Moga(PG)-Moga(PSTCL)
W3 zone Injection	(n-1-1) contingency of 400 kV Raipur-Bhadrawati D/C section and High loading of 400kV Raipur-Wardha (800 MW SPS setting on each circuit of 400kV Raipur-Wardha)

*Primary constraints

Simultaneous Import Capability

Corridor	Date	Time Period (hrs)	Total Transfer Capability (TTC)	Reliability Margin	Available Transfer Capability (ATC)	Long Term Access (LTA)/ Medium Term Open Access (MTOA)	Margin Available for Short Term Open Access (STOA)	Changes in TTC w.r.t. Last Revision	Comments
ER									
NR	1st June 2014 to 30th June 2014	00-17 23-24	8700	800	7900	6811	1089	500	Revised due to change in Load Generation Balance and Commissioning of Sasan Unit-1.
		17-23	8700		7900		1089		
NER	1st June 2014 to 30th June 2014	00-06	645	50	595	205	390	95	Revised due to change in Load Generation Balance.
		06-17'	645		595	210	385	95	
		17-18	580		530	210	320	30	
		18-23	580		530	205	325	30	
		23-24	645		595	205	390	95	
WR									
SR	1st June 2014 to 30th June 2014	00-06 18-24	3650	0	3650	3158	492		
		06-18'	3650		3650	3203	447		

Simultaneous Export Capability

Corridor	Date	Time Period (hrs)	Total Transfer Capability (TTC)	Reliability Margin	Available Transfer Capability (ATC)	Long Term Access (LTA)/ Medium Term Open Access (MTOA)	Margin Available for Short Term Open Access (STOA)	Changes in TTC w.r.t. Last Revision	Comments
NR*	1st June 2014 to 30th June 2014	00-06	3500	700	2800	590	2210		
		06-17'	3500		2800	720	2080		
		17-18	3600		2900	720	2180		
		18-23	3600		2900	590	2310		
		23-24	3500		2800	590	2210		
NER	1st June 2014 to 30th June 2014	00-17 23-24	500	100	400	0	400		
		17-23	450		350		350		
WR									
SR*	1st June 2014 to 30th June 2014	00-17 23-24	2100	0	2100	197	1903		
		17-23	2100		2100		1903		

* Fifty Percent (50 %) Counter flow benefit on account of LTA/MTOA transactions in the reverse direction would be considered for advanced transactions (Bilateral & First Come First Serve).

Limiting Constraints

NR	Import	(n-1) contingency of one circuit of 400kV Farakka –Malda D/C High loading of 765 kV Agra-Gwalior (1250 MW SPS setting on each circuit of 765 kV Gwalior-Agra) and high loop flows on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda (power flowing from WR to NR on 765kV Gwalior-Agra D/C and from NR to WR on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda).
	Export	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Allahabad-Pusauli
NER	Import	(n-1) contingency of 400 kV Balipara – Bongaigaon D/C leading to thermal loading of 220kV BTPS-Agia S/C
	Export	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa
SR	Import	1. Commissioning of 765kV Raichur-Sholapur S/C 2. Based on the operational experience after the synchronization of SR grid with NEW grid and due to inadvertent variation of 765kV Raichur-Sholapur line flow, observation of Low Frequency Oscillations(LFO). 3. ER-SR TTC has been declared assuming more than 1100 MW generation at Talcher Stage-2. In case Talcher Stage-2 generation goes below 1100 MW, then the ER-SR TTC would be revised downward as constraints within ER would emerge.
	Export	(n-1) and (n-1-1) contingencies of 400kV Talcher-Rourkela D/C

*Primary constraints

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Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	25.03.2014	Whole Month	Margin revised due to withdrawal/cancellation of 150 MW MTOA from Corporate Power Limited	ER-SR
			Re-Routing of transactions on West-East-North Corridor discontinued on account of Inter-Regional Loop flows leading to physical congestion on WR-NR.	WR-NR/ ER-NR
			Margin Revised due to correction in LTA/MTOA figure.	NR-WR
2	01-04-2014	Whole Month	Margin revised due to grant of 150 MW LTA towards SR from NEW grid and grant of 208 MW LTA to TANGEDCO	ER-SR / S1-S2
3	04-04-2014	Whole Month	Margin revised due to grant of 69 MW LTA to Jindal Power Limited Tamnar	W3/ ER-SR
4	11-04-2014	Whole Month	Margin revised due to correction of LTA. 69 MW LTA Quantum inadvertently added in the last revision.	ER-SR
5	01-05-2014	Whole Month	Margin revised due to incorporation of existing Power Allocation.	NR-WR
			Margin revised due to Commissioning of Sasan Unit-4.	WR-NR
			Margin revised due to incorporation of existing Solar Power Allocation to SR, ER, NER constituents between 6 hrs -18 hrs in LTA figures and allocation data available on RPCs RTA/REA.	NR-ER
			Margin revised considering the LTA/MTOA allocation available in RPCs RTA/REA.	ER-NR/ ER- W3
			Margin revised due to incorporation of existing LTA/MTOA allocation available in RPCs RTA/REA and Re-routing of existing MTOA granted by CTU.	W3-ER
			Margin revised due to incorporation of existing Solar Power Allocation to Karnataka between 6 hrs-18 hrs in LTA figures.	ER-SR
			Margin revised considering the LTA/MTOA allocation available in RPCs RTA/REA and due to incorporation of existing Solar Power Allocation to Assam.	ER-NER
			Revised due to Allocation of 150 MW TANGEDCO.	S1-S2
			Margin revised due to incorporation of existing LTA/MTOA allocation available in RPCs RTA/REA and existing MTOA granted by CTU.	W3 zone Injection
Revised due to augmentation/ modifications in Punjab control area network.	Import of Punjab			
6	23-05-2014	Whole Month	Refer to explanatory notes regarding the change in TTC representation given in the last page.	ER-SR/ S1-S2

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7	31-05-2014	Whole Month	Revised due to change in Load Generation Balance and Commissioning of Sasan Unit-1.	WR-NR
			Revised due to change in Load Generation Balance	ER-NR/ ER-NER
			Revised due to change in Load Generation Balance.	W3 zone Injection

ASSUMPTIONS IN BASECASE

Month : June '14

S.No.	Name of State/Area	Load		Generation	
		Peak Load (MW)	Off Peak Load (MW)	Peak (MW)	Off Peak (MW)
I	NORTHERN REGION				
1	Punjab	4471	4200	1608	1515
2	Haryana	5334	4220	1056	1117
3	Rajasthan	7448	7777	5583	5384
4	Delhi	3961	3666	681	728
5	Uttar Pradesh	10552	10484	5594	5815
6	Jammu & Kashmir	1602	1380	566	564
7	Uttarakhand	1925	1690	843	534
8	Himachal Pradesh	1102	1151	574	623
9	Chandigarh	180	200	0	0
10	ISGS/IPPs			17025	15536
	Total NR	36575	34768	33530	31816
II	EASTERN REGION				
1	West Bengal	7127	6661	5396	4376
2	Jharkhand	696	851	275	350
3	Orissa	3177	2990	2315	2770
4	Bihar	2276	1775	110	110
5	Damodar Valley Corporation	2328	2162	2703	2889
6	Sikkim	59	41	0	0
7	Bhutan	108	108	300	295
8	ISGS/IPPs	410	410	7400	7352
	Total ER	16181	14998	18499	18142
III	WESTERN REGION				
1	Chattisgarh	3118	2566	2217	1790
2	Madhya Pradesh	6272	5975	3092	2909
3	Maharashtra	15542	16342	10886	11197
4	Gujarat	11193	11948	9820	10359
5	Goa	258	360	0	0
6	Daman and Diu	124	94	0	0
7	Dadra and Nagar Haveli	619	600	0	0
8	ISGS/IPPs	1239	1239	18000	18000
	Total WR	38365	39124	44015	44255

IV	SOUTHERN REGION				
1	Andhra Pradesh	10867	9465	6571	5881
2	Tamil Nadu	11286	10266	7776	7002
3	Karnataka	8112	7123	6100	4619
4	Kerala	3214	2389	1781	863
5	Pondy	285	249	0	0
6	Goa	83	83	0	0
7	ISGS/IPPs			9937	9560
	Total SR	33847	29575	32165	27925
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	78	58	0	0
2	Assam	893	723	270	180
3	Manipur	84	48	0	0
4	Meghalaya	230	168	115	41
5	Mizoram	60	38	4	4
6	Nagaland	84	57	12	8
7	Tripura	158	115	95	99
8	ISGS/IPPs			561	274
	Total NER	1587	1207	1057	606
	Total All India	126555	119672	129266	122744