

**National Load Despatch Centre
Total Transfer Capability for August 2015**

Issue Date: 07/08/2015

Issue Time: 1715 hrs

Revision No. 12

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 Aug 2015 to 31st Aug 2015	00-24	2500	500	2000	421	1579			
WR-NR*	1st Aug 2015 to 6th Aug 2015	00-17	5100	500	4600	5277	0		Revised due to Overloading of 400kV SSP-Asoj S/C (Note: At present, due to Outage of Vindhyachal HVDC Block TTC was further reduced by 250MW).	
		23-24	5100		4600		0			
	7th Aug 2015	00-18	5100	500	4600	5277	0	-200		
		18-24	4900		4400		0			
	8th Aug 2015 to 17th Aug 2015	00-17	4900	500	4400	5277	0	-200		
		23-24	4900		4400		0			
	18th Aug 2015 to 31st Aug 2015	00-17	5100	500	4600	5277	0			
		23-24	5100		4600		0			
NR-ER*	1st Aug 2015 to 31st Aug 2015	00-06	2000	200	1800	293	1507			
06-18'		2000	1800		358	1442				
18-24		2000	1800		293	1507				
ER-NR*	1st Aug 2015 to 31st Aug 2015	00-17	4800	300	4500	2431	2069			
		23-24	4800		4500		2069			
W3-ER ^s	1st Aug 2015 to 31st Aug 2015	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.							
ER-W3	1st Aug 2015 to 31st Aug 2015	00-24	1000	300	700	874	0			
WR-SR	1st Aug 2015	00-05	2700	750	1950	1550	400			
		05-07'	2300		1550	1550	0			
		07-22'	2300		1550	1550	0			
		22-24	2700		1950	1550	400			
	2nd Aug 2015	00-05	2700	750	1950	1550	400			
		05-22'	2300		1550	1550	0			
		22-24	2700		1950	1550	400			
	3rd Aug 2015	00-05	2700	750	1950	1550	400			
		05-08'	2300		1550	1550	0			
		08-22'	1000	0	1000	1550	0			
		22-24	1000		1000	1550	0			
	4th Aug 2015	00-05	2700	750	1950	1550	400			
		05-22'	2300		1550	1550	0			
		22-24	2700		1950	1550	400			
	5th Aug 2015	00-05	2700	750	1950	1550	400			
		05-07'	2300		2300	1550	0			
		07-22	1000	0	1000	1550	-550			
	6th Aug 2015 to 31st Aug 2015	00-05	2700	750	1950	1550	400			
		05-22'	2300		1550	1550	0			
		22-24	2700		1950	1550	400			
	SR-WR *	1st Aug 2015 to 31st Aug 2015	00-24	No limit is being Specified.						
	ER-SR	1st Aug 2015 to 3rd Aug 2015	00-06	2650	0	2650	2300	350		
			18-24				2365	285		
		4th Aug 2015 to 19th Aug 2015	00-06	2650	0	2650	1857	793		
18-24			1922				728			
20th Aug 2015 to 31st Aug 2015		00-06	2650	0	2650	2300	350			
		18-24				2365	285			
SR-ER *	1st Aug 2015 to 31st Aug 2015	00-24	No limit is being Specified.							
ER-NER	1st Aug 2015 to 31st Aug 2015	00-17	1000	40	960	210	750			
		23-24	1030		990		780			
NER-ER	1st Aug 2015 to 31st Aug 2015	00-17	1310	30	1280	0	1280			
		23-24	1300		1260		1260			

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S1-S2	1st Aug 2015 to 31st Aug 2015	00-24	S1-S2 corridor TTC/ATC is uploaded on NLDC website under Intra-Regional Section in Monthly ATC.						
Import of Punjab	1st Aug 2015 to 31st Aug 2015	00-24	Import of Punjab TTC/ATC is uploaded on NLDC website under Intra-Regional Section in Monthly ATC.						
Import of DD & DNH	1st Aug 2015 to 31st Aug 2015	00-24	Import of DD & DNH TTC/ATC is uploaded on NLDC website under Intra-Regional Section in Monthly ATC.						
W3 zone Injection	1st Aug 2015 to 4th Aug 2015	00-17	9400	200	9200	7236	1964		
		23-24	9900		9700		2464		
	5th Aug 2015 to 31st Aug 2015	00-17	9400	200	9200	7576	1624		
		23-24	9900		9700		2124		

* 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.

- 1) S1 comprises of Telangana, AP and Karnataka; S2 comprises of Tamil Nadu, Kerala and Puducherry
 2) 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) Korba, j) Sipat, k) KSK Mahanadi, L)DB Power, m) KWPCCL, n)Vandana Vidyut

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 400kV Singrauli-Anpara & 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 Saranath-Pusauli
ER-NR	N-1 contingency of 400 kV Biharsharif- Lakhisarai S/C
ER-W3	1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG)
WR-SR & ER-SR	1. (n-1) of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) 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.
ER-NER	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA ICT at Misa
NER-ER	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA ICT at Misa
W3 zone Injection	1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG)

*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 Aug 2015 to 31st Aug 2015	00-05 08-24	7500	800	6700	7708	0		
		05-08'	8000		7200		0		
NER	1st Aug 2015 to 31st Aug 2015	00-17 23-24	1000	40	960	210	750		
		17-23	1030		990		780		
WR									
SR	1st Aug 2015	00-05	5350	750	4600	3850	750		
		05-06'	4950		4200	3850	350		
		06-07'	4950		4200	3915	285		
		07-18'	4950		4200	3915	285		
		18-22'	4950		4200	3850	350		
		22-24	5350		4600	3850	750		
	2nd Aug 2015	00-05	5350	750	4600	3850	750		
		05-06'	4950		4200	3850	350		
		06-18'	4950		4200	3915	285		
		18-22'	4950		4200	3850	350		
	3rd Aug 2015	00-05	5350	750	4600	3850	750		
		05-06'	4950		4200	3850	350		
		06-08'	4950		4950	3915	1035		
		08-18'	3650		3650	3915	0		
		18-22'	3650		0	3650	3850	0	
	4th Aug 2015	00-05	5350	750	4600	3850	750		
		05-06'	4950		4200	3407	1193		
		06-18'	4950		4200	3407	793		
		18-22'	4950		4200	3472	728		
	5th Aug 2015	00-05	5350	750	4600	3850	750		
		05-06'	4950		4200	3407	793		
		06-07'	4950		4950	3472	1478		
		07-18'	3650		2900	3472	-572		
		18-22'	3650		0	2900	3407	-507	
	6th Aug 2015 to 19th Aug 2015	00-05	5350	750	4600	3850	750		
		05-06'	4950		4200	3407	1193		
		06-18'	4950		4200	3472	728		
		18-22'	4950		4200	3407	793		
	20th Aug 2015 to 31st Aug 2015	00-05	5350	750	4600	3850	750		
		05-06'	4950		4200	3850	350		
		06-18'	4950		4200	3915	285		
		18-22'	4950		4200	3850	350		
			22-24	5350		4600	3850	750	

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 Aug 2015 to 31st Aug 2015	00-06	4500	700	3800	714	3086		
		06-18'			3800	779	3021		
		18-24			3800	714	3086		
NER	1st Aug 2015 to 31st Aug 2015	00-17 23-24	1310	30	1280	0	1280		
		17-23	1300	40	1260		1260		
WR									
SR *	1st Aug 2015 to 31st Aug 2015	00-24	No limit is being Specified.						

* 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 400 kV Biharshariff- Lakhisarai S/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 Saranath-Pusaali
NER	Import	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA
	Export	ICT at Misa
SR	Import	1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) 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.

*Primary constraints

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Total Transfer Capability for August 2015**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	6/16/2015	Whole month	Revised considering skewed sharing of flows on WR-NR and ER-NR corridor in the range 70:30	Import of NR
2	6/29/2015	1-8-15 - 21-8-15	LTA/MTOA revised due to Talcher Stage 2 Unit 3 Shut-Down and Jhajjar Re-Allocation	ER-SR / NR-WR
		22-8-15 - 31-8-15	LTA/MTOA revised due to Jhajjar Re-Allocation	
3	7/16/2015	1-8-15 - 21-8-15	STOA Margin revised due to deferment of Talcher Stage 2 Unit 3 Shut-Down.	ER-SR
4	7/20/2015	Whole month	STOA Margin revised considering CERC order dated 03-07-2015 in petition No- 92/MP/2015 which is under implementation by CTU. Pending this any margins would be released for short term transactions on day ahead basis.	ER-SR
5	7/27/2015	Whole month	Revised considering the present Maharashtra demand pattern.	WR-SR
6	7/31/2015	8/1/2015	Revised due to shutdown of 400kV Ramagundam-Bhadrawati Ckt-1.	WR-SR
		Whole month	Revised considering present WR-NR and ER-NR Inter-regional flow pattern flow in the range 68:32	Import of NR
7	7/31/2015	8/1/2015	Revised due to cancellation of 400kV Ramagundam-Bhadrawati Ckt-1 shutdown by indenting agency.	WR-SR
8	8/2/2015	8/3/2015	Revised due to shutdown of 765 kV Sholapur-Raichur-2	WR-SR
9	8/3/2015	4-8-15 - 19-8-15	STOA Margin revised due to shutdown of Talcher Stage-2 Unit-3.	ER-SR
10	8/4/2015	5-8-15 - 31-8-15	STOA Margin revised due to Operationalization of LTA.	W3
11	8/4/2015	8/5/2015	Due to the shutdown of 765 kV Raichur-Shoalpur-2	WR-SR
12	8/7/2015	7-8-15 - 17-8-15	Revised due to Overloading of 400kV SSP-Asoj S/C (Note: At present, due to Outage of Vindhyachal HVDC Block TTC was further reduced by 250MW).	WR-NR

ASSUMPTIONS IN BASECASE					
				Month : August '15	
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	8713	8161	4857	4826
2	Haryana	8363	7722	3103	3103
3	Rajasthan	9308	8711	5400	5399
4	Delhi	5197	4629	1251	1251
5	Uttar Pradesh	13078	14381	6632	6641
6	Uttarakhand	1707	1599	775	698
7	Himachal Pradesh	1212	1081	1132	1137
8	Jammu & Kashmir	2252	1650	634	589
9	Chandigarh	304	250	0	0
10	ISGS/PPs	0	0	20759	19350
	Total NR	50134	48182	44543	42994
II	EASTERN REGION				
1	Bihar	2295	1977	210	110
2	Jharkhand	898	692	499	404
3	Damodar Valley Corporation	2555	2323	3100	3043
4	Orissa	3491	2769	2847	2160
5	West Bengal	6943	6534	4946	3576
6	Sikkim	80	40	0	0
7	Bhutan	107	107	1170	1000
8	ISGS/PPs	607	607	10535	9591
	Total ER	16976	15049	23307	19884
III	WESTERN REGION				
1	Maharashtra	18462	13082	12556	7174
2	Gujarat	13136	8742	10115	6180
3	Madhya Pradesh	7004	4347	3935	2521
4	Chattisgarh	3488	2084	2491	1036
5	Daman and Diu	287	250	0	0
6	Dadra and Nagar Haveli	675	640	0	0
7	Goa-WR	474	286	0	0
8	ISGS/PPs	1059	1059	23713	21391
	Total WR	44585	30489	52810	38302

IV	SOUTHERN REGION				
1	Andhra Pradesh	6293	6002	5623	5039
2	Telangana	6866	6242	2944	2103
3	Karnataka	7897	6360	7633	5727
4	Tamil Nadu	13380	11277	8916	7189
5	Kerala	3271	1992	1694	693
6	Pondy	336	273	0	0
7	Goa-SR	69	69	0	0
8	ISGS/IPPs	0	0	8665	8530
	Total SR	38112	32215	35475	29281
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	134	100	0	0
2	Assam	1070	1003	284	242
3	Manipur	133	124	0	0
4	Meghalaya	305	205	198	148
5	Mizoram	71	44	4	3
6	Nagaland	111	115	21	16
7	Tripura	270	170	110	110
8	ISGS/IPPs	7	7	1554	1464
	Total NER	2101	1768	2171	1983
	Total All India	151909	127703	158306	132444