

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

Issue Date:05/10/2015

Issue Time: 1315 hrs

Revision No. 8

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 Oct 2015 to 31st Oct 2015	00-24	2500	500	2000	706	1294		
WR-NR*	1st Oct 2015 to 31st Oct 2015	00-24	7450	500	6950	5638	1312		
NR-ER*	1st Oct 2015 to 31st Oct 2015	00-06	2000	200	1800	293	1507		
		06-18'	2000		1800	358	1442		
		18-24	2000		1800	293	1507		
ER-NR*	1st Oct 2015 to 31st Oct 2015	00-24	4800	300	4500	2431	2069		
W3-ER ^s	1st Oct 2015 to 31st Oct 2015	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.						
ER-W3	1st Oct 2015 to 31st Oct 2015	00-24	No limit is being Specified.						
WR-SR	1st Oct 2015 to 4th Oct 2015	00-05	2700	750	1950	1950	0		
		05-22'	2300		1550	1550	0		
		22-24	2700		1950	1950	0		
	5th Oct 2015 to 31st Oct 2015	00-05	2830	750	2080	2080	0		
		05-22'	2830		2080	2080	0		
		22-24	2830		2080	2080	0		
SR-WR *	1st Oct 2015 to 31st Oct 2015	00-24	No limit is being Specified.						
ER-SR	1st Oct 2015 to 31st Oct 2015	00-06	2650	0	2650	2585	65		
		18-24				2650	0		
SR-ER *	1st Oct 2015 to 31st Oct 2015	00-24	No limit is being Specified.						
S1-S2	1st Oct 2015 to 31st Oct 2015	00-24	S1-S2 corridor TTC/ATC is uploaded on NLDC website under Intra-Regional Section in Monthly ATC.						
ER-NER	1st Oct 2015 to 31st Oct 2015	00-17	1390	45	1345	210	1135		
		23-24	1135		1090		880		
NER-ER	1st Oct 2015 to 31st Oct 2015	00-17	1415	45	1370	0	1370		
		23-24	1250		1205		1205		
W3 zone Injection	1st Oct 2015 to 05th Oct 2015	00-24	11000	200	10800	7576	3224		LTA/MTOA revised after operationalization of LTA as intimated by CTU after completion of trial operation of 765kV Aurangabad-Sholapur Ckt-2
	06th Oct 2015 to 31st Oct 2015	00-24	11000	200	10800	8106	2694		

* 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).

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\$ 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	1. (n-1) Contingency of 765kV Gwalior-Agra one ckt leads to 2750 MW loading on second circuit. 2.High Loading of 400kV Singrauli-Anpara S/C.
NR-ER	(n-1) contingency of 400 kV Saranath-Pusauli
ER-NR	N-1 contingency of 400 kV Biharshariff- Lakhisarai S/C
WR-SR & ER-SR	1. Outage of 765 kV Auarangabad - Sholapur will lead to high angular difference between Wardha and Parli 2. SPS limit of 765 kV Raichur - Sholapur 2*S/C 3. Low Voltage at Gazuwaka (East) Bus.
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. Outage of 765 kV Auarangabad - Sholapur will lead to high angular difference between Wardha and Parli 2. SPS limit of 765 kV Raichur - Sholapur 2*S/C

*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 Oct 2015 to 31st Oct 2015	00-05	10650	800	9850	8069	1781			
		05-08'	11150		10350		2281			
		08-19'	10650		9850		1781			
		19-24'	9950		9150		1081			
NER	1st Oct 2015 to 31st Oct 2015	00-17	1390	45	1345	210	1135			
		23-24			1090		880			
		17-23			1135					
WR										
SR	1st Oct 2015 to 4th Oct 2015	00-05	5350	750	4600	4535	65			
		05-06'	4950		4200	4135	65			
		06-18'	4950		4200	4200	0			
		18-22'	4950		4200	4135	65			
		22-24	5350		4600	4535	65			
	5th Oct 2015 to 31st Oct 2015	00-05	5480	750	4730	4730	0			
		05-06'	5480		4730	4730	0			
		06-18'	5480		4730	4730	0			
		18-22'	5480		4730	4730	0			
		22-24	5480		4730	4730	0			

* 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).

* For approving STOA Bilateral transactions, margin available in Simultaneous Import of NR would be apportioned on WR-NR Corridor & ER-NR Corridor in the following ratio:
 Margin in Simultaneous import of NR = A
 WR-NR ATC =B
 ER-NR ATC = C

 Margin for WR-NR applicants = $B * A/(B+C)$
 Margin for ER-NR Applicants = $C * A/(B+C)$

Example: Margin for WR-NR applicants from 00-05 hours = $231 * 5900/(5900+4500) = 131$
 Margin for ER-NR applicants from 00-05 hours = $231 * 4500/(5900+4500) = 100$

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 Oct 2015 to 31st Oct 2015	00-06	4500	700	3800	999	2801		
		06-18'			3800	1064	2736		
		18-24			3800	999	2801		
NER	1st Oct 2015 to 31st Oct 2015	00-17	1415	45	1370	0	1370		
		23-24			1205		1205		
		17-23			1205				
WR									
SR *	1st Oct 2015 to 31st Oct 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 1. (n-1) Contingency of 765kV Gwalior-Agra one ckt leads to 2750 MW loading on second circuit. 2.High Loading of 400kV Singrauli-Anpara S/C.
	Export	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Saranath-Pusauli
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. Outage of 765 Auarangabad - Sholapur will lead to high angular difference between Wardha and Parli 2. SPS limit of 765 kV Raichur - Sholapur 2*S/C 3. Low Voltage at Gazuwaka (East) Bus.

*Primary constraints

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

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	20-07-2015	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
2	26-08-2015	Whole Month	Revised due to commissioning of 765kV Gwalior-Phagi Ckt-1&2, 765kV Phagi-Bhiwani S/C and STOA margin revised due to operationalization of MTOA.	WR-NR/ Import of NR
			STOA Margin revised due to Operationalization of LTA.	W3 Zone Injection
3	02-09-2015	Whole Month	A remark has been put on Simultaneous Import of NR for approving STOA Bilateral Transactions	Import of NR
4	24-09-2015	Whole Month	Revised due to revision in 765kV Gwalior-Agra Ckt-1&2 SPS setting.	WR-NR/ Import of NR
			Revised due to commissioning of 765kV Dharamjaigarh-Jabalpur D/C.	W3 Zone Injection
5	28-09-2015	Whole Month	Revised due to commissioning of 765kV Dharamjaigarh-Jabalpur D/C.	ER-W3
			Revised considering the present Maharashtra demand pattern.	WR-SR
6	30-09-2015	Whole Month	Revised due to outage of Vindhyachal BTB HVDC Block-1.	WR-NR/ Import of NR
7	10-04-2015	05-10-2015 to 31-10-2015	Revised due to completion of trial operation of 765kV Aurangabad-Sholapur Ckt-2	WR-SR
8	05-10-2015	06-10-2015 to 31-10-2015	LTA/MTOA revised after operationalization of LTA as intimated by CTU after completion of trial operation of 765kV Aurangabad-Sholapur Ckt-2	W3 Zone Injection

ASSUMPTIONS IN BASECASE					
				Month : October '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	7657	6004	4196	4242
2	Haryana	7576	6766	3317	3317
3	Rajasthan	9178	9897	6114	6110
4	Delhi	4449	2882	1156	1156
5	Uttar Pradesh	12168	10933	5913	5851
6	Uttarakhand	1573	1277	556	404
7	Himachal Pradesh	1253	978	418	435
8	Jammu & Kashmir	2244	1746	240	232
9	Chandigarh	238	147	0	0
10	ISGS/PPs	0	0	18220	12306
	Total NR	46336	40630	40130	34053
II	EASTERN REGION				
1	Bihar	2686	1884	240	120
2	Jharkhand	995	793	552	300
3	Damodar Valley Corporation	2487	2030	3831	3261
4	Orissa	3593	2796	3378	2483
5	West Bengal	7396	6253	5086	4000
6	Sikkim	99	59	0	0
7	Bhutan	338	337	1490	1150
8	ISGS/PPs	610	566	11062	9925
	Total ER	18204	14717	25639	21239
III	WESTERN REGION				
1	Maharashtra	20077	12639	14900	8194
2	Gujarat	14392	8618	11287	5509
3	Madhya Pradesh	8008	5948	4832	3049
4	Chattisgarh	3838	3825	2611	2851
5	Daman and Diu	310	237	0	0
6	Dadra and Nagar Haveli	784	581	0	0
7	Goa-WR	521	298	0	0
8	ISGS/PPs	1056	1055	23713	21264
	Total WR	48986	33200	57341	40867

IV	SOUTHERN REGION				
1	Andhra Pradesh	5870	5494	5192	4701
2	Telangana	7082	6346	3246	2362
3	Karnataka	7654	5943	7091	5422
4	Tamil Nadu	12244	10949	6990	5376
5	Kerala	3271	2218	1782	820
6	Pondy	323	278	0	0
7	Goa-SR	86	76	0	0
8	ISGS/IPPs	0	0	9622	9622
	Total SR	36530	31304	33923	28303
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	107	44	0	0
2	Assam	969	719	265	195
3	Manipur	113	69	0	0
4	Meghalaya	295	197	214	163
5	Mizoram	76	44	4	4
6	Nagaland	95	70	16	6
7	Tripura	260	162	105	105
8	ISGS/IPPs	7	7	1313	856
	Total NER	1922	1312	1917	1329
	Total All India	151979	121164	158951	125791