

National Load Despatch Centre
Total Transfer Capability for October 2015

Issue Date: 10/10/2015

Issue Time: 1235 hrs

Revision No. 11

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 6th Oct 2015	00-24	7450	500	6950	5638	1312		
	7th Oct 2015 to 8th Oct 2015	00-07	7450	500	6950	5638	1312		
		07-24	6600		6100	5638	462		
	9th Oct 2015	00-08	7450	500	6950	5638	1312		
		08-24	6600		6100	5638	462		
	10th Oct 2015	00-07	7450	500	6950	5638	1312		
		07-24	6400		5900	5638	262		
	11th Oct 2015	00-07	7450	500	6950	5638	1312		
		07-24	7450		6950	5638	1312	1050	Revised due to deferrment of 765kV Gwalior-Agra Ckt-2 shutdown.
	12th Oct 2015	00-07	7450	500	6950	5638	1312		
07-24		6400	5900		5638	262	-1050	Revised due to shutdown of 765 kV Gwalior - Agra ckt 2	
13th 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 10th Oct 2015	00-05	2830	750	2080	2080	0		
		05-22'	2830		2080	2080	0		
		22-24	2830		2080	2080	0		
	11th Oct 2015	00-08	2830	750	2080	2080	0		
		08-24'	1000	0	1000	2080	0	-1830	Revised due to shutdown of 765kV Raichur-Sholapur-1
	12th 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 12th Oct 2015	00-06	2650	0	2650	2585	65		
		18-24				2650	0		
	13th Oct 2015 to 14th Oct 2015	00-06	2650	0	2650	2585	65		
		06-07'				2650	0		
		07-18'	2350		2350	2650	0		
	18-24'	2585		0					
	15th Oct 2015 to 31st Oct 2015	00-06	2650	0	2650	2585	65		
18-24		2650				0			
06-18'									
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.						

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ER-NER	1st Oct 2015 to 31st Oct 2015	00-17 23-24	1390	45	1345	210	1135		
		17-23	1135		1090		880		
NER-ER	1st Oct 2015 to 31st Oct 2015	00-17 23-24	1415	45	1370	0	1370		
		17-23	1250		1205		1205		
W3 zone Injection	1st Oct 2015 to 05th Oct 2015	00-24	11000	200	10800	7576	3224		
	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).

\$ 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 6th Oct 2015	00-05	10650	800	9850	8069	1781		
		05-08'	11150		10350		2281		
		08-19'	10650		9850		1781		
		19-24'	9950		9150		1081		
	7th Oct 2015 to 8th Oct 2015	00-05	10650	800	9850	8069	1781		
		05-07'	11150		10350		2281		
		07-08'	9880		9080		1011		
		08-19'	9435		8635		566		
	9th Oct 2015	19-24'	8824		8024		0		
		00-05	10650	800	9850	8069	1781		
		05-07'	11150		10350		2281		
		07-08'	11150		10350		2281		
	08-19'	9435	8635		566				
	10th Oct 2015	19-24'	8824		8024		0		
		00-05	10650	800	9850	8069	1781		
		05-07'	11150		10350		2281		
		07-08'	9581		8781		712		
	08-19'	9149	8349		280				
	11th Oct 2015	19-24'	8556		7756		0		
		00-05	10650	800	9850	8069	1781		
		05-07'	11150		10350		2281		
		07-08'	11150		10350		2281	1569	
	08-19'	10650	9850		1781		1501		
	12th Oct 2015	19-24'	9950		9150		1081	1394	Revised due to deferrment of 765kV Gwalior-Agra Ckt-2 shutdown.
		00-05	10650	800	9850	8069	1781		
		05-07'	11150		10350		2281		
		07-08'	9581		8781		712	-1569	
	08-19'	9149	8349		280		-1501		
13th Oct 2015 to 31st Oct 2015	19-24'	8556		7756		0	-1394	Revised due to shutdown of 765 kV Gwalior - Agra ckt 2	
	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									
17-23		1135						880	
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 10th 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		
	11th Oct 2015	00-06	5480	750	4730	4665	65		
		06-08'	5480	750	4730	4730	0		
		08-18'	3650	0	3650	4730	0	-1830	Revised due to shutdown of 765kV Raichur-Sholapur-1
	12th Oct 2015	18-24	3650	0	3650	4665	0	-1830	
		00-06	5480	750	4730	4665	65		
		06-18'	5480		4730	4730	0		
	18-24	5480	4730		4665	65			
	13th Oct 2015 to 14th Oct 2015	00-06	5480	750	4730	4665	65		
		06-07'	5480		4730	4730	0		
		07-18'	5180		4430	4730	0	-300	
	15th Oct 2015 to 31st Oct 2015	18-24	5180		4430	4665	0	-300	Revised due to shutdown of 400kV Rengali-Indravati
		00-06	5480	750	4730	4665	65		
06-18'		5480	4730		4730	0			
18-24	5480	4730	4665		65				

* 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		
		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	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
2	8/26/2015	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	9/2/2015	Whole Month	A remark has been put on Simultaneous Import of NR for approving STOA Bilateral Transactions	Import of NR
4	9/24/2015	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	9/28/2015	Whole Month	Revised due to commissioning of 765kV Dharamjaigarh-Jabalpur D/C.	ER-W3
			Revised considering the present Maharashtra demand pattern.	WR-SR
6	9/30/2015	Whole Month	Revised due to outage of Vindhyachal BTB HVDC Block-1.	WR-NR/ Import of NR
7	4/10/2015	05-10-2015 to 31-10-2015	Revised due to completion of trial operation of 765kV Aurangabad-Sholapur Ckt-2	WR-SR
8	10/5/2015	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
9	10/6/2015	07-10-2015 to 08-10-2015	Revised due to shutdown of 765 kV Gwalior - Phagi ckt 1 and ckt 2 one at a time	WR-NR/ Import of NR
10	10/8/2015	10/9/2015	Revised due to shutdown of 765 kV Gwalior - Phagi ckt 1	WR-NR/ Import of NR
		10-10-2015 to 11-10-2015	Revised due to shutdown of 765 kV Gwalior - Agra ckt 1 and ckt 2 one at a time	

11	10/10/2015	11/10/2015	Revised due to shutdown of 765kV Raichur-Sholapur-1	WR-SR
		11-10-2015 to 12-10-2015	Revised due to deferrment of 765kV Gwalior-Agra Ckt-2 shutdown on 11th Oct'15 to 12th Oct'15	WR-NR/ Import of NR
		13-10-2015 to 14-10-2015	Revised due to shutdown of 400kV Rengali-Indravati	ER-SR

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/IPPs	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/IPPs	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/IPPs	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