

National Load Despatch Centre
Total Transfer Capability for November 2015

Issue Date: 26/08/2015

Issue Time: 1600 hrs

Revision No. 1

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 Nov 2015 to 30th Nov 2015	00-24	2500	500	2000	706	1294		
WR-NR*	1st Nov 2015 to 30th Nov 2015	00-24	6400	500	5900	5638	262	1300	Revised due to commissioning of 765kV Gwalior Ckt-1&2, 765kV Phagi-Bhiwani S/C and STOA margin revised due to operationalization of MTOA.
NR-ER*	1st Nov 2015 to 30th Nov 2015	00-06	2000	200	1800	293	1507		
		06-18'	2000		1800	358	1442		
		18-24	2000		1800	293	1507		
ER-NR*	1st Nov 2015 to 30th Nov 2015	00-24	3400	300	3100	2431	669		
W3-ER ^s	1st Nov 2015 to 30th Nov 2015	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.						
ER-W3	1st Nov 2015 to 30th Nov 2015	00-24	1000	300	700	874	0		
WR-SR	1st Nov 2015 to 30th Nov 2015	00-24	2300	750	1550	1550	0		
SR-WR *	1st Nov 2015 to 30th Nov 2015	00-24	No limit is being Specified.						
ER-SR	1st Nov 2015 to 30th Nov 2015	00-06	2650	0	2650	2585	65		
		18-24				2650	0		
SR-ER *	1st Nov 2015 to 30th Nov 2015	00-24	No limit is being Specified.						
ER-NER	1st Nov 2015 to 30th Nov 2015	00-17	1310	45	1265	210	1055		
		23-24	1100		1055		845		
NER-ER	1st Nov 2015 to 30th Nov 2015	00-17	1420	45	1375	0	1375		
		23-24	1370		1325		1325		
W3 zone Injection	1st Nov 2015 to 30th Nov 2015	00-17	9400	200	9200	7576	1624		STOA Margin revised due to Operationalization of LTA.
		23-24	9900		9700		2124		
S1-S2	1st Nov 2015 to 30th Nov 2015	00 -24	S1-S2 corridor TTC/ATC is uploaded on NLDC website under Intra-Regional Section in Monthly ATC.						

* 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) JDB 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.

Note on LTA/MTOA towards SR: Existing LTA/MTOA plus notional LTA/MTOA granted by CTU as per CERC orders dated 16th Feb 2015 and 3rd Jul 2015 in petition nos 92/MP/2014 and 92/MP/2015. Notional LTA/MTOA will be operationalized based on margins available from time to time.

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.

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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 (1400 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	1. n-1 contingency of one circuit of 400 kV Biharshariff- Lakhisarai leads to high loading on the other circuit 2. n-1 contingency of one circuit of 400 kV Farakka-Malda leads to high loading of the other circuit
ER-W3	1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular Ocartation 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 Ocartation 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. n-1 contingency of 400/132 kV, 2 x 200 MVA ICTs at Silchar
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 Ocartation 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 Nov 2015 to 30th Nov 2015	00-05	9100	800	8300	8069	231	1800	Revised due to commissioning of 765kV Gwalior Ckt-1&2, 765kV Phagi-Bhiwani S/C and STOA margin revised due to operationalization of MTOA.
		05-08'	9600		8800		731	2300	
		08-19'	9100		8300		231	1800	
		19-24	8500		7700		0	1200	
NER	1st Nov 2015 to 30th Nov 2015	00-17	1310	45	1265	210	1055		
		23-24			1055		845		
		17-23			1100				
WR									
SR	1st Nov 2015 to 30th Nov 2015	00-06	4950	750	4200	4135	65		
		18-24			4200	4200	0		
		06-18'			4950				

* 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).

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 Nov 2015 to 30th Nov 2015	00-06	4500	700	3800	999	2801		
		06-18'			3800	1064	2736		
		18-24			3800	999	2801		
NER	1st Nov 2015 to 30th Nov 2015	00-17	1420	45	1375	0	1375		
		23-24			1325		1325		
		17-23			1370		45		1325
WR									
SR *	1st Nov 2015 to 30th Nov 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 (1400 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-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 ICT at Misa. n-1 contingency of 400/132 kV, 2 x 200 MVA ICTs at Silchar
	Export	(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.
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

ASSUMPTIONS IN BASECASE					
				Month : November '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	5559	3491	2152	2085
2	Haryana	6228	2948	2217	2217
3	Rajasthan	9325	8655	5570	5514
4	Delhi	3175	1549	790	790
5	Uttar Pradesh	12198	11682	5569	5587
6	Uttarakhand	1679	1218	525	228
7	Himachal Pradesh	1376	925	336	263
8	Jammu & Kashmir	2339	2352	401	255
9	Chandigarh	172	75	0	0
10	ISGS/IPPs	0	0	19083	11552
	Total NR	42053	32894	36643	28491
II	EASTERN REGION				
1	Bihar	2831	2132	180	120
2	Jharkhand	1049	914	540	360
3	Damodar Valley Corporation	2517	2132	3660	2748
4	Orissa	3672	2946	3365	1842
5	West Bengal	6333	5916	4695	3051
6	Sikkim	125	102	0	0
7	Bhutan	0	0	0	0
8	ISGS/IPPs	609	559	10625	9607
	Total ER	17137	14700	23065	17728
III	WESTERN REGION				
1	Maharashtra	20822	13093	14523	7312
2	Gujarat	13593	9878	10498	7289
3	Madhya Pradesh	9763	6885	4479	3426
4	Chattisgarh	3676	2005	2743	1102
5	Daman and Diu	306	229	0	0
6	Dadra and Nagar Haveli	783	562	0	0
7	Goa-WR	511	288	0	0
8	ISGS/IPPs	982	973	27229	23303
	Total WR	50436	33913	59472	42431

IV	SOUTHERN REGION				
1	Andhra Pradesh	5629	5313	4759	4284
2	Telangana	6366	6065	2427	1899
3	Karnataka	7697	5550	6984	5307
4	Tamil Nadu	11912	11319	6646	5746
5	Kerala	3445	2132	1796	826
6	Pondy	336	220	0	0
7	Goa-SR	85	85	0	0
8	ISGS/PPs	0	0	10043	9773
	Total SR	35470	30684	32655	27835
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	94	40	0	0
2	Assam	954	698	267	198
3	Manipur	103	56	0	0
4	Meghalaya	301	179	155	87
5	Mizoram	69	41	4	4
6	Nagaland	82	63	8	6
7	Tripura	224	131	106	106
8	ISGS/PPs	7	7	1303	847
	Total NER	1834	1215	1843	1248
	Total All India	146930	113407	153679	117734