National Load Despatch Centre
Total Transfer Capability for April 2015

Issue Date: 11/04/2015 Issue Time: 1410 hrs Revision No. 9

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 April 2015 to 30th April 2015	00-24	2500	500	2000	706	1294		
WR-NR *	1st April 2015 to 11th April 2015	00-17 23-24	5100	500	4600	5157	0		
		17-23	5100		4600		0		
	12th April 2015	00-07	5100	500	4600	5157	0		Revised due to shutdown of 400 kV Vindhyachal - Rihand
		07-'24	4850		4350		0	-250	
	13th April 2015 to 30th April 2015	00-17 23-24	5100	500	4600	5157	0		
		17-23	5100		4600		0		
NR-ER*	1st April 2015 to 30th April 2015	00-06	2000	200	1800	293	1507		
		06-18'	2000		1800	358	1442		
		18-24	2000		1800	293	1507		
ER-NR *	1st April 2015 to 30th April 2015	00-17 23-24	3400	300	3100	2431	669		
		17-23	3400		3100		669		
W3-ER$	1st April 2015 to 30th April 2015	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.						
ER-W3	1st April 2015 to 30th April 2015	00-24	1000	300	700	874	0		
WR-SR	1st April 2015 to 6th April 2015	05-22	2300	750	1550	1350	200		
		00-05 22-24	2700		1950		600		
	7th April 2015	00-05	2700	750	1950	1350	600		
		05-06	2300		1550		200		
		06-08	2150		1400		50		
		08-22	1800		1050		0		
		22-24	2200		1450		100		
	8th April 2015 to 30th April 2015	05-22	2300	750	1550	1350	200		
		00-05 22-24	2700		1950		600		
SR-WR *	1st April 2015 to 30th April 2015	00-24	No limit is being Specified.						
ER-SR	1st April 2015 to 30th April 2015	00-06 18-24	2650	0	2650	2585	65		
		06-18'				2650	0		
SR-ER *	1st April 2015 to 30th April 2015	00-24	No limit is being Specified.						
ER-NER	1st April 2015 to 30th April 2015	00-17 23-24	1100	40	1060	210	850		
		17-23	920		880		670		
NER-ER	1st April 2015 to 30th April 2015	No limit is being Specified.							
S1-S2	1st April 2015 to 3rd April 2015	00-24	2885	315	2570	2535	35		
	4th April 2015	00-08	2885	315	2570	2535	35		
		08-24'	3330	315	3015	2535	480		
	5th April 2015 to 6th April 2015	00-24	3330	315	3015	2535	480		
	7th April 2015	00-24	2970	315	2655	2535	120		
	8th April 2015	0000-1030	2970	315	2655	2535	120		
		1030-2400	3165	315	2850	2644	206		
	9th April 2015	00-08	3165	315	2850	2644	206		
		08-18'	3015		2700	2644	56		
		18-24	2880		2565	2535	30		
	10th April 2015 to 30th April 2015	00-24	2880	315	2565	2535	30		

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Import of Punjab	1st April 2015 to 30th April 2015	00-24	5700	300	5400	3790	1610		
Import TTC for DD & DNH	1st April 2015 to 30th April 2015	00-24	1200	0	1200	LTA and MTOA as per ex-pp schedule			
W3 zone Injection	1st April 2015 to 30th April 2015	00-17 23-24	9400	200	9200	7094	2106		
		17-23	9900		9700		2606		

* 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) 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) Korba, j) Sipat, k) KSK Mahanadi, L)DB Power, m) KWPCL, 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 commissionned 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 willl 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 Kahalgaon-Banka 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 400/132 kV, 2x200 MVA ICTs at Silchar leads to high loading on 2nd ICT.
S1-S2	(n-1) contingency of one circuit of 400 kV Kolar-Hosur D/C
Import of DD & DNH	(n-1) contingency of 400/220KV 315MVA ICT at VAPI
Import of Punjab	(n-1) contingency of ICT at Dhuri and (n-1) contingnecy of 220kV Moga(PG)-Moga(PSTCL)
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 April 2015 to 11th April 2015	00-17 23-24	8500	800	7700	7588	112		
		17-23	8500		7700		112		
	12th April 2015	00-07	8500	800	7700	7588	112		Revised due to shutdown of 400 kV Vindhyachal - Rihand
		07-24'	8250		7450		0	-250	
	13th April 2015 to 30th April 2015	00-17 23-24	8500	800	7700	7588	112		
		17-23	8500		7700		112		
NER	1st April 2015 to 30th April 2015	00-17 23-24	1100	40	1060	210	850		
		17-23	920		880		670		
WR									
SR	1st April 2015 to 6th April 2015	00-05	5350	750	4600	3935	665		
		05-06'	4950		4200	3935	265		
		06-18'	4950		4200	4000	200		
		18-22	4950		4200	3935	265		
		22-24	5350		4600	3935	665		
	7th April 2015	00-05	5350	750	4600	3935	665		
		05-06'	4950		4200	3935	265		
		06-08'	4800		4050	4000	50		
		08-18'	4450		3700	4000	0		
		18-22	4450		3700	3935	0		
		22-24	4850		4100	3935	165		
	8th April 2015 to 30th April 2015	00-05	5350	750	4600	3935	665		
		05-06'	4950		4200	3935	265		
		06-18'	4950		4200	4000	200		
		18-22	4950		4200	3935	265		
		22-24	5350		4600	3935	665		

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 April 2015 to 30th April 2015	00-06	4500	700	3800	999	2801		
		06-17'			3800	1064	2736		
		23-24	4500		3800	999	2801		
NER	1st April 2015 to 30th April 2015	00-24	No limit is being Specified.						
WR									
SR *	1st April 2015 to 30th April 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) contingnecy of Kahalgaon-Banka 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-Pusauli
NER	**Import**	(N-1) contingency of 400/132 kV, 2x200 MVA ICTs at Silchar leads to high loading on 2nd ICT.
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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Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	12-02-2015	Whole Month	Margin revised due to cancellation of LTA/MTOA.	NR-WR/ ER-W3
2	02-03-2015	Whole Month	STOA Margins revised due to grant of MTOA from Chattisgarh to KSEB by CTU.	W3-ER/ W3 Zone
			Revised due to commissioning of Kudankulam Unit-1, Coastal energen Unit-1 and Vallur Unit-3	S1-S2
3	20-03-2015	Whole month	Revised considering maintenance schedule of Singrauli - Rihand complex and reviewed HVDC set points.	WR-NR
			Revised considering reviwed thermal ratings of the lines in ER and expected flows on ER-NR corridor	ER-NR
			Revised considering the present Maharashtra Demand pattern and the commissioning of 765kV Pune-Sholapur S/C.	WR-SR
4	31-03-2015	Whole month	STOA margin revised due to commissioning of Sasan Unit-6	WR-NR
			Revised considering the reviwed thermal ratings of the lines in ER and network topology changes in NER.	ER-NER
5	04-04-2015	04.04.2015 - 06.04.2015	Revised due to NCTPS Unit Outage.	S1-S2
		07.04.2015 - 30.4.2015	Revised due to 765kV level Charging of Kurnool - Thiruvallam D/c and LGBR Changes.	
6	06-04-2015	07-04-2015	Revised due to Shutdown of HVDC Bhadrawati Block-1 and 400 kV 400kV Ramagundam-Bhadrawati-Ckt-1.	WR-SR
7	08-04-2015	08-04-2015	Revised due to outage of Vallur unit 1	S1-S2
		09-04-2015	Revised due to outage of Vallur unit 1 and shutdown of 220 kV Kadakola - Kaniyampetta	
		10-04-2015 - 30-04-2015	Revised after a corrected calculation in the simulation	
8	09-04-2015	4/9/20145	Revised due to revival of Vallur Unit-1	S1-S2
9	11-04-2015	12-04-2015	Revised due to shutdown of 400 kV Vindhyachal - Rihand	WR-NR

ASSUMPTIONS IN BASECASE

Month : Apr '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	5409	4445	3101	2272
2	Haryana	5737	4159	1726	1522
3	Rajasthan	7500	5646	5073	4432
4	Delhi	4025	2614	1009	650
5	Uttar Pradesh	11849	12777	5434	5454
6	Jammu & Kashmir	2100	1779	650	588
7	Uttarakhand	1344	1113	480	343
8	Himachal Pradesh	1293	927	530	423
9	Chandigarh	186	114	0	0
10	ISGS/IPPs	0	0	15905	12209
	Total NR	**39443**	**33574**	**33908**	**27893**
II	EASTERN REGION				
1	West Bengal	7200	5800	5000	4000
2	Jharkhand	1100	850	470	350
3	Orissa	3800	3100	2900	2150
4	Bihar	2550	2100	110	0
5	Damodar Valley Corporation	2650	2200	3300	2750
6	Sikkim	95	60	-	-
7	Bhutan	-	-	235	175
8	ISGS/IPPs			9520	8395
	Total ER	**17395**	**14110**	**21535**	**17820**
III	WESTERN REGION				
1	Chattisgarh	3486	3181	1610	1473
2	Madhya Pradesh	7270	5274	3570	1181
3	Maharashtra	19386	15678	15142	10934
4	Gujarat	13740	9287	9985	5532
5	Goa	410	340	0	0
6	Daman and Diu	253	261	0	0
7	Dadra and Nagar Haveli	588	626	0	0
8	ISGS/IPPs	0	0	20446	20446
	Total WR	**45133**	**34647**	**50753**	**39566**

ASSUMPTIONS IN BASECASE

Month : Apr '15

S.No.	Name of State/Area	Load		Generation	
		Peak Load (MW)	Off Peak Load (MW)	Peak (MW)	Off Peak (MW)
IV	**SOUTHERN REGION**				
1	Telangana	5832	5116	2399	2197
2	Andhra Pradesh	5307	4653	5314	4759
3	Tamil Nadu	10840	9969	6783	5823
4	Karnataka	7890	6637	6897	4860
5	Kerala	3341	2427	2082	1081
6	Pondy	340	245		
7	Goa	89	89		
8	ISGS/IPPs			7730	7730
	Total SR	**33639**	**29136**	**31205**	**26450**
V	**NORTH-EASTERN REGION**				
1	Arunachal Pradesh	69	31	0	0
2	Assam	749	566	225	160
3	Manipur	68	40	0	0
4	Meghalaya	201	106	104	44
5	Mizoram	51	31	4	3
6	Nagaland	63	53	10	6
7	Tripura	228	161	104	104
8	ISGS/IPPs			856	578
	Total NER	**1429**	**988**	**1303**	**895**
	Total All India	**137039**	**112455**	**138704**	**112624**