National Load Despatch Centre
Total Transfer Capability for July 2014

Issue Date: 25/06/2014 Issue Time: 1200 hrs Revision No. 7

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 July 2014 to 31st July 2014	00-24	2500	500	2000	297	1703		
WR-NR	1st July 2014 to 31st July 2014	00-17, 23-24	4700	500	4200	4380	0		
		17-23	4700		4200		0		
NR-ER*	1st July 2014 to 31st July 2014	00-06	1000	200	800	293	507		
		06-17'			800	423	377		
		17-18'	1100		900	423	477		
		18-23			900	293	607		
		23-24	1000		800	293	507		
ER-NR$	1st July 2014 to 31st July 2014	00-17, 23-24	3700	300	3400	2431	969	-700	Revised due to change in Load Generation Balance.
		17-23					969		
W3-ER$	1st July 2014 to 31st July 2014	00-24	1900	300	1600	551	1049		
ER-W3	1st July 2014 to 31st July 2014	00-24	1000	300	700	874	0		
WR-SR	1st July 2014 to 31st July 2014	00-24	1000	0	1000	1000	0		
SR-WR *	1st July 2014 to 31st July 2014	00-24	1000	0	1000	0	1000		
ER-SR	1st July 2014 to 7th July 2014	00-06, 18-24	2650	0	2650	1923	727		
		06-18'				1968	682		
	8th July 2014 to 9th July 2014	00-06, 18-24	2650	0	2650	2366	284		
		06-18'				2411	239		
	10th July 2014 to 31st July 2014	00-06, 18-24	2650	0	2650	1923	727		
		06-18'				1968	682		
SR-ER*	1st July 2014 to 7th July 2014	00-24	1200	0	1200	148	1052		
	8th July 2014 to 9th July 2014					197	1003		
	10th July 2014 to 31st July 2014					148	1052		
ER-NER	1st July 2014 to 31st July 2014	00-06, 18-24	520	50	470	205	265		
		06-18'	520		470	210	260		
NER-ER	1st July 2014 to 31st July 2014	00-17, 23-24	450	100	350	0	350		
		17-23	550		450		450		
S1-S2	1st July 2014 to 5th July 2014	00-24	2300	290	2010	2244	0	-410	Revised due to change in Load Generation Balance and Margin revised considering SRPC Generating Units Maintenance schedule.
	6th July 2014 to 7th July 2014	00-24	2300		2010	2244	0	-410	
	8th July 2014 to 9th July 2014	00-24	2300		2010	2477	0	-410	
	10th July 2014 to 15th July 2014	00-24	2300		2010	2244	0	-410	
	16th July 2014 to 22nd July 2014	00-24	2300		2010	2244	0	-100	
	23rd July 2014 to 30th July 2014	00-24	2300		2010	2324	0	-100	
	31st July 2014	00-24	2300		2010	2270	0	-100	

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Import of Punjab	1st July 2014 to 31st July 2014	00-24	5700	300	5400	3790	1610		
Import TTC for DD & DNH	1st July 2014 to 31st July 2014	00-24	980	0	980	LTA and MTOA as per ex-pp schedule			
W3 zone Injection	1st July 2014 to 31st July 2014	00-17 23-24	9000	200	8800	7050	1750		
		17-23	9500		9300		2250		

* 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.

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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 765 kV Agra-Gwalior (1250 MW SPS setting on each circuit of 765 kV Gwalior-Agra)
NR-ER	(n-1) contingency of 400 kV Allahabad-Pusauli
ER-NR	High loading of 765 kV Agra-Gwalior (1250MW SPS setting of 765kV Gwalior-Agra) due to transit flows on ER-WR-NR corridor
W3-ER	(n-1) contingency of 400kV Sterlite-Rourkela S/C
ER-W3	(n-1) contingency of 400kV Raigarh-Jharsuguda-Rourkela
WR-SR & ER-SR	1. Commissioning of 765kV Raichur-Sholapur S/C
	2. Based on the operational experience after the synchronization of SR grid with NEW grid and due to inadvertent
	3. ER-SR TTC has been declared assuming more than 1100 MW generation at Talcher Stage-2. In case
SR-WR	Bhadrawati HVDC B/B link capacity
SR-ER	(n-1) and (n-1-1) contingencies of 400kV Talcher-Rourkela D/C
ER-NER	(n-1) contingency of 400 kV Balipara – Bongaigaon D/C leading to thermal loading of 220kV BTPS-
NER-ER	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa
S1-S2	(n-1) contingency of 400 kV Kolar-Hosur D/C
Import of Punjab	(n-1) contingency of ICT at Dhuri and (n-1) contingnecy of 220kV Moga(PG)-Moga(PSTCL)
W3 zone Injection	(n-1-1) contingency of 400 kV Raipur-Bhadrawati D/C section and High loading of 400kV Raipur-Wardha (800 MW SPS setting on each circuit of 400kV Raipur-Wardha)

*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 July 2014 to 31st July 2014	00-17 23-24	8400	800	7600	6811	789	-700	Revised due to change in Load Generation Balance.
		17-23	8400		7600		789		
NER	1st July 2014 to 31st July 2014	00-06 18-24	520	50	470	205	265		
		06-18'	520		470	210	260		
WR									
SR	1st July 2014 to 7th July 2014	00-06 18-24	3650	0	3650	2923	727		
		06-18'				2968	682		
	8th July 2014 to 9th July 2014	00-06 18-24	3650	0	3650	3366	284		
		06-18'				3411	239		
	10th July 2014 to 31st July 2014	00-06 18-24	3650	0	3650	2923	727		
		06-18'				2968	682		

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 July 2014 to 31st July 2014	00-06	3500	700	2800	590	2210		
		06-17'	3500		2800	720	2080		
		17-18	3600		2900	720	2180		
		18-23	3600		2900	590	2310		
		23-24	3500		2800	590	2210		
NER	1st July 2014 to 31st July 2014	00-17 23-24	450	100	350	0	350		
		17-23	550		450		450		
WR									
SR*	1st July 2014 to 7th July 2014	00-24	2200	0	2200	148	2052		
	8th July 2014 to 9th July 2014					197	2003		
	10th July 2014 to 31st July 2014					148	2052		

* 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**	High loading of 765 kV Agra-Gwalior (1250MW SPS setting of 765kV Gwalior-Agra) due to transit flows on ER-WR-NR corridor. 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
	Export	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Allahabad-Pusauli
NER	**Import**	(n-1) contingency of 400 kV Balipara – Bongaigaon D/C leading to thermal loading of 220kV BTPS-Agia S/C
	Export	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa
SR	**Import**	1. Commissioning of 765kV Raichur-Sholapur S/C 2. Based on the operational experience after the synchronization of SR grid with NEW grid and due to inadvertent variation of 765kV Raichur-Sholapur line flow, observation of Low Frequency Oscillations(LFO). 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.
	Export	(n-1) and (n-1-1) contingencies of 400kV Talcher-Rourkela D/C

*Primary constraints

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Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	04-04-2014	Whole Month	Margin revised due to grant of 69 MW LTA to Jindal Power Limited Tamnar	W3/ ER-SR
2	11-04-2014	Whole Month	Margin revised due to addition of 139 MW LTA to TANGEDCO	ER-SR
			Margin Revised due to correction in LTA Figure and addition of 208 MW LTA to TANGEDCO	S1-S2
3	30-04-2014	Whole Month	Re-Routing of transactions on West-East-North Corridor discontinued on account of Inter-Regional Loop flows leading to physical congestion on WR-NR.	W3-ER
			Margin revised due to commissioning of Sasan Unit-4	WR-NR
4	01-05-2014	Whole Month	Margin revised due to incorporation of existing Power Allocation.	
			Margin revised due to incorporation of existing Solar Power Allocation to SR, ER, NER constituents between 6 hrs -18 hrs in LTA figures and allocation data avialable on RPCs RTA/REA.	NR-ER/ ER-NER
			Margin revised due to incorporation of existing LTA/MTOA allocation avialable in RPCs RTA/REA and Re-routing of existing MTOA granted by CTU.	W3-ER
			Margin revised due to incorporation of existing LTA/MTOA allocation avialable in RPCs RTA/REA.	ER-W3
			Margin revised due to incorporation of existing Solar Power Allocation to Karnataka between 6 hrs-18 hrs in LTA figures.	ER-SR
			Margin revised due to Allocation of 150 MW to TANGEDCO.	S1-S2
			Margin revised due to incorporation of existing LTA/MTOA allocation avialable in RPCs RTA/REA and existing MTOA granted by CTU.	W3 Zone Injection
			Revised due to augmentation/ modifications in Punjab control area network.	Import of Punjab
5	19-05-2014	Whole Month	Refer to explanatory notes regarding the change in TTC representation given in the last page.	ER-SR/ S1-S2
6	13-06-2014	Whole Month	Revised due to change in Load Generation Balance and Commissioning of Sasan Unit-1.	WR-NR
7	25-06-2014	Whole Month	Revised due to change in Load Generation Balance and Margin revised considering SRPC Generating Units Maintenance schedule.	S1-S2
			Revised due to change in Load Generation Balance	ER-NR

ASSUMPTIONS IN BASECASE

Month : July '14

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	8805	8759	3237	3034
2	Haryana	7318	7018	3790	3790
3	Rajasthan	6840	6640	4731	4721
4	Delhi	5241	5044	1172	1172
5	Uttar Pradesh	12034	12134	6260	6283
6	Jammu & Kashmir	1935	1834	556	571
7	Uttarakhand	1559	1459	508	469
8	Himachal Pradesh	1489	1390	867	867
9	Chandigarh	291	277	0	0
10	ISGS/IPPs			19676	17746
	Total NR	**45512**	**44555**	**40797**	**38653**
II	**EASTERN REGION**				
1	West Bengal	6881	4919	4764	3604
2	Jharkhand	1070	850	365	370
3	Orissa	3740	3000	3049	2375
4	Bihar	2190	1820	80	80
5	Damodar Valley Corporation	2350	2139	3523	3008
6	Sikkim	86	40		
7	Bhutan	108	108	1425	1065
8	ISGS/IPPs	300	480	9351	8716
	Total ER	**16725**	**13356**	**22557**	**19218**
III	**WESTERN REGION**				
1	Chattisgarh	2709	2381	1653	1326
2	Madhya Pradesh	5556	3873	4367	2740
3	Maharashtra	15757	13648	9707	7696
4	Gujarat	11177	8813	8279	6437
5	Goa	330	356		
6	Daman and Diu	244	263		
7	Dadra and Nagar Haveli	629	613		
8	ISGS/IPPs	1255	1255	18036	17054
	Total WR	**37657**	**31202**	**42042**	**35253**

ASSUMPTIONS IN BASECASE

Month : July '14

S.No.	Name of State/Area	Load		Generation	
		Peak Load (MW)	Off Peak Load (MW)	Peak (MW)	Off Peak (MW)
IV	**SOUTHERN REGION**				
1	Andhra Pradesh	11750	10246	7877	6292
2	Tamil Nadu	12324	10506	7812	6808
3	Karnataka	8094	6969	6094	5005
4	Kerala	3394	2653	1512	907
5	Pondy	339	291		
6	Goa	84	83		
7	ISGS/IPPs			10422	9492
	Total SR	**35985**	**30748**	**33717**	**28504**
V	**NORTH-EASTERN REGION**				
1	Arunachal Pradesh	120	60	0	0
2	Assam	1350	970	220	200
3	Manipur	120	84	0	0
4	Meghalaya	310	217	80	70
5	Mizoram	75	53	8	4
6	Nagaland	120	84	12	12
7	Tripura	250	120	90	90
8	ISGS/IPPs			1309	1096
	Total NER	**2345**	**1588**	**1719**	**1472**
	Total All India	**138224**	**121449**	**140832**	**123100**