

**National Load Despatch Centre
Total Transfer Capability for July 2014**

Issue Date: 09/07/2014

Issue Time: 1830 hrs

Revision No. 18

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	651	1349		
WR-NR	1st July 2014 to 4th July 2014	00-17 23-24	4700	500	4200	4380	0		
		17-23	4700				0		
	5th July 2014 to 31st July 2014	00-17 23-24	4900	500	4400	4380	20		
		17-23	4900				20		
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 ^s	1st July 2014 to 31st July 2014		00-17 23-24	3700	300		
17-23	969								
W3-ER ^s	1st July 2014 to 3rd July 2014	00-24	1500	300	1200	697	503		
	4th July 2014	00-08'	1500	300	1200	697	503		
		08-24'	1250		950		253		
	5th July 2014 to 31st July 2014	00-24	1500	300	1200	497	703		
ER-W3	1st July 2014 to 31st July 2014	00-24	1000	300	700	874	0		
WR-SR	1st July 2014 to 4th July 2014	00-24	1000	0	1000	1000	0		
	5th July 2014 to 31st July 2014	00-24	1800	600	1200	1200	0		
SR-WR *	1st July 2014 to 31st July 2014	00-24	1000	0	1000	0	1000		
ER-SR	1st July 2014	00-06 18-24	2500	0	2500	1923	577		
		06-18'				1968	532		
	2nd July 2014 to 3rd July 2014	00-06 18-24	2500	0	2500	2069	431		
		06-18'				2114	386		
	4th July 2014	00-06 18-24	2500	0	2500	2069	431		
		06-18'				2114	386		
	5th July 2014	00-06	2500	0	2500	2069	431		
		06-10'				2114	386		
		10-18'	2650			2114	536		
		18-24'				2069	581		
	6th July 2014 to 7th July 2014	00-06 18-24	2650	0	2650	1869	781		
		06-18'				1914	736		
	8th July 2014	00-06 18-24	2650	0	2650	2312	338		
		06-18'				2357	293		
	9th July 2014	00-06	2650	0	2650	2650	338		
		06-07'				2650	2357		
		07-18'	2650			2650	2357		
18-24'		2600	2650			2312	338		
10th July 2014	00-06	2650	0	2650	2650	1869	781		Revised due to shutdown of 400kV Rengali-Indravati S/C
	06-07'				2650	1914	736		
	07-18'	2350			1914	436			
	18-24'	2350			1869	481			
11th July 2014 to 31st July 2014	00-06 18-24	2650	0	2650	1869	781			
	06-18'				1914	736			
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		

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ER-NER	1st July 2014 to 31st July 2014	00-17 23-24	645	50	595	205	390		
		17-23'	600		550	210	340		
NER-ER	1st July 2014 to 31st July 2014	00-17 23-24	550	100	450	0	450		
		17-23	530		430		430		
S1-S2	1st July 2014	00-24	2580	290	2290	2400	0		
	2nd July 2014	00-24	2580		2290	2286	4		
	3rd July 2014 to 4th July 2014	00-24	2300		2010	2286	0		
	5th July 2014 to 7th July 2014	00-24	2490	450	2040	2042	0		
	8th July 2014 to 9th July 2014	00-24	2490		2040	2276	0		
	10th July 2014 to 15th July 2014	00-24	2490		2040	2042	0		
	16th July 2014 to 22nd July 2014	00-24	2490		2040	2042	0		
	23rd July 2014 to 30th July 2014	00-24	2490		2040	2122	0		
	31st July 2014	00-24	2490		2040	1912	128		
	Import of Punjab	1st July 2014 to 31st July 2014	00-24		5700	300	5400	3790	
Import TTC for DD & DNH	1st July 2014 to 4th July 2014	00-24	980	0	980	LTA and MTOA as per ex-pp schedule			
	5th July 2014 to 31st July 2014	00-24	1200	0	1200	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	6842	1958		
		17-23	9500		9300		2458		

* 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)JDB Power, m) KWPC, 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.

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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
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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	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). In case Vindhyachal Unit-12 trips, WR-NR TTC would be reduced to 4700 MW.
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 Talcher Stage-2 generation goes below 1100 MW, then the ER-SR TTC would be revised downward as constraints within ER would emerge.
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-Agia
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) contingency of 220kV Moga(PG)-Moga(PSTCL)
Import TTC for DD & DNH	(n-1) contingency of 400/220kV 315MVA ICT at VAPI
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

National Load Despatch Centre

Transfer Capability between India and Bangladesh for July 2014

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
1st July 2014 to 5th July 2014	0000-1030	500	0	500	230	270		
	1030 - 1730	475		475	230	245		
	1730 -2400	425		425	230	195		
6th July 2014	0000-1030	500	0	500	230	270		
	1030 - 1730	500		500	230	270		
	1730 -2400	450		450	230	220		
7th July 2014 to 12th July 2014	0000-1030	500	0	500	230	270		
	1030 - 1730	475		475	230	245		
	1730 -2400	425		425	230	195		
13th July 2014	0000-1030	500	0	500	230	270		
	1030 - 1730	500		500	230	270		
	1730 -2400	450		450	230	220		
14th July 2014 to 19th July 2014	0000-1030	500	0	500	230	270		
	1030 - 1730	475		475	230	245		
	1730 -2400	425		425	230	195		
20th July 2014	0000-1030	500	0	500	230	270		
	1030 - 1730	500		500	230	270		
	1730 -2400	450		450	230	220		
21st July 2014 to 26th July 2014	0000-1030	500	0	500	230	270		
	1030 - 1730	475		475	230	245		
	1730 -2400	425		425	230	195		
27th July 2014	0000-1030	500	0	500	230	270		
	1030 - 1730	500		500	230	270		
	1730 -2400	450		450	230	220		
28st July 2014 to 31st July 2014	0000-1030	500	0	500	230	270		
	1030 - 1730	475		475	230	245		
	1730 -2400	425		425	230	195		

Monday to Saturday

Time Period	Limiting Constraints
0000-1030	---
1030-1730	High loading of 400 kV Farakkka -Behrampur S/C and low voltage at Jeerat
1730-2400	

Sundays

Time Period	Limiting Constraints
0000-1030	---
1030-1730	---
1730-2400	High loading of 400 kV Farakkka -Behrampur S/C and low voltage at Jeerat

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	8600	800	7800	6811	989			
		17-23	8600		7800		989			
NER	1st July 2014 to 31st July 2014	00-17 23-24	645	50	595	205	390			
		17-23'	600		550		340			
WR										
SR *	1st July 2014	00-06 18-24	3500	0	3500	2923	577			
		06-18'				2968	532			
	2nd July 2014 to 3rd July 2014	00-06 18-24	3500	0	3500	3069	431			
		06-18'				3114	386			
	4th July 2014	00-06 18-24	3500	0	3500	3069	431			
		06-18'				3114	386			
	5th July 2014	00-06	4300	600	3700	3069	631			
		06-10'				3114	586			
		10-18'	4450			3114	736			
		18-24'				3069	781			
	6th July 2014 to 7th July 2014	00-06 18-24	4450	600	3850	3069	781			
		06-18'				3114	736			
	8th July 2014	00-06 18-24	4450	600	3850	3512	338			
		06-18'				3557	293			
	9th July 2014	00-06	4450	600	3850	3512	338			
		06-07'	4450			3850	3557			293
		07-18'	4450			3850	3557			293
		18-24'	4450			3850	3512			338
10th July 2014	00-06	4450	600	3850	3069	781		Revised due to shutdown of 400kV Rengali-Indravati S/C		
	06-07'	4450			3850	3114			736	
	07-18'	4150			3550	3114			436	
	18-24'	4150			3550	3069			481	
11th July 2014 to 31st July 2014	00-06 18-24	4450	600	3850	3069	781				
	06-18'				3114	736				

* CTU Transfer Capability assesement between NEW and SR grid is 3450 MW without considering 765kV Raichur-Sholapur D/C.

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	944	1856		
		06-17'	3500		2800	1074	1726		
		17-18	3600		2900	1074	1826		
		18-23	3600		2900	944	1956		
		23-24	3500		2800	944	1856		
NER	1st July 2014 to 31st July 2014	00-17	450	100	350	0	350		
		23-24			450		450		
		17-23	550						
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.
	Export	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 (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

**National Load Despatch Centre
Total Transfer Capability for July 2014**

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 available on RPCs RTA/REA.	NR-ER/ ER- NER
			Margin revised due to incorporation of existing LTA/MTOA allocation available 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 available 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 available 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
8	27-06-2014	Whole Month	LTA/MTOA revised due to deferment of Simhadri unit - 4 overhauling	S1-S2
9	30-06-2014	Whole Month	Revised due to change in Load-Generation balance and major network change due to commissioning of 400/220 kV Azara (Kukurmara) substation	ER-NER / NER-ER
			Revised due to forced outage of 400 kV Raigarh-SEL-Rourkela Ckt 1	W3-ER
10	30-06-2014	01-07-2014	Due to non availability of HVDC Gazuwaka Block 1	ER-SR
		01-07-2014 to 02-07-2014	Revised due to outage of NCTPS Unit-2	S1-S2

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Total Transfer Capability for July 2014**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
11	01-07-2014	02/07/2014 - 03/07/2014	Due to non availability of HVDC Gazuwaka Block 1.	ER-SR
		02/07/2014 - 31/07/2014	STOA Margin revised on account of change in LTA/Allocation	ER-SR/ S1-S2/ W3-ER/ NR-WR/ W3 Zone
12	03-07-2014	04-07-2014	Due to non availability of HVDC Gazuwaka Block 1.	ER-SR
			Revised due to shutdown of 400kV Rourkela-Jharsuguda-Raigarh D/C	W3-ER
13	04-07-2014	05/07/2014 - 07/07/2014	Due to non availability of HVDC Gazuwaka Block 1.	ER-SR
		05/07/2014 - 31/07/2014	Revised due to commissioning of contingency arrangement of one 500 MW Vindhyachal (Unit-12) with 400kV Vindhyachal-Rihand line.	WR-NR
			Revised due to commissioning of 765kV Sholapur-Raichur Circuit-2 and 765kV Wardha-Aurangabad D/C.	WR-SR
14	04-07-2014	05/07/2014-31/07/2014	Revised due to commissioning of 400/220KV 2X315MVA ICT at Kala S/S along with 220kV Kala-Sayali and 220KV Kala-Khadoli lines.	Import TTC for DD & DNH
15	05-07-2014	05/07/2014-07/07/2014	Revised due to restoration of Gazuwaka Block-1.	ER-SR
		05/07/2014-31/07/2014	Revised considering the Kudankulam Unit-1. with the synchronisation of 2nd Circuit of 765kV Raichur-Sholapur, the reliability of the link between SR & New Grid has improved. KKNPP Unit-1 is generating consistently without much variation.	S1-S2
16	08-07-2014	09-07-2014 - 10-07-2014	Revised due to shutdown of 400kV Rengali-Indravati S/C	ER-SR
17	08-07-2014	09-07-2014 - 10-07-2014	Revised as the shutdown of 400kV Rengali-Indravati S/C is not being availed by Intending agency.	ER-SR
18	09-07-2014	10-07-2014	Revised due to shutdown of 400kV Rengali-Indravati S/C	ER-SR

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