# National Load Despatch Centre Total Transfer Capability for March 2014

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 March 2014 to	00-24	2500	500	2000	361	1639		
	31st March 2014	00-17	4200		2700		4.4		
WR-NR <sup>1</sup>	1st March 2014 to 31st March 2014	23-24	4200	500	3700	3656	44		
		17-23	4200		3700		44		
NR-ER*	1st March 2014 to	00-17 23-24	1000	200	800	200	600		
	31st March 2014	17-23	1100		900		700		
	1st March 2014 to 6th March 2014	00-17 23-24	3600	300	3300	2789	511		
ER-NR	oth Watch 2014	17-23 00-17	3100		2800		11		
	7th March 2014 to 31st March 2014	23-24	3800	300	3500	2789	711		
	01301:101011 201 :	17-23					711		
		00-09 17-24	1800	300	1500	0	1500		
	1st March 2014	09-17'	1500	300	1200	0	1200		
W3-ER		05 17	1300	300	1200	Ů	1200		
	2nd March 2014 to 31st March 2014	00-24	1800	300	1500	0	1500		
FID ****	1st March 2014 to	00.5	1000	200	<b>-</b> 00	700			
ER-W3	31st March 2014	00-24	1000	300	700	700	0		
WR-SR	1st March 2014 to	00-24	1000	0	1000	1000	0		
	31st March 2014 1st March 2014 to								
SR-WR *	31st March 2014	00-24	1000	0	1000	0	1000		
	1st March 2014 to 31st March 2014	00-05	1 750	0	750	657	93		
ER-SR		10-19 05-10							
		19-24	750		750		93		
SR-ER *	1st March 2014 to 31st March 2014	00-17 23-24	1100	0	1100	197	903		
	31st March 2014	17-23	1100		1100		903		
	1st March 2014 to	00-17 23-24	650	50	600	230	370		
	05th March 2014	17-23		30	540	230	310		
	06th March 2014	00-17	650		600		370		
		17-23	720	50	540	230	310		
ER-NER <sup>2</sup>		17-23	720		340		310		
		23-24	720		670		440		
	7th March 2014 to 31st March 2014	00-17	720	50	670	230	440		
		23-24	720		670		440		
		17-23 00-17	720		670		440		
	1st March 2014 to 05th March 2014	23-24	520	100	420	0	420		
		17-23 00-17	450 520		350 420		350 420		
NER-ER	06th March 2014	17-23	590	100	490	0	490		
	7th March 2014	23-24	630		530		530		
	7th March 2014 to 31st March 2014	23-24 17-23	630 590	100	530 490	0	530 490		
		17-23	390		470		470		
	1st March 2014	00-24	5650	400	5250	4900	350		
01.00	2nd March 2014	00-06	5650	400	5250	4900	350		
S1-S2	ZHU IVIAICH ZU14	06-24'	5350	400	4950	4900	50	-300	Revised due to shutdown of 400
	2								kV Raichur-Gooty D/C
	3rd March 2014 to 31st March 2014	00-24	5650	400	5250	4900	350		
Import of	1st March 2014 to	00-24	5600	300	5300	3800	1500		
Punjab Import TTC	31st March 2014	00-24	3000	300	3300				
for DD &	1st March 2014 to 31st March 2014	00-24	980	0	980	LTA and MTO sched			
DNH		00-17	0000		0000	School	Ι		
W3 zone Injection	1st March 2014 to 31st March 2014	23-24	9000	200	8800	7167	1633		
ŭ		17-23	9500		9300		2133		r advanced transactions (Rilateral &

<sup>\*</sup> 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).

## **National Load Despatch Centre Total Transfer Capability for March 2014**

Issue Date: 01/03/2014 Issue Time: 1700 hrs Revision No. 5

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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- 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, b) Jindal Power Limited (JPL), 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

# The figure is based on LTA/MTOA approved by CTU. In actual Operation, due to Units being on Maintenance/ Fuel shortage the LTA/MTOA utilized would be les. RLDC/ NLDC would factor this situation while issuing STOA approvals

1. WR-NR Total Transfer capability will be reduced to 3100 MW in case of outage of any one of the following sections:

- 765 kV Gwalior-Agra one circuit
- 765 kV Bina-Gwalior one circuit

#### 2. ER-NER Total Transfer capability will be reduced to 450 MW in case of outage of any one of the 400kV Purnea-Biharshariff circuit.

## **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 (1000 MW SPS setting on each circuit of 765 kV Gwalior-Agra)
NR-ER	(n-1) contingency of 400 kV Allahabad-Pusauli
ER-NR	(n-1) contingency of 400 kV Kahalgaon-Biharshariff
W3-ER	(n-1) contingency of 400kV Sterilte-Rourkela S/C
ER-W3	High loading of 400 kV Raipur-Bhadrawati T/C, Bhilai-Bhadrawati S/C, Bhilai-Koradi and Bhilai-Seoni* (n-1) contingency of 400kV Raigarh-Sterlite
WR-SR & ER-SR	Commissioning of 765kV Raichur-Sholapur S/C     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)     Considering transfer capability assessment by CTU on NEW-SR corridor.
SR-WR	Bhadrawati HVDC B/B link capacity
SR-ER	
ER-NER	(n-1) contingency of 400 kV Kahalgaon-Biharshariff
NER-ER	(n-1) contingency of 315 MVA ICT at Misa
S1-S2	(n-1) contingency of 400 kV Kolar-Hosur D/C line, 400kV Hosur-Salem S/C and 400kV Somanahalli-Salem S/C line.
Import of Punjab	(n-1) contingency of ICT at Patiala/Moga
W3 zone Injection	(n-1) contingency of 400 kV Raipur-Wardha-Parli Section

<sup>\*</sup>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									
	1st March 2014 to 6th March	00-17 23-24	7800	800	7000	6445	555		
NR <sup>1</sup>	2014 7th March 2014 to 31st March	17-23 00-17 23-24	7300 8000	800	7200	6445	55 755		
	2014 1st March 2014	17-23 00-17	8000 650		7200 600		755 370		
		17-23	590	50	540	230	310		
NER <sup>2</sup>	06th March 2014		650 720	50	600 540	230	370 310		
	7th March 2014 to 31st March	23-24 00-17 23-24	720 720	50	670 670	230	440		
	2014	17-23	720		670		440		
WR									
SD	1st March 2014	00-05 10-19	1750	0	1750	1657	93		
SR	to 31st March 2014	05-10 19-24	1750	U	1750	1657	93		

- 1. WR-NR Total Transfer capability will be reduced to 3100 MW in case of outage of any one of the following sections:
  - 765 kV Gwalior-Agra one circuit
  - 765 kV Bina-Gwalior one circuit

2. ER-NER Total Transfer capability will be reduced to 450 MW in case of outage of any one of the 400kV Purnea-Biharshariff circuit.

## **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 March 2014 to 31st March	00-17 23-24	3500	700	2800	561	2239		
	2014	17-23	3600		2900		2339		
	1st March 2014 to 05th March	00-17 23-24	520	100	420	0	420		
	2014	17-23	450		350		350		
	06th March 2014	00-17	520	100	420	0	420		
NER		17-23	590		490		490		
		23-24	630		530		530		
	7th March 2014 to 31st March	00-17 23-24	630	100	530		530		
	2014	17-23	590		490		490		
WR									
W K									
SR*	1st March 2014 to 31st March	00-17 23-24	2100	0	2100	197	1903		
* E'C D	2014	17-23	2100		2100		1903		

<sup>\*</sup> 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**

	Import	(n-1) contingency of 400 kV Kahalgaon-Biharshariff
NR	Import	High loading of 765 kV Agra-Gwalior (1000 MW SPS setting on each circuit of 765 kV Gwalior-Agra)
1111	E-mart	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak.
	Export	(n-1) contingency of 400 kV Allahabad-Pusauli
NER	Import	(n-1) contingency of 400 kV Kahalgaon-Biharshariff
NEK	Export	(n-1) contingency of 315 MVA ICT at Misa
		1. Commissioning of 765kV Raichur-Sholapur S/C
	T	2. Based on the operational experience after the synchronization of SR grid with NEW grid and due to inadvertent
SR	Import	variation of 765kV Raichur-Sholapur line flow, observation of Low Frequency Oscillations (LFO)
		3. Considering transfer capability assessment by CTU on NEW-SR corridor.
	Export	

\*Primary constraints

## National Load Despatch Centre Total Transfer Capability for March 2014

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	22/01/2014	Whole	Revised due to commissioning of 765kV Raichur-	ER-SR/
1	22/01/2014	Month	Sholapur S/C	WR-SR
		Whole	1. Revised due to shutdown of TEESTA Power Station. 2. Revised due to change in Inter-regional flow pattern & COD of Sasan UMPP Unit-2	ER-NR/ WR-NR
2	19/02/2014	Month	Revised considering operational experience and margins on	ER-SR/
		Wionui	HVDC	WR-SR
			Review of flow pattern due to network topology change and	W3 Zone
			Load Generation Balance.	Injection
	25/22/2011	Whole Month	Revside due to Non-Commissioning of Kudankulam U-1, Vallur U-3 & NLC Exp U-1	S1-S2
3	26/02/2014	01.03.14 -	·	ER-NER /
		06.03.14	Revised due to shutdown of 220kV Balipara - Samaguri S/C	NER-ER
4	28/02/2014	01.03.14	Revised due to shutdown of 400 kV SEL-Rourkela Ckt 1	W3-ER
5	01/03/2014	02.03.14	Revised due to shutdown of 400 kV Raichur-Gooty D/C	S1-S2

# **ASSUMPTIONS IN BASECASE**

Month: March '14

		Lo	ad	Generation			
S.No.	Name of State/Area	Peak Load (MW)	Off Peak Load (MW)	Peak (MW)	Off Peak (MW)		
ı	NORTHERN REGION						
1	Punjab	5571	4510	2524	2495		
2	Haryana	5755	4779	3482	3482		
3	Rajasthan	8215	8320	4940	4892		
4	Delhi	4102	2950	1101	1101		
5	Uttar Pradesh	11500	10154	5957	5867		
6	Jammu & Kashmir	2249	1725	343	567		
7	Uttarakhand	1582	1397	649	580		
8	Himachal Pradesh	1353	1194	367	253		
9	Chandigarh	238	138	0	0		
10	ISGS/IPPs			17573	11543		
	Total NR	40564	35167	36936	30780		
II	EASTERN REGION						
1	West Bengal	6600	5100	4797	4000		
2	Jharkhand	1000	800	450	450		
3	Orissa	3400	2600	2405	1600		
4	Bihar	2000	1600	0	0		
5	Damodar Valley Corporation	2600	2350	3600	3397		
6	Sikkim	90	50		0		
7	Bhutan	110	110	200	200		
8	ISGS/IPPs	270	270	6849	6490		
	Total ER	16070	12880	18301	16137		
III	WESTERN REGION						
1	Chattisgarh	3236	2968	1629	1629		
2	Madhya Pradesh	6961	5643	3847	3003		
3	Maharashtra	16185	14018	11275	10527		
4	Gujarat	11063	10565	10649	9002		
5	Goa	422	283	0	0		
6	Daman and Diu	239	240	0	0		
7	Dadra and Nagar Haveli	588	552	0	0		
8	ISGS/IPPs	1291	1111	18555	16029		
	Total WR	39985	35380	45955	40190		

IV	SOUTHERN REGION				
1	Andhra Pradesh	12233	9818	8014	6538
2	Tamil Nadu	11677	9714	7485	5425
3	Karnataka	8822	6821	6694	5453
4	Kerala	3378	2583	1844	916
5	Pondy	312	247		
6	Goa	80	80		
7	ISGS/IPPs			10790	9643
	Total SR	36502	29263	34827	27975
V	NORTH-EASTERN REGION				
1	Manipur	120	84	0	0
2	Meghalaya	300	210	90	70
3	Mizoram	70	49	4	0
4	Nagaland	110	77	12	6
5	Assam	1280	940	190	190
6	Tripura	220	130	105	100
7	Arunachal Pradesh	120	84	0	0
8	ISGS/IPPs			921	603
	Total NER	2220	1574	1322	969
	Total All India	405044	444004	407044	440054
	Total All India	135341	114264	137341	116051