

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

Issue Date: 14/01/2014

Issue Time: 1300 hrs

Revision No. 14

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 January 2014 to 31st January 2014	00-24	2500	500	2000	286	1714		
WR-NR ¹	1st January 2014 to 31st January 2014	00-17 23-24	3900	500	3400	3181	219		
		17-23	3900		3400	3181	219		
NR-ER *	1st January 2014 to 31st January 2014	00-17 23-24	1000	200	800	200	600		
		17-23	1100		900		700		
		00-17 23-24 17-23	3800		3500		2118		
ER-NR	1st January 2014 to 3rd January 2014	00-17 23-24 17-23	3800	300	3500	2118	1382		
	4th January 2014 to 7th January 2014	00-24	3100				2800		
	8th January 2014	00-10 15-24	3100	300	2800	2118	682		
		10-15'	2700		2400		282		
	9th January 2014 to 14th January 2014	00-17 23-24	3600	300	3300	2118	1182		
		17-23	3100		2800		682		
	15th January 2014	00-17 23-24	3300	300	3000	2118	882	-300	Revised due to emergency shutdown of 400kV Kahalgaon-Barh Ckt-1
		17-23	3100		2800		682		
	16th January 2014 to 31st January 2014	00-17 23-24	3600	300	3300	2118	1182		
		17-23	3100		2800		682		
W3-ER	1st January 2014 to 6th January 2014	00-24	1800	300	1500	0	1500		
	7th January 2014	00-09 18-24	1800	300	1500	0	1500		
		09-18'	1500		1200		1200		
	8th January 2014	00-09 09-24'	1800	300	1500	0	1200		
		19-24	1500		1200		1200		
	9th January 2014	00-19 19-24	1500	300	1200	0	1500		
19-24		1800	1500		1500				
10th January 2014 to 31st January 2014	00-24	1800	300	1500	0	1500			
ER-W3	1st January 2014 to 31st January 2014	00-24	1000	300	700	700	0		
WR-SR	1st January 2014 to 14th January 2014	00-24	1000	0	1000	1000	0		
	15th January 2014 to 31st January 2014	00-24	850	0	850	850	0	-150	Revised due to commissioning of 765kV Raichur-Sholapur S/C
SR-WR *	1st January 2014 to 31st January 2014	00-24	1000	0	1000	0	1000		
ER-SR	1st January 2014 to 9th January 2014	00-05 10-19	750	0	750	657	93		
		05-10 19-24	1250		1250		593		
		00-05 05-08'	750		750		93		
	10th January 2014	08-24'	1250	0	1250	657	593		
		19-24	650		650		0		
	11th January 2014	00-24	650	0	650	657	0		
	12th January 2014	00-24	650	0	650	657	0		
	13th January 2014	00-19 19-24	650	0	650	657	0		
		19-24	1250		1250		593		
	14th January 2014	00-05 10-19	750	0	750	657	93		
		05-10 19-24	1250		1250		593		
	15th January 2014 to 31st January 2014	00-05 10-19	700	0	700	700	0	-50	Revised due to commissioning of 765kV Raichur-Sholapur S/C
		05-10 19-24	700		700		0		

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SR-ER *	1st January 2014 to 31st January 2014	00-17	1100	0	1100	197	903			
		23-24								
		17-23	1100		903					
ER-NER²	1st January 2014	00-24	500	50	450	230	220			
	2nd January 2014	00-17	720	50	670	230	440			
		23-24			590		360			
	3rd January 2014	00-09	720	50	670	230	440			
		16-17								
		23-24	700					650	420	
	4th January 2014 to 6th January 2014	09-16'	720	590	360					
		17-23	640	670	230	440				
		23-24	720	50	670	230	440			
	7th January 2014	17-23	640	590	360					
		00-09	720	50	670	230	440			
								16-17		
	23-24	700	650					420		
	8th January 2014	09-16'	720	590	360					
		17-23	640	670	230	440				
		23-24	720	50	670	230	440			
	9th January 2014	00-08	720	50	670	230	440			
		16-17								
		23-24	550					500	270	
	10th January 2014 to 31st January 2014	08-16'	720	590	360					
		17-23	640	670	230	440				
		23-24	720	50	670	230	440			
	NER-ER	1st January 2014 to 31st January 2014	00-17	570	100	470	0	470		
			23-24							
17-23			570	470						
S1-S2	1st January 2014	00-24	5600	400	5200	4900	300			
	2nd January 2014	00-08	5650	400	5250	4900	350			
		08-24'	5200		4800		0			
	3rd January 2014	00-19	5200	400	4800	4900	0			
19-24		5650	5250		350					
4th January 2014 to 31st January 2014	00-24	5650	400	5250	4900	350				
Import of Punjab	1st January 2014 to 31st January 2014	00-24	5600	300	5300	3800	1500			
Import TTC for DD & DNH	1st January 2014 to 31st January 2014	00-24	980	0	980	LTA and MTOA as per ex-pp schedule				
W3 zone Injection	1st January 2014 to 31st January 2014	00-08	8500	200	8300	7630	670			
		23-24								
		08-16'	8000		7800		170			
		16-17	9000		8800		1170			
17-23	9500	9300	1670							

* 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).

- 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) KWPCCL

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 less. RLDC/ NLDC would factor this situation while issuing STOA approvals.

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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	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. 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 400/220 kV, 2x315 MVA ICTs 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.
	(n-1) contingency of ICT at Patiala/Moga
W3 zone Injection	(n-1) contingency of 400 kV 400 kV Raipur-Wardha

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										
NR¹	1st January 2014 to 3rd January 2014	00-17 23-24	7700	800	6900	5299	1601			
		17-23	7700		6900		1601			
	4th January 2014 to 7th January 2014	00-17 23-24	7000	800	6200	5299	901			
		17-23	7000		6200		901			
	8th January 2014	00-10 15-24	7000	800	6200	5299	901			
		10-15'	6600		5800		501			
	9th January 2014 to 14th January 2014	00-17 23-24	7500	800	6700	5299	1401			
		17-23	7000		6200		901			
	15th January 2014	00-17 23-24	7200	800	6400	5299	1101	-300	Revised due to emergency shutdown of 400kV Kahalgaon-Barh Ckt-1	
		17-23	7000		6200		901			
	16th January 2014 to 31st January 2014	00-17 23-24	7500	800	6700	5299	1401			
		17-23	7000		6200		901			
	NER²	1st January 2014	00-24	500	50	450	230	220		
		2nd January 2014	00-17 23-24	720	50	670	230	440		
17-23			640	590		360				
3rd January 2014		00-09 16-17 23-24	720	50	670	230	440			
		09-16'	700		650		420			
		17-23	640		590		360			
4th January 2014 to 6th January 2014		00-17 23-24	720	50	670	230	440			
		17-23	640		590		360			
7th January 2014		00-09 16-17 23-24	720	50	670	230	440			
		09-16'	700		650		420			
		17-23	640		590		360			
8th January 2014		00-08 16-17 23-24	720	50	670	230	440			
		08-16'	550		500		270			
		17-23	640		590		360			
9th January 2014		00-08 16-17 23-24	720	50	670	230	440			
		08-16'	550		500		270			
		17-23	640		590		360			
10th January 2014 to 31st January 2014		00-17 23-24	720	50	670	230	440			
	17-23	640	590		360					

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
WR									
SR	1st January 2014 to 9th January 2014	00-05 10-19	1750	0	1750	1657	93		
		05-10 19-24	2250		2250		593		
	10th January 2014	00-05	1750	0	1750	1657	93		
		05-08'	2250		2250		593		
		08-24'	1650		1650		0		
	11th January 2014	00-24	1650	0	1650	1657	0		
	12th January 2014	00-24	1650	0	1650	1657	0		
	13th January 2014	00-19	1650	0	1650	1657	0		
		19-24	2250		2250		593		
	14th January 2014	00-05 10-19	1750	0	1750	1657	93		
		05-10 19-24	2250		2250		593		
	15th January 2014 to 31st January 2014	00-05 10-19	1550	0	1550	1550	0	-200	Revised due to commissioning of 765kV Raichur-Sholapur S/C
		05-10 19-24	1550		1550		0	-700	

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 January 2014 to 31st January 2014	00-17 23-24	3500	700	2800	286	2514		
		17-23	3600		2900		2614		
NER	1st January 2014 to 31st January 2014	00-17 23-24	570	100	470	0	470		
		17-23	570		470		470		
WR									
SR*	1st January 2014 to 31st January 2014	00-17 23-24	2100	0	2100	197	1903		
		17-23	2100		2100		1903		

* 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 Kahalgaon-Biharshariff High loading of 765 kV Agra-Gwalior (1000 MW SPS setting on each circuit of 765 kV 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 Kahalgaon-Biharshariff
	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. Considering transfer capability assessment by CTU on NEW-SR corridor.
	Export	

*Primary constraints

National Load Despatch Centre
Total Transfer Capability for January 2014

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	04-11-2013	Whole Month	Margin on NR-ER Corridor revised considering the LTA/MTOA on NR-ER Path	NR-ER
2	27-11-2013	Whoe Month	Revised due to change in Load Generation in WR/NR	WR-NR
			Commissioning of 400 kV Purnea-Biharshariff D/C and Network reconfiguration at Malda & Purnea.	ER-NR/ER-NER
			Change in Load Generation Balance in ER	ER-SR
			Revised due to change in Inter-Regional flow pattern and Load generation change in ER/WR.	W3 Zone Injection
3	23-12-2013	Whoe Month	Revised due to Commissioning of Kudankulam and NLC II EXP.	S1-S2
4	27-12-2013	Whoe Month	Revised due to Load Generation Balance	ER-SR
5	31-12-2013	01-01-2014	Revised due Outage of 400kV Purnea-Binaguri Ckt-I &II	ER-NER
6	01-01-2014	2nd to 3rd Jan 2014	Revised due to shutdown of 400kV Nellore-Alamathy & 400kV Alamathy-Sriperumbudur	S1-S2
		4th to 31st Jan 2014	Revised due to load generation balance.	
7	02-01-2014	3rd Jan 2014	Revised due to Emergency Shut Down of 220 kV Agia-Sarusajai & 220 kV Boko-Sarusajai	ER-NER
8	03-01-2014	4th Jan 2014 - 31st Jan 2014	Revised due to shutdown of TEESTA Power Station	ER-NR
9	06-01-2014	7th Jan 2014	Revised due to shutdown of 400kV Sterlite-Raigarh Ckt-I	W3-ER
			Revised due to emergency Shut Down of 220 kV Sarusajai- Agia	ER-NER
10	07-01-2014	8th Jan 2014	Revised due to shutdown of 400kV Maithon-Koderma D/C	ER-NR/ER-NER
		8th Jan 14 to 9th Jan 2014	Revised due to shutdown of 400kV Raigarh-Jharsuguda Ckt-1	W3-ER
11	07-01-2014	8th Jan 2014	Revised due to emergency shutdown of 400 kV Purena-Binaguri Ckt 3	ER-NER
12	08-01-2014	9th Jan'14	Revised due to shutdown of 400 kV Purena-Binaguri Ckt-4.	ER-NER
		9th Jan 14 to 31st Jan 14	Revised due to load generation balance.	ER-NR
13	09-01-2014	10-01-14 to 13-01-14	Revised due to shutdown of Talcher-Kolar HVDC Pole-2 and Pole-1.	ER-SR
14	14-01-2014	15-01-2014	Revised due to emergency shutdown of 400kV Kahalgaon-Barh Ckt-1	ER-NR
		15-01-14 to 31-01-14	Revised due to commissioning of 765kV Raichur-Sholapur S/C	ER-SR/WR-SR

ASSUMPTIONS IN BASECASE

Month : January '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	7000	4924	2546	2351
2	Haryana	5559	4660	2770	2770
3	Rajasthan	7051	6539	4002	4002
4	Delhi	3974	3720	1514	1514
5	Uttar Pradesh	11000	10322	6008	5756
6	Jammu & Kashmir	1876	1185	584	429
7	Uttarakhand	1543	902	713	340
8	Himachal Pradesh	1327	730	444	523
9	Chandigarh	224	118	0	0
10	ISGS/IPPs			16740	11303
	Total NR	39554	33100	35321	28988
II	EASTERN REGION				
1	West Bengal	4900	4500	4837	3944
2	Jharkhand	1110	770	561	561
3	Orissa	3500	2200	2430	1699
4	Bihar	1820	1320	0	0
5	Damodar Valley Corporation	2600	2035	3439	3039
6	Sikkim	40	40		
7	Bhutan	110	110	648	648
8	ISGS/IPPs	131	241	6494	6762
	Total ER	14211	11216	18409	16653
III	WESTERN REGION				
1	Chattisgarh	3181	2462	1804	1065
2	Madhya Pradesh	7637	5600	9905	7817
3	Maharashtra	15506	12500	4366	2928
4	Gujarat	11119	10121	11221	8374
5	Goa	432	281	0	0
6	Daman and Diu	245	208	0	0
7	Dadra and Nagar Haveli	604	471	0	0
8	ISGS/IPPs	590	590	16763	15466
	Total WR	39314	32233	44059	35650

IV	SOUTHERN REGION				
1	Andhra Pradesh	10900	9350	7204	6066
2	Tamil Nadu	11300	8617	6433	4962
3	Karnataka	7800	6499	5213	3549
4	Kerala	3225	2234	1917	760
5	Pondy	320	244	0	0
6	Goa	80	80	0	0
7	ISGS/IPPs			11130	10168
	Total SR	33625	27024	31897	25505
V	NORTH-EASTERN REGION				
1	Manipur	130	91	0	0
2	Meghalaya	280	196	110	95
3	Mizoram	85	60	8	4
4	Nagaland	120	84	20	10
5	Assam	1350	970	220	180
6	Tripura	260	130	100	100
7	Arunachal Pradesh	130	91	0	0
8	ISGS/IPPs			1020	735
	Total NER	2355	1622	1478	1124
	Total All India	129059	105195	131164	107920