

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

Issue Date: 21/01/2014

Issue Time: 1400 hrs

Revision No. 15

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 <sup>1</sup>	1st January 2014 to 21st January 2014	00-17	3900	500	3400	3181	219		Revised due to shutdown of Vindhyachal back-to-Back HVDC Block-1
		23-24	3900		3400	3181	219		
	22nd January 2014	00-08	3900	500	3400	3181	219		
		08-24	3650		3150	3181	0		
	23rd January 2014	00-21	3650	500	3150	3181	0		
		21-24	3900		3400	3181	219		
	24th January 2014 to 31st January 2014	00-17	3900	500	3400	3181	219		
		23-24	3900		3400	3181	219		
NR-ER *	1st January 2014 to 31st January 2014	00-17	1000	200	800	200	600		
		23-24	1100		900		700		
ER-NR	1st January 2014 to 3rd January 2014	00-17	3800	300	3500	2118	1382		
		23-24					1382		
	4th January 2014 to 7th January 2014	00-24	3100	300	2800	2118	682		
	8th January 2014	00-10	3100	300	2800	2118	682		
		15-24	2700		2400		282		
	9th January 2014 to 14th January 2014	00-17	3600	300	3300	2118	1182		
		23-24	3100		2800		682		
	15th January 2014	00-17	3300	300	3000	2118	882		
		23-24	3100		2800		682		
	16th January 2014 to 31st January 2014	00-17	3600	300	3300	2118	1182		
23-24		3100	2800		682				
W3-ER	1st January 2014 to 6th January 2014	00-24	1800	300	1500	0	1500		
	7th January 2014	00-09	1800	300	1500	0	1500		
		18-24	1500		1200		1200		
	8th January 2014	00-09	1800	300	1500	0	1200		
		09-24	1500		1200		1200		
	9th January 2014	00-19	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		
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	750	0	750	657	93		
		10-19					593		
		05-10					1250		
	10th January 2014	00-05	750	0	750	657	93		
		05-08	1250		1250		593		
		08-24	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	650	0	650	657	0		
		19-24	1250		1250		593		

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ER-SR	14th January 2014	00-05	750	0	750	657	93			
		10-19								
	15th January 2014 to 31st January 2014	05-10	1250		1250		593			
		19-24								
SR-ER *	1st January 2014 to 31st January 2014	00-05	700	0	700	700	0			
		10-19								
	17-23	05-10	700		700		0			
		19-24								
ER-NER <sup>2</sup>	1st January 2014	00-24	500	50	450	230	220			
	2nd January 2014	00-17	720	50	670	230	440			
		23-24								
	3rd January 2014	17-23	640		590		360			
		00-09	16-17	720	50	670	230	440		
			23-24							
	09-16'	09-16'	700		650		420			
		17-23	640		590		360			
	4th January 2014 to 6th January 2014	00-17	720	50	670	230	440			
		23-24								
		17-23	640				590		360	
	7th January 2014	00-09	720	50	670	230	440			
		16-17								
		23-24								
	09-16'	09-16'	700		650		420			
		17-23	17-23	640		590		360		
	8th January 2014	00-08	720	50	670	230	440			
		16-17								
		23-24								
	08-16'	08-16'	550		500		270			
		17-23	17-23	640		590		360		
	9th January 2014	00-08	720	50	670	230	440			
16-17										
23-24										
08-16'	08-16'	550		500		270				
	17-23	17-23	640		590		360			
10th January 2014 to 31st January 2014	00-17	720	50	670	230	440				
	23-24									
	17-23	640				590		360		
NER-ER	1st January 2014 to 21st January 2014	00-17	570	100	470	0	470			
		23-24								
		17-23	570				470		470	
	22nd January 2014	00-09	570	100	470	0	470			
		15-17								
		23-24								
	09-15'	09-15'	530		430		430	-40	Revised due to shutdown of 220 kV Balipara – Samaguri S/C .	
17-23		570		470		470				
23rd January 2014 to 31st January 2014	00-17	570	100	470	0	470				
	23-24									
17-23	570		470		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			

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<b>Import TTC for DD &amp; DNH</b>	1st January 2014 to 31st January 2014	00-24	980	0	980	LTA and MTOA as per ex-pp schedule			
<b>W3 zone Injection</b>	1st January 2014 to 31st January 2014	00-08	8500	200	8300	7630	670		
		23-24			7800		170		
		08-16'	8000		8800		1170		
		16-17	9000		9300		1670		
		17-23	9500						

\* 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.

**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
<b>NR-WR</b>	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak.
<b>WR-NR</b>	High loading of 765 kV Agra-Gwalior (1000 MW SPS setting on each circuit of 765 kV Gwalior-Agra)
<b>NR-ER</b>	(n-1) contingency of 400 kV Allahabad-Pusauli
<b>ER-NR</b>	(n-1) contingency of 400 kV Kahalgaon-Biharshariff
<b>W3-ER</b>	(n-1) contingency of 400kV Sterilte-Rourkela S/C
<b>ER-W3</b>	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
<b>WR-SR &amp; ER-SR</b>	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.
<b>SR-WR</b>	Bhadrawati HVDC B/B link capacity
<b>SR-ER</b>	
<b>ER-NER</b>	(n-1) contingency of 400 kV Kahalgaon-Biharshariff
<b>NER-ER</b>	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa
<b>S1-S2</b>	(n-1) contingency of 400 kV Kolar-Hosur D/C line, 400kV Hosur-Salem S/C and 400kV Somanahalli-Salem S/C line.
<b>Import of Punjab</b>	(n-1) contingency of ICT at Patiala/Moga
<b>W3 zone Injection</b>	(n-1) contingency of 400 kV 400 kV 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
<b>ER</b>									
<b>NR<sup>1</sup></b>	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		
		17-23	7000		6200		901		
	16th January 2014 to 21st January 2014	00-17 23-24	7500	800	6700	5299	1401		
		17-23	7000		6200		901		
	22nd January 2014	00-08	7500	800	6700	5299	1401		
		08-17'	7250		6450		1151		
		17-23'	6750		5950		651		
		23-24	7250		6450		1151		
	23rd January 2014	00-17	6250	800	5450	5299	151		
		17-21	6750		5950		651		
21-23		7000	6200		901				
23-24		7500	6700		1401				
16th January 2014 to 31st January 2014	00-17 23-24	7500	800	6700	5299	1401			
	17-23	7000		6200		901			
<b>NER<sup>2</sup></b>	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		

Revised due to shutdown of Vindhyachal back-to-Back HVDC Block-1

**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
NER2	9th January 2014	00-08	720	50	670	230	440		
		16-17							
		23-24							
	10th January 2014 to 31st January 2014	08-16'	550					270	
		17-23	640					360	
		00-17	720	50	670	230	440		
23-24									
		17-23	640		590		360		
WR									
SR	1st January 2014 to 9th January 2014	00-05	1750	0	1750	1657	93		
		10-19							
	10th January 2014	05-10	2250		2250		593		
		19-24							
		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	1750	0	1750	1657	93		
		10-19							
		05-10	2250		2250		593		
	15th January 2014 to 31st January 2014	00-05	1550	0	1550	1550	0		
10-19									
05-10		1550	1550		0				
		19-24							

**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 21st January 2014	00-17 23-24	570	100	470	0	470		
		17-23	570		470		470		
	22nd January 2014	00-09 15-17 23-24	570	100	470	0	470		Revised due to shutdown of 220 kV Balipara – Samaguri S/C .
		09-15'	530		430		430	-40	
		17-23	570		470		470		
	23rd 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	<b>Import</b>	(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)
	<b>Export</b>	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Allahabad-Pusauli
NER	<b>Import</b>	(n-1) contingency of 400 kV Kahalgaon-Biharshariff
	<b>Export</b>	N-1 contingency of 400/220 kV, 2x315 MVA ICTs at Misa
SR	<b>Import</b>	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.
	<b>Export</b>	

\*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
15	21-01-2014	22-01-14 to 23-01-14	Revised due to shutdown of Vindhyachal back-to-Back HVDC Block-1	WR-NR
		22-01-2014	Revised due to shutdown of 220 kV Balipara – Samaguri S/C .	NER-ER

## 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)
<b>I</b>	<b>NORTHERN REGION</b>				
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
	<b>Total NR</b>	<b>39554</b>	<b>33100</b>	<b>35321</b>	<b>28988</b>
<b>II</b>	<b>EASTERN REGION</b>				
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
	<b>Total ER</b>	<b>14211</b>	<b>11216</b>	<b>18409</b>	<b>16653</b>
<b>III</b>	<b>WESTERN REGION</b>				
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
	<b>Total WR</b>	<b>39314</b>	<b>32233</b>	<b>44059</b>	<b>35650</b>



<b>IV</b>	<b>SOUTHERN REGION</b>				
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
	<b>Total SR</b>	<b>33625</b>	<b>27024</b>	<b>31897</b>	<b>25505</b>
<b>V</b>	<b>NORTH-EASTERN REGION</b>				
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
	<b>Total NER</b>	<b>2355</b>	<b>1622</b>	<b>1478</b>	<b>1124</b>
	<b>Total All India</b>	<b>129059</b>	<b>105195</b>	<b>131164</b>	<b>107920</b>