

**National Load Despatch Centre  
Total Transfer Capability for December 2013**

Issue Date: 14/12/2013

Issue Time: 1000 hrs

Revision No. 15

Corridor	Date	Time Period (hrs)	Total Transfer Capability (TTC)	Reliability Margin (RM)	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 December 2013 to 31st December 2013	00-24	2500	500	2000	361	1639			
WR-NR <sup>1</sup>	1st December 2013 to 14th December 2013	00-17	3900	500	3400	3181	219			
		17-23	3900		3400		219			
	15th December 2013	00-11	3900	500	3400	3181	219		Revised due to shutdown of 500kV HVDC Mundra-Mohindergarh Pole-1 and Pole-2	
		11-17'	2200		1700		0			-1700
		17-24	3450		2950		0			-450
	16th December 2013	00-20	3450	500	2950	3181	0		Revised due to shutdown of 500kV HVDC Mundra-Mohindergarh Pole-2	
		20-24	3900		3400		219			
	17th December 2013 to 31st December 2013	00-17	3900	500	3400	3181	219			
		17-23	3900		3400		219			
	NR-ER *	1st December 2013 to 31st December 2013	00-17	1000	200	800	200	600		
		17-23	1100	900		700				
ER-NR	1st December 2013 to 31st December 2013	00-24	3800	300	3500	2363	1137			
W3-ER	1st December 2013 to 2nd December 2013	00-24	1800	300	1500	0	1500			
	3rd December 2013	00-08	1800	300	1500	0	1500			
		08-15'	1500	300	1200	0	1200			
	04th December 2013 to 09th December 2013	00-24	1800	300	1500	0	1500			
	10th December 2013	00-09	1800	300	1500	0	1500			
		09-19'	1500	300	1200	0	1200			
	11th December 2013	00-09	1800	300	1500	0	1500			
		09-19'	1500	300	1200	0	1200			
12th December 2013 to 31st December 2013	00-24	1800	300	1500	0	1500				
ER-W3	1st December 2013 to 31st December 2013	00-24	1000	300	700	700	0			
WR-SR	1st December 2013 to 31st December 2013	00-24	1000	0	1000	1000	0			
SR-WR *	1st December 2013 to 31st December 2013	00-24	1000	0	1000	0	1000			
ER-SR	1st December 2013	00-05	1250	200	1050	657	393			
		10-19	1250	200	1050		393			
	2nd December 2013 to 3rd December 2013	00-05	1450	200	1250	657	593			
		05-10	1450		1250		593			
	4th December 2013 to 5th December 2013	00-05	1450	200	1250	657	593			
		05-10	1450		1250		593			
	6th December 2013	00-05	750	0	750	657	93			
		10-19	1250	200	1050		393			

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ER-SR	7th December 2013	00-05 10-19	750	0	750	657	93		
		05-10 19-24	1250	0	1250		593		
	8th December 2013	00-05	750	0	750	657	93		
		05-07 19-24	1250		1250		593		
		07-10'	900		900		243		
		10-19'	400		400		0		
	9th December 2013 to 10th December 2013	00-05 10-19	750	0	750	657	93		
		05-10 19-24	1250	0	1250		593		
	11th December 2013 to 12th December 2013	00-05	750	0	750	657	93		
		10-19'	450		450		0		
		05-10 19-24	1250		1250		593		
	13th December 2013 to 31st December 2013	00-05 10-19	750	0	750	657	93		
		05-10 19-24	1250	0	1250		593		
	SR-ER *	1st December 2013 to 31st December 2013	00-17 23-24	800	0	800	197	603	
17-23			900		900	703			
ER-NER <sup>2</sup>	1st December 2013 to 31st December 2013	00-17 23-24	720	50	670	230	440		
		17-23	640		590		360		
NER-ER	1st December 2013 to 31st December 2013	00-17 23-24	570	100	470	0	470		
		17-23	570		470		470		
S1-S2	1st December 2013 to 31st December 2013	00-24	5600	400	5200	4900	300		
Import of Punjab	1st December 2013 to 31st December 2013	00-24	5600	300	5300	3800	1500		
Import TTC for DD & DNH	1st December 2013 to 31st December 2013	00-24	980	0	980	LTA and MTOA as per ex-pp schedule			
W3 zone Injection	1st December 2013 to 31st December 2013	00-08 23-24	8500	200	8300	7074	1226		
		08-16'	8000		7800		726		
		16-17	9000		8800		1726		
		17-23	9500		9300		2226		

\* 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-Biharsharif circuit.**

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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 (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	Bhadrawati HVDC B/B link capacity
SR-WR	Bhadrawati HVDC B/B link capacity
ER-SR	Peak: 1. Talcher-Kolar HVDC Capacity; 2. (n-1) contingency of 400 kV Jeypore-Gazuwaka Off-Peak: 1. Talcher-Kolar HVDC Capacity; 2. (n-1) contingency of 400 kV Jeypore-Gazuwaka From 11th to 12th Dec: (n-1) contingency of 400 kV Jeypore-Indrawati From 2nd to 5th Dec: (n-1) contingency of 400 kV Rourkela-Talcher & (n-1) contingency of 400 kV Jeypore-Gazuwaka
SR-ER	
ER-NER	(n-1) contingency of 400kV Balipara-Bongaigaon* (n-1) contingency of 400/220 kV, 315 MVA ICT at Misa
NER-ER	(n-1) contingency of 400 kV Binaguri-Bongaigaon* (n-1) contingency of 400 kV Balipara-Bongaigaon
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 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 December 2013 to 14th December 2013	00-17 23-24	7700	800	6900	5544	1356		
		17-23	7700		6900		1356		
	15th December 2013	00-11	7700	800	6900	5544	1356		Revised due to shutdown of 500kV HVDC Mundra-Mohindergarh Pole-1 & Pole-2
		11-17 <sup>1</sup>	6000		5200		0	-1700	
		17-24	7250		6450		906	-450	
	16th December 2013	00-20	7250	800	6450	5544	906	-450	Revised due to shutdown of 500kV HVDC Mundra-Mohindergarh Pole-2
		20-24	7700		6900		1356		
	17th December 2013 to 31st December 2013	00-17 23-24	7700	800	6900	5544	1356		
17-23		7700	6900		1356				
<b>NER<sup>2</sup></b>	1st December 2013 to 31st December 2013	00-17 23-24	720	50	670	230	440		
		17-23	640		590		360		
<b>WR</b>									
<b>SR</b>	1st December 2013	00-05 10-19	2250	200	2050	1657	393		
		05-10 19-24	2250	200	2050		393		
	2nd December 2013 to 3rd December 2013	00-05 10-19	2450	200	2250	1657	593		
		05-10 19-24	2450		2250		593		
	4th December 2013 to 5th December 2013	00-05 10-19	2450	200	2250	1657	593		
		05-10 19-24	2450		2250		593		
	6th December 2013	00-05 10-19	1750	0	1750	1657	93		
		05-10 19-24	2250	200	2050		393		
	7th December 2013	00-05 10-19	1750	0	1750	1657	93		
		05-10 19-24	2250	0	2250		593		
	8th December 2013	00-05	1750	0	1750	657	1093		
		05-07	2250		2250		1593		
		19-24	1900		1900		1243		
		07-10 <sup>1</sup> 10-19 <sup>1</sup>	1400		1400		0		
	9th December 2013 to 10th December 2013	00-05 10-19	1750	0	1750	1657	93		
		05-10 19-24	2250	0	2250		593		
	11th December 2013 to 12th December 2013	00-05	1750	0	1750	1657	93		
		10-19 <sup>1</sup>	1450		1450		0		
		05-10 19-24	2250		2250		593		
	13th December 2013 to 31st December 2013	00-05 10-19	1750	0	1750	1657	93		
05-10 19-24		2250	0	2250	593				

**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 December 2013 to 31st December 2013	00-17	3500	700	2800	561	2239		
		23-24	3600		2900		2339		
NER	1st December 2013 to 31st December 2013	00-17	570	100	470	0	470		
		23-24	570		470		470		
WR									
SR*	1st December 2013 to 31st December 2013	00-17	1800	0	1800	197	1603		
		23-24	1900		1900		1703		

\* 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 400kV Balipara-Bongaigaon* (n-1) contingency of 400/220 kV, 315 MVA ICT at Misa
	Export	(n-1) contingency of 400 kV Binaguri-Bongaigaon* (n-1) contingency of 400 kV Balipara-Bongaigaon
SR	Import	Bhadrawati HVDC B/B link capacity 1. Talcher-Kolar HVDC Capacity; 2. (n-1) contingency of 400 kV Jeypore-Gazuwaka From 11th to 12th Dec: (n-1) contingency of 400 kV Jeypore-Indrawati From 2nd to 5th Dec: (n-1) contingency of 400 kV Rourkela-Talcher & (n-1) contingency of 400 kV Jeypore-Gazuwaka
	Export	

\*Primary constraints

**National Load Despatch Centre**  
**Total Transfer Capability for December 2013**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	10-09-13	Whole Month	Revised due to commissioning of Sasan UMPP Unit 30	WR-NR
			Increase in share of Punjab from Sasan, DSTPS, Parbati-III	Import of Punjab
2	09-10-13	Whole Month	Revised considering SPS setting of 1000 MW on each circuit of 765 kV Agra-Gwalior	WR-NR
			Margin revised considering reduction in MTOA quantum.	W3
3	29-10-13	Whole Month	Margin on NR-ER Corridor revised considering the LTA/MTOA on NR-ER Path	NR-ER
4	27-11-13	Whole 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 Non-Commissioning of Kundankulam and NLC-II Exp unit-1.	S1-S2
			Revised due to change in Inter-Regional flow pattern and Load generation change in ER/WR.	W3 Zone Injection
5	27-11-13	Whole Month	Reliability Margin included.	ER-SR
			Revised due to increase in LTA/MTOA quantum.	NR-WR
6	27-11-13	1st Dec 13 to 2nd Dec 13	Revised due to reduction in Talcher Stage-2 Generation	ER-SR
7	01-12-13	2nd Dec 13 to 3rd Dec 13	Revised due to reduction in Talcher Stage-2 Generation	ER-SR
8	02-12-13	3rd Dec 13	Revised due to emergency shutdown of 400 kV SEL-Rourkela Ckt 1	W3-ER
9	03-12-13	4th Dec 13 to 6th Dec 13	Revised due to reduction in Talcher Stage-2 Generation	ER-SR
10	05-12-13	06th Dec 13	Revised due to increase in Talcher Stage-2 Generation	ER-SR
11	06-12-13	7th Dec 13	Revised due to change in Load Generation Balance.	ER-SR
12	07-12-13	8th Dec 13	Revised due to shutdown of 400kV Vijayawada-Nellore-1&2	ER-SR
13	09-12-13	10th Dec 13	Revised due to shutdown of 400 kV Raigarh-Jharsuguda-Rourkela Ckt 1	W3-ER
14	10-12-13	11th Dec 13 to 12th Dec 13	Revised due to shutdown of 400kV Angul-JITPL	ER-SR
		12th Dec 13	Revised due to shutdown of 400 kV Raigarh-Jharsuguda-Rourkela Ckt 1	W3-ER
15	14-12-13	15th Dec 13	Revised due to shutdown of 500kV HVDC Mundra-Mohindergarh Pole-1 and Pole-2	WR-NR
		16th Dec 13	Revised due to shutdown of 500kV HVDC Mundra-Mohindergarh Pole-2	

## ASSUMPTIONS IN BASECASE

Month : December '13

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>