

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

Issue Date: 17/12/2013

Issue Time: 1130 hrs

Revision No. 17

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-NR¹	1st December 2013 to 14th December 2013	00-17	3900	500	3400	3181	219			
		23-24								
	15th December 2013	17-23	3900	500	1700	3181	0			
		00-11	3900							
		11-17'	2200							
		17-24	3450							
	16th December 2013	00-20	3450	500	2950	3181	0			
		20-23	3900							
	17th December 2013 to 31st December 2013	00-17	3900	500	3400	3181	219			
		23-24								
		17-23	3900		3400		219			
NR-ER *	1st December 2013 to 31st December 2013	00-17	1000	200	800	200	600			
		23-24			900		700			
		17-23	1100							
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			
		15-24								
			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			
		19-24								
		09-19'	1500	300	1200	0	1200			
11th December 2013	00-09	1800	300	1500	0	1500				
	19-24									
		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 16th December 2013	00-24	1000	0	1000	1000	0			
	17th December 2013 to 18th December 2013	00-08	1000	0	1000	1000	0			
		19-24			500		0			
		08-19'	500							
	19th 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								
		05-10								
			19-24	1250	200	1050	657	393		
	2nd December 2013 to 3rd December 2013	00-05	1450	200	1250	657	593			
10-19										
		05-10	1450		1250		593			
		19-24								

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ER-SR	4th December 2013 to 5th December 2013	00-05 10-19	1450	200	1250	657	593			
		05-10 19-24	1450		1250		593			
	6th December 2013	00-05 10-19	750	0	750	657	93			
		05-10 19-24	1250	200	1050		393			
	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	1250		1250		593			
		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 ²		1st December 2013 to 17th December 2013	00-17 23-24	720	50	670	230	440		
			17-23	640		590		360		
	18th December 2013 to 20th December 2013	00-07 16-17 23-24	720	50	670	230	440		Revised due to shutdown of 220kV Sarusajai-Boko and 220kV Sarusajai-Agia	
		07-16'	700		650		420	-20		
		17-23	640		590		360			
	21st 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 16th 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			

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W3 zone Injection	17th December 2013	00-08	8500	200	8300	7074	1226		
		08-16'	7500		7300		226		
		16-17	8500		8300		1226		
		17-23	9000		8800		1726		
		23-24	8000		7800		726		
	18th December 2013 to 19th December 2013	00-08	8000	200	7800	7074	726		
		23-24	7500		7300		226		
		08-16'	7500		8300		1226		
		16-17	8500		8800		1726		
		17-23	9000		9300		2226		
	20th December 2013	00-08	8000	200	7800	7074	726		
		08-16'	7500		7300		226		
		16-17	8500		8300		1226		
		17-19	9000		8800		1726		
		19-23	9500		9300		2226		
	21st December 2013 to 31st December 2013	00-08	8500	200	8300	7074	1226		
		23-24	8000		7800		726		
		08-16'	8000		8800		1726		
		16-17	9000		9300		2226		
		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-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-Pusaui
ER-NR	(n-1) contingency of 400 kV Kahalgaon-Biharshariff
W3-ER	(n-1) contingency of 400kV Sterilite-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
ER									
NR ¹	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		
		11-17	6000		5200		0		
	16th December 2013	17-24	7250	800	6450	5544	906		
		00-20 20-23	7250 7700		6450 6900		906 1356		
	17th December 2013 to 31st December 2013	00-17 23-24	7700	800	6900	5544	1356		
		17-23	7700		6900		1356		
NER ²	1st December 2013 to 17th December 2013	00-17 23-24	720	50	670	230	440		
		17-23	640		590		360		
	18th December 2013 to 20th December 2013	00-07 16-17 23-24	720	50	670	230	440		Revised due to shutdown of 220kV Sarusajai-Boko and 220kV Sarusajai-Agia
		07-16	700		650		420	-20	
		17-23	640		590		360		
	21st December 2013 to 31st December 2013	00-17 23-24	720	50	670	230	440		
17-23		640	590		360				
WR									
SR	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 19-24	2250		2250		1593		
		07-10	1900		1900		1243		
		10-19	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	1450		1450		0			
13th December 2013 to 16th December 2013	05-10 19-24	2250	0	2250	1657	593			
	00-05 10-19	1750		1750		93			

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
SR	17th December 2013 to 18th December 2013	00-05 10-19	1750	0	1750	1657	93		
		08-10'	1750		1750		93		
		10-19'	1150		1150		0		
		05-08 19-24	2250		2250		593		
	19th 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 23-24	3500	700	2800	561	2239		
		17-23	3600		2900		2339		
NER	1st December 2013 to 31st December 2013	00-17 23-24	570	100	470	0	470		
		17-23	570		470		470		
WR									
SR*	1st December 2013 to 31st December 2013	00-17 23-24	1800	0	1800	197	1603		
		17-23	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-Bhimnal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Allahabad-Pusauli
NER	Import	(n-1) contingechny 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
	Export	From 2nd to 5th Dec: (n-1) contingency of 400 kV Rourkela-Talcher &(n-1) contingency of 400 kV Jeypore-Gazuwaka

*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	10-09-2013	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	09-10-2013	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	29-10-2013	Whole Month	Margin on NR-ER Corridor revised considering the LTA/MTOA on NR-ER Path	NR-ER
4	27-11-2013	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	27-11-2013	Whole Month	Reliability Margin included.	ER-SR
			Revised due to increase in LTA/MTOA quantum.	NR-WR
6	27-11-2013	1st Dec 13 to 2nd Dec 13	Revised due to reduction in Talcher Stage-2 Generation	ER-SR
7	01-12-2013	2nd Dec 13 to 3rd Dec 13	Revised due to reduction in Talcher Stage-2 Generation	ER-SR
8	02-12-2013	3rd Dec 13	Revised due to emergency shutdown of 400 kV SEL-Rourkela Ckt 1	W3-ER
9	03-12-2013	4th Dec 13 to 6th Dec 13	Revised due to reduction in Talcher Stage-2 Generation	ER-SR
10	05-12-2013	06th Dec 13	Revised due to increase in Talcher Stage-2 Generation	ER-SR
11	06-12-2013	7th Dec 13	Revised due to change in Load Generation Balance.	ER-SR
12	07-12-2013	8th Dec 13	Revised due to shutdown of 400kV Vijayawada-Nellore-1&2	ER-SR
13	09-12-2013	10th Dec 13	Revised due to shutdown of 400 kV Raigarh-Jharsuguda-Rourkela Ckt 1	W3-ER
14	10-12-2013	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	14-12-2013	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	
16	16-12-2013	17th Dec 13 - 18th Dec 13	Revised due to shutdown of HVDC Bhadrawati pole-1	WR-SR
		17th Dec 13 - 20th Dec 13	Revised due to shutdown of 765kV Seoni-Bina and 765kV Seoni-Wardha-2.	W3 Zone Injection
17	17-12-2013	18th Dec 13 - 20th Dec 13	Revised due to shutdown of 220kV Sarusajai-Boko and 220kV Sarusajai-Agia	ER-NER

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)
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