

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

Issue Date: 14/10/2013

Issue Time: 1300 hrs

Revision No. 7

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 October 2013 to 31st October 2013	00-24	2500	500	2000	LTA -286 MW	1714			
WR-NR ¹	1st October 2013 to 31st October 2013	00-17	3700	500	3200	LTA - 3176 MW	24			
		23-24								
		17-23	3700		3200		24			
NR-ER*	1st October 2013 to 31st October 2013	00-17	1000	200	800	0	800			
		23-24	1100		900		900			
ER-NR	1st October 2013 to 31st October 2013	00-17	4000	300	3700	LTA- 2189 MW	1511			
		23-24					1511			
		17-23								
W3-ER	1st October 2013 to 31st October 2013	00-24	1800	300	1500	0	1500			
ER-W3	1st October 2013 to 31st October 2013	00-24	1000	300	700	700	0			
WR-SR	1st October 2013 to 31st October 2013	00-24	1000	0	1000	LTA: 316 MW MTOA: 684 MW Total:1000 MW	0			
SR-WR*	1st October 2013 to 31st October 2013	00-24	1000	0	1000	0	1000			
ER-SR	1st October 2013	00-05	700	0	700	LTA:35 MW, MTOA: 577 MW, Total- 612 MW	88			
		10-19					88			
			05-10	700		700				
	2nd October 2013 to 3rd October 2013	00-05	750	0	750	612	138			
		10-19	1250	200	1050		438			
	4th October 2013	00-05	750	0	750	612	138			
		05-06	1250	200	1050		438			
		19-24	950	200	750		138			
		06-10'	450	0	450		0			
	05th October 2013	00-05	750	0	750	612	138			
		10-19	1250	200	1050		438			
	6th October 2013 to 14th October 2013	00-05	750	0	750	612	138			
		10-19	1250	200	1050		438			
	15th October 2013	00-05	750	0	750	612	138	0	Revised due to Reduced Voltage mode Operation of Talcher-Kolar HVDC	
		10-19	750	0	750		138	-500		
	16th October 2013	00-05	750	0	750	612	138			
10-19		1250	200	1050	438					
17th October 2013 to 31st October 2013	00-05	830	0	830	612	218				
	10-19	830	0	830		218				
SR-ER*	1st October 2013 to 31st October 2013	00-17	800	0	800	197	603			
		23-24	900		900		703			
		17-23	900		900		703			

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ER-NER	1st October 2013	00-08 23-24	680	35	645	LTA - 230 MW	415		
		08-17'	480		445		215		
		17-23	590		555		325		
	2nd October 2013 to 31st October 2013	00-17 23-24	680	35	645	230 MW	415		
		17-23	590		555		325		
NER-ER	1st October 2013 to 31st October 2013	00-17 23-24	500	100	400	0	400		
		17-23	440		340		340		
S1-S2	1st October 2013 to 31st October 2013	00-24	5600	400	5200	LTA: 4100MW MTOA:700 MW Total: 4800 MW	400		
Import of Punjab	1st October 2013 to 31st October 2013	00-24	5600	300	5300	3800	1500		
Import TTC for DD & DNH	1st October 2013 to 31st October 2013	00-24	980	0	980	LTA and MTOA as per ex-pp schedule			
W3 zone Injection	1st October 2013 to 31st October 2013	00-17, 23-24	9000	200	8800	LTA-6162 MW, MTOA-1211 MW, Total- 7373 MW	1427		
		17-23	9500		9300		1927		

* 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)KWPCCL, M) DB Power, N) Vandana Vidut

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 STOS approvals.

I. 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

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 Farakka-Malda
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	Off-Peak: 1. Talcher-Kolar HVDC Capacity; 2. (n-1) contingency of 400 kV Jeypore-Gazuwaka Peak: 1. Talcher-Kolar HVDC Capacity; 2. (n-1) contingency of 400 kV Jeypore-Gazuwaka
SR-ER	
ER-NER	(n-1) contingency of 400/220 kV,315 MVA ICT at Misa* (n-1) contingency of 400 kV Binaguri-Bongaigaon
NER-ER	(n-1) contingency of 400 kV Binaguri-Bongaigaon* Insufficient generating resources in NER
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.

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Import of Punjab	(n-1) contingency of ICT at Patiala/Moga								
W3 zone Injection	(n-1-1) contingency of 400 kV Raipur-Bhadrawati D/C section								

*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									
NR¹	1st October 2013 to 31st October 2013	00-17 23-24	7700	800	6900	LTA-5365 MW	1535		
		17-23	7700		6900		1535		
NER	1st October 2013	00-08 23-24	680	35	645	LTA-230 MW	415		
		08-17'	480		445		215		
		17-23	590		555		325		
	2nd October 2013 to 31st October 2013	00-17 23-24	680	35	645	230	415		
		17-23	590		555		325		
WR									
SR	1st October 2013	00-05 10-19	1700	0	1700	LTA-351 MW, MTOA- 1261 MW, Total- 1612 MW	88		
		05-10 19-24	1700		1700		88		
	2nd October 2013 to 3rd October 2013	00-05 10-19	1750	0	1750	1612	138		
		05-10 19-24	2250	200	2050		438		
	4th October 2013	00-05	1750	0	1750	1612	138		
		05-06 19-24	2250	200	2050		438		
		06-10'	1950	200	1750		138		
		10-19'	1450	0	1450		0		
	05th October 2013	00-05 10-19	1750	0	1750	1612	138		
		05-10 19-24	2250	200	2050		438		
	6th October 2013 to 14th October 2013	00-05 10-19	1750	0	1750	1612	138		
		05-10 19-24	2250	200	2050		438		
	15th October 2013	00-05 10-19	1750	0	1750	1612	138	0	Revised due to Reduced Voltage mode Operation of Talcher-Kolar HVDC
		05-10 19-24	1750	0	1750		0	-500	
	16th October 2013	00-05 10-19	1750	0	1750	1612	138		
		05-10 19-24	2250	200	2050		438		
	17th October 2013 to 31st October 2013	00-05 10-19	1830	0	1830	1612	218		
		05-10 19-24	1830		1830		218		

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

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 October 2013 to 31st October 2013	00-17 23-24	3500	700	2800	286	2514		
		17-23	3600		2900		2614		
NER	1st October 2013 to 31st October 2013	00-17 23-24	500	100	400	0	400		
		17-23	440		340		340		
WR									
SR	1st October 2013 to 31st October 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).

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 STOS approvals.

Limiting Constraints

NR	Import	(n-1) contingency of 400 kV Faarakka-Malda* 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 400/220 kV,315 MVA ICT at Misa* (n-1) contingency of 400 kV Binaguri-Bongaigaon
	Export	(n-1) contingency of 400 kV Binaguri-Bongaigaon* Insufficient generating resources in NER
SR	Import	Bhadrawati HVDC B/B link capacity Off-Peak(ER-side): 1. Talcher-Kolar HVDC Capacity; 2. (n-1) contingency of 400 kV Jeypore-Gazuwaka
	Export	Peak(ER-side): 1. Talcher-Kolar HVDC Capacity; 2. (n-1) contingency of 400 kV Jeypore-Gazuwaka

*Primary constraints

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Revision No	Date of Revision	Period of revision	Reason for Revision	Corridor Affected
1	26-08-2013	Whole Month	Revised due to Allocation of 150 MW additional power to J&K.	WR-NR
2	28-08-2013	Whole Month	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).	NR-WR, NR-ER, SR-WR, SR-ER
3	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
4	28-09-2013	Whole Month	Revised considering SPS setting of 1000 MW on each circuit of 765 kV Agra-Gwalior	WR-NR
		1st Oct	Revised considering present load generation balance and shutdown of 220 kV BTPS-Salakati D/C	ER-NER
5	30-09-2013	1st Oct - 16th Oct	Revised due to shutdown of Unit-1 of Talcher Stage-I and also due to change in LGBR	ER-SR
		Whole Month	Revised due to Non-Commissioning of Kudankulam Unit-1	S1-S2
		Whole Month	Margin revised considering reduction in MTOA quantum.	W3 zone Injection
6	03-10-2013	04th Oct	Revised due to shutdown of 400 kV Meramundli-Angul-Bolangir	ER-SR
7	14-10-2013	15th Oct	Revised due to reduced Voltage mode Operation of Talcher-Kolar HVDC	ER-SR

ASSUMPTIONS IN BASECASE

Month : October '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