

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

Issue Date: 21/10/2014

Issue Time: 1630 hrs

Revision No. 16

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 2014 to 31st October 2014	00-24	2500	500	2000	651	1349		
WR-NR	1st October 2014 to 31st October 2014	00-17	4900	500	4400	4380	20		
		23-24							
		17-23	4900		4400		20		
NR-ER*	1st October 2014 to 31st October 2014	00-06	1800	200	1600	293	1307		
		06-17'			800	358	442		
		17-18'	1800		1600	358	1242		
		18-23			900	293	607		
		23-24	1800		1600	293	1307		
		ER-NR	1st October 2014 to 31st October 2014		00-17	2800	300		
23-24									
17-23	69								
W3-ER <sup>s</sup>	1st October 2014 to 31st October 2014	00-24	1600	300	1300	697	603		
ER-W3	1st October 2014 to 31st October 2014	00-24	1000	300	700	874	0		
WR-SR	1st October 2014 to 31st October 2014	00-24	2100	750	1350	1350	0		
SR-WR *	1st October 2014 to 31st October 2014	00-24	No limit is being specified						
ER-SR	1st October 2014	00-06	2650	0	2650	2585	65		
		18-24			2650	2650	0		
		06-08'	2650		2650	0			
		08-18'	2450		2650	0			
	2nd October 2014 to 13th October 2014	00-06	2650	0	2650	2370	280		
		18-24				2435	215		
		06-18'							
	14th October 2014	00-06	2650	0	2650	2585	65		
		0600-1130'				2650	2650		
		1130-1800'	2000		2000	2650	0		
		18-24'	2000		2000	2585	0		
15th October 2014 to 31st October 2014	00-06	2000	0	2000	2585	0			
	18-24				2650	0			
	06-18'								
SR-ER *	1st October 2014 to 31st October 2014	00-24	No limit is being specified						
ER-NER	1st October 2014 to 10th October 2014	00-06	700	40	660	210	450		
		23-24			660	210	450		
		06-17'	700		560	210	350		
		17-18	600		560	210	350		
	11th October 2014	00-08	700	40	660	210	450		
		23-24				310	210		
		08-17'	350		310	210	100		
		17-18'	350		560	210	350		
	12th October 2014 to 31st October 2014	00-06	700	40	660	210	450		
		23-24				660	210		
		06-17'	700		560	210	350		
		17-18	600		560	210	350		
NER-ER	1st October 2014 to 31st October 2014	00-17	690	100	590	0	590		
		23-24			430	430			
		17-23	530						

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S1-S2	1st October 2014	00-24	3785	300	3485	2946	539		
	2nd October 2014	00-16	3050	300	2750	2837	0		
		16-24	3325	300	3025	2837	188		
	3rd October 2014	0000-1030	3325	300	3025	2837	188		
		1030-1200'	3620	300	3320	2731	589		
		12-24'	3620	300	3320	2731	589		
	4th October 2014	00-09'	3620	300	3320	2731	589		
		09-12'	3325	300	3025	2622	403		
		12-23'	3050	300	2750	2622	128		
	5th October 2014	23-24'	3325	300	3025	2622	403		
		00-17	3325	300	3025	2622	403		
		17-2315	3050	300	2750	2622	128		
	6th October 2014	2315-2400	3325	300	3025	2622	403		
		00-04	3325	300	3025	2658	367		
		0400'-1245	3050	300	2750	2658	92		
	7th October 2014	1245'-2400	3330	300	3030	2767	263		
		00-17	3330	300	3030	2767	263		
		17'-24	3620	300	3320	2767	553		
	8th October 2014	00-24	3325	300	3025	2658	367		
	9th October 2014	0000-0845	3325	300	3025	2658	367		
		0845-2400	3050	300	2750	2658	92		
	10th October 2014	00-24	3050	300	2750	2658	92		
	11th October 2014	00-11	3050	300	2750	2658	92		
		11-15'	3620	300	3320	2767	553		
		15-24'	3330	300	3030	2767	263		
	12th October 2014	00-10	3330	300	3030	2767	263		
		10-24'	3050	300	2750	2658	92		
	13th October 2014	00-24	3050	300	2750	2658	92		
	14th October 2014	00-24	3050	300	2750	2873	0		
		00-08	3050	300	2750	2837	0		
		08'-19	2700	300	2400	2837	0		
15th October 2014	19-24'	3050	300	2750	2837	0			
	16th October 2014 to 18th October 2014	00-24	3050	300	2750	2837	0		
19th October 2014	00-1230	3050	300	2750	2837	0			
	1230-24	3330		3030	2946	84			
20th October 2014	00-24	3510	300	3210	2946	264			
21st October 2014	00-24	3250	300	2950	2837	113			
22nd October 2014	00-24	3250	300	2950	3037	0	-285	Revised due to the extension of outage of Vallur Unit-2 and synchronization of Ramagundam unit-6	
23rd October 2014 to 28th October 2014	00-24	2965	300	2665	2928	0		Revised due to the synchronization of Ramagundam unit - 6	
29th October 2014 to 30th October 2014	00-24	2965	300	2665	2851	0			
31st October 2014	00-24	2965	300	2665	2887	0			

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Import of Punjab	1st October 2014 to 31st October 2014	00-24	5700	300	5400	3790	1610		
Import TTC for DD & DNH	1st October 2014 to 31st October 2014	00-24	1200	0	1200	LTA and MTOA as per ex-pp schedule			
W3 zone Injection	1st October 2014 to 6th October 2014	00-17	9400	200	9200	6843	2357		
		23-24					2857		
	7th October 2014 to 31st October 2014	00-17	9400	200	9200	7054	2146		
		23-24					2646		
		17-23	9900		9700				

\* 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).

\$ As per Simulations, predominant direction of flow is on West to North Corridor. Hence, in case injection point is in Western Region (W1,W2,W3), STOA/PX transactions from West to North on West-East-North corridor shall not be allowed as such transaction increases congestion in the West to North Corridor.

- 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 n) Vandana Vidyut

# 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 vary. RLDC/NLDC would factor this situation on day ahead basis. In the eventuality that net schedules exceed ATC, real time curtailments might be effected by RLDCs/NLDC.

In case of TTC Revision due to any shutdown :

- 1) The TTC value will be revised to normal values after restoration of shutdown.
- 2) The TTC value will be revised to normal values if the shutdown is not being availed in real time.

**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 (1250 MW SPS setting on each circuit of 765 kV Gwalior-Agra) and Loop flows on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda (power flowing from WR to NR on 765kV Gwalior-Agra D/C and from NR to WR on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda).
NR-ER	(n-1) contingency of 400 kV Sarnath-Pusaali
ER-NR	High loading of 765 kV Agra-Gwalior (1250 MW SPS setting on each circuit of 765 kV Gwalior-Agra) due to transit flows on ER-WR-NR corridor.
W3-ER	(n-1) contingency of one circuit of 400kV MPL-Maithon D/C
ER-W3	(n-1) contingency of 400kV Raigarh-Jharsuguda-Rourkela
WR-SR & ER-SR	1. (n-1) contingency of 400kV Parli(PG)-Sholapur(PG) D/C
	2. ER-SR TTC has been declared assuming more than 1100 MW generation at Talcher Stage-2. In case Talcher Stage-2 generation goes below 1100 MW, then the ER-SR TTC would be revised downward as constraints within ER would emerge.
SR-WR	Bhadrawati HVDC B/B link capacity
SR-ER	(n-1) contingency of one circuit of 400kV Talcher-Rourkela D/C
ER-NER	Palatana unit tripping leading to the thermal overloading of 220 kV BTPS - Salakati D/C
NER-ER	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa and High loading of 220kV Misa-Samaguri D/C
S1-S2	(n-1) contingency of one circuit of 400 kV Kolar-Hosur D/C line
Import of Punjab	(n-1) contingency of ICT at Patiala/Moga
W3 zone Injection	(n-1-1) contingency of one circuit 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													
NR	1st October 2014 to 31st October 2014	00-17	7700	800	6900	6811	89						
		23-24											
		17-23	7700		6900		89						
NER	1st October 2014 to 10th October 2014	00-06	700	40	660	210	450						
		23-24											
		06-17								700	660	210	450
		17-18								600	560	210	350
		18-23								600	560	210	350
	11th October 2014	00-08	700	40	660	210	450						
		23-24											
		08-17								350	310	210	100
		17-18								350	310	210	100
		18-23								600	560	210	350
	12th October 2014 to 31st October 2014	00-06	700	40	660	210	450						
		23-24											
		06-17								700	660	210	450
		17-18								600	560	210	350
		18-23								600	560	210	350
WR													
SR	1st October 2014	00-06	4750	750	4000	3935	65						
		18-24											
		06-08								4750	4000	4000	0
	2nd October 2014 to 13th October 2014	00-06	4750	750	4000	3720	280						
		18-24											
		06-18								4750	4000	3785	215
	14th October 2014	00-06	4750	750	4000	3935	65						
		0600-1130											
		1130-1800								4100	3350	4000	0
		18-24								4100	3350	3935	0
		15th October 2014 to 31st October 2014								00-06	4100	750	3350
	18-24												
		06-18	4100	3350	4000	0							

Simultaneous Export Capability

Corridor	Date	Time	Total	Reliability	Available	Long Term	Margin	Changes	Comments			
NR*	1st October 2014 to 31st October 2014	00-06	3500	700	2800	944	1856					
		06-17										
		17-18	3600							2800	1009	1791
		18-23								2900	1009	1891
		23-24								3500	2900	944
2800	944	1856										
NER	1st October 2014 to 31st October 2014	00-17	690	100	590	0	590					
		23-24										
		17-23	530							430	430	
WR												
SR *	1st October 2014 to 31st October 2014	00-24	No limit is being specified									

\* 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) contingencies of one circuit of 400KV Farakka-Malda D/C & (n-1) contingency of one circuit of 400KV High loading of 765 kV Agra-Gwalior (1250 MW SPS setting on each circuit of 765 kV Gwalior-Agra) and Loop
	Export	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak.
NER	Import	(n-1) contingency of 400 kV Samath-Pusauli
	Export	Palatana unit tripping leading to the thermal overloading of 220 kV BTPS - Salakati D/C (n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa and High loading of 220kV Misa-Samaguri D/C
SR	Import	1. (n-1) contingency of 400kV Pari(PG)-Sholapur(PG) D/C
		2. ER-SR TTC has been declared assuming more than 1100 MW generation at Talcher Stage-2. In case Talcher Stage-2 generation goes below 1100 MW, then the ER-SR TTC would be revised downward as constraints within ER would emerge.

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Total Transfer Capability for October 2014**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	08-08-2014	Whole Month	STOA Margin revised due correction in LTA/ MTOA/ Allocation.	NR-WR/ NR-ER/ W3-ER
			Revised due to commissioning of contingency arrangement of one 500 MW Vindhyachal (Unit-12) with 400kV Vindhyachal-Rihand line.	WR-NR
			Revised due to commissioning of 765kV Sholapur-Raichur Circuit-2 and 765kV Wardha-Aurangabad D/C. The LTA/MTOA figures are based on allocations and the meetings on TTC/ATC taken by CTU on 24th and 30th Jul 2014. Any margins on account of less LTA/MTOA would be offered on day ahead basis.	WR-SR/ ER-SR
			Revised due to commissioning of 400/220KV 2X315MVA ICT at Kala S/S along with 220kV Kala-Sayali and 220KV Kala-Khadoli lines	Import TTC for DD & DNH
2	26-09-2014	Whole month	LTA/MTOA revised by CTU. MTOA from MP to Bescom (KPTCL) = 111 MW, MTOA from KSEB to Chattishgarh = 100 MW. TNEB got 365 MW LTA from WR (Jindal-150MW(earlier), KSK Mahanadi =179 MW, BALCO = 36 MW)	ER-SR
			Revised due to commissioning of 400kV Tiruvalam- Kalivendapattu DC line, 400kV Kalivendapattu-Pugalur-1 & Tiruvalam 230kV line and LGBR Changes.	S1-S2
3	30-09-2014	01-10-2014	Revised due to the outage of Vallur Unit-2 and NCTPS St-2 Unit-1	S1-S2
		01-10-2014	Revised due to shutdown of 220kV Jeypore-Jayanagar ckt 1 and ckt 2 one at a time	ER-SR
		Whole Month	Revised after the reassessment of TTC due to the commissioning of the new elements in NER	ER-NER
		Whole Month	Revised considering the present inter-regional flow pattern and transit flows from ER to NR via WR	ER-NR
4	02-10-2014	02-10-2014 to 31-10-2014	LTA revised till further orders from CERC	ER-SR
5	02-10-2014	02-10-2014 to 03-10-2014	Revised due to the extension of outage of NCTPS Stage 2 Unit -1	S1-S2
6	03-10-2014	03-10-2014	Revised due to outage of both NCTPS Stage 2 Unit -1 and Vallur Unit -2. LTA granted by CTU revised as per orders from CERC	S1-S2
		04-10-2014	Revised due to outage of both NCTPS Stage 2 Unit -1 and Vallur Unit -3. LTA granted by CTU revised as per orders from CERC	
		05-10-2014 to 13-10-2014	LTA granted by CTU revised as per orders from CERC	
7	04-10-2014	04-10-2014 to 05-10-2014	Revised due to extended outage of NCTPS Unit-1.	S1-S2
		06-10-2014 to 15-10-2014	Revised due to the extended outage of Vallur Unit -1	

8	06-10-2014	05-10-2014 to 07-10-2014	Revised due to the extension of outage of NCTPS Unit -1	S1-S2
			Revised due to the outage of Vallur Unit -2	
9	07-10-2014	07-10-2014 to 10-10-2014	Revised due to the outage of NCTPS Stage 2 Unit -1	S1-S2
		07-10-2014	MTOA revised by CTU. MTOA from MP to Bescom (KPTCL) = 111 MW, MTOA from KSEB to Chattishgarh = 100 MW.	
10	09-10-2014	09-10-2014 to 10-10-2014	Revised due to the Synchronisation of NCTPS Stage 2 Unit -1	S1-S2
11	11-10-2014	11-10-2014	Revised due to S/D of 400 kV Binaguri-Bongaigaon Ckt 1	ER-NER
		11-10-2014	Revised due to outage of Vallur Unit-2 and NCTPS Unit-1	S1-S2
		12-10-2014	Revised due to outage of Vallur Unit-2	
12	14-10-2014	14-10-2014 to 31-10-2014	Revised due to breakdown of 400 kV Jeypore -Gazuwaka D/C during Hudhud cyclone	ER-SR
		15-10-2014	Revised due to shutdown of 400 kV Kalivendapattu - Pugalur ckt 1	S1-S2
13	15-10-2014	16-10-2014 to 20-10-2014	Revised due to the extended outage of Vallur unit 1	S1-S2
14	19-10-2014	19-10-2014	Revised due to Vallur Unit-2 Outage on BTL.	S1-S2
		20-10-2014	Revised due to commissioning of 400kV Kalivendapattu-Pugalur-2 & Vallur Unit-2 Outage on BTL	
		21-10-2014 to 31-10-2014	Revised due to commissioning of 400kV Kalivendapattu-Pugalur-2	
15	20-10-2014	21-10-2014	Revised due to the synchronisation of Vallur Unit-2	S1-S2
16	21-10-2014	22-10-2014	Revised due to the extension of outage of Vallur Unit-2 and synchronization of Ramagundam unit-6	S1-S2
		23-10-2014 to 31-10-2014	Revised due to the synchronization of Ramagundam unit - 6	

## ASSUMPTIONS IN BASECASE

Month : Oct '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	6873	6618	2298	2471
2	Haryana	6347	4800	1950	1950
3	Rajasthan	8049	7201	4652	4690
4	Delhi	4270	3469	985	985
5	Uttar Pradesh	9996	9406	5793	5830
6	Jammu & Kashmir	1997	1359	564	567
7	Uttarakhand	1496	1497	566	538
8	Himachal Pradesh	1508	1145	625	340
9	Chandigarh	240	167	0	0
10	ISGS/PPs	0	0	18031	12458
	<b>Total NR</b>	<b>40776</b>	<b>35662</b>	<b>35464</b>	<b>29829</b>
<b>II</b>	<b>EASTERN REGION</b>				
1	West Bengal	6471	4940	4771	3800
2	Jharkhand	937	800	600	340
3	Orissa	3564	3000	3100	2857
4	Bihar	2345	1800	110	110
5	Damodar Valley Corporation	2626	2200	3740	3122
6	Sikkim	84	60	0	0
7	Bhutan	109	108.56	1001	1351
8	ISGS/PPs	548	440	8060	6815
	<b>Total ER</b>	<b>16684</b>	<b>13348.56</b>	<b>21382</b>	<b>18394</b>
<b>III</b>	<b>WESTERN REGION</b>				
1	Chattisgarh	3023	2275	1779	1076
2	Madhya Pradesh	9513	5428	4849	3597
3	Maharashtra	20147	13460	15061	8252
4	Gujarat	11178	7880	10164	6606
5	Goa	440	307	0	0
6	Daman and Diu	276	233	0	0
7	Dadra and Nagar Haveli	624	623	0	0
8	ISGS/PPs	1278	1214	21701	18099
	<b>Total WR</b>	<b>46479</b>	<b>31420</b>	<b>53554</b>	<b>37630</b>

## ASSUMPTIONS IN BASECASE

Month : Oct '14

S.No.	Name of State/Area	Load		Generation	
		Peak Load (MW)	Off Peak Load (MW)	Peak (MW)	Off Peak (MW)
<b>IV</b>	<b>SOUTHERN REGION</b>				
1	Andhra Pradesh	5527	5017	3532	3032
2	Telangana	5568	5054	3434	1920
3	Tamil Nadu	10826	9182	6586	5424
4	Karnataka	7571	5677	6003	4075
5	Kerala	2943	1826	1581	601
6	Pondy	287	199	0	0
7	Goa	68	68	0	0
8	ISGS/IPPs	74	74	10977	10836
	<b>Total SR</b>	<b>32864</b>	<b>27097</b>	<b>32113</b>	<b>25888</b>
<b>V</b>	<b>NORTH-EASTERN REGION</b>				
1	Arunachal Pradesh	117	47	0	0
2	Assam	929	752	254	227
3	Manipur	117	84	0	0
4	Meghalaya	335	201	154	87
5	Mizoram	77	46	0	3
6	Nagaland	104	84	24	21
7	Tripura	278	202	109	108
8	ISGS/IPPs	3	3	1301	918
	<b>Total NER</b>	<b>1960</b>	<b>1418.99</b>	<b>1842</b>	<b>1364</b>
	<b>Total All India</b>	<b>138763</b>	<b>108947</b>	<b>144355</b>	<b>113106</b>