

National Load Despatch Centre
Total Transfer Capability for December 2016

Issue Date: 13/12/2016

Issue Time: 1330 hrs

Revision No. 9

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 Dec 2016 to 31st Dec 2016	00-06	2500	500	2000	55	1945			
		06-18'				65	1935			
		18-24				55	1945			
WR-NR*	1st Dec 2016	00-07'	6000	500	5500	6850	0			
		07-24	5000		4500		0			
	2nd Dec 2016 to 4th Dec 2016	00-24	5000	500	4500	6850	0			
	5th Dec 2016	00-24	6200	500	5700	6850	0			
	6th Dec 2016	00-07	6700	500	6200	6850	0			
		07-24	6200		5700		0			
	7th Dec 2016 to 8th Dec 2016	00-07	6700	500	6200	6850	0			
		07-24	5950		5450		0			
	9th Dec 2016 to 12th Dec 2016	00-07	6700	500	6200	6850	0			
		07-24	6200		5700		0			
	13th Dec 2016	00-08	6400	500	5900	6850	0			
		08-24'	5700		5200		0			
	14th Dec 2016	00-09	6400	500	5900	6850	0	-800		Revised due to outage of HVDC Rihand-Dadri Poe-1 and shutdown of 765/400 kV ICT-1 at Phagi.
		09-24	6200		5700		0	-1000		
	15th Dec 2016	00-09	7200	500	6700	6850	0			Revised due to shutdown of 765/400 kV ICT-1 at Phagi.
09-24		7050	6550		0		-150			
16th Dec 2016 to 31st Dec 2016	00-24	7200	500	6700	6850	0				
NR-ER*	1st Dec 2016 to 31st Dec 2016	00-06	2000	200	1800	193	1607			
		06-18'	2000		1800	303	1497			
		18-24	2000		1800	193	1607			
ER-NR*	1st Dec 2016 to 31st Dec 2016	00-24	4200	300	3900	2931	969			
W3-ER	1st Dec 2016 to 31st Dec 2016	00-24	No limit is being specified.							
ER-W3	1st Dec 2016 to 31st Dec 2016	00-24	No limit is being specified.							
WR-SR	1st Dec 2016 to 2nd Dec 2016	00-24	4000	750	3250	3250	0			
	3rd Dec 2016 to 10th Dec 2016	00-24	3500	750	2750	3250	0			
	11th Dec 2016	00-05	3900	750	3150	3384	0			
		05-24	3500		2750		0			
		22-24	3900		3150		0			
	12th Dec 2016 to 31st Dec 2016	00-05	4400	750	3650	3384	266			
		05-24	4000		3250		0			
		22-24	4400		3650		266			
SR-WR *	1st Dec 2016 to 31st Dec 2016	00-24	No limit is being Specified.							

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ER-SR	1st Dec 2016 to 31st Dec 2016	00-06	2650	0	2650	2585	65		
		18-24							
		06-18'				2650	0		
SR-ER *	1st Dec 2016 to 31st Dec 2016	00-24	No limit is being Specified.						
ER-NER	1st Dec 2016 to 31st Dec 2016	00-17	1320	45	1275	225	1050		
		23-24							
		17-23	1150		1105		880		
NER-ER	1st Dec 2016 to 31st Dec 2016	00-17	1100	45	1055	0	1055		
		23-24							
		17-23	1260		1215		1215		
W3 zone Injection	1st Dec 2016 to 31st Dec 2016	00-24	No limit is being specified (In case of any constraints appearing in the system, W3 zone export would be revised accordingly)						
Note: TTC/ATC of S1-S2 corridor, Import of Punjab and Import of DD & DNH is uploaded on NLDC website under Intra-Regional Section in Monthly ATC.									

* 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) S1 comprises of Telangana, AP and Karnataka: S2 comprises of Tamil Nadu, Kerala and Puducherry

2) W3 comprises of the following regional entities :

a) Chattisgarh Sell transaction, b) Jindal Power Limited (JPL) Stage-I & Stage-II, 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) KWPC, n)Vandana Vidut o)RKM, p)GMR Raikheda, q)Ind Barath and any other regional entity generator in Chhattisgarh

The figure is based on LTA/MTOA approved by CTU and Allocation figures as per RPCs RTA/REA. In actual Operation, due to Units being on Maintenance/ Fuel shortage/New units being commissioned 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	1. (n-1) Contingency of 765kV Gwalior-Agra one ckt leads to 2750 MW loading on second circuit. 2.High Loading of 400kV Singrauli-Anpara S/C.
NR-ER	(n-1) contingency of 400 kV Saranath-Pusauli
ER-NR	(n-1) contingencies of N.Ranchi - Chandawa S/c & (n-1) contingencies of 400kV MPL- Maithon S/c
WR-SR & ER-SR	00-05 hrs & 22-24 hrs: (n-1) contingency of one circuit of 765 kV Raichur - Sholapur will lead to 2750 MW loading on the other circuit.
	05-22 hrs: (n-1) contingency of one circuit of 765 kV Aurangabad - Sholapur will lead to 2750 MW loading on the other circuit and 10kV voltage dip at Sholapur (PG)
	Low Voltage at Gazuwaka (East) Bus.
ER-NER	a. (n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa b. High loading of 220 kV Balipara-Sonabil line(200 MW)
NER-ER	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA ICT at Misa
W3 zone Injection	---

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	1st Dec 2016 to 2nd Dec 2016	00-06	6650	750	5900	5835	65		
		06-18'	6650		5900	5900	0		
		18-24	6650		5900	5835	65		
	3rd Dec 2016 to 10th Dec 2016	00-06	6150	750	5400	5835	0		
		06-18'	6150		5400	5900	0		
		18-24	6150		5400	5835	0		
	11th Dec 2016	00-05	6550	750	5800	5969	0		
		05-06	6150		5400	5969	0		
		06-18	6150		5400	6034	0		
		18-22	6150		5400	5969	0		
		22-24	6550		5800	5969	0		
	SR	12th Dec 2016 to 31st Dec 2016	00-05	7050	750	6300	5969	331	
05-06			6650	5900		5969	0		
06-18			6650	5900		6034	0		
18-22			6650	5900		5969	0		
22-24			7050	6300		5969	331		

* 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).

* For approving STOA Bilateral transactions, margin available in Simultaneous Import of NR would be apportioned on WR-NR Corridor & ER-NR Corridor in the following ratio:
Margin in Simultaneous import of NR = A
WR-NR ATC =B
ER-NR ATC = C

Margin for WR-NR applicants = $A * B/(B+C)$
Margin for ER-NR Applicants = $A * C/(B+C)$

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 Dec 2016 to 31st Dec 2016	00-06	4500	700	3800	148	3652		
		06-18'			3800	213	3587		
		18-24	4500		3800	148	3652		
NER	1st Dec 2016 to 31st Dec 2016	00-17	1100	45	1055	0	1055		
		23-24			1215		1215		
		17-23	1260						
WR									
SR *	1st Dec 2016 to 31st Dec 2016	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) contingency of one circuit of 400 kV Kahalgaon-Banka leads to high loading on the other circuit 1. (n-1) Contingency of 765kV Gwalior-Agra one ckt leads to 2750 MW loading on second circuit. 2.High Loading of 400kV Singrauli-Anpara S/C. 3.(n-1) contingencies of N.Ranchi - Chandawa S/c & (n-1) contingencies of 400kV MPL- Maithon S/c.
	Export	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Saranath-Pusauli
NER	Import	a. (n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa b. High loading of 220 kV Balipara-Sonabil line(200 MW)
	Export	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA
SR	Import	00-05 hrs & 22-24 hrs: (n-1) contingency of one circuit of 765 kV Raichur - Sholapur will lead to 2750 MW loading on the other circuit.
		05-22 hrs: (n-1) contingency of one circuit of 765 kV Aurangabad - Sholapur will lead to 2750 MW loading on the other circuit and 10kV voltage dip at Sholapur (PG) Low Voltage at Gazuwaka (East) Bus.

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Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	29/11/2016	01/12/2016 to 04/12/2016	Revised due to shutdown of HVDC Mundra - Mohindergarh Pole-1, Commissioning of 400kV RAPC-Shujalpur D/C & Operationalization of LTA/MTOA.	WR-NR/ Import of NR
		05/12/2016 to 31/12/2016	Revised due to Commissioning of 400kV RAPC-Shujalpur D/C & Operationalization of LTA/MTOA.	
2	30/11/2016	01/12/2016 to 04/12/2016	Revised due to dense fog condition and trippings occurred in the past few days due to fog.	WR-NR/ Import of NR
3	2/12/2016	03/12/2016 to 10/12/2016	Revised due to outage of HVDC Bhadrawati Block-I.	WR-SR/ Import of SR
4	4/12/2016	5/12/2016	Revised due to dense fog conditions prevailing in NR and line trippings occurred in the past few days due to fog.	WR-NR/ Import of NR
5	5/12/2016	6/12/2016 to 12/12/2016	Revised considering fog during 0000-0007 hrs and shutdown of 765 kV Agra - Gwalior ckt 1 from 0700 hrs	WR-NR/ Import of NR
6	6/12/2016	7/12//2016 to 8/12/2016	Revised due to shutdown of 400 kV Anpara - Mau	WR-NR/ Import of NR
7	10/12/2016	11/12/2016	Revised due to (1) Outage of HVDC Bhadrawati Block-I. (2) Present Maharashtra Demand/Generation and Voltage profile at Sholapur (PG), Parli(PG) etc. during night hours.	WR-SR/ Import of SR
		12/12/2016 to 31/12/2016	Revised due to present Maharashtra Demand/Generation and Voltage profile at Sholapur (PG), Parli(PG) etc. during night hours.	
8	12/12/2016	13/12/2016	Revised due to outage of HVDC Rihand-Dadri and 765 kV Phagi - Bhiwani ckt 1	WR-NR/ Import of NR
9	13/12/2016	14/12/2016	Revised due to outage of HVDC Rihand-Dadri Poe-1 and shutdown of 765/400 kV ICT-1 at Phagi	WR-NR/ Import of NR
		15/12/2016	Revised due to shutodwn of 765/400 kV ICT-1 at Phagi	

ASSUMPTIONS IN BASECASE					
				Month: December '16	
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	5866	3850	2079	2141
2	Haryana	6497	3357	2061	2061
3	Rajasthan	9758	10060	5720	5774
4	Delhi	3735	1797	493	493
5	Uttar Pradesh	12555	12314	6338	6302
6	Uttarakhand	1783	1835	546	328
7	Himachal Pradesh	1380	1361	246	111
8	Jammu & Kashmir	2254	2352	463	431
9	Chandigarh	212	98	0	0
10	ISGS/IPPs	28	29	19403	11986
	Total NR	44068	37053	37348	29626
II	EASTERN REGION				
1	Bihar	3392	2543	200	131
2	Jharkhand	1098	814	400	400
3	Damodar Valley Corporation	2400	2136	3121	2971
4	Orissa	3753	2677	2759	1699
5	West Bengal	6741	5697	5110	3876
6	Sikkim	100	51	0	0
7	Bhutan	245	245	477	115
8	ISGS/IPPs	567	572	11276	10138
	Total ER	18266	14706	23298	19316
III	WESTERN REGION				
1	Maharashtra	20119	12604	14942	9531
2	Gujarat	12390	9961	9312	7051
3	Madhya Pradesh	11481	7945	6974	5088
4	Chattisgarh	3842	2563	2830	1919
5	Daman and Diu	308	252	0	0
6	Dadra and Nagar Haveli	706	656	0	0
7	Goa-WR	500	240	0	0
8	ISGS/IPPs	3099	3142	30985	26469
	Total WR	52445	37363	65042	50058

IV	SOUTHERN REGION				
1	Andhra Pradesh	7562	5829	6378	5692
2	Telangana	7946	6579	2953	2749
3	Karnataka	9122	9050	7140	5214
4	Tamil Nadu	12600	10108	5209	3920
5	Kerala	3891	2888	1609	629
6	Pondy	391	337	0	0
7	Goa-SR	89	89	0	0
8	ISGS/IPPs	0	0	14187	12153
	Total SR	41601	34880	37476	30357
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	113	54	0	0
2	Assam	1048	789	250	160
3	Manipur	129	84	0	0
4	Meghalaya	326	226	162	112
5	Mizoram	84	59	8	8
6	Nagaland	93	77	8	6
7	Tripura	178	127	81	80
8	ISGS/IPPs	80	50	1507	1083
	Total NER	2051	1467	2016	1449
	Total All India	158676	125714	165657	130921