

National Load Despatch Centre
Total Transfer Capability for January 2016

Issue Date: 06/01/2016

Issue Time: 1430 hrs

Revision No. 8

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 Jan 2016 to 31st Jan 2016	00-24	2500	500	2000	706	1294		
WR-NR*	1st Jan 2016 to 4th Jan 2016	00-24	7700	500	7200	6103	1097		
	5th Jan 2016 to 6th Jan 2016	00-09	7700	500	7200	6103	1097		
		09-24'	7200		6700		597		
	7th Jan 2016 to 31st Jan 2016	00-24	7700	500	7200	6103	1097		
NR-ER*	1st Jan 2016 to 31st Jan 2016	00-06	2000	200	1800	293	1507		
		06-18'	2000		1800	358	1442		
		18-24	2000		1800	293	1507		
ER-NR*	1st Jan 2016 to 31st Jan 2016	00-24	3800	300	3500	2431	1069		
W3-ER ^s	1st Jan 2016 to 31st Jan 2016	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.						
ER-W3	1st Jan 2016 to 31st Jan 2016	00-24	No limit is being specified.						
WR-SR	1st Jan 2016 to 2nd Jan 2016	00-24	3500	750	2750	3250	0		
	3rd Jan 2016	00-24	1000	500	500	3250	0		
	4th Jan 2016	00-24	1000	500	500	3250	0		
	5th Jan 2016	00-24	1000	500	500	3250	0		
	6th Jan 2016	00-24	1000	500	500	3250	0		
	7th Jan 2016 to 31st Jan 2016	00-24	4000	750	3250	3250	0		
SR-WR *	1st Jan 2016 to 31st Jan 2016	00-24	No limit is being Specified.						
ER-SR	1st Jan 2016 to 6th Jan 2016	00-06	2650	0	2650	2585	65		Revised due to shutdown of HVDC Talcher-Kolar Pole-1 & Pole-2.
		18-24				2650	0		
	7th Jan 2016	00-06	2650	0	2650	2585	65		
		06-18'	650		650	2650	0	-2000	
		18-24	650		650	2585	0	-2000	
	8th Jan 2016 to 11th Jan 2016	00-05	1650	0	1650	2585	0	-1000	
		05-06'	650		650	2585	0	-2000	
		06-18'	650		650	2650	0	-2000	
		18-24			650	2585	0	-2000	
					2650	0			
12th Jan 2016 to 31st Jan 2016	00-06	2650	0	2650	2585	65			
	18-24				2650	0			
		06-18'			2650	0			
SR-ER *	1st Jan 2016 to 31st Jan 2016	00-24	No limit is being Specified.						
ER-NER	1st Jan 2016 to 4th Jan 2016	00-17	1160	45	1115	210	905		
		23-24					1100	1055	845
	5th Jan 2016	00-17	1160	45	1115	210	905		
		17-19	1160		1115		905		
		19-23	1340		1295		1085		
		23-24	1400		1355		1145		
	6th Jan 2016 to 31st Jan 2016	00-17	1400	45	1355	210	1145		
		23-24						1400	1295

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NER-ER	1st Jan 2016 to 4th Jan 2016	00-17	1110	45	1065	0	1065		
		23-24			905		905		
	5th Jan 2016	17-23	950	45	1065	0	1065		
		00-17	1110		905		905		
		17-19	950		1295		1295		
		19-23	1340		1285		1285		
	23-24	1330	45	1285	0	1285	1285		
		00-17		1330		1295	1295		
		23-24		1340		1295	1295		
	6th Jan 2016 to 31st Jan 2016	00-17	1330	45	1285	0	1285		
		23-24	1340		1295		1295		
	W3 zone Injection	1st Jan 2016 to 31st Jan 2016	00-24	No limit is being specified (in case of skewed inter-regional flows or 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).

\$ 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) 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) KWPCCL, n)Vandana Vidyut

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	1. n-1 contingency of one circuit of 400 kV Biharshariff- Lakhisarai leads to high loading on the other circuit
WR-SR & ER-SR	(n-1) contingency of one circuit of 765 kV Raichur - Sholapur will lead to 2500 MW loading on the other circuit Low Voltage at Gazuwaka (East) Bus.
ER-NER	(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. n-1 contingency of 400/132 kV, 2 x 200 MVA ICTs at Silchar
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	---

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 Jan 2016 to 4th Jan 2016	00-05	11000	800	10200	8534	1666			
		05-08'	11100		10300		1766			
		08-19'	11000		10200		1666			
		19-24	10250		9450		916			
	5th Jan 2016	00-05	11000	800	10200	8534	1666			
		05-08'	11100		10300		1766			
		08-09'	11000		10200		1666			
		09-19'	10300		9500		966			
		19-24	9600		8800		266			
	7th Jan 2016 to 31st Jan 2016	00-05	11000	800	10200	8534	1666			
		05-08'	11100		10300		1766			
		08-19'	11000		10200		1666			
19-24		10250	9450		916					
NER	1st Jan 2016 to 4th Jan 2016	00-17	1160	45	1115	210	905			
		23-24			1055		845			
		17-23			1100					
	5th Jan 2016	00-17	1160	45	1115	210	905			
		17-19			1160		905			
		19-23			1340		1085			
		23-24			1400		1145			
	6th Jan 2016 to 31st Jan 2016	00-17	1400	45	1355	210	1145			
		23-24			1340		1085			
	WR									
SR	1st Jan 2016 to 2nd Jan 2016	00-06	6150	750	5400	5835	0			
		06-18'			5400	5900	0			
		18-24			6150	5400	5835	0		
	3rd Jan 2016	00-06	3650	500	3150	5835	0			
		06-18'			3650	3150	5900	0		
		18-24			3650	3150	5835	0		
	4th Jan 2016	00-06	3650	500	3150	5835	0			
		06-18'			3650	3150	5900	0		
		18-24			3650	3150	5835	0		
	5th Jan 2016	00-06	3650	500	3150	5835	0			
		06-18'			3650	3150	5900	0		
		18-24			3650	3150	5835	0		
	6th Jan 2016	00-06	3650	500	3150	5835	0			
		06-18'			3650	3150	5900	0		
		18-24			3650	3150	5835	0		
	7th Jan 2016	00-06	6650	750	5900	5835	65			
		06-18'			4650	3900	5900	0	-2000	Revised due to shutdown of HVDC Talcher-Kolar Pole-1 & Pole-2.
		18-24			4650	3900	5835	0	-2000	
	8th Jan 2016 to 11th Jan 2016	00-05	5650	750	4900	5835	0	-1000		
		05-18'			4650	3900	5835	0	-2000	
		06-18'			4650	3900	5900	0	-2000	
18-24		4650			3900	5835	0	-2000		
12th Jan 2016 to 31st Jan 2016	00-06	6650	750	5900	5835	65				
	06-18'			6650	5900	5900	0			
	18-24			6650	5900	5835	65			

* 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 Jan 2016 to 31st Jan 2016	00-06	4500	700	3800	999	2801		
		06-18'			3800	1064	2736		
		18-24	4500		3800	999	2801		
NER	1st Jan 2016 to 4th Jan 2016	00-17	1110	45	1065	0	1065		
		23-24			905		905		
		17-23	950		905				
	5th Jan 2016	00-17	1110	45	1065	0	1065		
		17-19			950		905		
		19-23	1340		1295				
		23-24	1330		1285				
	6th Jan 2016 to 31st Jan 2016	00-17	1330	45	1285	0	1285		
		23-24			1295		1295		
17-23	1340	1295							
WR									
SR *	1st Jan 2016 to 31st Jan 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 400 kV Biharshariff- Lakhisarai S/C 1. (n-1) Contingency of 765kV Gwalior-Agra one ckt leads to 2750 MW loading on second circuit.
	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	(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. n-1 contingency of 400/132 kV, 2 x 200 MVA ICTs at Silchar
	Export	(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.
SR	Import	(n-1) contingency of one circuit of 765 kV Raichur - Sholapur will lead to 2500 MW loading on the other circuit Low Voltage at Gazuwaka (East) Bus.

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Total Transfer Capability for January 2016**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	22/12/2015	Whole month of January 2016	STOA margin revised due to change in LTA/MTOA towards NR	WR-NR / import of NR
			Revised due to commissioning of 765 kV Aurangabad - Sholapur D/C, 400 kV Kolhapur - Kudgi D/C and 765 kV Raichur - Kurnool ckt 1	WR-SR
			Revised due to commissioning of new transmission elements	ER-NR
			Revised due to commissioning of 765 kV Aurangabad-Sholapur D/C, 765 kV Dharamjaigarh - Jabalpur D/C and considering the present inter regional power flow pattern	W3 Zone injection
2	31/12/2015	1/12/2015 to 5/12/2015	Revised due to shutdown of HVDC Bhadrawati pole 1	WR-SR/Import of SR
		Whole month of January 2016	Revised considering new lines commissioned and outage of 220 kV Balipara - Samaguri	ER-NER/NER-ER
3	2/1/2016	3/1/2016	Revised due to Outage of 765kV Raichur-Sholapur ckt-2.	WR-SR/Import of SR
4	3/1/2016	4/1/2016	Revised due to Outage of 765kV Raichur-Sholapur ckt-2.	WR-SR/Import of SR
5	4/1/2016	5/1/2016	Revised due to Outage of 765kV Raichur-Sholapur ckt-2.	WR-SR/Import of SR
		5/1/2016 to 6/1/2016	Revised due to emergency shutdown of 765/400kV ICT at Agra.	WR-NR / import of NR
6	5/1/2016	6/1/2016	Revised due to Outage of 765kV Raichur-Sholapur ckt-2.	WR-SR/Import of SR
7	5/1/2016	5/1/2016 to 31/1/2016	Revised due to restoration of 220 kV Balipara - Samaguri	ER-NER/NER-ER
8	6/1/2016	5/1/2016 to 31/1/2016	Revised due to shutdown of HVDC Talcher-Kolar Pole-1 & Pole-2.	ER-SR/ Import of SR

ASSUMPTIONS IN BASECASE					
				Month : January '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	5199	3202	2642	2259
2	Haryana	5948	3423	3088	3088
3	Rajasthan	9489	8509	5784	5708
4	Delhi	3966	2030	905	905
5	Uttar Pradesh	12457	12419	5395	5351
6	Uttarakhand	1665	1402	614	350
7	Himachal Pradesh	1392	1023	219	76
8	Jammu & Kashmir	2184	2517	379	155
9	Chandigarh	234	116	0	0
10	ISGS/PPs	0	0	18010	10990
	Total NR	42534	34642	37036	28882
II	EASTERN REGION				
1	Bihar	2642	1775	180	100
2	Jharkhand	1121	739	455	215
3	Damodar Valley Corporation	2466	1899	3485	2815
4	Orissa	3449	2379	2390	1576
5	West Bengal	6671	4388	4796	3378
6	Sikkim	98	64	0	0
7	Bhutan	245	245	352	0
8	ISGS/PPs	602	599	10700	9171
	Total ER	17293	12089	22359	17255
III	WESTERN REGION				
1	Maharashtra	20219	10937	14007	7706
2	Gujarat	12105	8961	8303	5316
3	Madhya Pradesh	9578	3649	5550	1333
4	Chattisgarh	3568	2205	2661	1570
5	Daman and Diu	283	203	0	0
6	Dadra and Nagar Haveli	798	562	0	0
7	Goa-WR	469	302	0	0
8	ISGS/PPs	835	837	26803	19253
	Total WR	47856	27657	57324	35178

IV	SOUTHERN REGION				
1	Andhra Pradesh	6017	5521	5699	5264
2	Telangana	7012	5973	2713	2190
3	Karnataka	8161	7225	6446	5250
4	Tamil Nadu	13147	11563	7036	4865
5	Kerala	3409	2427	1687	701
6	Pondy	383	383	0	0
7	Goa-SR	89	89	0	0
8	ISGS/IPPs	0	0	12143	12143
	Total SR	38218	33181	35724	30413
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	95	43	0	0
2	Assam	877	636	192	122
3	Manipur	98	58	0	0
4	Meghalaya	292	181	147	86
5	Mizoram	68	43	4	4
6	Nagaland	80	65	8	6
7	Tripura	190	88	85	85
8	ISGS/IPPs	0	0	1272	867
	Total NER	1700	1114	1708	1170
	Total All India	147602	108682	154151	112899