

**National Load Despatch Centre
Total Transfer Capability for February 2016**

Issue Date: 21/02/2016

Issue Time: 1750 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 Feb 2016 to 29th Feb 2016	00-24	2500	500	2000	706	1294		
WR-NR*	1st Feb 2016 to 03rd Feb 2016	00-24	7700	500	7200	6103	1097		
	04th Feb 2016	00-07	7700	500	7200	6103	1097		
		07-24'	5700	500	5200	6103	0		
	05th Feb 2016 to 21st Feb 2016	00-24	7700	500	7200	6103	1097		
	22nd Feb 2016	00-24	4000	500	3500	6103	0	-3700	Agitation in Haryana leading to disruption at two 400 kV substations and threat perception to other substations impacting WR-NR interregional flows
23rd Feb 2016 to 29th Feb 2016	00-24	7700	500	7200	6103	1097			
NR-ER*	1st Feb 2016 to 29th Feb 2016	00-06	2000	200	1800	293	1507		
		06-18'	2000		1800	358	1442		
		18-24	2000		1800	293	1507		
ER-NR*	1st Feb 2016 to 29th Feb 2016	00-24	4800	300	4500	2431	2069		
W3-ER\$	1st Feb 2016 to 29th Feb 2016	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.						
ER-W3	1st Feb 2016 to 29th Feb 2016	00-24	No limit is being Specified.						
WR-SR	1st Feb 2016	00-05	4000	750	3250	3250	0		
		05-22'	4000		3250	3250	0		
		22-24	4000		3250	3250	0		
	2nd Feb 2016 to 5th Feb 2016	00-05	4000	750	3250	3250	0		
		05-06'	4000		3250	3250	0		
		06-22'	3750		3000	3250	0		
	6th Feb 2016	22-24	3750	750	3000	3250	0		
		00-05	4000		3250	3250	0		
		05-06'	4000		3250	3250	0		
	7th Feb 2016	06-07'	3750	750	3000	3250	0		
		07-24'	3300		2550	3250	0		
		00-05	3450		2700	3250	0		
	8th Feb 2016	05-06'	3450	750	2700	3250	0		
		06-07'	3300		2550	3250	0		
		07-24'	3300		2550	3250	0		
		00-05	4000		3250	3250	0		
	05-06'	4000	750	3250	3250	0			
	06-07'	3750		3000	3250	0			
	07-24'	3300		2550	3250	0			

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	9th Feb 2016	00-05	3450	750	2700	3250	0			
		05-06'	3450		2700	3250	0			
		06-07'	3300		2550	3250	0			
		07-24'	3300		2550	3250	0			
	10th Feb 2016	00-06	4000	750	3250	3250	0			
		06-09'	3750		3000	3250	0			
		09-22'	3450		2700	3250	0			
		22-24	3450		2700	3250	0			
	11th Feb 2016 to 16th Feb 2016	00-05	4000	750	3250	3250	0			
		05-06'	4000		3250	3250	0			
		06-22'	4000		3250	3250	0			
		22-24	4000		3250	3250	0			
	17th Feb 2016 to 29th Feb 2016	00-05	4000	750	3250	3250	0			
		05-22'	4000		3250	3250	0			
		22-24	4000		3250	3250	0			
	SR-WR *	1st Feb 2016 to 29th Feb 2016	00-24	No limit is being Specified.						
ER-SR	1st Feb 2016 to 29th Feb 2016	00-06 18-24 06-18'	2650	0	2650	2585 2650	65 0			
SR-ER *	1st Feb 2016 to 29th Feb 2016	00-24	No limit is being Specified.							
S1-S2	1st Feb 2016 to 29th Feb 2016	00-24	S1-S2 corridor TTC/ATC is uploaded on NLDC website under Intra-Regional Section in Monthly ATC.							
ER-NER	1st Feb 2016 to 18th Feb 2016	00-17 23-24	1430	45	1385	210	1175			
		17-23	1390		1345		1135			
	19th Feb 2016 to 20th Feb 2016	00-10	1430	45	1385	210	1175			
		10-13'	1170		1125		915			
		13-17	1430		1385		1175			
		17-23	1390		1345		1135			
	21st Feb 2016 to 29th Feb 2016	23-24	1430		1385		1175			
		00-17 23-24	1430	45	1385	210	1175			
	17-23	1390	1345		1135					
	NER-ER	1st Feb 2016 to 18th Feb 2016	00-17 23-24	1220	45	1175	0	1175		
			17-23	1220		1175		1175		
		19th Feb 2016 to 20th Feb 2016	00-10	1220	45	1175	0	1175		
10-13'			930	885		885				
13-17			1220	1175		1175				
17-23			1220	1175		1175				
21st Feb 2016 to 29th Feb 2016		23-24	1220		1175		1175			
		00-17 23-24	1220	45	1175	0	1175			
17-23	1220	1175	1175							
W3 zone Injection	1st Feb 2016 to 29th Feb 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)							

* 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).

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\$ 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	N-1 contingency of 400 kV Biharshariff- Lakhisarai S/C
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
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 Feb 2016 to 3rd Feb 2016	00-24	9100	800	8300	8534	0		
	4th Feb 2016	00-07	9100	800	8300	8534	0		
		07-24'	6700		5900		0		
	5th Feb 2016 to 18th Feb 2016	00-24	9100	800	8300	8534	0		
	19th Feb 2016 to 21st Feb 2016	00-10	9100	800	8300	8534	0		
		16-24	9625		8825		291		
	22nd Feb 2016	00-10	5000	800	4200	8534	0	-4100	Agitation in Haryana leading to disruption at two 400 kV substations and threat perception to other substations impacting WR-NR interregional flows
		16-24	5300		4500		0	-4325	
	23rd Feb 2016 to 29th Feb 2016	00-10	9100	800	8300	8534	0		
		16-24	9625		8825		291		
NER	1st Feb 2016 to 18th Feb 2016	00-17	1430	45	1385	210	1175		
		23-24	1390		1345		1135		
	19th Feb 2016 to 20th Feb 2016	00-10	1430	45	1385	210	1175		
		10-13'	1170		1125		915		
		13-17	1430		1385		1175		
		17-23	1390		1345		1135		
		23-24	1430		1385		1175		
	21st Feb 2016 to 29th Feb 2016	00-17	1430	45	1385	210	1175		
		23-24	1390		1345		1135		
	WR								
SR	1st Feb 2016	00-06	6650	750	5900	5835	65		
		06-18'	6650		5900	5900	0		
		18-24	6650		5900	5835	65		
	02nd Feb 2016 to 5th Feb 2016	00-06	6650	750	5900	5835	65		
		06-18'	6400		5650	5900	0		
		18-24	6400		5650	5835	0		
	6th Feb 2016	00-06	6650	750	5900	5835	65		
		06-07'	6400		5650	5900	0		
		07-18'	5950		5200	5900	0		
		18-24	5950		5200	5835	0		
	7th Feb 2016	00-06	6100	750	5350	5835	0		
		06-18'	5950		5200	5900	0		
		18-24	5950		5200	5835	0		
	8th Feb 2016	00-06	6650	750	5900	5835	65		
		06-07'	6400		5650	5900	0		
		07-18'	5950		5200	5900	0		
18-24		5950	5200		5835	0			

9th Feb 2016	00-06	6100	750	5350	5835	0	
	06-18'	5950		5200	5900	0	
	18-24	5950		5200	5835	0	
10th Feb 2016	00-06	6650	750	5900	5835	65	
	06-09'	6400		6400	5900	0	
	09-18'	6100		5350	5900	0	
	18-24	6100		5350	5835	0	
11th Feb 2016 to 16th Feb 2016	00-06	6650	750	5900	5835	65	
	06-18'	6650		5900	5900	0	
	18-24	6650		5900	5835	0	
17th Feb 2016 to 29th Feb 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 Feb 2016 to 29th Feb 2016	00-06	4500	700	3800	999	2801		
		06-18'			3800	1064	2736		
		18-24			3800	999	2801		
NER	1st Feb 2016 to 18th Feb 2016	00-17	1220	45	1175	0	1175		
		23-24					1175		
	19th Feb 2016 to 20th Feb 2016	00-10	1220	45	1175	0	1175		
		10-13'					885		
		13-17					1175		
		17-23					1175		
		23-24					1175		
	21st Feb 2016 to 29th Feb 2016	00-17	1220	45	1175	0	1175		
		23-24					1175		
			17-23	1220	45	1175			

WR									
SR *	1st Feb 2016 to 29th Feb 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. 2.High Loading of 400kV Singrauli-Anpara 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	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA
	Export	ICT at Misa
SR	Import	(n-1) contingency of one circuit of 765 kV Raichur - Sholapur leads to 2500 MW loading on the other circuit
		Low Voltage at Gazuwaka (East) Bus.

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Total Transfer Capability for February 2016**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	31/01/2016	Whole Month	Revised considering commissioning of New Transmission Elements.	WR-SR/ import of SR
			Revised considering present Inter-Regional flow pattern, & considering the restoration of Vindhyaachal Block. STOA margin revised due to grant of LTA/MTOA towards NR. .	Import of NR
2	1-Feb-16	02/02/16 to 16/02/16	Revised due to the shutdown of 400 kV Ramagundam-Chandrapur-1	WR-SR/ import of SR
3	3-Feb-16	4-Feb-16	Revised due to the shutdown of 765 kVAgra Bus-1.	WR-NR/ Import of NR
4	5-Feb-16	06/02/16 to 09/02/16	Revised due to shutdown of 765kV Aurangabad-Sholapur Ckt-1 for two days and Ckt-2 for next two days	WR-SR/ Import of SR
5	10-Feb-16	10/2/2016	Revised due to emergency shutdown of 765kV Aurangabad-Sholapur-2 and restoration of 400kV Ramagundam-Bhadrawati Ckt.	WR-SR/ Import of SR
		11/02/16 to 16/02/16	Revised due to restoration of 400kV Ramagundam-Bhadrawati Ckt.	
6	17-Feb-16	19/02/16 to 20/02/16	Revised due to shutdown of 400 kV Balipara - Misa S/C	ER-NER/NER-ER
		19/02/16 to 29/02/16	Revised considering the present inter regional power flow pattern	Import of NR
7	21/2/2016	22/2/2016	Agitation in Haryana leading to disruption at two 400 kV substations and threat perception to other substations impacting WR-NR interregional flows	Import of NR

ASSUMPTIONS IN BASECASE					
				Month : February '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	5201	5473	2830	2193
2	Haryana	5814	6170	3168	2291
3	Rajasthan	9835	9280	5925	6389
4	Delhi	3639	3875	822	805
5	Uttar Pradesh	11744	11581	4665	5587
6	Uttarakhand	1767	1430	594	456
7	Himachal Pradesh	1413	1262	227	245
8	Jammu & Kashmir	2348	2003	368	362
9	Chandigarh	195	222	0	0
10	ISGS/IPPs	0	0	18168	18311
	Total NR	41957	41295	36767	36640
II	EASTERN REGION				
1	Bihar	2761	1795	210	100
2	Jharkhand	1085	748	380	215
3	Damodar Valley Corporation	2268	1920	3305	2685
4	Orissa	3226	2300	2300	1436
5	West Bengal	6315	4431	4796	3428
6	Sikkim	99	65	0	0
7	Bhutan	245	245	352	0
8	ISGS/IPPs	602	607	10243	8778
	Total ER	16601	12111	21587	16641
III	WESTERN REGION				
1	Maharashtra	19770	14437	14472	7886
2	Gujarat	12235	10132	10392	7878
3	Madhya Pradesh	8576	5415	5272	2131
4	Chattisgarh	3701	2520	1750	1526
5	Daman and Diu	301	227	0	0
6	Dadra and Nagar Haveli	768	649	0	0
7	Goa-WR	478	258	0	0
8	ISGS/IPPs	1083	1089	24693	23670
	Total WR	46913	34728	56579	43091

IV	SOUTHERN REGION				
1	Andhra Pradesh	6396	5728	6099	5669
2	Telangana	7389	6317	2720	2186
3	Karnataka	8219	7094	6349	5102
4	Tamil Nadu	13261	11695	6736	4900
5	Kerala	3730	2744	1672	695
6	Pondy	387	294	0	0
7	Goa-SR	89	89	0	0
8	ISGS/IPPs	0	0	12773	11909
	Total SR	39471	33961	36349	30461
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	79	42	0	0
2	Assam	810	629	192	122
3	Manipur	84	58	0	0
4	Meghalaya	254	169	130	77
5	Mizoram	60	42	4	4
6	Nagaland	72	65	8	6
7	Tripura	186	84	87	84
8	ISGS/IPPs	0	0	1117	855
	Total NER	1545	1089	1538	1148
	Total All India	146487	123185	152819	127981