

National Load Despatch Centre
Total Transfer Capability for May 2016

Issue Date: 18/5/2016

Issue Time: 1430 hrs

Revision No. 13

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 May 2016 to 31st May 2016	00-24	2500	500	2000	149	1851		
WR-NR*	1st May 2016	00-24	6700	500	6200	6170	30		
	2nd May 2016 to 3rd May 2016	00-07	6700	500	6200	6170	30		
		07-24'	6300	500	5800	6170	0		
	4th May 2016	00-24	6700	500	6200	6170	30		
	5th May 2016	00-07	6700	500	6200	6170	30		
		07-24	5850	500	5350	6170	0		
	6th May 2016 to 10th May 2016	00-24	5850	500	5350	6170	0		
	11th May 2016	00-24	5850	500	5350	6170	0		
	12th May 2016	00-24	6700	500	6200	6170	30		
	13th May 2016 to 18th May 2016	00-24	6700	500	6200	6170	30		
19th May 2016	00-07	6700	500	6200	6170	30	-700	Revised due to shutdown of 765 kV Agra - Jhatikara and considering the restriction imposed on the flow of 765 kV Phagi - Bhiwani under ERS towers	
	07-24'	6000		5500		0			
20th May 2016 to 31st May 2016	00-24	6700	500	6200	6170	30			
NR-ER*	1st May 2016 to 31st May 2016	00-06	2000	200	1800	293	1507		
		06-18'	2000		1800	358	1442		
		18-24	2000		1800	293	1507		
ER-NR*	1st May 2016 to 31st May 2016	00-24	3800	300	3500	2431	1069		
W3-ER^s	1st May 2016 to 31st May 2016	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.						
ER-W3	1st May 2016 to 31st May 2016	00-24	No limit is being specified.						
WR-SR	1st May 2016 to 5th May 2016	00-24	4000	750	3250	3250	0		
	6th May 2016	00-24	3750	750	3000	3250	0		
	7th May 2016 to 10th May 2016	00-24	4000	750	3250	3250	0		
	11th May 2016	00-24	3500	750	2750	3250	0		
	12th May 2016 to 31st May 2016	00-24	4000	750	3250	3250	0		
SR-WR *	1st May 2016 to 31st May 2016	00-24	No limit is being Specified.						

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ER-SR	1st May 2016	00-06	2350	0	2350	2585	0		
		18-24				2650	0		
	2nd May 2016 to 3rd May 2016	00-06	2350	0	2350	2585	0		
		18-24				2650	0		
	4th May 2016 to 9th May 2016	00-06	2350	0	2350	2585	0		
		18-24				2650	0		
	10th May 2016	00-06	2350	0	2350	2585	0		
		18-24				2650	0		
	11th May 2016	00-06	2650	0	2650	2585	65		
		18-24				2650	0		
	12th May 2016 to 31st May 2016	00-06	2650	0	2650	2585	65		
		18-24				2650	0		
SR-ER *	1st May 2016 to 31st May 2016	00-24	No limit is being Specified.						
ER-NER	1st May 2016 to 31st May 2016	00-17	1430	45	1385	210	1175		
		23-24	1240		1195		985		
NER-ER	1st May 2016 to 31st May 2016	00-17	1200	45	1155	0	1155		
		23-24	1300		1255		1255		
W3 zone Injection	1st May 2016 to 31st May 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).

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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 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 May 2016	00-24	8400	800	7600	8601	0		
	2nd May 2016 to 3rd May 2016	00-07	8400	800	7600	8601	0		
		07-24	7900	800	7100	8601	0		
	4th May 2016	00-24	8400	800	7600	8601	0		
	5th May 2016	00-07	8400	800	7600	8601	0		
		07-24	7350	800	6550	8601	0		
	6th May 2016 to 10th May 2016	00-24	7350	800	6550	8601	0		
	11th May 2016	00-24	7350	800	6550	8601	0		
	12th May 2016	00-24	8400	800	7600	8601	0		
	13th May 2016 to 18th May 2016	00-24	8400	800	7600	8601	0		
	19th May 2016	00-07	8400	800	6700	8601	0	-900	Revised due to shutdown of 765 kV Agra - Jhatikara and considering the restriction imposed on the flow of 765 kV Phagi - Bhiwani under ERS towers
		07-24	7500						
	20th May 2016 to 31st May 2016	00-24	8400	800	7600	8601	0		

NER	1st May 2016 to 31st May 2016	00-17	1430	45	1385	210	1175		
		23-24					1195		
		17-23	1240						
WR									
SR	1st May 2016	00-06	6350	750	5600	5835	0		
		06-18'	6350		5600	5900	0		
		18-24	6350		5600	5835	0		
	2nd May 2016 to 3rd May 2016	00-06	6350	750	5600	5835	0		
		06-18'	6350		5600	5900	0		
		18-24	6350		5600	5835	0		
	4th May 2016 to 5th May 2016	00-06	6350	750	5600	5835	0		
		06-18'	6350		5600	5900	0		
		18-24	6350		5600	5835	0		
	6th May 2016	00-06	6100	750	5350	5835	0		
		06-18'	6100		5350	5900	0		
		18-24	6100		5350	5835	0		
	7th May 2016 to 9th May 2016	00-06	6350	750	5600	5835	0		
		06-18'	6350		5600	5900	0		
		18-24	6350		5600	5835	0		
	10th May 2016	00-06	6350	750	5600	5835	0		
		06-18'	6350		5600	5900	0		
		18-24	6350		5600	5835	0		
	11th May 2016	00-06	6150	750	5400	5835	0		
		06-18'	6150		5400	5900	0		
		18-24	6150		5400	5835	0		
	12th May 2016 to 31st May 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 May 2016 to 31st May 2016	00-06	4500	700	3800	442	3358		
		06-18'			3800	507	3293		
		18-24	4500		3800	442	3358		
NER	1st May 2016 to 31st May 2016	00-17	1200	45	1155	0	1155		
		23-24					1255		
		17-23	1300		1255		1255		
WR									
SR *	1st May 2016 to 31st May 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 Biharshariff- Lakhisarai 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.
	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 May 2016**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	1/3/2016	Whole Month	STOA Margin revised considering the completion of ISGS Allocation towards SR.	NR-WR/ Export of NR
2	31/3/2016	Whole Month	STOA Margin revised considering the grant of of MTOA.	WR-NR
3	12/4/2016	Whole Month	STOA Margin revised due to allocation of power from NR ISGS to SR Constituents	NR-WR/ Export of NR
4	30/4/2016	1/5/2016	Revised considering the present high generation in Rajasthan state and trend of import of NR from WR and ER	WR-NR/ Import of NR
			Revised considering shutwon of one pole of HVDC Gazuwaka B/B and high valve hall temperature at HVDC Gauwaka B/B	ER-SR / Import of SR
		2/5/2016 to 3/5/2016	Revised due to shutdown of HVDC Rihand Dadri Bipole, considering present high generation trend in Rajasthan and trend of import of NR from WR and ER	WR-NR/ Import of NR
		4/5/2016	Revised considering the present high generation in Rajasthan state and trend of import of NR from WR and ER	
		5/5/2016 to 10/5/2016	Revised considering Shutdown of 765 kV Phagi - Bhiwani S/C, present high generation in Rajasthan and trend of import of NR from WR and ER	
11/5/2016 to 31/5/2016	Revised considering the present high generation trend in Rajasthan state and trend of import of NR from WR and ER			
5	1/5/2016	2/5/2016 to 3/5/2016	Revised considering shutdown of one pole of HVDC Gazuwaka B/B and high valve hall temperature at HVDC Gauwaka B/B	ER-SR / Import of SR
6	2/5/2016	5/5/2016	Revised due to correction in timing of the shutdown	WR-NR/ Import of NR
7	3/5/2016	4/5/2016 to 9/5/2016	Revised considering shutdown of one pole of HVDC Gazuwaka B/B and high valve hall temperature at HVDC Gauwaka B/B	ER-SR / Import of SR
8	5/5/2016	6/5/2016	Revised due to outage of one circuit of 400 kV Ramagundam - Bhadrwati	WR- SR/Import of SR
9	9/5/2016	10/5/2016 to 11/5/2016	Revised considering shutdown of one pole of HVDC Gazuwaka B/B and high valve hall temperature at HVDC Gauwaka B/B as informed by Site	ER-SR / Import of SR

10	10/5/2016	11/5/2016	Revised due to revival of HVDC Gazuwaka pole -2 and outage of HVDC Bhadrawati pole -1	ER-SR / WR-SR/Import of SR
			Revised considering the ongoing works on 765kV Phagi-Bhiwani S/C	WR-NR/Import of NR
11	11/5/2016	12/5/016	Revised considering the ongoing works on 765kV Phagi-Bhiwani S/C	WR-NR/Import of NR
12	11/5/2016	12/5/2016	Revised considering restoration of 765kV Phagi-Bhiwani S/C	WR-NR/Import of NR
13	18/5/2016	19/5/2016	Revised due to shutdown of 765 kV Agra - Jhatikara and considering the restriction imposed on the flow of 765 kV Phagi - Bhiwani under ERS towers	WR-NR/Import of NR

ASSUMPTIONS IN BASECASE					
				Month : May '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	6191	5617	2395	2423
2	Haryana	6958	6342	2256	2256
3	Rajasthan	8173	7964	4722	4722
4	Delhi	4850	4752	1117	1117
5	Uttar Pradesh	13236	12912	6416	6087
6	Uttarakhand	1591	1325	724	730
7	Himachal Pradesh	1149	921	864	771
8	Jammu & Kashmir	2220	1595	753	735
9	Chandigarh	258	187	0	0
10	ISGS/PPs	0	0	19254	16602
	Total NR	44627	41614	38500	35442
II	EASTERN REGION				
1	Bihar	3004	2153	210	100
2	Jharkhand	1140	881	470	300
3	Damodar Valley Corporation	2652	2202	3463	2943
4	Orissa	3838	2931	2849	1818
5	West Bengal	7169	5199	4850	3600
6	Sikkim	98	64	0	0
7	Bhutan	215	215	757	427
8	ISGS/PPs	629	626	10995	9916
	Total ER	18745	14270	23594	19104
III	WESTERN REGION				
1	Maharashtra	19564	14106	14568	10078
2	Gujarat	13686	12793	10999	9783
3	Madhya Pradesh	8365	5488	4654	3091
4	Chattisgarh	3699	2994	2392	1932
5	Daman and Diu	298	250	0	0
6	Dadra and Nagar Haveli	776	656	0	0
7	Goa-WR	478	281	0	0
8	ISGS/PPs	1074	1073	27268	23418
	Total WR	47941	37639	59880	48301

IV	SOUTHERN REGION				
1	Andhra Pradesh	6930	5771	6047	5570
2	Telangana	7271	6232	2651	2111
3	Karnataka	9132	7475	6868	5269
4	Tamil Nadu	15237	13449	8546	6146
5	Kerala	3924	2824	1608	655
6	Pondy	391	309	0	0
7	Goa-SR	89	89	0	0
8	ISGS/PPs	0	0	13286	11952
	Total SR	42621	35840	39006	31703
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	115	44	0	0
2	Assam	1008	699	308	170
3	Manipur	112	59	0	0
4	Meghalaya	268	182	185	80
5	Mizoram	72	44	4	4
6	Nagaland	90	69	16	8
7	Tripura	246	157	87	87
8	ISGS/PPs	0	0	1396	956
	Total NER	1902	1249	1996	1305
	Total All India	155837	130612	162976	135856