

National Load Despatch Centre
Total Transfer Capability for April 2017

Issue Date: 10th April 2017

Issue Time: 1130 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 Apr 2017 to 30th Apr 2017	00-06	2500	500	2000	55	1945		
		06-18							
		18-24							
WR-NR*	1st Apr 2017 to 30th Apr 2017	00-24	9050	500	8550	7951	599		
NR-ER*	1st Apr 2017 to 30th Apr 2017	00-06	2000	200	1800	193	1607		
		06-18'	2000		1800	303	1497		
		18-24	2000		1800	193	1607		
ER-NR*	1st Apr 2017 to 30th Apr 2017	00-24	4200	300	3900	2931	969		
W3-ER	1st Apr 2017 to 30th Apr 2017	00-24	No limit is being specified.						
ER-W3	1st Apr 2017 to 30th Apr 2017	00-24	No limit is being specified.						
WR-SR	1st Apr 2017 to 3rd Apr 2017	00-05	3800	500	3300	2900	400		
		05-22	3400		2900		0		
		22-24	3800		3300		400		
	4th Apr 2017 to 5th Apr 2017	00-05	4750	500	4250	3850	400		
		05-22	4350		3850		0		
		22-24	4750		4250		400		
	6th Apr 2017 to 07th Apr 2017	00-05	4350	500	3850	3850	0		
		05-22	4350		3850		0		
		22-24	4350		3850		0		
	08th Apr 2017 to 09th Apr 2017	00-05	3400	500	2900	3750	0		
		05-22	3400		2900		0		
		22-24	3400		2900		0		
	10th Apr 2017	00-05	3400	500	2900	3750	0		
		05-22	3400		2900		0		
		22-24	3400		2900		0		
11th Apr 2017 to 13th Apr 2017	00-05	3400	500	2900	3750	0	-950	Revised considering the outage of 765 kV Wardha-Nizamabad D/C	
	05-22	3400		2900		0			
	22-24	3400		2900		0			
14th Apr 2017 to 30th Apr 2017	00-05	4350	500	3850	3850	0			
	05-22	4350		3850		0			
	22-24	4350		3850		0			
SR-WR *	1st Apr 2017 to 30th Apr 2017	00-24	No limit is being Specified.						

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ER-SR	1st Apr 2017 to 3rd Apr 2017	00-06	3450	250	3200	3232	0		
		06-18'				3317	0		
		18-24				3232	0		
	4th Apr 2017 to 07th Apr 2017	00-06	3350	250	3100	3100	0		
		06-18'				3100	0		
		18-24				3100	0		
	8th Apr 2017 to 09th Apr 2017	00-05	3450	250	3200	3200	0		
		05-22'	3450		3200	3200	0		
		22-24	3450		3200	3200	0		
	10th Apr 2017	00-06	3450	250	3200	3200	0		
		06-18'				3200	0		
		18-24				3200	0		
	11th Apr 2017 to 13th Apr 2017	00-06	3450	250	3200	3200	0	100	Revised considering the outage of 765 kV Wardha-Nizamabad D/C
		06-18'				3200	0		
		18-24				3200	0		
	14th Apr 2017 to 30th Apr 2017	00-06	3350	250	3100	3100	0		
		06-18'				3100	0		
		18-24				3100	0		
SR-ER *	1st Apr 2017 to 30th Apr 2017	00-24	No limit is being Specified.						
ER-NER	1st Apr 2017 to 30th Apr 2017	00-17	1040	45	995	225	770		
		17-23	1050		1005		780		
		23-24	1040		995		770		
NER-ER	1st Apr 2017 to 30th Apr 2017	00-17	1230	45	1185	0	1185		
		17-23	1300		1255		1255		
		23-24	1230		1185		1185		
W3 zone Injection	1st Apr 2017 to 30th Apr 2017	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 and Puducherry; S3 comprises Kerala

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 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 :

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

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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	(n-1) contingency of 765 / 400 kV, 1500 MVA single ICT at Nizamabad will lead to 874 MW loading on 400kV Vemagiri(PG)-Gazuwaka (With Opening of 400kV Vemagiri(PG)-Nunna S/C) 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	---

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 Apr 2017 to 30th Apr 2017	00-05	12900	800	12100	10882	1218		
		05-08	12000		11200		318		
		08-18	12900		12100		1218		
		18-23	11600		10800		0		
		23-24	12900		12100		1218		
NER	1st Apr 2017 to 30th Apr 2017	00-17	1040	45	995	225	770		
		17-23	1050		1005		780		
		23-24	1040		995		770		
WR									
SR	1st Apr 2017 to 3rd Apr 2017	00-05	7250	750	6500	6132	368		
		05-06	6850		6100	6132	0		
		06-18	6850		6100	6217	0		
		18-22	6850		6100	6132	0		
		22-24	7250		6500	6132	368		
	4th Apr 2017 to 6th Apr 2017	00-05	8100	750	7350	6950	400		
		05-06	7700		6950	6950	0		
		06-18	7700		6950	6950	0		
		18-22	7700		6950	6950	0		
		22-24	8100		7350	6950	400		
	6th Apr 2017 to 07th Apr 2017	00-05	7700	750	6950	6950	0		
		05-06	7700		6950	6950	0		
		06-18	7700		6950	6950	0		
		18-22	7700		6950	6950	0		
		22-24	7700		6950	6950	0		
	8th Apr 2017 to 9th Apr 2017	00-05	6850	750	6100	6950	0		
		05-06	6850		6100	6950	0		
		06-18	6850		6100	6950	0		
		18-22	6850		6100	6950	0		
		22-24	6850		6100	6950	0		
	10th Apr 2017	00-05	6850	750	6100	6950	0		
		05-06	6850		6100	6950	0		
		06-18	6850		6100	6950	0		
		18-22	6850		6100	6950	0		
		22-24	6850		6100	6950	0		
	11th Apr 2017 to 13th Apr 2017	00-05	6850	750	6100	6950	0	-850	Revised considering the outage of 765 kV Wardha-Nizamabad D/C
		05-06	6850		6100	6950	0		
		06-18	6850		6100	6950	0		
		18-22	6850		6100	6950	0		
		22-24	6850		6100	6950	0		
	14th Apr 2017 to 30th Apr 2017	00-05	7700	750	6950	6950	0		
		05-06	7700		6950	6950	0		
06-18		7700	6950		6950	0			
18-22		7700	6950		6950	0			
22-24		7700	6950		6950	0			

* 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 Apr 2017 to 30th Apr 2017	00-06	4500	700	3800	248	3552		
		06-18'			3800	368	3432		
		18-24	4500		3800	248	3552		
NER	1st Apr 2017 to 30th Apr 2017	00-17	1230	45	1185	0	1185		
		17-23	1300		1255		1007		
		23-24	1230		1185		1185		
WR									
SR *	1st Apr 2017 to 30th Apr 2017	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 N.Ranchi - Chandawa S/c & (n-1) contingencies of 400kV MPL- Maithon 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	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 ICT at Misa.
SR	Import	(n-1) contingency of 765 / 400 kV, 1500 MVA single ICT at Nizamabad will lead to 874 MW loading on 400kV Vemagiri(PG)-Gazuwaka (With Opening of 400kV Vemagiri(PG)-Nunna S/C) Low Voltage at Gazuwaka (East) Bus.

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Total Transfer Capability for April 2017**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	02-03-2017	Whole month	STOA margin revised considering Solar allocation in LTA/MTOA during non solar hours	Import of SR
2	28-02-2017	Whole month	Revised due to commissioning of 765 kV Angul-Srikakulam-Vemagiri D/C, LILO of 400 kV Gazuwaka - Nunna at Vemagiri (PG), and opening of 400 kV Vemagiri-Nunna S/C. STOA margin revised due to operationalization of MTOA.	WR-SR/ ER-SR/ Import of SR
3	28/3/2017	Whole month	Revised considering prolonged shutdown of 765 kV Vadodara SS, reduced power order operation of HVDC Mundra-Mahendragarh, commissioning of one pole of HVDC Champa - Kurukshetra and change in LTA/MTOA approved by CTU	WR-NR/ Import of NR
			Revised considering low demand in Maharashtra area in Off-Peak hours	WR-SR/ Import of SR
4	29th March 2017	Whole month	Revised considering the normal power order operation of HVDC Mundra - Mohindergarh and restoration of 765 kV Vadodara S/S	WR-NR/ Import of NR
5	3rd April 2017	4th Apr 2017 to 30th Apr 2017	Revised considering the commissioning of 765 kV Durg - Wardha D/C, second ICT at Vemagiri, 765 kV Wardha - Nizamabad D/C, one ICT at Nizamabad, and 400 kV Nizamabad-Dichipally D/C.	WR-SR/ ER-SR/ Import of SR
6	5th April 2017	6th Apr 2017 to 30th Apr 2017	Revised considering high load in Maharashtra and rest of Western Region	WR-SR/ Import of SR
7	7th April 2017	8th Apr 2017 to 9th Apr 2017	Revised considering Generation outages around Gazuwaka and emergency shutdown of 765kV Wardha-Nizamabad-D/C (One at a time)	WR-SR/ ER-SR/ Import of SR
8	7th April 2017	8th Apr 2017 to 10th Apr 2017	Revised considering the outage of 765 kV Wardha-Nizamabad D/C	WR-SR/ ER-SR/ Import of SR
9	10th April 2017	11th Apr 2017 to 13th Apr 2017	Revised considering the outage of 765 kV Wardha-Nizamabad D/C	WR-SR/ ER-SR/ Import of SR

ASSUMPTIONS IN BASECASE					
				Month : April'17	
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	6138	5892	2760	2789
2	Haryana	6634	4998	2470	2470
3	Rajasthan	8620	8226	6298	6298
4	Delhi	4678	4074	437	437
5	Uttar Pradesh	13735	12612	7711	7738
6	Uttarakhand	1920	1329	728	691
7	Himachal Pradesh	1342	929	379	547
8	Jammu & Kashmir	2372	1687	618	700
9	Chandigarh	232	164	0	0
10	ISGS/IPPs	175	133	17627	11556
	Total NR	45844	40044	39027	33225
II	EASTERN REGION				
1	Bihar	3680	2648	200	131
2	Jharkhand	1042	883	400	400
3	Damodar Valley Corporation	2531	2207	3741	3372
4	Orissa	4031	2991	3359	2199
5	West Bengal	7642	5394	5049	3656
6	Sikkim	89	39	0	0
7	Bhutan	245	245	842	527
8	ISGS/IPPs	563	568	9897	8843
	Total ER	19793	14946	23459	19114
III	WESTERN REGION				
1	Maharashtra	19346	14655	15124	11320
2	Gujarat	13639	12072	9171	8787
3	Madhya Pradesh	7977	7209	3825	4078
4	Chattisgarh	3532	3572	2830	2020
5	Daman and Diu	303	258	0	0
6	Dadra and Nagar Haveli	787	692	0	0
7	Goa-WR	436	327	0	0
8	ISGS/IPPs	3139	3282	31411	27887
	Total WR	49158	42068	62360	54091

ASSUMPTIONS IN BASECASE					
				Month : April'17	
S.No.	Name of State/Area	Load		Generation	
		Peak Load (MW)	Off Peak Load (MW)	Peak (MW)	Off Peak (MW)
IV	SOUTHERN REGION				
1	Andhra Pradesh	8268	7479	7920	6664
2	Telangana	8627	7461	3853	3386
3	Karnataka	9575	8509	7352	5568
4	Tamil Nadu	14817	12625	7110	6510
5	Kerala	4200	3110	1698	650
6	Pondy	395	330	0	0
7	Goa-SR	89	89	0	0
8	ISGS/IPPs	0	0	14288	12255
	Total SR	45971	39603	42222	35033
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	110	68	0	0
2	Assam	1042	812	230	180
3	Manipur	132	74	0	0
4	Meghalaya	244	135	75	15
5	Mizoram	86	60	8	8
6	Nagaland	98	76	12	8
7	Tripura	217	135	82	77
8	ISGS/IPPs	83	60	1534	1070
	Total NER	2012	1420	1941	1358
	Total All India	162877	138219	169753	143348