

National Load Despatch Centre
Total Transfer Capability for July 2016

Issue Date: 19/7/2016

Issue Time: 1300 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 July 2016 to 31st July 2016	00-24	2500	500	2000	55	1945		
WR-NR*	1st July 2016 to 13th July 2016	00-24	6700	500	6200	6170	30		
	14th July 2016 to 31st July 2016	00-24	6800	500	6300	6170	130		
NR-ER*	1st July 2016 to 31st July 2016	00-06	2000	200	1800	93	1707		
		06-18'	2000		1800	158	1642		
		18-24	2000		1800	93	1707		
ER-NR*	1st July 2016 to 31st July 2016	00-24	4400	300	4100	2531	1569		
W3-ER ^s	1st July 2016 to 31st July 2016	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.						
ER-W3	1st July 2016 to 31st July 2016	00-24	No limit is being specified.						
WR-SR	1st July 2016 to 13th July 2016	00-24	4000	750	3250	3250	0		
	14th July 2016 to 15th July 2016	00-09	4000	750	3250	3250	0		
		09-24.	3500		2750		0		
16th July 2016 to 31st July 2016	00-24	4000	750	3250	3250	0			
SR-WR *	1st July 2016 to 31st July 2016	00-24	No limit is being Specified.						
	1st July 2016 to 2nd July 2016	00-06	2650	0	2650	2585	65		
		0600-0830'	2650		2650	2650	0		
		0830-1800'	2450		2450	2650	0		
		18'-24	2450		2450	2585	0		
	3rd July 2016 to 6th July 2016	00-06	2650	0	2650	2585	65		
		06-18'				2650	0		
	7th July 2016	00-06	2650	0	2650	2585	65		
		06-07'	2650	0	2650	2650	0		
		07-18'	2350	0	2350	2650	0		
		18'-24	2350	0	2350	2585	0		
	8th July 2016 to 9th July 2016	00-06	2650	0	2650	2585	65		
		06-18'				2650	0		
	10th July 2016 to 15th July 2016	00-06	2650	0	2650	2142	508		
		18-24							
		06-18'				2207	443		

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ER-SR	16th July 2016	00-06	2650	0	2650	2142	508		Revised due to shutdown of 220 kV Katapalli- Bolagir and 220 kV Katapalli - Bolangir (PG)
		0600-0930'	2650		2650	2207	443		
		0930-1800'	2450		2450	2207	243		
		18'-24	2450		2450	2142	308		
	17th July 2016 to 19th July 2016	00-06	2650	0	2650	2585	65		
		0600-0930'	2650		2650	2650	0		
		0930-1800'	2450		2450	2650	0		
		18'-24	2450		2450	2585	0		
	20th July 2016	00-06	2650	0	2650	2585	65		
		06-18'	2350		2350	2650	0	-300	
		18-24'	2350		2350	2585	0	-300	
	21st July 2016 to 22nd July 2016	00-06	2350	0	2350	2585	0		
		06-18'			2650	0			
	23rd July 2016 to 31st July 2016	00-06	2650	0	2650	2585	65		
06-18'		2650			0				
SR-ER *	1st July 2016 to 31st July 2016	00-24	No limit is being Specified.						
ER-NER	1st July 2016 to 17th July 2016	00-17	990	45	945	210	735		
		17-23			990		945	735	
	18th July 2016	00-08	990	45	945	210	735		
		08-17'			730		685	475	
		17-23			990		945	735	
		23-24			990		945	735	
	19th July 2016 to 31st July 2016	00-17	990	45	945	210	735		
		17-23			990		945	735	
	NER-ER	1st July 2016 to 17th July 2016	00-17	1400	45	1355	0	1355	
			23-24			1470		1425	1425
18th July 2016		00-08	1400	45	1355	0	1355		
		08-17'			1100		1055	1055	
		17-23			1470		1425	1425	
		23-24			1400		1355	1355	
19th July 2016 to 31st July 2016		00-17	1400	45	1355	0	1355		
		23-24			1470		1425	1425	
W3 zone Injection	1st July 2016 to 31st July 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 Biharsharif- 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
ER-NER	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading 220 kV Balipara – Sonabil – Samaguri lines (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 July 2016 to 13th July 2016	00-05	9600	800	8800	8701	99		
		05-08'	9600		8800		99		
		08-19'	9600		8800		99		
		19-24	9600		8800		99		
	14th July 2016 to 31st July 2016	00-18	10800	800	10000	8701	1299		
		18-23	10000		9200		499		
23-24		10800	10000		1299				
NER	1st July 2016 to 17th July 2016	00-17	990	45	945	210	735		
		23-24			945		735		
	18th July 2016	00-08	990	45	945	210	735		
		08-17'	730		685		475		
		17-23	990		945		735		
		23-24	990		945		735		
	19th July 2016 to 31st July 2016	00-17	990	45	945	210	735		
		23-24			945		735		
	WR								
	SR	1st July 2016 to 2nd July 2016	00-06	6650	750	5900	5835	65	
0600-0830'			6650	5900		5900	0		
0830-1800'			6450	5700		5900	0		
18-24			6450	5700		5835	0		
3rd July 2016 to 6th July 2016		00-06	6650	750	5900	5835	65		
		06-18'	6650		5900	5900	0		
		18-24	6650		5900	5835	65		
7th July 2016		00-06	6650	750	5900	5835	65		
		06-07'	6650		5900	5900	0		
		07-18'	6350		5600	5900	0		
		18-24	6350		5600	5835	0		
8th July 2016 to 9th July 2016		00-06	6650	750	5900	5835	65		
		06-18'	6650		5900	5900	0		
		18-24	6650		5900	5835	65		
10th July 2016 to 13th July 2016		00-06	6650	750	5900	5392	508		
		06-18'	6650		5900	5457	443		
		18-24	6650		5900	5392	508		
14th July 2016 to 15th July 2016		00-06	6650	750	5900	5392	508		
		06-09'	6650		5900	5457	443		
		09-24'	6150		5400	5327	73		
		18-24	6150		5400	5392	8		

16th July 2016	00-06	6650	750	5900	5392	508		
	0600-0930'	6650		5900	5457	443		
	0930-1800'	6450		5700	5457	243		
	18-24	6450		5700	5392	308		
17th July 2016 to 19th July 2016	00-06	6650	750	5900	5835	65		
	0600-0930'	6650		5900	5900	0		
	0930-1800'	6450		5700	5900	0		
	18-24	6450		5700	5835	0		
20th July 2016	00-06	6650	750	5900	5835	65	-300	Revised due to shutdown of 220 kV Katapalli-Bolangir and 220 kV Katapalli - Bolangir (PG)
	06-18'	6350		5600	5900	0		
	18-24	6350		5600	5835	0		
21st July 2016 to 22nd July 2016	00-06	6350	750	5600	5835	0	-300	
	06-18'	6350		5600	5900	0		
	18-24	6350		5600	5835	0		
23rd July 2016 to 31st July 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 July 2016 to 31st July 2016	00-06	4500	700	3800	148	3652		
		06-18'			3800	213	3587		
		18-24	4500		3800	148	3652		
NER	1st July 2016 to 17th July 2016	00-17	1400	45	1355	0	1355		
		23-24			1425		1425		
		17-23	1470		45		1355		
	18th July 2016	00-08	1400	1055		1055			
		08-17'	1100	1425		1425			
		17-23	1470	1355	1355				
	19th July 2016 to 31st July 2016	00-17	1400	45	1355	0	1355		
		23-24			1425		1425		
		17-23	1470						
WR									
SR *	1st July 2016 to 31st July 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 220 kV Balipara – Sonabil – Samaguri lines (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 one circuit of 765 kV Raichur - Sholapur will lead to 2500 MW loading on the other circuit
		Low Voltage at Gazuwaka (East) Bus.

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

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	4/5/2016	Whole month	Revised considering the present high generation trend in Rajasthan state	WR-NR/ Import of NR
			STOA margin revised due to change in LTA/MTOA allocation	NR-WR / Export of NR
2	17/6/2016	10/7/2016 to 30/7/2016	STOA margin revised due to anticipated outage of Talcher Stage-2 Unit -6 approved in 120th OCC of SRPC held on 10-06-2016.	ER-SR/ Import of SR
3	28/6/2016	Whole month	Revised considering the present Inter-Regional flow pattern.	Import of NR
			STOA Margin revised due to completion of MTOA.	NR-WR, NR-ER
			STOA margin revised due to grant of MTOA from DVC to Haryana.	ER-NR
		1/7/2016 to 2/7/2016	Revised due to change in load- generation balance, commissioning of Bongaigaon TPP (NTPC) Unit #1, 400/220 kV 315 MVA ICT-II at Balipara.	ER-NER/ NER-ER
4	6/7/2016	7/7/2016	Revised due to shutdown of 400 kV Jeypore-Indravati	ER-SR/ Import of SR
5	13/7/2016	14/7/2016 to 31/7/2016	Revised due to commissioning of 400kV Ranchi-Chandawa-Gaya D/C, 765kV Varanasi-Kanpur D/C, 765kV Kanpur-Jhatikara S/C , 400kV Kanpur (GIS)-Kanpur D/C and considering total gen at Kawai, Chhabra, Kalisindh as 2500 MW.	WR-NR/ Import of NR
		14/7/2016 to 15/7/2016	Revised due to shutdown of Bhadravati BTB HVDC Block-2.	WR-SR/ Import of SR
6	15/7/2016	16/7/2016 to 19/7/2016	Revised due to shutdown of Kolar AC Filter Bus-III.	ER-SR/ Import of SR
7	16/7/2016	17/7/2016 to 31/7/2016	STOA margin revised due to postponement of outage of Talcher Stage-2 Unit -6 approved in 121st OCC of SRPC	ER-SR/ Import of SR
8	17/7/2016	18/7/2016	Revised due to shutdown of 220 kV Samaguri - Sonabil S/C	ER-NER/ NER-ER
9	19/7/2016	20/7/2016 to 22/7/2016	Revised due to shutdown of 220 kV Katapalli- Bolagir and 220 kV Katapalli - Bolangir (PG)	ER-SR/ Import of SR

ASSUMPTIONS IN BASECASE					
				Month : July '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	9417	9264	4060	4183
2	Haryana	7660	7356	2137	2137
3	Rajasthan	8189	8166	4373	4373
4	Delhi	5287	5321	920	920
5	Uttar Pradesh	12769	13458	5813	5944
6	Uttarakhand	1612	1357	754	981
7	Himachal Pradesh	1181	991	1070	1035
8	Jammu & Kashmir	2271	1484	732	727
9	Chandigarh	302	242	0	0
10	ISGS/IPPs	0	0	22339	21201
	Total NR	48688	47639	42198	41501
II	EASTERN REGION				
1	Bihar	2941	2113	200	131
2	Jharkhand	1089	865	400	380
3	Damodar Valley Corporation	2723	2359	3400	3101
4	Orissa	4005	2948	3109	2039
5	West Bengal	7030	5995	4768	3422
6	Sikkim	79	50	0	0
7	Bhutan	215	215	1514	1195
8	ISGS/IPPs	620	920	9770	9508
	Total ER	18701	15465	23161	19776
III	WESTERN REGION				
1	Maharashtra	19604	13832	14300	9615
2	Gujarat	14023	9261	10629	6492
3	Madhya Pradesh	7485	5137	3789	2723
4	Chattisgarh	3467	2632	2116	1346
5	Daman and Diu	307	253	0	0
6	Dadra and Nagar Haveli	741	643	0	0
7	Goa-WR	406	236	0	0
8	ISGS/IPPs	1078	1075	27818	23042
	Total WR	47111	33069	58651	43218

IV	SOUTHERN REGION				
1	Andhra Pradesh	6506	5552	5427	5181
2	Telangana	7319	6912	2324	1982
3	Karnataka	8101	6015	6437	5128
4	Tamil Nadu	15406	13893	8405	5905
5	Kerala	3782	2485	1596	659
6	Pondy	391	335	0	0
7	Goa-SR	89	89	0	0
8	ISGS/IPPs	20	20	13317	11829
	Total SR	41614	35301	37506	30684
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	122	95	0	0
2	Assam	1052	964	261	240
3	Manipur	145	81	0	0
4	Meghalaya	250	175	208	189
5	Mizoram	86	63	8	0
6	Nagaland	111	104	22	16
7	Tripura	250	152	89	88
8	ISGS/IPPs	100	60	1529	1418
	Total NER	2115	1694	2117	1952
	Total All India	158474	133414	165162	138341