

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

Issue Date: 15/7/2016

Issue Time: 1400 hrs

Revision No. 6

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 <sup>\$</sup>	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.								
ER-SR	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				
	8th July 2016 to 9th July 2016	18'-24	2650	0	2650	2585	65				
		00-06				2650	0				
		06-18'				2650	0				
	10th July 2016 to 15th July 2016	00-06	2650	0	2650	2142	508				
		18-24				2207	443				
		06-18'				2450	308				
	16th July 2016 to 19th July 2016	00-06	2650	0	2650	2142	508				
		0600-0930'				2650	2207	443			
		0930-1800'				2450	2450	2207	243		
		18'-24				2450	2142	308			
	20th July 2016 to 31st July 2016	00-06	2650	0	2650	2142	508				
18-24		2207				443					
	06-18'										
SR-ER *	1st July 2016 to 31st July 2016	00-24	No limit is being Specified.								
ER-NER	1st July 2016 to 31st July 2016	00-17	990	45	945	210	735				
		23-24	990		945		735				
NER-ER	1st July 2016 to 31st July 2016	00-17	1400	45	1355	0	1355				
		23-24	1470		1425		1425				

Revised due to shutdown of Kolar AC Filter Bus-III.

-200

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<b>W3 zone Injection</b>	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)							
<b>Note: TTC/ATC of S1-S2 corridor, Import of Punjab and Import of DD &amp; DNH is uploaded on NLDC website under Intra-Regional Section in Monthly ATC.</b>										

\* 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
<b>NR-WR</b>	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak
<b>WR-NR</b>	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.
<b>NR-ER</b>	(n-1) contingency of 400 kV Saranath-Pusauli
<b>ER-NR</b>	n-1 contingency of one circuit of 400 kV Biharshariff- Lakhisarai leads to high loading on the other circuit
<b>WR-SR &amp; ER-SR</b>	(n-1) contingency of one circuit of 765 kV Raichur - Sholapur will lead to 2500 MW loading on the other circuit
<b>ER-NER</b>	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading 220 kV Balipara – Sonabil – Samaguri lines (200 MW).
<b>NER-ER</b>	(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
<b>W3 zone Injection</b>	---

**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
<b>ER</b>									
<b>NR*</b>	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				
<b>NER</b>	1st July 2016 to 31st July 2016	00-17	990	45	945	210	735		
		23-24							
		17-23	990		735				
<b>WR</b>									
<b>SR</b>	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 to 19th 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		
	20th July 2016 to 31st July 2016	00-06	6650	750	5900	5392	508		
		06-18'	6650		5900	5457	443		
		18-24	6650		5900	5392	508		

\* 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 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-Pusaui
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.

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Total Transfer Capability for July 2016**

<b>Revision No</b>	<b>Date of Revision</b>	<b>Period of Revision</b>	<b>Reason for Revision</b>	<b>Corridor Affected</b>
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
		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/ NR-ER	
		1/7/2016 to 2/7/2016	Revised due to shutdown of 400 kV Kolar AC Filter Bus-3	ER-SR/ Import of SR
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 Bhadrawati 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

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