

National Load Despatch Centre
Total Transfer Capability for September 2016

Issue Date: 19/9/2016

Issue Time: 1510 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 Sep 2016 to 30th Sep 2016	00-24	2500	500	2000	55	1945		
WR-NR*	1st Sep 2016 to 14th Sep 2016	00-24	6800	500	6300	6170	130		
	15th Sep 2016 to 30th Sep 2016	00-24	6600		6100	6170	0		
NR-ER*	1st Sep 2016 to 30th Sep 2016	00-06	2000	200	1800	93	1707		
		06-18'	2000		1800	158	1642		
		18-24	2000		1800	93	1707		
ER-NR*	1st Sep 2016 to 30th Sep 2016	00-24	4400	300	4100	2531	1569		
W3-ER ^s	1st Sep 2016 to 30th Sep 2016	00-24	No limit is being specified.						
ER-W3	1st Sep 2016 to 30th Sep 2016	00-24	No limit is being specified.						
WR-SR	1st Sep 2016 to 19th Sep	00-24	4000	750	3250	3250	0		
	20th Sep 2016 to 21st Sep 2016	00-07	4000	750	3250	3250	0		
		07-24	3500	750	2750	3250	0		
	22nd Sep 2016 to 30th Sep	00-24	4000	750	3250	3250	0		
SR-WR *	1st Sep 2016 to 30th Sep 2016	00-24	No limit is being Specified.						
ER-SR	1st Sep 2016 to 13th Sep 2016	00-06	2650	0	2650	2142	508		
		06-18'				2207	443		
		18-24				2142	508		
	14th Sep 2016 to 23rd Sep 2016	00-06	2650	0	2650	2142	508		
		06-18'				2207	443		
		18-24				2142	508		
	24th Sep 2016 to 30th Sep 2016	00-06	2650	0	2650	2585	65		
		06-18'				2650	0		
		18-24				2585	65		
SR-ER *	1st Sep 2016 to 30th Sep 2016	00-24	No limit is being Specified.						

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ER-NER	1st Sep 2016 to 19th Sep 2016	00-17	1030	45	985	210	775			
		17-23	940		895		685			
		23-24	1030		985		775			
	20th Sep 2016 to 23rd Sep 2016	00-08	1030	45	985	210	775	-90		Revised due to shutdown of 400 kV Bongaigaon - Azara S/C and shutdown of 400 kV Bongaigaon - Byrnihat S/C
		08-17	940		895		685			
		17-23	940		895		685			
	24th Sep 2016 to 30th Sep 2016	23-24	1030	45	985	210	775			
		00-17	1030		985		775			
		17-23	940		895		685			
NER-ER	1st Sep 2016 to 19th Sep 2016	00-17	1530	45	1485	0	1485			
		17-23	1500		1455		1455			
		23-24	1530		1485		1485			
	20th Sep 2016 to 23rd Sep 2016	00-08	1530	45	1485	0	1485	-690		Revised due to shutdown of 400 kV Bongaigaon - Azara S/C and shutdown of 400 kV Bongaigaon - Byrnihat S/C
		08-17	840		795		795			
		17-23	1500		1455		1455			
	24th Sep 2016 to 30th Sep 2016	23-24	1530	45	1485	0	1485			
		00-17	1530		1485		1485			
		17-23	1500		1455		1455			
		23-24	1530	45	1485	0	1485			
		00-17	1530		1485		1485			
		17-23	1500		1455		1455			

W3 zone Injection	1st Sep 2016 to 30th Sep 2016	00-24	No limit is being specified (In case of any constraints appearing in the system, W3 zone export would be revised accordingly)						
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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, 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) KWPC, n)Vandana Vidyut o)RKM, p)GMR Raikhe, 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-Pusaali
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 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 Sep 2016 to 14th Sep 2016	00-18	10800	800	10000	8701	1299		
		18-23'	10000		9200		499		
		23-24	10800		10000		1299		
	15th Sep 2016 to 30th Sep 2016	00-18	10500		9700	8701	999		
		18-23'	9700		8900		199		
		23-24	10500		9700		999		
NER	1st Sep 2016 to 19th Sep 2016	00-17	1030	45	985	210	775		
		17-23	940		895		685		
		23-24	1030		985		775		
	20th Sep 2016 to 23rd Sep 2016	00-08	1030	45	985	210	775		Revised due to shutdown of 400 kV Bongaigaon - Azara S/C and shutdown of 400 kV Bongaigaon - Byrnihat S/C
		08-17'	940		895		685	-90	
		17-23	940		895		685		
		23-24	1030		985		775		
	24th Sep 2016 to 30th Sep 2016	00-17	1030	45	985	210	775		
		17-23	940		895		685		
		23-24	1030		985		775		
	WR								
	SR	1st Sep 2016 to 13th Sep 2016	00-06	6650	750	5900	5392	508	
06-18'			6650	5900		5457	443		
18-24			6650	5900		5392	508		
14th Sep 2016 to 19th Sep 2016		00-06	6650	750	5900	5392	508		
		06-18'	6650		5900	5457	443		
		18-24	6650		5900	5392	508		
20th Sep 2016 to 21st Sep 2016		00-06	6650	750	5900	5392	508		
		06-07'	6650		5900	5457	443		
		07-18'	6150		5400	5457	0		
		18-24	6150		5400	5392	8		
22nd Sep 2016 to 23rd Sep 2016		00-06	6650	750	5900	5392	508		
		06-18'	6650		5900	5457	443		
		18-24	6650		5900	5392	508		
24th Sep 2016 to 30th Sep 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 Sep 2016 to 30th Sep 2016	00-06	4500	700	3800	148	3652			
		06-18'			3800	213	3587			
		18-24			3800	148	3652			
NER	1st Sep 2016 to 19th Sep 2016	00-17	1530	45	1485	0	1485			
		17-23	1500		1455		1455			
		23-24	1530		1485		1485			
	20th Sep 2016 to 23rd Sep 2016	00-08	1530	45	1485	0	1485		Revised due to shutdown of 400 kV Bongaigaon - Azara S/C and shutdown of 400 kV Bongaigaon - Byrnihat S/C	
		08'-17	840		795		795	-690		
		17-23	1500		1455		1455			
	23-24	1530	1485	1485	1485					
		24th Sep 2016 to 30th Sep 2016	00-17	1530	45	1485	0	1485		
			17-23	1500		1455		1307		
	23-24		1530	1485		1485				
	WR									
	SR *	1st Sep 2016 to 30th Sep 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 September 2016**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	8/1/2016	Whole month	STOA margin revised due to change in LTA/MTOA allocation	NR-ER/ NR-WR/ Simultaneous Export of NR
			Revised due to commissioning of 400 kV 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 and considering the present inter regional flow pattern	WR-NR/ Simultaneous import of NR
2	26/8/2016	01-08-16 to 13-08-16	STOA margin revised due to outage of Talcher Stage-2 Unit - 6 approved in 121st OCC of SRPC.	ER-SR/ Import of SR
3	29/8/2016	Whole month	Revised considering the present Inter-Regional flow pattern.	WR-NR/ Import of NR
4	12/9/2016	14/9/2016 to 23/9/2016	STOA margin revised due to extended outage of Talcher Stage-2 Unit -6.	ER-SR/ Import of SR
5	14/9/2016	15/9/2016 to 30/9/2016	Revised considering the current rating of 400 kV isolators at Dhanaunda as 2000 A	WR-NR/ Simultaneous import of NR
6	19/09/2016	20/09/2016 to 21/09/2016	Revised due to the shutdown of HVDC Bhadrawati Block-1.	WR-SR/ Import of SR
7	19/09/2016	20/09/2016 to 23/09/2016	Revised due to shutdown of 400 kV Bongaigaon - Azara S/C and shutdown of 400 kV Bongaigaon - Byrnihat S/C	ER-NER / NER- ER

ASSUMPTIONS IN BASECASE					
				Month : September '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	9400	8059	5466	5258
2	Haryana	7798	7260	2610	2610
3	Rajasthan	10027	10099	6333	6382
4	Delhi	4844	4498	962	962
5	Uttar Pradesh	13618	12577	7131	7179
6	Uttarakhand	1688	1250	804	722
7	Himachal Pradesh	1184	901	815	850
8	Jammu & Kashmir	2246	1356	841	807
9	Chandigarh	286	191	0	0
10	ISGS/IPPs	0	0	20482	15017
	Total NR	51091	46191	45444	39787
II	EASTERN REGION				
1	Bihar	3260	2746	200	110
2	Jharkhand	1023	883	400	350
3	Damodar Valley Corporation	2582	2207	3400	2871
4	Orissa	3708	2852	2929	2000
5	West Bengal	7601	6081	4768	3830
6	Sikkim	93	49	0	0
7	Bhutan	215	215	1504	1472
8	ISGS/IPPs	415	419	9645	9015
	Total ER	18897	15452	22846	19647
III	WESTERN REGION				
1	Maharashtra	20103	13051	13552	9451
2	Gujarat	14488	8693	11414	5676
3	Madhya Pradesh	8537	5486	4790	2285
4	Chattisgarh	4088	2975	3236	1989
5	Daman and Diu	314	229	0	0
6	Dadra and Nagar Haveli	680	626	0	0
7	Goa-WR	487	221	0	0
8	ISGS/IPPs	902	904	28078	22617
	Total WR	49599	32185	61071	42019

IV	SOUTHERN REGION				
1	Andhra Pradesh	7073	5389	6385	5627
2	Telangana	9564	7551	4263	2964
3	Karnataka	9054	7496	6966	5130
4	Tamil Nadu	14003	12691	7036	5417
5	Kerala	3973	2663	1643	638
6	Pondy	391	327	0	0
7	Goa-SR	89	89	0	0
8	ISGS/IPPs	28	28	14187	11953
	Total SR	44175	36234	40480	31729
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	130	102	0	0
2	Assam	1228	1007	275	225
3	Manipur	164	76	0	0
4	Meghalaya	279	206	300	243
5	Mizoram	93	63	8	0
6	Nagaland	120	84	24	16
7	Tripura	234	148	91	91
8	ISGS/IPPs	100	60	1869	1763
	Total NER	2348	1746	2567	2338
	Total All India	166356	132052	173941	136992