

**National Load Despatch Centre
Total Transfer Capability for June 2015**

Issue Date: 19/06/2015

Issue Time: 1800 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 Jun 2015 to 30th Jun 2015	00-24	2500	500	2000	706	1294			
WR-NR*	1st Jun 2015 to 05th Jun 2015	00-17	5100	500	4600	5157	0			
		23-24			4600		0			
		17-23	5100							
	06th June 2015	00-05	5100	500	4600	5157	0			
		14-17								
		23-24	4850		0					
		05-14'	5100		0					
	07th Jun 2015 to 19th Jun 2015	00-17	5100	500	4600	5157	0			
		23-24								4600
		17-23	5100							
	20th Jun 2015	00-0730	5100	500	4600	5157	0		Revised due to shutdown of 400 kV Mahendragarh-Dhanonda ckt 2	
		0730-1300	4900		4400		0			-200
		1300-24	5100		4600		0			
	21st Jun 2015 to 30th Jun 2015	00-17	5100	500	4600	5157	0			
23-24		4600								0
NR-ER*	1st Jun 2015 to 30th Jun 2015	00-06	2000	200	1800	293	1507			
		06-18'			2000	1800	358			1442
		18-24			2000	1800	293			1507
	1st Jun 2015 to 10th Jun 2015	00-17	4500		300	4200	2431			1769
23-24		4200		1769						
17-23		4500								
ER-NR*#	11th Jun 2015 to 30th Jun 2015	00-17	3225	300	2925	2431	494			
		23-24								
		17-23	3175		2875		444			
W3-ER^s	1st Jun 2015 to 30th Jun 2015	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.							
ER-W3	1st Jun 2015 to 30th Jun 2015	00-24	1000	300	700	874	0			

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WR-SR	1st Jun 2015 to 5th Jun 2015	00-05	2500	750	1750	1550	200			
		05-22'	2100		1350		0			
		22-24	2500		1750		200			
	6th Jun 2015 to 12th Jun 2015	00-05	2700	750	1950	1550	400			
		05-22'	2300		1550		0			
		22-24	2700		1950		400			
	13th Jun 2015	00-05	2700	750	1950	1550	400			
		05-22'	1000		1000		0			
		22-24	1000		1000		0			
	14th Jun 2015	00-05	2700	750	1950	1550	400			
		05-0930'	2300		1550		0			
		0930-14	1300		550		0			
		14-22	2300		1550		0			
	15th Jun 2015 to 20th Jun 2015	00-05	2700	750	1950	1550	400			
		05-22'	2300		1550		0			
		22-24	2700		1950		400			
	21st Jun 2015	00-05	2700	750	1950	1550	400		Revised due to shutdown of 400 kV Bhadrawati - Ramagundam D/C	
		05-0530'	2300		1550		0			
		0530-22'	1300		550		0			
		22-24	1700		950		0			
	22nd Jun 2015 to 30th Jun 2015	00-05	2700	750	1950	1550	400			
05-22'		2300	1550		0					
22-24		2700	1950		400					
SR-WR *	1st Jun 2015 to 30th Jun 2015	00-24	No limit is being Specified.							
ER-SR	1st Jun 2015 to 5th Jun 2015	00-06	2450	0	2450	2385	65			
		18-24					2450			0
	06-18'									
6th Jun 2015 to 30th Jun 2015	00-06	2650	0	2650	1942	708				
	18-24								2007	643
	06-18'									
SR-ER *	1st Jun 2015 to 30th Jun 2015	00-24	No limit is being Specified.							
ER-NER	1st Jun 2015 to 30th Jun 2015	00-17	1260	45	1215	210	1005			
		23-24			1115		905			
17-23										
	NER-ER	1st Jun 2015 to 30th Jun 2015	00-17	1400	45	1355	0	1355		
23-24			1200							
17-23		1245	45	1200						
S1-S2 (Rev-0)	1st Jun 2015 to 5th Jun 2015	00-24	2610	305	2305	2790	0			
	6th Jun 2015 to 14th Jun 2015	00-24	2910	305	2605	2898	0			
	15th Jun 2015 to 30th Jun 2015	00-24	2910	305	2605	2819	0			

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Import of Punjab	1st Jun 2015 to 30th Jun 2015	00-24	5700	300	5400	3790	1610		
Import TTC for DD & DNH	1st Jun 2015 to 30th Jun 2015	00-24	1200	0	1200	LTA and MTOA as per ex-pp schedule			
W3 zone Injection	1st Jun 2015 to 30th Jun 2015	00-17	9400	200	9200	7094	2106		
		23-24	9900		9700		2606		

* 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).

S1-S2 Corridor: Any revision in S1-S2 TTC/ATC from Rev-0, would be uploaded under Intra-Regional Section on NLDC website.

\$ 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.

ER-NR TTC is independent of WR-NR corridor flow

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	High Loading of 400kV Singrauli-Anpara & High loading of 765 kV Agra-Gwalior (1250 MW SPS setting on each circuit of 765 kV Gwalior-Agra) and Loop flows on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda (power flowing from WR to NR on 765kV Gwalior-Agra D/C and from NR to WR on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda).
NR-ER	(n-1) contingency of 400 kV Saranath-Pusauli
ER-NR	(n-1) contingency of 400 kV Farakka-Malda D/C
ER-W3	1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) D/C
WR-SR & ER-SR	1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) D/C. 3. ER-SR TTC has been declared assuming more than 1100 MW generation at Talcher Stage-2. In case Talcher Stage-2 generation goes below 1100 MW, then the ER-SR TTC would be revised downward as constraints within ER would emerge.
ER-NER	N-1 contingency of 220/132 kV, 2x100 MVA ICTs at Dimapur.
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
S1-S2	(n-1) contingency of one circuit of 400 kV Kolar-Hosur D/C
Import of DD & DNH	(n-1) contingency of 400/220KV 315MVA ICT at VAPI
Import of Punjab	(n-1) contingency of ICT at Dhuri and (n-1) contingency of 220kV Moga(PG)-Moga(PSTCL)
W3 zone Injection	1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) D/C

*Primary constraints

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 Jun 2015 to 05th Jun 2015	00-17 23-24	9600	800	8800	7588	1212		Revised due to shutdown of 400 kV Mahendragarh-Dhanonda ckt 2	
		17-23	9600		8800		1212			
	05th Jun 2015 to 19th Jun 2015	00-05 08-18 21-24	7100	800	6300	7588	0			
		05-08'	7900		7100		0			
		18-21	7000		6200		0			
	20th Jun 2015	00-05 21-24	7100	800	6300	7588	0			
		05-0730'	7900		7100		0			
		0730-0800	7500		6700		0			
		08-13'	6700		5900		0			
		13-18'	7100		6300		0			
		18-21	7000		6200		0			
	21sts Jun 2015 to 30th Jun 2015	00-05 08-18 21-24	7100	800	6300	7588	0			
		05-08'	7900		7100		0			
		18-21	7000		6200		0			
NER	1st Jun 2015 to 30th Jun 2015	00-17 23-24	1260	45	1215	210	1005			
		17-23	1160		1115		905			
WR										
SR	1st Jun 2015 to 5th Jun 2015	00-05	4950	750	4200	3935	265			
		05-06'	4550		3800	3935	0			
		06-18'	4550		3800	4000	0			
		18-22	4550		3800	3935	0			
		22-24	4950		4200	3935	265			
	6th Jun 2015 to 12th Jun 2015	00-05	5350	750	4600	3492	1108			
		05-06'	4950		4200	3492	708			
		06-18'	4950		4200	3557	643			
		18-22	4950		4200	3492	708			
	13th Jun 2015	22-24	5350	750	4600	3492	1108			
		00-05	5350		0	3650	3492	158		
		05-06'	4950				3557	93		
		06-18'	4950				3492	158		
	18-22	4950	3492	158						
	14th Jun 2015	22-24	5350	750	3200	3557	0			
		00-05	5350					4600	3492	1108
		05-06'	4950					4200	3492	708
		06-0930'	4950					4200	3557	643
		0930-14	3950					4200	3557	643
		14-18	4950					4200	3557	643
18-22		4950	4200					3492	708	
22-24	5350	4600	3492	1108						

15th Jun 2015 to 20th Jun 2015	00-05	5350	750	4600	3492	1108		
	05-06'	4950		4200	3492	708		
	06-18'	4950		4200	3557	643		
	18-22	4950		4200	3492	708		
	22-24	5350		4600	3492	1108		
21st Jun 2015	00-05	5350	750	4600	3492	1108	-1000	Revised due to shutdown of 400 kV Bhadrawati - Ramagundam D/C
	05- 0530'	4950		4200	3492	708		
	0530- 06'	3950		3200	3492	0		
	06-18'	3950		3200	3557	0		
	18-22	3950		3200	3492	0		
22nd Jun 2015 to 30th Jun 2015	22-24	4350	750	3600	3492	108		
	00-05	5350		4600	3492	1108		
	05-06'	4950		4200	3492	708		
	06-18'	4950		4200	3557	643		
	18-22	4950		4200	3492	708		
	22-24	5350		4600	3492	1108		

* 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).

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 Jun 2015 to 30th Jun 2015	00-06	4500	700	3800	999	2801		
		06-18'			3800	1064	2736		
		18-24	4500		3800	999	2801		
NER	1st Jun 2015 to 30th Jun 2015	00-17 23-24	1400	45	1355	0	1355		
		17-23	1245	45	1200		1200		
WR									
SR *	1st Jun 2015 to 30th Jun 2015	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 400 kV Farakka-Malda D/C High loading of 765 kV Agra-Gwalior (1250 MW SPS setting on each circuit of 765 kV Gwalior-Agra) and high loop flows on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda (power flowing from WR to NR on 765kV Gwalior-Agra D/C and from NR to WR on 400kV Kankroli-Zerda and 400kV Bhinmal-Zerda).
	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 220/132 kV, 2x100 MVA ICTs at Dimapur.
	Export	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other ICT at Misa
SR	Import	1. (n-1) of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) D/C.
		3. ER-SR TTC has been declared assuming more than 1100 MW generation at Talcher Stage-2. In case Talcher Stage-2 generation goes below 1100 MW, then the ER-SR TTC would be revised downward as constraints within ER would emerge.

*Primary constraints

**National Load Despatch Centre
Total Transfer Capability for June 2015**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	02-03-2015	Whole Month	STOA Margins revised due to grant of MTOA from Chattisgarh to KSEB by CTU.	W3 Zone/ W3-ER
2	31-03-2015	Whole Month	Revised due to commissioning of Sasan Unit-6 and reviewed HVDC set points.	WR-NR
			Revised due to commissioning of 765kV Pune-Sholapur S/C.	WR-SR
3	22-05-2015	Whole Month	Fifty Percent (50 %) Counter flow benefit on account of LTA/MTOA transactions in the reverse direction.	Import of NR
		01-06-15 to 05-06-15	Revised considering the present Maharashtra Demand pattern.	WR-SR
		01-06-15 to 05-06-15	Revised considering the present Maharashtra Demand pattern and due to Shutdown of Talcher Stage-2 Unit-2.	WR-SR/ ER-SR
4	29-05-2015	Whole Month	Revised on account of addition of new elements in NER Grid and change in load-generation balance.	ER-NER/ NER-ER
5	31-05-2015	1-06-2015 to 05-06-2015	Revised considering tripping events of Talcher-Kolar HVDC Bipole and high ambient Temperature.	ER-SR / WR-SR
6	05-06-2015	06-06-2015 to 30-06-2015	Revised considering skewed sharing of flows on WR-NR and ER-NR corridor ranging from 65:35 to 72:28	Import of NR
		06-06-2015	Revised considering the shutdown of 400 kV HVDC Rihand Feeder 2	WR-NR
7	10-06-2015	whole month(till restoration)	Revised considering the outage of 400 kV Biharshariff-Banka D/C, 400 kV Biharshariff-Koderma D/C, 400 kV Biharshariff-Purnea S/C, 400/200 kV all ICTs at Biharshariff.	ER-NR
8	12-06-2015	13-06-2015	Revised due to shutdown of 400 kV Raichur - Gooty ckt 1 and ckt 2	WR-SR
		14-06-2015	Revised due to shutdown of HVDC Bharawati B/B	
9	19-06-2015	21-06-2015	Revised due to shutdown of 400 kV Bhadrawati - Ramagundam D/C	WR-SR
		20-06-2015	Revised due to shutdown of 400 kV Mahendragarh-Dhanonda ckt 2	WR-NR & NR import

ASSUMPTIONS IN BASECASE

Month : June '15

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	9585	9795	4766	4766
2	Haryana	7802	6896	3352	3352
3	Rajasthan	7493	7935	4303	4303
4	Delhi	5388	4734	1337	1337
5	Uttar Pradesh	12093	12670	6549	6546
6	Uttarakhand	1598	1367	754	666
7	Himachal Pradesh	1248	1034	880	867
8	Jammu & Kashmir	2188	1715	531	441
9	Chandigarh	296	253	0	0
10	ISGS/IPPs			19551	18408
	Total NR	47691	46399	42023	40686
II	EASTERN REGION				
1	Bihar	2500	1850	180	110
2	Jharkhand	1100	678	400	360
3	Damodar Valley Corporation	2750	2200	4512	3337
4	Orissa	3803	3285	3508	2688
5	West Bengal	7536	6049	4966	4542
6	Sikkim	90	65	0	0
7	Bhutan	107	106	1000	900
8	ISGS/IPPs	675	664	10789	9319
	Total ER	18561	14897	25355	21256
III	WESTERN REGION				
1	Maharashtra	19358	15390	14146	9781
2	Gujarat	13470	10976	10381	7092
3	Madhya Pradesh	7020	5477	3837	1927
4	Chattisgarh	3472	2268	2147	1462
5	Daman and Diu	288	270	0	0
6	Dadra and Nagar Haveli	677	665	0	0
7	Goa-WR	475	299	0	0
8	ISGS/IPPs	1136	1120	23133	23134
	Total WR	45896	36465	53644	43396

ASSUMPTIONS IN BASECASE

Month : June '15

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	5271	4582	5048	4666
2	Telangana	5667	5464	2230	1951
3	Karnataka	7755	7025	7076	5624
4	Tamil Nadu	11352	10421	7157	6587
5	Kerala	2827	1928	1567	617
6	Pondy	312	288	0	0
7	Goa-SR	83	89	0	0
8	ISGS/IPPs	79	71	7622	7622
	Total SR	33346	29868	30700	27067
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	70	39	0	0
2	Assam	772	627	215	200
3	Manipur	72	43	0	0
4	Meghalaya	280	208	232	154
5	Mizoram	61	39	4	3
6	Nagaland	83	69	21	16
7	Tripura	249	169	110	110
8	ISGS/IPPs	48	27	1055	720
	Total NER	1635	1221	1637	1203
	Total All India	147129	128850	153359	133608