

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

Issue Date: 13/05/2015

Issue Time: 1750 hrs

Revision No. 25

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 May 2015 to 31st May 2015	00-24	2500	500	2000	706	1294			
WR-NR*	1st May 2015	00-07	5100	500	4600	5157	0			
		07-24	4850		4350		0			
	2nd May 2015	00-0730	4850	500	4350	5157	0			
		0730-1030	4400		3900		0			
		1030-24	4850		4350		0			
		00-17	4850	500	4350	5157	0			
	17-23	4850	4350		0					
	4th May 2015	00-2115	4850	500	4350	5157	0			
		2115-2230	3750		3250		5157			0
		2230-24	5100		4600		5157			0
	5th May 2015 to 6th May 2015	00-17	5100	500	4600	5157	0			
		17-23	5100		4600		0			
	7th May 2015	00-07	5100	500	4600	5157	0			
		07--24	4100		3600		5157			0
	8th May 2015	00-07	5100	500	4600	5157	0			
		07--12	4100		3600		5157			0
		12--24	4400		3900		5157			0
	9th May 2015	00-17	4400	500	3900	5157	0			
		17-23	4400		3900		5157			0
	10th May 2015	00-17	5100	500	4600	5157	0			
		17-23	5100		4600		5157			0
	11th May 2015 to 12th May 2015	00-17	5100	500	4600	5157	0			
		17-23	5100		4600		5157			0
	13th May 2015	00-13	5100	500	4600	5157	0			
13-24		4400	3900		5157		0			
14th May 2015 to 31st May 2015	00-17	5100	500	4600	5157	0				
	17-23	5100		4600		5157			0	
NR-ER*	1st May 2015 to 31st May 2015	00-06	2000	200	1800	293	1507			
		06-18	2000		1800	358	1442			
		18-24	2000		1800	293	1507			
ER-NR*	1st May 2015 to 31st May 2015	00-17	3400	300	3100	2431	669			
		17-23	3400		3100		669			
W3-ER^s	1st May 2015 to 31st May 2015	00-24	No limit is being specified. No Re-routing is allowed via W3-ER-NR.							
ER-W3	1st May 2015 to 31st May 2015	00-24	1000	300	700	874	0			
WR-SR	1st May 2015	05-22	2100	750	1350	1350	0			
		00-05	2500		1750		400			
		22-24	2300		1550		200			
		05-22	2300	750	1950	1350	600			
	00-05	2700	1950		200					
	7th May 2015 to 9th May 2015	05--07	2300	750	1150	1350	0			
		07-22	1900		1550		200			
		22-24	2300		1550		200			
10th May 2015 to 31st May 2015	05-22	2300	750	1550	1350	200				
	00-05	2700		1950		600				
SR-WR *	1st May 2015 to 31st May 2015	00-24	No limit is being Specified.							

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ER-SR	1st May 2015 to 10th May 2015	00-06	2650	0	2650	2385	265			
		18-24				2450	200			
		06-18'								
	11th May 2015	00-06	2650	0	2650	2385	265			
		06-18'	2350			2450	0			
		18-24'	2350			2385	0			
	12th May 2015	00-06	2650	0	2650	2385	265			
		06-18'	2500			2450	50			
		18-24'	2500			2385	115			
	13th May 2015	00-06	2650	0	2650	2385	265			
		06-18'	2500			2450	50			
		18-24'	2500			2385	115			
14th May 2015 to 31st May 2015	00-06	2650	0	2650	2385	265				
	18-24				2450	200				
	06-18'									
SR-ER *	1st May 2015 to 31st May 2015	00-24	No limit is being Specified.							
ER-NER	1st May 2015 to 31st May 2015	00-17	1170	40	1130	210	920			
		23-24	1150		1110		900			
NER-ER	1st May 2015 to 31st May 2015	00-24	No limit is being Specified.							
S1-S2	1st May 2015	00-24	3220	320	2900	2583	317			
	2nd May 2015	00-12	3220	320	2900	2583	317			
		12-24	3220	320	2900	2583	317			
	3rd May 2015	00-24	3220	320	2900	2583	317			
	4th May 2015	00-21:45	2920	320	2600	2474	126			
		21:45-24	3265			2945	2474	471		
	5th May 2015	00-24	3265	320	2945	2474	471			
	6th May 2015	00-19	3265	320	2945	2474	471			
		19-24	3265			2945	2474	471		
	7th May 2015	00-08	3265	320	2945	2474	471			
		12-24'	2920	320	2600	2474	126			
	8th May 2015	00-24	2920	320	2600	2474	126			
	9th May 2015	00-20	2920	320	2600	2474	126			
		20-24	2750	320	2430	2729	0			
	10th May 2015	00-13	2750	320	2430	2729	0			
		13-15	3095			2775	2729	46		
		15-24	2750			2430	2729	0		
	11th May 2015	00-06	2750	320	2430	2729	0			
		06-19'	2750	320	2430	2729	0			
		19-24'	3045	320	2725	2838	0			
	12th May 2015	00-11:45	3045	320	2725	2838	0			
		11:45-24	3330			3010	2946	64		
	13th May 2015	00-06	3330	320	3010	2946	64			
		06-09'	3045			2725	2838	0		
		09-10'	2715			2715	2838	0		
		10-13'	3045			2725	2946	0		
		13-16:15'	2715			2395	2838	0		
		16:15-19'	3045			2725	2946	0	330	Revised due to outage of Vallur unit 1
	14th May 2015	19-24'	3330	320	3010	2946	64	285		
		00-06	3880			3560	2946	614		
		06-09'	3800			3480	2583	897		
		09-19'	3465			3145	2583	562		
	15th May 2015	19-24'	3800	320	3480	2583	897			
		00-09	2920			320	2430	2474	0	
		09-19'	2555			320	2235	2474	0	
	16th May 2015 to 31st May 2015	19-24'	2920	320	2600	2474	126			
00-24		2920	320	2600	2474	126				

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Import of Punjab	1st May 2015 to 31st May 2015	00-24	5700	300	5400	3790	1610		
Import TTC for DD & DNH	1st May 2015 to 31st May 2015	00-24	1200	0	1200	LTA and MTOA as per ex-pp schedule			
W3 zone Injection	1st May 2015 to 31st May 2015	00-17	9400	200	9200	7094	2106		
		23-24			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).

\$ 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) KWPL, 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 Kahalgaon-Lakhisarai S/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)
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) 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 Kahalgaon-Lakhisarai S/C
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)

*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
SR	1st May 2015	00-05	5150	750	4400	3935	465		
		05-06'	4750		4000	3935	65		
		06-18'	4750		4000	4000	0		
		18-22	4750		4000	3935	65		
		22-24	5150		4400	3935	465		
	2nd May 2015 to 6th May 2015	00-05	5350	750	4600	3935	665		
		05-06'	4950		4200	3935	265		
		06-18'	4950		4200	4000	200		
		18-22	4950		4200	3935	265		
		22-24	5350		4600	3935	665		
	7th May 2015 to 9th May 2015	00-05	5350	750	4600	3935	665		
		05-06'	4950		4200	3935	265		
		06-07'	4950		4200	4000	200		
		07-18'	4550		3800	4000	0		
		18-22	4550		3800	3935	0		
	10th May 2015	22-24	4950	750	4200	3935	265		
		00-05	5350		4600	3935	665		
		05-06'	4950		4200	3935	265		
		06-18'	4950		4200	4000	200		
		18-22	4950		4200	3935	265		
	11th May 2015	22-24	5350	750	4600	3935	665		
		00-05	5350		4200	3935	265		
		05-06'	4950		4200	3935	265		
		06-18'	4650		3900	4000	0		
		18-22	4650		3900	3935	0		
	12th May 2015	22-24	5050	750	4300	3935	365		
		00-05	5350		4600	3935	665		
		05-06'	4950		4200	3935	265		
06-18'		4800	4050		4000	50			
18-22		4800	4050		3935	115			
13th May 2015	22-24	5200	750	4450	3935	515			
	00-05	5350		4600	3935	665			
	05-06'	4950		4200	3935	265			
	06-18'	4800		4050	4000	50			
	18-22	4800		4050	3935	115			
14th May 2015 to 31st May 2015	22-24	5200	750	4450	3935	515			
	00-05	5350		4600	3935	665			
	05-06'	4950		4200	3935	265			
	06-18'	4950		4200	4000	200			
	18-22	4950		4200	3935	265			

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 May 2015 to 31st May 2015	00-06	4500	700	3800	999	2801		
		06-18'			3800	1064	2736		
		18-24	4500		3800	999	2801		
NER	1st May 2015 to 31st May 2015	00-17	No limit is being Specified.						
		23-24							
		17-23							
WR									
SR *	1st May 2015 to 31st May 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 Kahalgaon-Lakhisarai S/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 Kahalgaon-Lakhisarai S/C
	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

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Total Transfer Capability for May 2015**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	12-Feb-15	Whole Month	Margin revised due to cancellation of LTA/MTOA	NR-WR/ ER-W3
2	2-Mar-15	Whole Month	STOA Margins revised due to grant of MTOA from Chattisgarh to KSEB by CTU.	W3-ER/ W3 Zone
			Revised due to commissioning of Vallur Unit-3	S1-S2
3	31-Mar-15	Whole Month	Revised considering the commissioning of Sasan Unit-6 and reviewed HVDC set points.	WR-NR
			Revised considering the commissioning of 765kV Pune-Sholapur S/C.	WR-SR
4	21-Apr-15	Whole Month	Revised considering revised thermal ratings of the lines in ER and expected flows on ER-NR corridor	ER-NR
5	27-Apr-15	Whole Month	Revised due to LGBR changes given in 106th OCC meeting.	S1-S2
6	30-Apr-15	Whole Month	Revised due to shutdown of 765kV Pune-Sholapur S/C and considering the present Maharashtra Demand pattern (1st May) & Revised considering the present Maharashtra Demand pattern (2nd-31st) .	WR-SR
		01-05-2015 to 03-05-2015	Revised due to shutdown of HVDC Vindhyachal BTB Block-2.	WR-NR
		Whole Month	on account of addition of new elements in NER Grid and change in load-generation balance.	ER-NER/ NER-ER
		01-05-15 to 02-05-15	Due to Extension of Vallur Unit -3 Outage	S1-S2
7	2-May-15	02-05-2015	Revised due to Emergency shutdown of Rihand-Dadri HVDC Pole-1.	WR-NR
8	2-May-15	02-05-15 to 03-05-15	Revised due to Extension of Vallur Unit -3 Outage	S1-S2
9	3-May-15	04-05-2015	Revised due to extension of HVDC Vindhyachal BTB Block-2 shutdown.	WR-NR
10	4-May-15	04-05-2015	Revised due to tripping of Mundra-Mahendragarh HVDC pole-2	WR-NR
		5/4/2015 to 5/6/2015	Revised due to NCTPS stage 2 Unit-1 Outage	S1-S2
11	4-May-15	04-05-2015	Due to revival of Mundra-mahendragarh pole 2 and Vindhyachal Block 2	WR-NR
12	6-May-15	7/5/2015 to 9/5/2015	Revised due to shutdown of 400kV Chandrapur-Ramagundam Ckt-1 (7th-8th) & Ckt-2 (9th).	WR-SR
		7/5/2015 to 8/5/2015	Revised due to shutdown of 765kV Bus-1 at Agra Substation.	WR-NR

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Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
13	6-May-15	6/5/2015 to 7/5/2015	Revised due to Extension of NCTPS Stage 2 Unit-1 Outage.	S1-S2
14	7-May-15	07-05-2015	Revised due to revival of NCTPS Stage 2 Unit-1.	S1-S2
15	8-May-15	05-08-2015	Revised due to cancellation of 765kV Agra Bus-1 shutdown and due shutdown of Rihand-Dadri HVDC Pole-2.	WR-NR
		9/5/2015 to 10/5/2015	Revised due shutdown of Rihand-Dadri HVDC Pole-2.	
16	9-May-15	9/5/2015 to 11/5/2015	Revised due to Kudamkulam Unit-1 Outage.	S1-S2
		10-05-2015	Revised due restoration of Rihand-Dadri HVDC Pole-2.	WR-NR
17	10-May-15	11-05-2015	Revised due to shutdown of 400 kV Jeypore - Gazuwaka Ckt-1 and 400 kV Angul - Bolangir S/C	ER-SR
		10-05-2015	Revised due to outage of NCTPS Stage 2 Unit -1	S1-S2
18	11-May-15	11/5/2015 to 15/5/2015	Due to Extension of KKNPP Unit-1 Outage	S1-s2
19	11-May-15	12-05-2015	Revised due to shutdown of 400 kV Jeypore - Gazuwaka Ckt-2	ER-SR
20	11-May-15	12-05-2015 to 14-05-2015	Revised due to shutdown of 400 kV SVCTM - Pondy S/C	S1-S2
21	12-May-15	11-05-2015 to 12-05-2015	Revised due to Outage of Vallur Unit -3	S1-S2
22	13-May-15	13-05-2015	Revised due to shutdown of Rihand-Dadri HVDC Pole-2.	WR-NR
		13-05-2015	Revised due to shutdown of 400kV Jeypore-Gazuwaka Ckt-2	ER-SR
		12-05-2015 to 15-05-2015	Revised due to Vallur Unit-2 Outage, revival of Kudankulam Unit-1 and 400kV SVCTM-Pondy SC line SD.	S1-S2
23	13-May-15	12-05-2015 to 15-05-2015	Revised due to Extension of Vallur Unit -2 & KKNPP Unit-1 Outage.	S1-S2
24	13-May-15	14-05-2015 (00-06)	Revised due to commisioning of 400 kV Mettur-Tiruvalem ckt 1, and outages of Vallur Unit 1 & 2	S1-S2
		14-05-2015 (06-09)	Revised due to commisioning of 400 kV Mettur-Tiruvalem ckt 1and revival of Vallur Unit - 2 and KKNPP Unit-1	
		14-05-2015 (09-19)	Revised due to commisioning of 400 kV Mettur-Tiruvalem ckt 1 and shutdown of 400kV SVCTM - Pondy	
		14-05-2015 (19-24)	Revised due to commisioning of 400 kV Mettur-Tiruvalem ckt 1	
25	13-May-15	13-05-2015	Revised due to outage of Vallur unit 1	S1-S2

ASSUMPTIONS IN BASECASE

Month : May '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	7577	6617	3463	3477
2	Haryana	5856	5210	2202	2203
3	Rajasthan	7738	7467	4717	4717
4	Delhi	5200	4674	1323	1323
5	Uttar Pradesh	12604	12834	6533	6524
6	Jammu & Kashmir	2166	1404	443	441
7	Uttarakhand	1638	1285	830	496
8	Himachal Pradesh	1383	1127	704	624
9	Chandigarh	292	194	0	0
10	ISGS/IPPs			18480	15160
	Total NR	44454	40812	38695	34965
II	EASTERN REGION				
1	West Bengal	7550	6800	5200	3700
2	Jharkhand	1070	900	470	380
3	Orissa	3950	3200	3400	2500
4	Bihar	2600	2140	180	0
5	Damodar Valley Corporation	2675	2400	3800	3400
6	Sikkim	85	50	-	-
7	Bhutan			250	140
8	ISGS/IPPs			10005	8325
	Total ER	17930	15490	23305	18445
III	WESTERN REGION				
1	Chattisgarh	3336	2801	1606	1313
2	Madhya Pradesh	7271	6314	3649	3011
3	Maharashtra	19250	17030	15092	12163
4	Gujarat	13471	1238	10322	8765
5	Goa	438	347		
6	Daman and Diu	288	264		
7	Dadra and Nagar Haveli	687	665		
8	ISGS/IPPs	1058	1058	22774	22774
	Total WR	45799	29717	53443	48026

ASSUMPTIONS IN BASECASE

Month : May '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	Telangana	5580	5568	2354	2173
2	Andhra Pradesh	5593	5592	5077	4550
3	Tamil Nadu	12051	10398	7068	6424
4	Karnataka	8046	7046	7080	5576
5	Kerala	3328	2336	1939	770
6	Pondy	374	294		
7	Goa	89	89		
8	ISGS/IPPs			9180	9180
	Total SR	35061	31323	32698	28673
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	86	53	0	0
2	Assam	753	640	215	200
3	Manipur	83	53	0	0
4	Meghalaya	296	211	140	92
5	Mizoram	58	40	4	3
6	Nagaland	76	63	16	8
7	Tripura	244	164	110	110
8	ISGS/IPPs			990	738
	Total NER	1596	1224	1475	1151
	Total All India	144840	118566	149616	131260