

National Load Despatch Centre
Total Transfer Capability for January 2015

Issue Date: 16/1/2015

Issue Time: 1530 hrs

Revision No. 10

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 January 2015 to 31st January 2015	00-24	2500	500	2000	1055	945			
WR-NR **	1st January 2015 to 31st January 2015	00-17	4700	500	4200	4768	0			
		23-24			4200		0			
		17-23	4700							
NR-ER*	1st January 2015 to 31st January 2015	00-06	2000	200	1800	293	1507			
		06-18'	2000		1800	358	1442			
		18-24	2000		1800	293	1507			
ER-NR	1st January 2015 to 31st January 2015	00-17	3400	300	3100	2431	669			
		23-24					669			
		17-23					669			
W3-ER ^s	1st January 2015 to 31st January 2015	00-24	1800	300	1500	351	1149			
ER-W3	1st January 2015 to 31st January 2015	00-24	1000	300	700	973	0			
WR-SR ##	1st January 2015 to 4th January 2015	00-05	2500	750	1750	1350	400			
		22-24			2100	1350	1350			0
	5th January 2015	00-05	2500	750	1750	1350	400			
		05-08'	2100	750	1350	1350	0			
		08-22'	1000	0	1000	1350	0			
		22-24	1000	0	1000	1350	0			
	6th January 2015 to 10th January 2015	00-05	2500	750	1750	1350	400			
		22-24	2100		1350	1350	0			
	11th January 2015	00-05	2500	750	1750	1350	400			
		05-08'	2100	750	1350	1350	0			
		08-22'	1000	0	1000	1350	0			
		22'-24	1000	0	1000	1350	0			
	12th January 2015 to 15th January 2015	00-05	2500	750	1750	1350	400			
		22-24	2100		1350	1350	0			
	16th January 2015 to 31st January 2015	00-05	2500	750	1750	1350	400			
		22-24	2100		1350	1350	0			
	SR-WR *	1st January 2015 to 31st January 2015	00-24	No limit is being Specified.						

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ER-SR ##	1st January 2015 to 15th January 2015	00-06	2650	0	2650	2585	65		
		18-24							
		06-18'							
	16th January 2015	00-06	2650	0	2650	2585	65		
		06-615	2400		2400	2650	0		
		615-630	2150		2150	2650	0		
		630-645	1900		1900	2650	0		
		645-7	1700		1700	2650	0		
		7-18'	1700		1700	2650	0		
		18-24	1700		1700	2585	0		
	17th January 2015	00-06	1700	0	1700	2585			Revised due to Shutdown of Talcher-Kolar HVDC pole-1 & Pole-2 Shutdown.
		06-615	1450		1450	2650	0		
		615-630	1200		1200	2650	0		
		630-645	950		950	2650	0		
		645-7	700		700	2650	0		
		7-18'	700		700	2650	0		
	18th January 2015	18-24	700	0	700	2585			Revised due to Shutdown of Talcher-Kolar HVDC pole-1 & Pole-2 Shutdown.
		00-06	700		700	2650	0		
		06-18'	700		700	2585	0		
		18-21	700		700	2585	0		
		21-2115	950		950	2585	0		
		2115-2130	1200		1200	2585	0		
		2130-2145	1450		1450	2585	0		
		2145-22	1700		1700	2585	0		
19th January 2015	22-24	1700	0	1700	2585	0		Revised due to Shutdown of Talcher-Kolar HVDC Pole-2 Shutdown.	
	00-06	1700		1700	2585	0			
	06-18'	1700		1700	2650	0			
20th January 2015 to 31st January 2015	18-24	2650	0	2650	2585	65			
	06-18'				2650	0			
SR-ER *	1st January 2015 to 31st January 2015	00-24	No limit is being Specified.						
ER-NER	1st January 2015 to 31st January 2015	00-17	650	50	600	210	390		
		23-24	720		670		460		
NER-ER	1st January 2015 to 31st January 2015	00-17	540	30	510	0	510		
		23-24	590	40	550		550		
S1-S2	1st January 2015 to 4th January 2015	00-24	3720	315	3405	2630	775		
	5th January 2015 to 8th January 2015	00-24	3720	315	3405	2630	775		
	9th January 2015	00-15	3720	315	3405	2630	775		
		15-24	3430		3115	2520	595		
	10th January 2015 to 13th January 2015	00-24	3430	315	3115	2520	595		
	14th January 2015	00-22	3430	315	3115	2520	595		
		22-24	3625		3310	2775	535		
	15th January 2015	00-05	3625	315	3310	2775	535		
		05-24	3325		3010	2775	235		
16th January 2015	00-24	3325	315	3010	2775	235			
17th January 2015 to 18th January 2015	00-24	3325	315	3010	2775	235	105	Revised due to Kudankulam U-1 Outage Extension	
19th January 2015 to 31st January 2015	00-24	3430	315	3115	2520	595			

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Import of Punjab	1st January 2015 to 31st January 2015	00-24	5700	300	5400	3790	1610		
Import TTC for DD & DNH	1st January 2015 to 31st January 2015	00-24	1200	0	1200	LTA and MTOA as per ex-pp schedule			
W3 zone Injection	1st January 2015 to 31st January 2015	00-17	9400	200	9200	6862	2338		
		23-24					2838		
		17-23	9900		9700				

* 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).

**Considering the dense fog in Major parts of Northern region in the morning hours between 0300 hrs to 0900 hrs and an associated high risk of HVDC Mundra - Mohindergarh pole tripping / RVO mode of operation, TTC will be curtailed in these hours by 600 MW on day ahead basis looking at the forecast & real time situation.

- ## 1) 215 MW quantum of LTA is not being scheduled as per the CERC order dated 1st Oct 2014 for petition number 92/MP/2014
2) 211 MW quantum of MTOA is not being scheduled as per the communication sent by GM (commercial), Powergrid dated 30th Sep 2014.
3) considering (1), (2) & likelihood of commencement of above transactions, the margins would be released for short term transactions on day ahead basis.

\$ 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) ER-SR TTC declared at Talcher Interconnector and Gazuwaka HVDC B/B seam
- 2) S1 comprises of AP and Karnataka: S2 comprises of Tamil Nadu, Kerala and Pondicherry
- 3) 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 Vidyt

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.

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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	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 contingencies of 400KV Kahalgaon-Banka S/C and 400 kV Farraka-Malda S/C
W3-ER	i. (n-1) Contingency of 400 kV MPL-Maithon S/C ii. (n-1) contingency of 400kV Sterlite-Rourkela S/C
ER-W3	(n-1) contingency of 400kV Raigarh-Jharsuguda-Rourkela
WR-SR & ER-SR	1. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) 2. 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 contingencies of 400KV Kahalgaon-Banka S/C and 400 kV Farraka-Malda 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 line
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	(n-1-1) contingency of 400 kV Raipur-Bhadrawati D/C section and High loading of 400kV Raipur-Wardha (850 MW SPS setting on each circuit of 400kV Raipur-Wardha)

*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 January 2015 to 31st January 2015	00-17 23-24	8100	800	7300	7199	101		
		17-23	8100		7300		101		
NER	1st January 2015 to 31st January 2015	00-17 23-24	650	50	600	210	390		
		17-23	720		670		460		
WR									
SR ^{##}	1st January 2015 to 4th January 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		
	5th January 2015	00-05	5150	750	4400	3935	465		
		05-06'	4750	750	4000	3935	65		
		06-08'	4750	750	4000	4000	0		
		08-18'	3650	0	3650	4000	0		
		18-22	3650	0	3650	3935	0		
	6th January 2015 to 10th January 2015	22-24	3650	0	3650	3935	0		
		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			
	11th January 2015	00-05	5150	750	4400	3935	465		
		05-06'	4750	750	4000	3935	65		
		06-08'	4750	750	4750	4000	750		
		08-18'	3650	0	3650	4000	0		
		18-22	3650	0	3650	3935	0		
	12th January 2015 to 15th January 2015	22-24	3650	0	3650	3935	0		
		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			
	16th January 2015	00-05	5150	750	4400	3935	465		
05-06'		4750	4000		3935	65			
06-615		4500	3750		4000	0			
615-630		4250	3500		4000	0			
630-645		4000	3250		4000	0			
645-7		3800	3050		4000	0			
7-18'		3800	3050		4000	0			
18-22		3800	3050		3935	0			
17th January 2015	22-24	3800	750	3050	3935	0			
	00-05	4200	750	3450	3935	-485			
	05-06'	3800		3050	3935	-885			
	06-615	3550		2800	4000	0			
	615-630	3300		2550	4000	0			
	630-645	3050		2300	4000	0			
	645-7	2800		2050	4000	0			
	7-18'	2800		2050	4000	0			
18-22	2800	2050		3935	0				
22-24	3200	2450	3935	0					

Revised due to Shutdown of Talcher-Kolar HVDC pole-1 Shutdown.

Revised due to Shutdown of Talcher-Kolar HVDC pole-1 Shutdown.

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
	18th January 2015	00-05	3200	750	2450	3935	-1485		Revised due to Shutdown of Talcher-Kolar HVDC pole-1 Shutdown.
		05-06'	2800		2050	3935	-1885		
		06-18'	2800		2050	4000	0		
		18-21	2800		2050	3935	0		
		21-2115	2800		2050	3935	0		
		2115-2130	3050		2300	3935	0		
		2130-2145	3300		2550	3935	0		
		2145-22	3550		2800	3935	0		
	22-24	4200	3450	3935	0				
	19th January 2015	00-05	4200	750	3450	3935	-485		Revised due to Shutdown of Talcher-Kolar HVDC pole-1 Shutdown.
		05-06'	3800		3050	3935	-885		
		06-18'	3800		3050	4000	0		
		18-22	3800		3050	3935	0		
		22-24	4200		3450	3935	0		
20th January 2015 to 31st January 2015	00-05	4750	750	4000	3935	65			
	05-06'	4750		4000	3935	65			
	06-18'	4750		4000	4000	0			
	18-22	4750		4000	3935	65			
	22-24	4750		4000	3935	65			

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 January 2015 to 31st January 2015	00-06 18-24	4500	700	3800	1348	2452		
		06-18'	4500		3800	1413	2387		
NER	1st January 2015 to 31st January 2015	00-17 23-24	540	30	510	0	510		
		17-23	590	40	550		550		
WR									
SR *	1st January 2015 to 31st January 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).

1) 215 MW quantum of LTA is not being scheduled as per the CERC order dated 1st Oct 2014 for petition number 92/MP/2014
2) 211 MW quantum of MTOA is not being scheduled as per the communication sent by GM (commercial), Powergrid dated 30th Sep 2014.
3) Considering (1), (2) & likelihood of commencement of above transactions, the margins would be released for short term transactions on day ahead basis.

Limiting Constraints

NR	Import	n-1 contingencies of 400KV Kahalgaon-Banka S/C and 400 kV Farraka-Malda 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 Bhinnal-Zerda (power flowing from WR to NR on 765kV Gwalior-Agra D/C and from NR to WR on 400kV Kankroli-Zerda and 400kV Bhinnal-Zerda).
	Export	(n-1) contingency of 400kV Zerda-Bhinnal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Saranath-Pusauli
NER	Import	n-1 contingencies of 400KV Kahalgaon-Banka S/C and 400 kV Farraka-Malda S/C
	Export	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa
SR	Import	1. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG)
		2. 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 January 2015**

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	29-12-2014	Whole Month	Margin revised due to change in LTA/MTOA.	NR-WR/ ER-W3/ W3-ER
			Revised considering change in LTA/MTOA and the New Transmission system commissioned.	W3 Zone Injection
			Margin revised due to COD of SASAN Unit-5.	WR-NR
			Revised after considering the LGBR submitted in 102nd OCC meeting and the New Transmission system commissioned.	S1-S2
2	30-12-2014	Whole Month	Revised due to NCTPS Stage -2 Unit-1 Outage Extension	S1-S2
3	31-12-2014	01/01/2015 to 15/01/2015	Revised considering the present demand pattern of Maharashtra during off -peak conditions.	WR-SR
		01/01/2015 to 04/01/2015	Revised due to Vallur Unit-2 Outage Extension. Less coal stock because of coal conveyor works commissioning.	S1-S2
4	31-12-2014	Whole Month	Revised due to Commissioning of Kudankulam Unit-1.	S1-S2
5	04-01-2015	05-01-2015	Revised due to shutdown of 765 kV Bus-2 at Sholapur S/S	WR-SR
		05-01-2015 to 09-01-2015	Revised due to Vallur Unit-2 outage extension	S1-S2
6	08-01-2015	Whole month	**Considering the dense fog in major parts of Northern region in the morning hours between 0300 hrs to 0900 hrs and an associated high risk of HVDC Mundra - Mohindergarh pole tripping / RVO mode of operation, WR-NR TTC will be curtailed in these hours by 600 MW on day ahead basis looking at the forecast & real time situation.	WR-NR
7	08-01-2015	09-01-2015	Revised due to Vallur U-2 Outage Extension	S1-S2
8	10-01-2015	11-01-2015	Revised due to shutdown of 400 kV Parli - Sholapur Ckt 2	WR-SR
9	14-01-2015	14-01-2015	Revised due to NCTPS Stage-2 Unit-2 and KKNPP Unit-1 outage	S1-S2
		15-01-2015 to 16-01-2015	Revised due to KKNPP Unit-1 outage	
10	14-01-2015	16-01-2015 to 31-01-2015	Revised considering the present demand pattern of Maharashtra during off -peak conditions.	WR-SR
		16-01-2015	Revised due to Shutdown of Talcher-Kolar HVDC pole-1 Shutdown.	ER-SR

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11	16-01-2015	17-01-2015 to 19-01-2015	Revised due to Shutdown of Talcher-Kolar HVDC pole-1 & Pole-2 Shutdown.	WR-SR
		17-01-2015 to 18-01-2015	Revised due to Kudankulam U-1 Outage Extension	ER-SR