National Load Despatch Centre
Total Transfer Capability for May 2014

Issue Date: 30/04/2014 Issue Time: 1430 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 May 2014 to 31st May 2014	00-24	2500	500	2000	297	1703		
WR-NR	1st May 2014 to 31st May 2014	00-17, 23-24	4200	500	3700	3992	0		
		17-23	4200		3700		0		
NR-ER*	1st August 2014 to 31st August 2014	00-06	1000	200	800	293	507		
		06-17'			800	423	377		
		17-18'	1100		900	423	477		
		18-23			900	293	607		
		23-24	1000		800	293	507		
ER-NR[$]	1st May 2014 to 31st May 2014	00-17, 23-24	3800	300	3500	2431	1069		
		17-23					1069		
W3-ER	1st May 2014 to 2nd May 2014	00-07	1800	300	1500	551	949		Revised due to shutdown of 400 kV Rourkela-Sundergarh-Raigarh Ckt-II
		07'-24	1500	300	1200	551	649	-300	
	3rd May to 31st May 2014	00-24	1800	300	1500	551	949		
ER-W3	1st May 2014 to 31st May 2014	00-24	1000	300	700	874	0		
WR-SR	1st May 2014 to 31st May 2014	00-24	1000	0	1000	1000	0		
SR-WR *	1st May 2014 to 31st May 2014	00-24	1000	0	1000	0	1000		
ER-SR	1st May 2014 to 31st May 2014	00-06, 18-24	750	0	750	593	157		
		06-18'				638	112		
SR-ER *	1st May 2014 to 31st May 2014	00-17, 23-24	1100	0	1100	197	903		
		17-23	1100		1100		903		
ER-NER[2]	1st May 2014 to 31st May 2014	00-06, 23-24	720	50	670	205	465		
		06-17'	720		670	210	460		
		17-18	640		590	210	380		
		18-23	640		590	205	385		
NER-ER	1st May 2014 to 31st May 2014	00-17, 23-24	530	100	430	0	430		
		17-23	550		450		450		
S1-S2	1st May 2014 to 31st May 2014	00-24	5650	400	5250	5150	100		
Import of Punjab	1st May 2014 to 31st May 2014	00-24	5600	300	5300	3800	1500		
Import TTC for DD & DNH	1st May 2014 to 31st May 2014	00-24	980	0	980	LTA and MTOA as per ex-pp schedule			
W3 zone Injection	1st May 2014	00-07	9000	200	8800	6901	1899		
		07-17, 23-24	8500		8300		1399	-500	Revised due to shutdown of 400kV Raipur-Wardha Ckt-2.
		17-23	9000		8800		1899		
	2nd May 2014 to 31st May 2014	00-17, 23-24	9000	200	8800	6901	1899		
		17-23	9500		9300		2399		

* 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).

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$ 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) KWPCL, 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 commissionned the LTA/MTOA utilized would be 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 willl be revised to normal values if the shutdown is not being availed in real time.

2. ER-NER Total Transfer capability will be reduced to 450 MW in case of outage of any one of the 400kV Purnea-Biharshariff circuit.

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 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.
NR-ER	(n-1) contingency of 400 kV Allahabad-Pusauli
ER-NR	(n-1) contingency of 400 kV Kahalgaon-Biharshariff
W3-ER	(n-1) contingency of 400kV Sterilte-Rourkela S/C
ER-W3	High loading of 400 kV Raipur-Bhadrawati T/C, Bhilai-Bhadrawati S/C, Bhilai-Koradi and Bhilai-Seoni* (n-1) contingency of 400kV Raigarh-Sterlite
WR-SR & ER-SR	1. Commissioning of 765kV Raichur-Sholapur S/C 2. Based on the operational experience after the synchronization of SR grid with NEW grid and due to inadvertent variation of 765kV Raichur-Sholapur line flow, observation of Low Frequency Oscillations(LFO) 3. Considering transfer capability asessment by CTU on NEW-SR corridor.
SR-WR	Bhadrawati HVDC B/B link capacity
SR-ER	
ER-NER	(n-1) contingency of 400 kV Kahalgaon-Biharshariff (during Off-Peak Hours) (n-1) contingency of one circuit of 400 kV Balipara – Bongaigaon D/C (during Peak Hours)
NER-ER	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa
S1-S2	(n-1) contingency of 400 kV Kolar-Hosur D/C line, 400kV Hosur-Salem S/C and 400kV Somanahalli-Salem S/C line.
Import of Punjab	(n-1) contingency of ICT at Patiala/Moga
W3 zone Injection	(n-1) contingency of 400 kV Raipur-Wardha-Parli Section

*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 May 2014 to 31st May 2014	00-17 23-24	8000	800	7200	6423	777		
		17-23	8000		7200		777		
NER[2]	1st May 2014 to 31st May 2014	00-06 23-24	720	50	670	205	465		
		06-17'	720		670	210	460		
		17-18	640		590	210	380		
		18-23	640		590	205	385		
WR									
SR	1st May 2014 to 31st May 2014	00-06 18-24	1750	0	1750	1593	157		
		06-18'	1750		1750	1638	112		

2. ER-NER Total Transfer capability will be reduced to 450 MW in case of outage of any one of the 400kV Purnea-Biharshariff circuit.

Simultaneous Export Capability 297

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 2014 to 31st May 2014	00-06	3500	700	2800	590	2210		
		06-17'	3500		2800	720	2080		
		17-18	3600		2900	720	2180		
		18-23	3600		2900	590	2310		
		23-24	3500		2800	590	2210		
NER	1st May 2014 to 31st May 2014	00-17 23-24	530	100	430	0	430		
		17-23	550		450		450		
WR									
SR*	1st May 2014 to 31st May 2014	00-17 23-24	2100	0	2100	197	1903		
		17-23	2100		2100		1903		

* 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 Kahalgaon-Biharshariff 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.
	Export	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Allahabad-Pusauli
NER	**Import**	(n-1) contingency of 400 kV Kahalgaon-Biharshariff (during Off-Peak hours) and (n-1) contingency of one circuit of 400 kV Balipara – Bongaigaon D/C (during Peak Hours)
	Export	(n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa
SR	**Import**	1. Commissioning of 765kV Raichur-Sholapur S/C 2. Based on the operational experience after the synchronization of SR grid with NEW grid and due to inadvertent variation of 765kV Raichur-Sholapur line flow, observation of Low Frequency Oscillations(LFO). 3. Considering transfer capability asessment by CTU on NEW-SR corridor.
	Export	

*Primary constraints

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Total Transfer Capability for May 2014

Revision No	Date of Revision	Period of Revision	Reason for Revision	Corridor Affected
1	19-02-2014	Whole Month	Revised due to change in Inter-regional flow pattern & COD of Sasan UMPP Unit-2	ER-NR/ WR-NR
			Revised considering operational experience and margins on HVDC	ER-SR/ WR-SR
			Review of flow pattern due to network topology change and Load Generation Balance.	W3 Zone Injection
2	05-03-2014	Whole Month	Re-Routing of transactions on West-East-North Corridor discontinued on account of Inter-Regional Loop flows leading to physical congestion on WR-NR.	WR-NR/ ER-NR
3	13-03-2014	Whole Month	Margin revised due to withdrawal/cancellation of 150MW MTOA from Corporate Power Limited	ER-SR
4	25-03-2014	Whole Month	Margin revised due to correction in LTA/MTOA figure.	NR-WR
5	29-03-2014	Whole Month	Margin revised due to grant of 150 MW LTA towards SR from NEW grid	ER-SR
6	29-04-2014	Whole Month	Margin revised due to Non-Commissioning of Kudankulam U-1,Vallur U-3 unit and NLC-2 EXP units and Allocation of 150 MW to TANGEDCO.	S1-S2
			Margin revised due to incorporation of existing Solar Power Allocation to SR, ER, NER constituents between 6 hrs -18 hrs in LTA figures and allocation data avialable on RPCs RTA/REA.	NR-ER/ ER-SR
			Margin revised due to Commissioning of Sasan Unit-4.	WR-NR
			Margin revised considering the LTA/MTOA allocation avialable in RPCs RTA/REA and due to incorporation of existing Solar Power Allocation to Assam.	ER-NER
			Margin revised considering the LTA/MTOA allocation avialable in RPCs RTA/REA.	NR-WR/ ER-NR
			Margin revised considering the LTA/MTOA allocation avialable on RPCs RTA/REA and Re-routing of existing MTOA granted by CTU.	W3-ER
7	30-04-2014	01-05-2014	Revised due to shutdown of 400kV Raipur-Wardha Circuit-2.	W3 Zone Injection
		01/05/2014-02/05/2014	Revised due to shutdown of 400 kV Rourkela-Sundergarh-Raigarh Ckt-II	W3-ER

ASSUMPTIONS IN BASECASE

Month : May '14

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	5971	5191	2258	2229
2	Haryana	5885	5116	3178	3178
3	Rajasthan	7955	6916	5132	5116
4	Delhi	4102	3566	1296	1296
5	Uttar Pradesh	11500	10090	6358	6354
6	Jammu & Kashmir	2133	1854	387	420
7	Uttarakhand	1628	1415	461	416
8	Himachal Pradesh	1413	1228	469	385
9	Chandigarh	238	192	0	0
10	ISGS/IPPs			18314	13943
	Total NR	**40825**	**35568**	**37853**	**33337**
II	**EASTERN REGION**				
1	West Bengal	4920	4680	4920	3644
2	Jharkhand	1070	850	580	420
3	Orissa	3745	2780	3180	2160
4	Bihar	1770	1500	0	0
5	Damodar Valley Corporation	2670	2350	3752	3336
6	Sikkim	96	32	0	0
7	Bhutan	108	110	494	484
8	ISGS/IPPs	245	250	7253	7344
	Total ER	**14624**	**12552**	**20179**	**17388**
III	**WESTERN REGION**				
1	Chattisgarh	3400	2700	1629	1629
2	Madhya Pradesh	7728	5521	3632	3013
3	Maharashtra	16790	15516	13037	11828
4	Gujarat	12301	11245	11178	9102
5	Goa	367	257		
6	Daman and Diu	264	245		
7	Dadra and Nagar Haveli	590	585		
8	ISGS/IPPs	1258	1240	17391	16068
	Total WR	**42698**	**37309**	**46867**	**41640**

IV	**SOUTHERN REGION**				
1	Andhra Pradesh	11603	10209	7716	6690
2	Tamil Nadu	11969	10938	7142	6612
3	Karnataka	8415	6979	6440	4970
4	Kerala	3314	2552	1724	893
5	Pondy	329	276		
6	Goa	84	83		
7	ISGS/IPPs			10873	10054
	Total SR	**35714**	**31037**	**33895**	**29219**
V	**NORTH-EASTERN REGION**				
1	Arunachal Pradesh	120	84	0	0
2	Assam	1350	980	240	200
3	Manipur	120	84	0	0
4	Meghalaya	310	217	60	55
5	Mizoram	75	52.5	4	4
6	Nagaland	120	84	12	12
7	Tripura	250	130	110	110
8	ISGS/IPPs			1188	938
	Total NER	**2345**	**1631.5**	**1614**	**1319**
	Total All India	**136206**	**118098**	**140408**	**122903**