National Load Despatch Centre

Total Transfer Capability for December 2020

Issue Date: 29th November 2020 Issue Time: 1630 hrs Revision No. 3

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 December 2020 to 31st December 2020	00-06	2500	500	2000	195	1805		
		06-18				1281	719		
		18-24				195	1805		
WR-NR*	1st December 2020 to 31st December 2020	00-06	17850 16900**	500	17350 16400**	10580 9630**	6770	-300	(i) Revised TTC/ATC due to change in direction of HVDC BNC-AGRA for operational requirement (ii) Revised STOA margin due to: (a) change in LTA quantum from ALFANAR_SECI-III (Wind) to Delhi DISCOMS (increment of 17 MW) (b) Change in LTA quantum from RWE_APL2_SECI-III (Ghadsisa, Wind) to Haryana (increment of 45 MW)
		06-18	17850 16900**	500	17350 16400**	11059 10109**	6291	-300	
		18-24	17850 16900**	500	17350 16400**	10580 9630**	6770	-300	
NR-ER*	1st December 2020 to 31st December 2020	00-06	2000	200	1800	193	1607		
		06-18	2000		1800	303	1497		
		18-24	2000		1800	193	1607		
ER-NR*	1st December 2020 to 31st December 2020	00-24	5500	300	5200	4066	1134	-750	Revised TTC/ATC due to change in direction of HVDC BNC-AGRA for operational requirement
W3-ER	1st December 2020 to 31st December 2020	00-24	No limit is being specified.						
ER-W3	1st December 2020 to 31st December 2020	00-24	No limit is being specified.						
WR-SR^	1st December 2020	00-05	8000	500	7500	4073	3427		Revision in TTC/ATC due to planned outage of 765 kV Angul - Srikakulam circuit 1
		05-07	8000		8000		8000		
		07-22	7900		7400		3327	-100	
		22-24	7900		7400		3327	-100	
	2nd December 2020 to 31st December 2020	00-05	8000	500	7500	4073	3427		
		05-22	8000		7500		3427		
		22-24	8000		7500		3427		
SR-WR *	1st December 2020 to 31st December 2020	00-24	4600	400	4200	550	3650		

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ER-SR^	1st December 2020	00-06	5900	250	5650	2673	2977		Revision in TTC/ATC due to planned outage of 765 kV Angul - Srikakulam circuit 1
		06-07	5900		5650	2758	2892		
		07-18	5150		4900	2758	2142	-750	
		18-24	5150		4900	2673	2227	-750	
ER-SR^	2nd December 2020 to 31st December 2020	00-06	5900	250	5650	2673	2977		
		06-18				2758	2892		
		18-24				2673	2977		
SR-ER *	1st December 2020 to 31st December 2020	00-24	No limit is being Specified.						
ER-NER*	1st December 2020 to 31st December 2020	00-02	650	45	605	474	131	-580	Revised TTC/ATC due to: (a) 1) Change in Load-Generation of NER 2) Addition of 2x150 MW out of 4 x 150 MW Kameng Generation 3) Forced outage of 2x 50 MW Karbi Langpi generation of Assam 4) Incorporation of HVDC BNC-AGRA flow of 500 MW towards Biswanath Chariali
		02-07	650		605	474	131	-580	
		07-12	650		605	474	131	-680	
		12-17	650		605	474	131	-650	
		17-21	420		375	474	-99	-690	
		21-23	650		605	474	131	-460	
		23-24	650		605	474	131	-580	
NER-ER*	1st December 2020 to 31st December 2020	00-02	3000	45	2955	42	2913	500	Revised TTC/ATC due to: (a) 1) Change in Load-Generation of NER 2) Addition of 2x150 MW out of 4 x 150 MW Kameng Generation 3) Forced outage of 2x 50 MW Karbi Langpi generation of Assam 4) Incorporation of HVDC BNC-AGRA flow of 500 MW towards Biswanath Chariali
		02-07	3000		2955	42	2913	500	
		07-12	3000		2955	42	2913	450	
		12-17	3000		2955	42	2913	460	
		17-21	3180		3135	42	3093	500	
		21-23	3000		2955	42	2913	320	
		23-24	3000		2955	42	2913	500	

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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
W3 zone Injection	1st December 2020 to 31st December 2020	00-24	No limit is being specified (In case of any constraints appearing in the system, W3 zone export would be revised accordingly)						

Note: TTC/ATC of S1-(S2&S3) corridor, Import of S3(Kerala), 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).

**Considering 400 kV Rihand stage-III - Vindhyachal PS D/C line as inter-regional line for the purpose of scheduling, metering and accounting and 950 MW ex-bus generation in Rihand stage-III. Rihand Stage-III generation is considered as NR regional entity.

1) S1 comprises of Telangana, AP and Karnataka; S2 comprises of Tamil Nadu and Puducherry; S3 comprises Kerala
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) KWPCL, n)Vandana Vidyut o)RKM, p)GMR Raikheda, 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 commissionned 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 willl be revised to normal values if the shutdown is not being availed in real time.

Real Time TTC/ATC revisions are uploaded on POSOCO/NLDC "News Update" (Flasher) Section

^Though 2X315 MVA, 400/220 kV ICTs at Maradam are N-1 non-compliant, the TTC of WR-SR and ER-SR corridor has not been restricted due to the same considering that this aspect will be managed by AP SLDC through appropiate measures like SPS implemetation.

^In case of drawl of Karnataka beyond 3800 MW, the voltages in Bengaluru area are observed to be critically low. This issue may be taken care of by Karnataka SLDC by taking appropiate measures.

SR-WR TTC/ATC figures have been calculated considering 01 unit (800 MW) at Kudgi TPS in service. The figures are subject to change with change in generation at Kudgi TPS.

WR-NR/Import of NR TTC has been calculated considering generation at Pariccha TPS as 350 MW. TTC figures are subject to change with significant change in generation at Pariccha TPS.

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**
NR*	1st December 2020 to 31st December 2020	00-06	23350 22400**	800	22550 21600**	14646 13696**	7904	-1050	(i) Revised TTC/ATC due to change in direction of HVDC BNC-AGRA for operational requirement (ii) Revised STOA margin due to: (a) change in LTA quantum from ALFANAR_SECI-III (Wind) to Delhi DISCOMS (increment of 17 MW) (b) Change in LTA quantum from RWE_APL2_SECI-III (Ghadsisa, Wind) to Haryana (increment of 45 MW)
		06-09	23350 22400**		22550 21600**	15125 14175**	7425	-1050	
		09-17	23350 22400**		22550 21600**	15125 14175**	7425	-1050	
		17-18	23350 22400**		22550 21600**	15125 14175**	7425	-1050	
		18-24	23350 22400**		22550 21600**	14646 13696**	7904	-1050	
NER*	1st December 2020 to 31st December 2020	00-02	1150	45	1105	474	631	-80	Revised TTC/ATC due to: (a) 1) Change in Load-Generation of NER 2) Addition of 2x150 MW out of 4 x 150 MW Kameng Generation 3) Forced outage of 2x 50 MW Karbi Langpi generation of Assam 4) Incorporation of HVDC BNC-AGRA flow of 500 MW towards Biswanath Chariali
		02-07	1150		1105	474	631	-80	
		07-12	1150		1105	474	631	-180	
		12-17	1150		1105	474	631	-150	
		17-21	920		875	474	401	-190	
		21-23	1150		1105	474	631	40	
		23-24	1150		1105	474	631	-80	
WR*									
SR*#	1st December 2020	00-06	13900	750	13150	6746	6404		Revision in TTC/ATC due to planned outage of 765 kV Angul - Srikakulam circuit 1
		06-07	13900		13900	6831	7069		
		07-18	13050		12300	6831	5469	-850	
		18-24	13050		12300	6746	5554	-850	
SR*#	2nd December 2020 to 31st December 2020	00-06	13900	750	13150	6746	6404		
		06-18	13900		13150	6831	6319		
		18-24	13900		13150	6746	6404		

* 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 400 kV Rihand stage-III - Vindhyachal PS D/C line as inter-regional line for the purpose of scheduling, metering and accounting and 950 MW ex-bus generation in Rihand stage-III. Rihand Stage-III generation is considered as NR regional entity.
* 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)
Real Time TTC/ATC revisions are uploaded on POSOCO/NLDC "News Update" (Flasher) Section
#Though 2X315 MVA, 400/220 kV ICTs at Maradam are N-1 non-compliant, the TTC of SR Import has not been restricted due to the same considering that this aspect will be managed by AP SLDC through appropiate measures like SPS implemetation.
In case of drawl of Karnataka beyond 3800 MW, the voltages in Bengaluru area are observed to be critically low. This issue may be taken care of by Karnataka by taking appropiate measures.
WR-NR/Import of NR TTC has been calculated considering generation at Paricha TPS as 350 MW. TTC figures are subject to change with significant change in generation at Paricha TPS.

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 December 2020 to 31st December 2020	00-06	4500	700	3800	388	3412		
		06-18			3800	1584	2216		
		18-24	4500		3800	388	3412		
NER*	1st December 2020 to 31st December 2020	00-02	2500	45	2455	42	2413		Revised TTC/ATC due to: (a) 1) Change in Load-Generation of NER 2) Addition of 2x150 MW out of 4 x 150 MW Kameng Generation 3) Forced outage of 2x 50 MW Karbi Langpi generation of Assam 4) Incorporation of HVDC BNC-AGRA flow of 500 MW towards Biswanath Chariali
		02-07	2500		2455	42	2413		
		07-12	2500		2455	42	2413	-50	
		12-17	2500		2455	42	2413	-40	
		17-21	2680		2635	42	2593		
		21-23	2500		2455	42	2413	-180	
		23-24	2500		2455	42	2413		
WR*									
SR*^	1st December 2020 to 31st December 2020	00-24	3700	400	3300	1150	2150		

* 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).

Real Time TTC/ATC revisions are uploaded on POSOCO/NLDC "News Update" (Flasher) Section

^SR Export TTC/ATC figures have been calculated considering 01 unit (800 MW) at Kudgi TPS in service. The figures are subject to change with change in generation at Kudgi TPS.

Limiting Constraints (Corridor wise)

Corridor	Constraint	Applicable Revisions
WR-NR	N-1 contingency of 1000 MVA, 765/400 kV ICT at Orai will overload the other ICT	Rev- 0 to 2
	N-1 contingency of 1500 MVA, 765/400 kV ICT at Agra will overload the other ICT	Rev- 3
NR-ER	(n-1) contingency of 400 kV Saranath-Pusauli	Rev- 0 to 3
ER-NR	1. N-1 contingency of 400 kV Mejia-Maithon A line will overload the other ckt. 2. N-1 contingency of 400 kV Kahalgaon-Banka line will overload the other ckt. 3. N-1 contingency of 400kV MPL- Maithon line will overload the other ckt.	Rev- 0 to 3
WR-SR and ER-SR	n-1 contingency of one ckt of 765 kV Wardha - Nizamabad D/C will overload of the other ckt	Rev- 0 to 1
	n-1 contingency of one ckt of 765 kV Angul - Srikakulam D/C will overload of the other ckt	
	Low Voltage at Gazuwaka (East) Bus.	
WR-SR and ER-SR	N-1 of one ICT of 765/400 kV, 1500 MVA ICT at Nizamabad will overload the other ICT	Rev- 2 to3
	Low Voltage at Gazuwaka (East) Bus.	
SR-WR	a) N-1 contingency of one ckt of 400 kV Kolhapur-PG - Kolhapur-MS D/C will overload of the other ckt b) N-1 contingency of 500 MVA ICT at 400 kV Kolhapur-MS will overload the other 2x315 MVA ICTs	Rev- 0 to 3
ER-NER	a) N-1 contingency of 400 kV Bongaigaon - Azara line b) High Loading of 220 kV Salakati - BTPS D/C	Rev- 0 to 2
	High Loading of 220 kV Balipara Sonabil (200 MW)	Rev- 3
NER-ER	a) N-1 contingency of 400 kV Silchar- Azara line b) High Loading of 400 kV Silchar-Killing Line	Rev- 0 to 3
W3 zone Injection	---	Rev- 0 to 3

Limiting Constraints (Simultaneous)

		Constraint	Applicable Revisions
NR	**Import**	1. N-1 contingency of 400 kV Mejia-Maithon A line will overload the other ckt. 2. N-1 contingency of 400 kV Kahalgaon-Banka line will overload the other ckt. 3. N-1 contingency of 400kV MPL- Maithon line will overload the other ckt.	Rev- 0 to 3
		N-1 contingency of 1000 MVA, 765/400 kV ICT at Orai will overload the other ICT	Rev- 0 to 2
		N-1 contingency of 1500 MVA, 765/400 kV ICT at Agra will overload the other ICT	Rev- 3
	Export	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak.	Rev- 0 to 3
		(n-1) contingency of 400 kV Saranath-Pusauli	
NER	**Import**	a) N-1 contingency of 400 kV Bongaigaon - Azara line b) High Loading of 220 kV Salakati - BTPS D/C	Rev- 0 to 2
		High Loading of 220 kV Balipara Sonabil (200 MW)	Rev- 3
	Export	a) N-1 contingency of 400 kV Silchar- Azara line b) High Loading of 400 kV Silchar-Killing Line	Rev- 0 to 3
SR	**Import**	n-1 contingency of one ckt of 765 kV Wardha - Nizamabad D/C will overload of the other ckt	Rev- 0 to 1
		n-1 contingency of one ckt of 765 kV Angul - Srikakulam D/C will overload of the other ckt	
		Low Voltage at Gazuwaka (East) Bus	
	Import	N-1 of one ICT of 765/400 kV, 1500 MVA ICT at Nizamabad will overload the other ICT	Rev- 2
		Low Voltage at Gazuwaka (East) Bus	
	Export	N-1 contingency of one ckt of 400 kV Kolhapur-PG - Kolhapur-MS D/C will overload of the other ckt	Rev- 0 to 3
		N-1 contingency of 500 MVA ICT at 400 kV Kolhapur-MS will overload the other 2x315 MVA ICTs	

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Revision No	Date of Revision	Period of Revision	Reason for Revision/Comment	Corridor Affected
1	28th Sep 2020	Whole Month	Revision in STOA margin due to the following:- a) Operationalization of 153 MW LTA from Alfanar, Bhuj to Delhi Discoms b) Revision in LTA quantum from RPL-SECI-II-RE (Wind, Bhachau) to Punjab and UP from 148 MW to 170 MW	WR-NR / Import of NR
2	28th Oct 2020	Whole Month	TTC/ATC revised after commissioning of HVDC Raigarh – Pugalur Pole -1	WR-SR/ER-SR/Import of SR
			STOA margin revised due to the following:- • Operationalization of 50 MW LTA from APL Ghadsisa (Wind) to Haryana • Revision in LTA quantum from Alfanar Bhuj (Wind) to Delhi DISCOMS from 153 MW to 179 MW • Revision in LTA quantum from SEISPPL_MP (Solar) to TDPPL, Delhi from 90 MW to 180 MW	WR-NR/Import of NR
3	29th Nov 2020	1st December 2020	Revision in TTC/ATC due to planned outage of 765 kV Angul - Srikakulam circuit 1	WR-SR/ER-SR/Import of NR
		Whole Month	(i) Revised TTC/ATC due to change in direction of HVDC BNC-AGRA for operational requirement (ii) Revised STOA margin due to: (a) change in LTA quantum from ALFANAR_SECI-III (Wind) to Delhi DISCOMS (increment of 17 MW) (b) Change in LTA quantum from RWE_APL2_SECI-III (Ghadsisa, Wind) to Haryana (increment of 45 MW)	WR-NR/ER-NR/Import of NR
			Revised TTC/ATC due to: (a) 1) Change in Load-Generation of NER 2) Addition of 2x150 MW out of 4 x 150 MW Kameng Generation 3) Forced outage of 2x 50 MW Karbi Langpi generation of Assam 4) Incorporation of HVDC BNC-AGRA flow of 500 MW towards Biswanath Chariali	ER-NER/NER-ER/Import/Export of NER

ASSUMPTIONS IN BASECASE					
				Month : December'2020	
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	6289	5587	2595	2544
2	Haryana	6451	5257	1291	1291
3	Rajasthan	10865	10750	7532	7509
4	Delhi	4834	3248	672	672
5	Uttar Pradesh	13586	13698	8714	8693
6	Uttarakhand	1466	1418	665	601
7	Himachal Pradesh	1163	978	254	164
8	Jammu & Kashmir	1971	2184	467	316
9	Chandigarh	245	167	0	0
10	ISGS/IPPs	20	20	13796	9540
	Total NR	46890	43308	35985	31329
II	EASTERN REGION				
1	Bihar	5262	5288	384	384
2	Jharkhand	1551	1581	343	343
3	Damodar Valley Corporation	2761	2816	4539	4539
4	Orissa	3490	3559	2940	2940
5	West Bengal	6213	6305	4120	4120
6	Sikkim	111	113	0	0
7	Bhutan	167	171	410	310
8	ISGS/IPPs	-167	-171	12601	12701
	Total ER	19388	19663	25336	25336
III	WESTERN REGION				
1	Maharashtra	15121	12798	9403	8974
2	Gujarat	13777	11083	9019	8248
3	Madhya Pradesh	10000	6622	3769	3926
4	Chattisgarh	3395	2532	1711	2198
5	Daman and Diu	280	276	0	0
6	Dadra and Nagar Haveli	741	754	0	0
7	Goa-WR	492	416	0	0
8	ISGS/IPPs	3644	2828	37593	27186
	Total WR	47449	37309	61495	50532

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	8333	5152	7856	5986
2	Telangana	11615	10733	5548	4648
3	Karnataka	9108	5083	6835	3639
4	Tamil Nadu	13505	10597	6062	5162
5	Kerala	3737	2345	1489	95
6	Pondy	314	316	0	0
7	Goa-SR	49	49	0	0
8	ISGS/IPPs	0	0	13941	10412
	Total SR	46660	34276	41733	29942
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	104	66	12	8
2	Assam	1184	855	295	245
3	Manipur	222	109	0	0
4	Meghalaya	311	264	272	147
5	Mizoram	110	67	68	68
6	Nagaland	118	92	8	8
7	Tripura	220	131	73	69
8	ISGS/IPPs	134	83	2372	2114
	Total NER	2403	1667	3099	2659
	Total All India	162657	136138	167648	139799