

**National Load Despatch Centre
Total Transfer Capability for September 2020**

Issue Date: 30th August 2020

Issue Time: 1800 hrs

Revision No. 2

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 September 2020 to 30th September 2020	00-06	2500	500	2000	195	1805		
		06-18				1281	719		
		18-24				195	1805		
WR-NR*	1st September 2020 to 30th September 2020	00-06	18150	500	17650	10268	7382	950	Revision in TTC/ATC due to commissioning of HVDC Champa - Kurukshetra Pole-4
			17200**		16700**	9318**			
		06-18	18150	500	17650	10657	6993	950	
			17200**		16700**	9707**			
		18-24	18150	500	17650	10268	7382	950	
			17200**		16700**	9318**			
NR-ER*	1st September 2020 to 30th September 2020	00-06	2000	200	1800	193	1607		
		06-18	2000		1800	303	1497		
		18-24	2000		1800	193	1607		
ER-NR*	1st September 2020 to 30th September 2020	00-24	6250	300	5950	4066	1884	1000	Revision in TTC/ATC due to change in HVDC APD-Agra power order and load-generation balance.
W3-ER	1st September 2020 to 30th September 2020	00-24	No limit is being specified.						
ER-W3	1st September 2020 to 30th September 2020	00-24	No limit is being specified.						
WR-SR^	1st September 2020 to 30th September 2020	00-05	6950	500	6450	4049	2401		
		05-22	6950		6450		2401		
		22-24	6950		6450		2401		
SR-WR *	1st September 2020 to 30th September 2020	00-24	4600	400	4200	550	3650		
ER-SR^	1st September 2020 to 30th September 2020	00-06	5950	250	5700	2663	3037		
		06-18				2748	2952		
		18-24				2663	3037		
SR-ER *	1st September 2020 to 30th September 2020	00-24	No limit is being Specified.						

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ER-NER*	1st September 2020 to 30th September 2020	00-02	1750	45	1705	474	1231	710	Revision in TTC/ATC due to the following:- a) Change in Load-Generation of NER b) Addition of 2x150 MW out of 4 x 150 MW Kameng Generation c) Incorporation of HVDC flow of 700 MW between Biswanath Chariali and Agra
		02-07	1750		1705	474	1231	710	
		07-12	1750		1705	474	1231	680	
		12-17	1750		1705	474	1231	710	
		17-18	1750		1705	474	1231	750	
		18-22	1620		1575	474	1101	620	
		22-23	1750		1705	474	1231	750	
		23-24	1750		1705	474	1231	710	
NER-ER*	1st September 2020 to 30th September 2020	00-02	1820	45	1775	42	1733	-190	Revision in STOA margin due to the following:- a) Increase in allocation from Kameng HEP to UP, Haryana, Chhattisgarh and Goa b) Revision in LTA/allocation from GIWEL, Bhuj (Wind) and Mangdechu HEP to Assam
		02-07	1820		1775	42	1733	-190	
		07-12	1820		1775	42	1733	-230	
		12-17	1820		1775	42	1733	-190	
		17-18	1820		1775	42	1733	-290	
		18-22	1910		1865	42	1823	-200	
		22-23	1820		1775	42	1733	-290	
		23-24	1820		1775	42	1733	-190	

W3 zone Injection	1st September 2020 to 30th September 2020	00-24	No limit is being specified (In case of any constraints appearing in the system, W3 zone export would be revised accordingly)
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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 - Vindhychal 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) KWPCCL, 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.

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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.

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 appropriate measures like SPS implementation.

^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 appropriate 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 September 2020 to 30th September 2020	00-06	24400 23450**	800	23600 22650**	14334 13384**	9266	1950	a) Revision in TTC/ATC due to commissioning of HVDC Champa - Kurukshetra Pole-4 b) Revision in TTC/ATC due to change in HVDC APD-Agra power order and load-generation balance.
		06-09	24400 23450**		23600 22650**	14723 13773**	8877	1950	
		09-17	24400 23450**		23600 22650**	14723 13773**	8877	1950	
		17-18	24400 23450**		23600 22650**	14723 13773**	8877	1950	
		18-24	24400 23450**		23600 22650**	14334 13384**	9266	1950	
NER*	1st September 2020 to 30th September 2020	00-02	1050	45	1005	474	531	10	Revision in TTC/ATC due to the following:- a) Change in Load-Generation of NER b) Addition of 2x150 MW out of 4 x 150 MW Kameng Generation Revision in STOA margin due to revision in LTA/allocation from GIWEL, Bhuj (Wind) and Mangdechu HEP to Assam
		02-07	1050		1005	474	531	10	
		07-12	1050		1005	474	531	-20	
		12-17	1050		1005	474	531	10	
		17-18	1050		1005	474	531	50	
		18-22	920		875	474	401	-80	
		22-23	1050		1005	474	531	50	
		23-24	1050		1005	474	531	10	
WR*									
SR*#	1st September 2020 to 30th September 2020	00-06	12900	750	12150	6712	5438		
		06-18	12900		12150	6797	5353		
		18-24	12900		12150	6712	5438		

* 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 appropriate measures like SPS implementation.

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 appropriate measures.

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 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 September 2020 to 30th September 2020	00-06	4500	700	3800	388	3412		
		06-18			3800	1584	2216		
		18-24			3800	388	3412		
NER*	1st September 2020 to 30th September 2020	00-02	2520	45	2475	42	2433	510	Revision in TTC/ATC due to the following:- a) Change in Load-Generation of NER b) Addition of 2x150 MW out of 4 x 150 MW Kameng Generation c) Incorporation of HVDC flow of 700 MW between Biswanath Chariali and Agra Revision in STOA margin due to increase in allocation from Kameng HEP to UP, Haryana, Chhattisgarh and Goa
		02-07	2520		2475	42	2433	510	
		07-12	2520		2475	42	2433	470	
		12-17	2520		2475	42	2433	510	
		17-18	2520		2475	42	2433	410	
		18-22	2610		2565	42	2523	500	
		22-23	2520		2475	42	2433	410	
		23-24	2520		2475	42	2433	510	
WR*									
SR*^	1st September 2020 to 30th September 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)			Applicable Revisions
Corridor	Constraint		
WR-NR	N-1 contingency of 1000 MVA, 765/400 kV ICT at Orai will overload the other ICT		Rev 0 to 2
NR-ER	(n-1) contingency of 400 kV Saranath-Pusauli		Rev 0 to 2
ER-NR	1. N-1 contingency of 400 kV Mejia-Maithon A line will overload the other ckt. 2. Inter-regional flow pattern towards NR		Rev 0 to 2
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 2
	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.		
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 2
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
NER-ER	a) N-1 contingency of 400 kV Silchar- Azara line b) High Loading of 400 kV Silchar-Killing Line		Rev 0 to 2
W3 zone Injection	---		Rev 0 to 2
Limiting Constraints (Simultaneous)			Applicable Revisions
NR	Import	1. N-1 contingency of 400 kV Mejia-Maithon A line will overload the other ckt. 2. Inter-regional flow pattern towards NR	Rev 0 to 2
		N-1 contingency of 1000 MVA, 765/400 kV ICT at Orai will overload the other ICT	
	Export	(n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Saranath-Pusauli	Rev 0 to 2
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
	Export	a) N-1 contingency of 400 kV Silchar- Azara line b) High Loading of 400 kV Silchar-Killing Line	Rev 0 to 2
SR	Import	n-1 contingency of one ckt of 765 kV Wardha - Nizamabad D/C will overload of the other ckt	Rev 0 to 2
		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	
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 2
	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 June 2020	Whole Month	Revision in STOA margin due to change in LTA quantum from GIWEL_SECI-III_RE (Wind, Bhuj) to Punjab from 151.2 MW to 200 MW	WR-NR/Import of NR
			Revision in STOA margin due to allocation of 20.75 MW power from Kameng HEP to UP, Haryana, Chhattisgarh and Goa	NER-ER/Export of NER/ER-NR/Import of NR
2	30th August 2020	Whole Month	Revision in TTC/ATC due to the following:- a) Change in Load-Generation of NER b) Addition of 2x150 MW out of 4 x 150 MW Kameng Generation c) Incorporation of HVDC flow of 700 MW between Biswanath Chariali and Agra Revision in STOA margin due to the following:- a) Increase in allocation from Kameng HEP to UP, Haryana, Chhattisgarh and Goa b) Revision in LTA/allocation from GIWEL, Bhuj (Wind) and Mangdechu HEP to Assam	ER-NER/NER-ER/Import and Export of NER
			Revision in TTC/ATC due to:- a) Commissioning of HVDC Champa - Kurukshetra Pole-4 b) Change in HVDC APD-Agra power order and load-generation balance.	WR-NR/ER-NR/Import of NR

ASSUMPTIONS IN BASECASE					
				Month : September'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	10228	9530	4580	4618
2	Haryana	9146	9428	2953	2953
3	Rajasthan	10205	11428	6168	6168
4	Delhi	5674	6558	753	753
5	Uttar Pradesh	18102	15529	9903	9908
6	Uttarakhand	2144	1981	1060	1015
7	Himachal Pradesh	1562	1558	859	854
8	Jammu & Kashmir	3049	1686	1075	1017
9	Chandigarh	375	303	0	0
10	ISGS/PPs	23	23	20932	19626
	Total NR	60510	58023	48283	46912
II	EASTERN REGION				
1	Bihar	5380	4412	99	110
2	Jharkhand	1637	1024	425	421
3	Damodar Valley Corporation	3028	2466	4980	4180
4	Orissa	4823	3995	3952	2615
5	West Bengal	8541	7006	5659	4956
6	Sikkim	114	43	0	0
7	Bhutan	171	168	1474	1444
8	ISGS/PPs	-171	-168	11907	10404
	Total ER	23523	18947	28495	24128
III	WESTERN REGION				
1	Maharashtra	16912	14197	12996	9886
2	Gujarat	13683	8433	10325	6208
3	Madhya Pradesh	8253	5455	4058	2863
4	Chattisgarh	3890	3168	2239	2230
5	Daman and Diu	297	153	0	0
6	Dadra and Nagar Haveli	781	550	0	0
7	Goa-WR	513	326	0	0
8	ISGS/PPs	4640	3609	33397	25451
	Total WR	48969	35891	63015	46638

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	9316	6695	6310	5934
2	Telangana	9937	9870	5913	4863
3	Karnataka	8351	4343	6606	3257
4	Tamil Nadu	14738	12867	8660	7460
5	Kerala	3683	2236	1649	423
6	Pondy	298	246	0	0
7	Goa-SR	58	48	0	0
8	ISGS/PPs	0	0	14970	12179
	Total SR	46381	36305	44109	34117
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	111	70	18	16
2	Assam	1707	1346	295	245
3	Manipur	183	82	0	0
4	Meghalaya	269	198	237	142
5	Mizoram	99	66	68	42
6	Nagaland	120	75	22	16
7	Tripura	259	154	76	75
8	ISGS/PPs	159	81	2385	2242
	Total NER	2907	2073	3101	2778
	Total All India	182131	151157	187003	154572