

National Load Despatch Centre Total Transfer Capability for May 2024										
Issue Date:Apr 28 2024				Issue Time:10:29:35				Revision No :5		
Corridor	Date	Time Period(hrs)	Total Transfer Capability(TTC)	Reliability Margin(RM)	Available Transfer Capability(ATC)	Approved GNA(MW)	Margin for T-GNA (MW)	Changes w.r.t. Previous Revision	Comment	
ER-NER	01 May to 31 May	00:00 to 17:00	1850	60	1790	NA		0		
		17:00 to 21:00	1570	60	1510	NA		0		
		21:00 to 24:00	1850	60	1790	NA		0		
ER-NR	01 May to 31 May	00:00 to 24:00	6700	400	6300	NA		0		
ER-SR	01 May to 31 May	00:00 to 06:00	5750	350	5400	NA		0		
		06:00 to 18:00	5750	350	5400	NA		0		
		18:00 to 24:00	5750	350	5400	NA		0		
ER-W3	01 May to 31 May	00:00 to 24:00	No limit is being specified.							
ER-WR	01 May to 31 May	00:00 to 24:00	NA	NA		NA		0		
NER-ER	01 May to 31 May	00:00 to 17:00	2900	60	2840	NA		0		
		17:00 to 21:00	2900	60	2840	NA		0		
		21:00 to 24:00	2900	60	2840	NA		0		
NR-ER	01 May to 31 May	00:00 to 06:00	4000	300	3700	NA		0		
		06:00 to 18:00	4000	300	3700	NA		0		
		18:00 to 24:00	4000	300	3700	NA		0		
NR-WR	01 May to 31 May	00:00 to 06:00	6700	500	6200	NA		700	Enhancement in TTC/ATC due to the commissioning of 400 KV Chittorgarh-Neemuch-PS-D/C	
		06:00 to 18:00	6700	500	6200	NA		700		
		18:00 to 24:00	6700	500	6200	NA		700		
SR-ER	01 May to 31 May	00:00 to 24:00	No limit is being specified.							
SR-WR	01 May to 31 May	00:00 to 06:00	6000	650	5350	NA		0		
		06:00 to 18:00	7650	650	7000	NA		0		
		18:00 to 24:00	6000	650	5350	NA		0		
W3 Injection	01 May to 31 May	00:00 to 24:00	NA	NA		NA		0		
W3-ER	01 May to 31 May	00:00 to 24:00	No limit is being specified.							
WR-ER	01 May to 31	00:00 to	5500	300	5200	NA		0		

Corridor	Date	Time Period(hrs)	Total Transfer Capability(TTC)	Reliability Margin(RM)	Available Transfer Capability(ATC)	Approved GNA(MW)	Margin for T-GNA (MW)	Changes w.r.t. Previous Revision	Comment
	May	06:00							
		06:00 to 18:00	5500	300	5200	NA		0	
		18:00 to 24:00	5500	300	5200	NA		0	
WR-NR	01 May to 31 May	00:00 to 06:00	19200	1000	18200	NA		0	
		06:00 to 18:00	19200	1000	18200	NA		0	
		18:00 to 24:00	19200	1000	18200	NA		0	
WR-SR	01 May to 31 May	00:00 to 06:00	16100	650	15450	NA		0	
		06:00 to 08:00	16400	650	15750	NA		0	
		08:00 to 15:00	16100	650	15450	NA		0	
		15:00 to 17:00	16400	650	15750	NA		0	
		17:00 to 24:00	16100	650	15450	NA		0	

- Based on the actual distribution of corridor flows, Counter flow benefit on account of transactions in the reverse direction would be considered for short-term transactions wherever applicable.
- 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.
- S1 comprises of Telangana, AP and Karnataka; S2 comprises of Tamil Nadu and Puducherry; S3 comprises Kerala
- 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) NTPC Korba I, II & III, j) NTPC Sipat I & II, k) KSK Mahanadi, l) DB Power, m) REGL (Previously KWPC), n) RKM, o) REL, p) Bharat Aluminium, q) MCCPL, r) SKS, s) TRN, t) NTPC Lara, u) Adani Power Limited Raipur and any other regional entity generator in Chhattisgarh
- The figure is based on GNA approved by CTU. In actual Operation, due to Units being on Maintenance/ Fuel shortage/New units being commissioned, the dispatches of units 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.
- Real Time TTC/ATC revisions are uploaded on Grid-India/NLDC "News Update" (Flasher) Section.
- HVDC Raigarh-Pugalur has the ability to be overloaded upto 1.1 P.U. Each Bipole can be operated for 2 hours continuously in a span of twelve hours.
- TTC/ATC of WR-SR, ER-SR & SR Import corridor declared based on operation of any one of two Bipole of HVDC Raigarh-Pugalur to 1.1 pu (3300 MW) during morning 6 – 8 hours and other Bipole to 1.1 pu (3300 MW) during during 15 – 17 hours. These assumptions are taken in view of restriction of maximum power order of HVDC Talcher-Kolar upto 1500 MW till **31st May 2024**.
- With the change in inter-regional flow pattern, significant power flow observed from NR to ER direction during the solar hours. From last 15 days flow pattern, average NR-ER flow observed to be ~1100 MW during the solar hour(09-15 hrs) at the same period of NR-WR flow. Therefore, NR Export TTC for the time period 09-18 hrs is calculated as below

NR Export TTC = NR-WR TTC (from simulation result) + average NR to ER flow at the time of peak NR-WR flow (from real time data)

Simultaneous Import Capability

Corridor	Date	Time Period(hrs)	Total Transfer Capability(TTC)	Reliability Margin(RM)	Available Transfer Capability(ATC)	Approved GNA(MW)	Margin for T-GNA (MW)	Changes w.r.t. Previous Revision	Comment
ER	01 May to 31 May	00:00 to 24:00	NA	NA		3112	NA	0	Revised T-GNA margin due to approval of 24 MW GNA for West Bengal from Outside Eastern Region
NER	01 May to 31 May	00:00 to 17:00	1350	60	1290	824	466	0	1. Revised T-GNA margin due to approval of 6.54 MW GNA for Arunachal Pradesh from Outside North-Eastern Region. 2. Revised T-GNA margin due to approval of 371

Corridor	Date	Time Period(hrs)	Total Transfer Capability(TTC)	Reliability Margin(RM)	Available Transfer Capability(ATC)	Approved GNA(MW)	Margin for T-GNA (MW)	Changes w.r.t. Previous Revision	Comment
									MW GNA for Assam from Outside North-Eastern Region
		17:00 to 21:00	1070	60	1010	824	186	0	
		21:00 to 24:00	1350	60	1290	824	466	0	
NR	01 May to 31 May	00:00 to 06:00	25900	1400	24500	17344	7156	0	
		06:00 to 18:00	25900	1400	24500	17344	7156	0	
		18:00 to 24:00	25900	1400	24500	17344	7156	0	
SR	01 May to 31 May	00:00 to 06:00	21850	1000	20850	7601	13249	0	Revised T-GNA margin due to approval of 500 MW GNA for Karnataka from Outside Southern Region
		06:00 to 08:00	22150	1000	21150	7601	13549	0	
		08:00 to 15:00	21850	1000	20850	7601	13249	0	
		15:00 to 17:00	22150	1000	21150	7601	13549	0	
		17:00 to 24:00	21850	1000	20850	7601	13249	0	
WR	01 May to 31 May	00:00 to 24:00	NA	NA		7813	NA	0	Revised T-GNA margin due to approval of 25 MW GNA for Goa from Outside Western Region

- Based on the actual distribution of corridor flows, Counter flow benefit on account of transactions in the reverse direction would be considered for short-term transactions wherever applicable.
- 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.
- S1 comprises of Telangana, AP and Karnataka; S2 comprises of Tamil Nadu and Puducherry; S3 comprises Kerala
- 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) NTPC Korba I, II & III, j) NTPC Sipat I & II, k) KSK Mahanadi, l) DB Power, m) REGL (Previously KWPCCL), n) RKM, o) REL, p) Bharat Aluminium, q) MCCPL, r) SKS, s) TRN, t) NTPC Lara, u) Adani Power Limited Raipur and any other regional entity generator in Chhattisgarh
- The figure is based on GNA approved by CTU. In actual Operation, due to Units being on Maintenance/ Fuel shortage/New units being commissioned, the dispatches of units 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.
- Real Time TTC/ATC revisions are uploaded on Grid-India/NLDC "News Update" (Flasher) Section

Simultaneous Export Capability

Corridor	Date	Time Period(hrs)	Total Transfer Capability(TTC)	Reliability Margin(RM)	Available Transfer Capability(ATC)	Approved GNA(MW)	Margin for T-GNA (MW)	Changes w.r.t. Previous Revision	Comment
ER	01 May to 31 May	00:00 to 24:00	NA	NA		NA		0	
NER	01 May to 31 May	00:00 to 17:00	3400	60	3340	NA		0	
		17:00 to 21:00	3400	60	3340	NA		0	
		21:00 to 24:00	3400	60	3340	NA		0	
NR	01 May to 31 May	00:00 to 09:00	6700	500	6200	NA		700	Enhancement in TTC/ATC due to the commissioning of 400 KV Chittorgarh-Neemuch-PS-D/C

Corridor	Date	Time Period(hrs)	Total Transfer Capability(TTC)	Reliability Margin(RM)	Available Transfer Capability(ATC)	Approved GNA(MW)	Margin for T-GNA (MW)	Changes w.r.t. Previous Revision	Comment
		09:00 to 18:00	7800	500	7300	NA		1800	
		18:00 to 24:00	6700	500	6200	NA		700	
SR	01 May to 31 May	00:00 to 06:00	5150	650	4500	NA		0	
		06:00 to 18:00	6600	650	5950	NA		0	
		18:00 to 24:00	5150	650	4500	NA		0	
WR	01 May to 31 May	00:00 to 24:00	NA	NA		NA		0	

- Based on the actual distribution of corridor flows, Counter flow benefit on account of transactions in the reverse direction would be considered for short-term transactions wherever applicable.
- 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.
- S1 comprises of Telangana, AP and Karnataka; S2 comprises of Tamil Nadu and Puducherry; S3 comprises Kerala
- 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) NTPC Korba I, II & III, j) NTPC Sipat I & II, k) KSK Mahanadi, l) DB Power, m) REGL (Previously KWPC), n) RKM, o) REL, p) Bharat Aluminium, q) MCCPL, r) SKS, s) TRN, t) NTPC Lara, u) Adani Power Limited Raipur and any other regional entity generator in Chhattisgarh
- The figure is based on GNA approved by CTU. In actual Operation, due to Units being on Maintenance/ Fuel shortage/New units being commissioned, the dispatches of units 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.
- Real Time TTC/ATC revisions are uploaded on Grid-India/NLDC "News Update" (Flasher) Section

Limiting Constraints

Corridor	Constraints	Revisions
WR-NR	N-1 contingency of one ckt of 765 kV Vindhyachal-Varanasi will overload the other circuit	0-5
NR-ER	1. Overloading of one circuit of 400 kV New Ranchi – New PPSP D/C on the tripping of the other circuit 2. Overloading of one circuit of 400 kV Kahalgaon – Farakka D/C on the tripping of the other circuit 3. Overloading of 400 kV Farakka – Sagardighi – 1 on the tripping of 400 kV Farakka – Sagardighi - 2	0-5
WR-ER	1. Overloading of one circuit of 400 kV New Ranchi – New PPSP D/C on the tripping of the other circuit 2. Overloading of one circuit of 400 kV Kahalgaon – Farakka D/C on the tripping of the other circuit 3. Overloading of 400 kV Farakka – Sagardighi – 1 on the tripping of 400 kV Farakka – Sagardighi - 2	0-5
ER-NR	Inter-regional flow pattern towards NR	0-5
WR-SR	Outage of any one of the 2x1500 MVA, 765/400 kV ICTs at Maheswaram overloads the other ICT	0-5
ER-SR	1. Low Voltage at Gazuwaka (East) Bus.	0-5
SR-WR	a) Angular separation between Kudgi & Kolhapur (PG) under N-1 of 400 kV Kudgi - Kolhapur (PG) D/C touches 30 deg b) N-1 non-compliance of 2*1500 MVA, 765/400 kV ICTs at Section– A at Raigarh - PS(Kotra) with increase in HVDC Raigarh – Pugalur Bipole – II power order beyond 950 MW in SR to WR Direction (Solar Hours) c) N-1 non-compliance of 2*1500 MVA, 765/400 kV ICTs at Section– B at Raigarh -PS (Kotra) with increase in HVDC Raigarh – Pugalur Bipole – I power order beyond 450 MW in SR to WR Direction (Solar Hours) d) N-1 Contingency of 400 kV Pune – Kalwa will overload 400 kV Pune -Khargar and vice-versa	0-5
ER-NER	a) N-1 contingency of 400 kV Bongaigaon - Azara line b) High Loading of 220 kV Balipara-Sonabil D/C	0-5
NER-ER	a) N-1 contingency of 400 kV Bongaigaon-Alipurduar I or II b) High Loading of 400 kV Bongaigaon-Alipurduar II or I	0-5
NR_IMPORT	N-1 contingency of one ckt of 765 kV Vindhyachal-Varanasi will overload the other circuit	0-5
NR_EXPORT	Outage of any one of the two circuits from 400 kV Kankroli to 400 kV Zerda shall overload the other circuit.	0-5
NER_IMPORT	a) N-1 contingency of 400 kV Bongaigaon - Azara line b) High Loading of 220 kV Balipara-Sonabil D/C	0-5
NER_EXPORT	a) N-1 contingency of 400 kV Bongaigaon-Alipurduar I or II b) High Loading of 400 kV Bongaigaon-Alipurduar II or I	0-5
SR_IMPORT	1. Outage of any one of the 2x1500 MVA, 765/400 kV ICTs at Maheswaram overloads the other ICT 2. Low Voltage at Gazuwaka (East) Bus	0-5
SR_EXPORT	a) Angular separation between Kudgi & Kolhapur (PG) under N-1 of 400 kV Kudgi - Kolhapur (PG) D/C touches 30 deg b) N-1 non-compliance of 2*1500 MVA, 765/400 kV ICTs at Section– A at Raigarh - PS(Kotra) with increase in HVDC Raigarh –	0-5

Corridor	Constraints	Revisions
	Pugalur Bipole – II power order beyond 950 MW in SR to WR Direction (Solar Hours) c) N-1 non-compliance of 2*1500 MVA, 765/400 kV ICTs at Section– B at Raigarh -PS (Kotra) with increase in HVDC Raigarh – Pugalur Bipole – I power order beyond 450 MW in SR to WR Direction (Solar Hours) d) N-1 Contingency of 400 kV Pune – Kalwa will overload 400 kV Pune -Khargar and vice-versa	

Revision Summary

Revision	Date Of Revision	Period Of Revision	Reason for Revision/Comment	Corridor Affected
1	28 Dec	01 May to 31 May	Change in T-GNA Margin due to grant of additional 174 MW GNA to Uttar Pradesh from outside Northern Region	NR_IMPORT
		01 May to 31 May	Change in T-GNA Margin due to grant of additional 55 MW GNA to Mizoram from outside North Eastern Region	NER_IMPORT
2	26 Jan	01 May to 31 May	TTC/ATC revised in view of change in load generation balance and inter-regional flow pattern towards NR	WR-NR
		01 May to 31 May	TTC/ATC revised in view of change in load generation balance and inter-regional flow pattern towards NR	ER-NR
		01 May to 31 May	TTC/ATC increased with the Commissioning of 765/400 kV, 1500 MVA ICT - 3 at Nizamabad and Change in LGB	WR-SR
		01 May to 31 May	TTC/ATC increased with the Commissioning of 765/400 kV, 1500 MVA ICT - 3 at Nizamabad and Change in LGB	ER-SR
		01 May to 31 May	TTC/ATC revised in view of change in load generation balance and inter-regional flow pattern towards NR	NR_IMPORT
		01 May to 31 May	TTC/ATC increased with the Commissioning of 765/400 kV, 1500 MVA ICT - 3 at Nizamabad and Change in LGB	SR_IMPORT
3	28 Feb	01 May to 31 May	Revised T-GNA margin due to approval of 500 MW GNA for Andhra Pradesh from Outside Southern Region	SR_IMPORT
4	28 Mar	01 May to 31 May	Enhancement in TTC due to Bypassing of 400 kV Kankroli - Bhinmal and 400 kV Bhinmal - Zerda at Bhinmal - PG (Temporary Arrangement) & revival of 400 KV Jodhpur-Kankroli-S/C after reconductoring	NR-WR
		01 May to 31 May	TTC/ATC revised due to operation of any one of two bipole of HVDC Raigarh Pugalur to its overload capacity (1.1 PU) in forward direction (West to South) for 2 hrs.	WR-SR
		01 May to 31 May	TTC/ATC curtailed due to restriction on power order of HVDC Talcher Kolar by 500 MW till 31st May 2024	ER-SR
		01 May to 31 May	TTC/ATC revised due to operation of any one of two bipole of HVDC Raigarh Pugalur to its overload capacity (1.1 PU) in forward direction (West to South) for 2 hrs & restriction on power order of HVDC Talcher Kolar by 500 MW till 31st May 2024	SR_IMPORT
		01 May to 31 May	Enhancement in TTC due to Bypassing of 400 kV Kankroli - Bhinmal and 400 kV Bhinmal - Zerda at Bhinmal - PG (Temporary Arrangement) & revival of 400 KV Jodhpur-Kankroli-S/C after reconductoring	NR_EXPORT
5	28 Apr	01 May to 31 May	Enhancement in TTC/ATC due to the commissioning of 400 KV Chittorgarh-Neemuch-PS-D/C	NR-WR
		01 May to 31 May	1. Revised T-GNA margin due to approval of 6.54 MW GNA for Arunachal Pradesh from Outside North-Eastern Region. 2. Revised T-GNA margin due to approval of 371 MW GNA for Assam from Outside North-Eastern Region	NER_IMPORT
		01 May to 31 May	Revised T-GNA margin due to approval of 25 MW GNA for Goa from Outside Western Region	WR_IMPORT
		01 May to 31 May	Revised T-GNA margin due to approval of 500 MW GNA for Karnataka from Outside Southern Region	SR_IMPORT
		01 May to 31 May	Enhancement in TTC/ATC due to the commissioning of 400 KV Chittorgarh-Neemuch-PS-D/C	NR_EXPORT
		01 May to 31 May	Revised T-GNA margin due to approval of 24 MW GNA for West Bengal from Outside Eastern Region	ER_IMPORT

ASSUMPTIONS IN BASECASE

Month : May'24

S.No.	Name of State/Area	Demand		Generation	
		Non-Solar Peak(MW)	Solar Peak (MW)	Non-Solar Peak(MW)	Solar Peak (MW)
I	NORTHERN REGION				
1	Punjab	7031	7510	4881	4940
2	Haryana	7418	7386	3037	3499

3	Rajasthan	13248	16311	8225	10042
4	Delhi	4405	5136	564	545
5	Uttar Pradesh	22062	18685	10734	11973
6	Uttarakhand	2375	2108	694	463
7	Himachal Pradesh	1985	1936	474	302
8	Jammu & Kashmir	3311	2984	264	206
9	Chandigarh	266	258	0	0
10	ISGS/IPPs	105	105	18638	22308
	Total NR	62206	62419	47511	54278
II	EASTERN REGION				
1	Bihar	5063	4065	464	458
2	Jharkhand	1407	1559	410	365
3	Damodar Valley Corporation	3416	3284	5273	5244
4	Orissa	5269	4919	3608	3496
5	West Bengal	7175	6925	6049	5781
6	Sikkim	116	109	0	0
7	Bhutan	32	50	107	228
8	ISGS/IPPs	928	917	18890	15263
	Total ER	23406	21828	34802	30835
III	WESTERN REGION				
1	Maharashtra	24878	25141	15943	16380
2	Gujarat	18292	17984	6324	6349
3	Madhya Pradesh	15567	16371	6053	6073
4	Chattisgarh	4447	4465	1823	1592
5	DD & DNH	984	867	0	0
6	Goa-WR	660	554	0	0
7	ISGS/IPPs	2463	1937	53004	49159
	Total WR	67290	67320	83147	79553
IV	SOUTHERN REGION				
1	Andhra Pradesh	8005	10681	6952	8203
2	Telangana	10834	14680	5212	6980
3	Karnataka	12118	15214	6579	9390
4	Tamil Nadu	16381	16743	6524	9609
5	Kerala	4221	3432	1510	340
6	Pondy	493	494	0	0
7	Goa-SR	109	109	0	0
8	ISGS/IPPs	0	0	19847	21748
	Total SR	52162	61353	46623	56270
V	NORTH-EASTERN REGION				
1	Arunachal Pradesh	166	101	0	0
2	Assam	1441	1146	275	428
3	Manipur	262	139	0	0
4	Meghalaya	471	350	144	12
5	Mizoram	171	141	33	8
6	Nagaland	158	120	15	7
7	Tripura	369	318	190	187
8	ISGS/IPPs	0	0	3308	2557
	Total NER	3038	2314	3964	3200
	Total All India	208065	215177	215925	223878