

National Load Despatch Centre
Total Transfer Capability for September 2015

Issue Date: 26/08/2015

Issue Time: 1530 hrs

Revision No. 5

| 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 Sep 2015 to 30th Sep 2015 | 00-24 | 2500 | 500 | 2000 | 421 | 1579 | | | | |
| WR-NR* | 1st Sep 2015 to 30th Sep 2015 | 00-24 | 6400 | 500 | 5900 | 5638 | 262 | 650 | Revised due to commissioning of 765kV Phagi-Bhiwani S/C and STOA margin revised due to operationalization of MTOA. | | |
| NR-ER* | 1st Sep 2015 to 30th Sep 2015 | 00-06 | 2000 | 200 | 1800 | 293 | 1507 | | | | |
| | | 06-18' | 2000 | | 1800 | 358 | 1442 | | | | |
| | | 18-24 | 2000 | | 1800 | 293 | 1507 | | | | |
| ER-NR* | 1st Sep 2015 to 30th Sep 2015 | 00-24 | 4800 | 300 | 4500 | 2431 | 2069 | | | | |
| W3-ER [§] | 1st Sep 2015 to 30th Sep 2015 | 00-24 | No limit is being specified. No Re-routing is allowed via W3-ER-NR. | | | | | | | | |
| ER-W3 | 1st Sep 2015 to 30th Sep 2015 | 00-24 | 1000 | 300 | 700 | 874 | 0 | | | | |
| WR-SR | 1st Sep 2015 to 30th Sep 2015 | 00-24 | 2300 | 750 | 1550 | 1550 | 0 | | | | |
| SR-WR * | 1st Sep 2015 to 30th Sep 2015 | 00-24 | No limit is being Specified. | | | | | | | | |
| ER-SR | 1st Sep 2015 to 30th Sep 2015 | 00-06 | 2650 | 0 | 2650 | 2300 | 350 | | | | |
| | | 18-24 | | | | 2365 | 285 | | | | |
| | | 06-18' | | | | | | | | | |
| SR-ER * | 1st Sep 2015 to 30th Sep 2015 | 00-24 | No limit is being Specified. | | | | | | | | |
| S1-S2 (Rev-0) | 1st Sep 2015 to 7th Sep 2015 | 00-24 | 3565 | 350 | 3215 | 2573 | 642 | | | | |
| | 8th Sep 2015 to 14th Sep 2015 | 00-24 | 3565 | 350 | 3215 | 2484 | 731 | | | | |
| | 15th Sep 2015 to 21st Sep 2015 | 00-24 | 3565 | 350 | 3215 | 2561 | 654 | | | | |
| | 22nd Sep 2015 to 25th Sep 2015 | 00-24 | 3565 | 350 | 3215 | 2612 | 603 | | | | |
| | 26th Sep 2015 to 27th Sep 2015 | 00-24 | 3565 | 350 | 3215 | 2691 | 524 | | | | |
| | 28th Sep 2015 to 30th Sep 2015 | 00-24 | 3565 | 350 | 3215 | 2602 | 613 | | | | |
| ER-NER | 1st Sep 2015 to 30th Sep 2015 | 00-17 | 1200 | 40 | 1160 | 210 | 950 | | | | |
| | | 23-24 | | | 1250 | | 1210 | 1000 | | | |
| NER-ER | 1st Sep 2015 to 30th Sep 2015 | 00-17 | 1220 | 30 | 1190 | 0 | 1190 | | | | |
| | | 23-24 | | | | | 1300 | 40 | | 1260 | 1260 |
| | | 17-23 | | | | | | | | | |
| W3 zone Injection | 1st Sep 2015 to 30th Sep 2015 | 00-17 | 9400 | 200 | 9200 | 7576 | 1624 | | STOA Margin revised due to Operationalization of LTA. | | |
| | | 23-24 | | | 9700 | | 2124 | | | | |
| | | 17-23 | | | | | | | | | |

* 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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|----------|------|-------------------|---------------------------------|--------------------|-------------------------------------|----------------------------------------------------------|----------------------------------------------------|-------------------------------------|----------|
|----------|------|-------------------|---------------------------------|--------------------|-------------------------------------|----------------------------------------------------------|----------------------------------------------------|-------------------------------------|----------|

S1-S2 Corridor: Any revision in S1-S2 TTC/ATC from Rev-0, would be uploaded under Intra-Regional Section on NLDC website.

\$ 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. & ER-NR TTC is independent of WR-NR corridor flow

1) S1 comprises of Telangana, AP and Karnataka: S2 comprises of Tamil Nadu, Kerala and Puducherry

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

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.

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 (1400 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 contingency of 400 kV Biharshariff- Lakhisarai S/C |
| ER-W3 | 1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) |
| WR-SR & ER-SR | 1. (n-1) of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) 3. 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) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA ICT at Misa |
| 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 |
| W3 zone Injection | 1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) |

*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 Sep 2015 to 30th Sep 2015 | 00-05 | 9100 | 800 | 8300 | 8069 | 231 | 600 | Revised due to commissioning of 765kV Phagi-Bhiwani S/C and STOA margin revised due to operationalization of MTOA. |
| | | 05-08' | 9600 | | 8800 | | 731 | 600 | |
| | | 08-19' | 9100 | | 8300 | | 231 | 600 | |
| | | 19-24' | 8500 | | 7700 | | 0 | 0 | |
| NER | 1st Sep 2015 to 30th Sep 2015 | 00-17 23-24 | 1200 | 40 | 1160 | 210 | 950 | | |
| | | 17-23 | 1250 | | 1210 | | 1000 | | |
| WR | | | | | | | | | |
| SR | 1st Sep 2015 to 30th Sep 2015 | 00-06 18-24 | 4950 | 750 | 4200 | 3850 | 350 | | |
| | | 06-18' | 4950 | | 4200 | | 3915 | 285 | |
| | | | | | | | | | |

* 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).

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 Sep 2015 to 30th Sep 2015 | 00-06 | 4500 | 700 | 3800 | 714 | 3086 | | |
| | | 06-18' | | | 3800 | 779 | 3021 | | |
| | | 18-24 | | | 3800 | 714 | 3086 | | |
| NER | 1st Sep 2015 to 30th Sep 2015 | 00-17 23-24 | 1220 | 30 | 1190 | 0 | 1190 | | |
| | | 17-23 | 1300 | 40 | 1260 | | 1260 | | |
| WR | | | | | | | | | |
| SR * | 1st Sep 2015 to 30th Sep 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).

Limiting Constraints

| | | |
|-----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NR | Import | (n-1) contingency of 400 kV Biharshariff- Lakhisarai S/C High loading of 765 kV Agra-Gwalior (1400 MW SPS setting on each circuit of 765 kV Gwalior-Agra) and high 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). |
| | Export | (n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Saranath-Pusauli |
| NER | Import | (n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA |
| | Export | ICT at Misa |
| SR | Import | 1. n-1 of 400 kV Wardha – Parli will lead to 30 degrees angular separation between Wardha and Parli. 2. (n-1) contingency of one circuit of 400kV Parli(PG)-Sholapur(PG) 3. 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

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| Revision No | Date of Revision | Period of Revision | Reason for Revision | Corridor Affected |
|--------------------|-------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1 | 6/25/2015 | Whole month | Revised considering skewed sharing of flows on WR-NR and ER-NR corridor in the range 70:30 | Import of NR |
| 2 | 6/28/2015 | Whole month | STOA Margin revised due to Jhajjar reallocation | ER-SR/ NR-WR |
| 3 | 7/20/2015 | Whole month | STOA Margin revised considering CERC order dated 03-07-2015 in petition No- 92/MP/2015 which is under implementation by CTU. Pending this any margins would be released for short term transactions on day ahead basis. | ER-SR |
| 4 | 8/24/2015 | Whole month | Revised due to the commissioning of 765 kV Gwalior-Phagi 1,2 | WR-NR/ Import of NR |
| 5 | 8/26/2015 | Whole month | Revised due to commissioning of 765kV Phagi-Bhiwani S/C and STOA margin revised due to operationalization of MTOA. | WR-NR/ Import of NR |
| | | | STOA Margin revised due to Operationalization of LTA. | W3 Zone Injection |
| | | | | |
| | | | | |
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| | | | | |

| ASSUMPTIONS IN BASECASE | | | | | |
|-------------------------|----------------------------|----------------|--------------------|-----------------------|---------------|
| | | | | Month : September '15 | |
| 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 | 8327 | 7408 | 4656 | 4626 |
| 2 | Haryana | 7890 | 7084 | 3318 | 3318 |
| 3 | Rajasthan | 9096 | 8161 | 5709 | 5646 |
| 4 | Delhi | 4549 | 3953 | 1095 | 1095 |
| 5 | Uttar Pradesh | 12551 | 12022 | 6555 | 6605 |
| 6 | Uttarakhand | 1677 | 1295 | 874 | 723 |
| 7 | Himachal Pradesh | 1189 | 985 | 988 | 971 |
| 8 | Jammu & Kashmir | 2123 | 1439 | 438 | 438 |
| 9 | Chandigarh | 266 | 159 | 0 | 0 |
| 10 | ISGS/PPs | 0 | 0 | 19172 | 14064 |
| | Total NR | 47668 | 42504 | 42804 | 37485 |
| II | EASTERN REGION | | | | |
| 1 | Bihar | 2690 | 2033 | 110 | 0 |
| 2 | Jharkhand | 915 | 749 | 507 | 330 |
| 3 | Damodar Valley Corporation | 2906 | 2140 | 3619 | 2922 |
| 4 | Orissa | 3574 | 2894 | 3176 | 2150 |
| 5 | West Bengal | 7617 | 5926 | 5553 | 3524 |
| 6 | Sikkim | 88 | 43 | 0 | 0 |
| 7 | Bhutan | 105 | 104 | 1300 | 1030 |
| 8 | ISGS/PPs | 608 | 568 | 9360 | 8909 |
| | Total ER | 18502 | 14458 | 23625 | 18865 |
| III | WESTERN REGION | | | | |
| 1 | Maharashtra | 20211 | 11204 | 14900 | 6645 |
| 2 | Gujarat | 12909 | 7121 | 10115 | 4527 |
| 3 | Madhya Pradesh | 7861 | 4927 | 4832 | 2521 |
| 4 | Chattisgarh | 3612 | 2182 | 2491 | 1036 |
| 5 | Daman and Diu | 305 | 233 | 0 | 0 |
| 6 | Dadra and Nagar Haveli | 771 | 570 | 0 | 0 |
| 7 | Goa-WR | 513 | 293 | 0 | 0 |
| 8 | ISGS/PPs | 1048 | 1046 | 23713 | 20410 |
| | Total WR | 47230 | 27575 | 56050 | 35139 |

| | | | | | |
|----|----------------------|--------|--------|--------|--------|
| | | | | | |
| IV | SOUTHERN REGION | | | | |
| 1 | Andhra Pradesh | 5904 | 5359 | 4699 | 4399 |
| 2 | Telangana | 7336 | 6348 | 3626 | 2262 |
| 3 | Karnataka | 7925 | 6076 | 7334 | 5247 |
| 4 | Tamil Nadu | 13399 | 11925 | 8681 | 7218 |
| 5 | Kerala | 3381 | 2230 | 1779 | 694 |
| 6 | Pondy | 338 | 290 | 0 | 0 |
| 7 | Goa-SR | 81 | 81 | 0 | 0 |
| 8 | ISGS/PPs | 0 | 0 | 9605 | 9470 |
| | Total SR | 38364 | 32309 | 35724 | 29290 |
| | | | | | |
| V | NORTH-EASTERN REGION | | | | |
| 1 | Arunachal Pradesh | 107 | 92 | 0 | 0 |
| 2 | Assam | 1050 | 944 | 285 | 250 |
| 3 | Manipur | 125 | 105 | 0 | 0 |
| 4 | Meghalaya | 312 | 208 | 211 | 155 |
| 5 | Mizoram | 72 | 44 | 4 | 4 |
| 6 | Nagaland | 110 | 106 | 22 | 16 |
| 7 | Tripura | 266 | 166 | 110 | 110 |
| 8 | ISGS/PPs | 7 | 7 | 1501 | 1302 |
| | Total NER | 2049 | 1672 | 2133 | 1837 |
| | | | | | |
| | Total All India | 153812 | 118517 | 160336 | 122616 |