

**National Load Despatch Centre
Total Transfer Capability for June 2015**

Issue Date: 05/06/2015

Issue Time: 1300 hrs

Revision No. 6

| 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 Jun 2015 to 30th Jun 2015 | 00-24 | 2500 | 500 | 2000 | 706 | 1294 | | |
| WR-NR* | 1st Jun 2015 to 05th Jun 2015 | 00-17 | 5100 | 500 | 4600 | 5157 | 0 | | |
| | | 23-24 | 5100 | | 4600 | | 0 | | |
| | 06th Jun 2015 | 00-05 | 5100 | 500 | 4600 | 5157 | 0 | -250 | Revised considering the shutdown of 400 kV HVDC Rihand Feeder 2 |
| | | 14-17 | 4850 | | 4350 | | 0 | | |
| | | 23-24 | 5100 | | 4600 | | 0 | | |
| | 07th Jun 2015 to 30th Jun 2015 | 00-17 | 5100 | 500 | 4600 | 5157 | 0 | | |
| 23-24 | | 5100 | 4600 | | 0 | | | | |
| NR-ER* | | | | | | | | | |
| NR-ER* | 1st Jun 2015 to 30th Jun 2015 | 00-06 | 2000 | 200 | 1800 | 293 | 1507 | | |
| | | 06-18' | 2000 | | 1800 | 358 | 1442 | | |
| | | 18-24 | 2000 | | 1800 | 293 | 1507 | | |
| ER-NR* | | | | | | | | | |
| ER-NR* | 1st Jun 2015 to 30th Jun 2015 | 00-17 | 4500 | 300 | 4200 | 2431 | 1769 | | |
| | | 23-24 | 4500 | | 4200 | | 1769 | | |
| | | 17-23 | 4500 | | 4200 | | 1769 | | |
| W3-ER^s | | | | | | | | | |
| W3-ER ^s | 1st Jun 2015 to 30th Jun 2015 | 00-24 | No limit is being specified. No Re-routing is allowed via W3-ER-NR. | | | | | | |
| ER-W3 | | | | | | | | | |
| ER-W3 | 1st Jun 2015 to 30th Jun 2015 | 00-24 | 1000 | 300 | 700 | 874 | 0 | | |
| WR-SR | | | | | | | | | |
| WR-SR | 1st Jun 2015 to 5th Jun 2015 | 00-05 | 2500 | 750 | 1750 | 1550 | 200 | | |
| | | 05-22' | 2100 | | 1350 | | 0 | | |
| | | 22-24 | 2500 | | 1750 | | 200 | | |
| WR-SR | 6th Jun 2015 to 30th Jun 2015 | 00-05 | 2700 | 750 | 1950 | 1550 | 400 | | |
| | | 05-22' | 2300 | | 1550 | | 0 | | |
| | | 22-24 | 2700 | | 1950 | | 400 | | |
| SR-WR * | | | | | | | | | |
| SR-WR * | 1st Jun 2015 to 30th Jun 2015 | 00-24 | No limit is being Specified. | | | | | | |
| ER-SR | | | | | | | | | |
| ER-SR | 1st Jun 2015 to 5th Jun 2015 | 00-06 | 2450 | 0 | 2450 | 2385 | 65 | | |
| | | 18-24 | | | | | 2450 | | |
| ER-SR | 6th Jun 2015 to 30th Jun 2015 | 00-06 | 2650 | 0 | 2650 | 1942 | 708 | | |
| | | 18-24 | | | | | 2007 | | |
| SR-ER * | | | | | | | | | |
| SR-ER * | 1st Jun 2015 to 30th Jun 2015 | 00-24 | No limit is being Specified. | | | | | | |
| ER-NER | | | | | | | | | |
| ER-NER | 1st Jun 2015 to 30th Jun 2015 | 00-17 | 1260 | 45 | 1215 | 210 | 1005 | | |
| | | 23-24 | | | | | 1115 | | |
| NER-ER | 1st Jun 2015 to 30th Jun 2015 | 00-17 | 1400 | 45 | 1355 | 0 | 1355 | | |
| | | 23-24 | | | | | 1245 | | |
| S1-S2 (Rev-0) | | | | | | | | | |
| S1-S2 (Rev-0) | 1st Jun 2015 to 5th Jun 2015 | 00-24 | 2610 | 305 | 2305 | 2790 | 0 | | |
| | 6th Jun 2015 to 14th Jun 2015 | 00-24 | 2910 | 305 | 2605 | 2898 | 0 | | |
| | 15th Jun 2015 to 30th Jun 2015 | 00-24 | 2910 | 305 | 2605 | 2819 | 0 | | |
| Import of Punjab | | | | | | | | | |
| Import of Punjab | 1st Jun 2015 to 30th Jun 2015 | 00-24 | 5700 | 300 | 5400 | 3790 | 1610 | | |
| Import TTC for DD & DNH | | | | | | | | | |
| Import TTC for DD & DNH | 1st Jun 2015 to 30th Jun 2015 | 00-24 | 1200 | 0 | 1200 | LTA and MTOA as per ex-pp schedule | | | |
| W3 zone Injection | | | | | | | | | |
| W3 zone Injection | 1st Jun 2015 to 30th Jun 2015 | 00-17 | 9400 | 200 | 9200 | 7094 | 2106 | | |
| | | 23-24 | | | 9900 | | 9700 | | |

* 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) KWPC, n)Vandana Vidyt

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-Bhimnal and (n-1) contingency of 220kV Badod-Modak. |
| WR-NR | High Loading of 400kV Singrauli-Anpara & High loading of 765 kV Agra-Gwalior (1250 MW SPS setting on each circuit of 765 kV Gwalior-Agra) and Loop flows on 400kV Kankroli-Zerda and 400kV Bhimnal-Zerda (power flowing from WR to NR on 765kV Gwalior-Agra D/C and from NR to WR on 400kV Kankroli-Zerda and 400kV Bhimnal-Zerda). |
| NR-ER | (n-1) contingency of 400 kV Saranath-Pusauli |
| ER-NR | (n-1) contingency of 400 kV Farakka-Malda D/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) D/C |
| 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) D/C. 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 220/132 kV, 2x100 MVA ICTs at Dimapur. |
| 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 |
| S1-S2 | (n-1) contingency of one circuit of 400 kV Kolar-Hosur D/C |
| Import of DD & DNH | (n-1) contingency of 400/220kV 315MVA ICT at VAPI |
| Import of Punjab | (n-1) contingency of ICT at Dhuri and (n-1) contingency of 220kV Moga(PG)-Moga(PSTCL) |
| 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) D/C |

*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 Jun 2015 to 05th Jun 2015 | 00-17 23-24 | 9600 | 800 | 8800 | 7588 | 1212 | | |
| | | 17-23 | 9600 | | 8800 | | 1212 | | |
| | 05th Jun 2015 to 30th Jun 2015 | 00-05 08-18 21-24 | 7100 | 800 | 6300 | 7588 | 0 | -2500 | |
| | | 05-08' 18-21 | 7900 7000 | | 7100 6200 | | 0 -1700 0 -2600 | | |
| NER | 1st Jun 2015 to 30th Jun 2015 | 00-17 23-24 | 1260 | 45 | 1215 | 210 | 1005 | | |
| | | 17-23 | 1160 | | 1115 | | 905 | | |
| WR | | | | | | | | | |
| SR | 1st Jun 2015 to 5th Jun 2015 | 00-05 | 4950 | 750 | 4200 | 3935 | 265 | | |
| | | 05-06' | 4550 | | 3800 | 3935 | 0 | | |
| | | 06-18' | 4550 | | 3800 | 4000 | 0 | | |
| | | 18-22 | 4550 | | 3800 | 3935 | 0 | | |
| | | 22-24 | 4950 | | 4200 | 3935 | 265 | | |
| | 6th Jun 2015 to 30th Jun 2015 | 00-05 | 5350 | 750 | 4600 | 3492 | 1108 | | |
| | | 05-06' | 4950 | | 4200 | 3492 | 708 | | |
| | | 06-18' | 4950 | | 4200 | 3557 | 643 | | |
| | | 18-22 | 4950 | | 4200 | 3492 | 708 | | |
| | | 22-24 | 5350 | | 4600 | 3492 | 1108 | | |

* 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 Jun 2015 to 30th Jun 2015 | 00-06 | 4500 | 700 | 3800 | 999 | 2801 | | |
| | | 06-18' | | | 3800 | 1064 | 2736 | | |
| | | 18-24 | | | 3800 | 999 | 2801 | | |
| NER | 1st Jun 2015 to 30th Jun 2015 | 00-17 23-24 | 1400 | 45 | 1355 | 0 | 1355 | | |
| | | 17-23 | 1245 | 45 | 1200 | | 1200 | | |
| WR | | | | | | | | | |
| SR* | 1st Jun 2015 to 30th Jun 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 Farakka-Malda D/C 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 (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 220/132 kV, 2x100 MVA ICTs at Dimapur. |
| | Export | (n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 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) D/C. 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 | 02-03-2015 | Whole Month | STOA Margins revised due to grant of MTOA from Chattisgarh to KSEB by CTU. | W3 Zone/ W3-ER |
| 2 | 31-03-2015 | Whole Month | Revised due to commissioning of Sasan Unit-6 and reviewed HVDC set points. | WR-NR |
| | | | Revised due to commissioning of 765kV Pune-Sholapur S/C. | WR-SR |
| 3 | 22-05-2015 | Whole Month | Fifty Percent (50 %) Counter flow benefit on account of LTA/MTOA transactions in the reverse direction. | Import of NR |
| | | 01-06-15 to 05-06-15 | Revised considering the present Maharashtra Demand pattern. | WR-SR |
| | | 01-06-15 to 05-06-15 | Revised considering the present Maharashtra Demand pattern and due to Shutdown of Talcher Stage-2 Unit-2. | WR-SR/ ER-SR |
| 4 | 29-05-2015 | Whole Month | Revised on account of addition of new elements in NER Grid and change in load-generation balance. | ER-NER/ NER-ER |
| 5 | 31-05-2015 | 1-06-2015 to 05-06-2015 | Revised considering tripping events of Talcher-Kolar HVDC Bipole and high ambient Temperature. | ER-SR / WR-SR |
| 6 | 05-06-2015 | 06-06-2015 to 30-06-2015 | Revised considering skewed sharing of flows on WR-NR and ER-NR corridor ranging from 65:35 to 72:28 | Import of NR |
| | | 06-06-2015 | Revised considering the shutdown of 400 kV HVDC Rihand Feeder 2 | WR-NR |

ASSUMPTIONS IN BASECASE

Month : June '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 | 9585 | 9795 | 4766 | 4766 |
| 2 | Haryana | 7802 | 6896 | 3352 | 3352 |
| 3 | Rajasthan | 7493 | 7935 | 4303 | 4303 |
| 4 | Delhi | 5388 | 4734 | 1337 | 1337 |
| 5 | Uttar Pradesh | 12093 | 12670 | 6549 | 6546 |
| 6 | Uttarakhand | 1598 | 1367 | 754 | 666 |
| 7 | Himachal Pradesh | 1248 | 1034 | 880 | 867 |
| 8 | Jammu & Kashmir | 2188 | 1715 | 531 | 441 |
| 9 | Chandigarh | 296 | 253 | 0 | 0 |
| 10 | ISGS/IPPs | | | 19551 | 18408 |
| | Total NR | 47691 | 46399 | 42023 | 40686 |
| | | | | | |
| II | EASTERN REGION | | | | |
| 1 | Bihar | 2500 | 1850 | 180 | 110 |
| 2 | Jharkhand | 1100 | 678 | 400 | 360 |
| 3 | Damodar Valley Corporation | 2750 | 2200 | 4512 | 3337 |
| 4 | Orissa | 3803 | 3285 | 3508 | 2688 |
| 5 | West Bengal | 7536 | 6049 | 4966 | 4542 |
| 6 | Sikkim | 90 | 65 | 0 | 0 |
| 7 | Bhutan | 107 | 106 | 1000 | 900 |
| 8 | ISGS/IPPs | 675 | 664 | 10789 | 9319 |
| | Total ER | 18561 | 14897 | 25355 | 21256 |
| | | | | | |
| III | WESTERN REGION | | | | |
| 1 | Maharashtra | 19358 | 15390 | 14146 | 9781 |
| 2 | Gujarat | 13470 | 10976 | 10381 | 7092 |
| 3 | Madhya Pradesh | 7020 | 5477 | 3837 | 1927 |
| 4 | Chattisgarh | 3472 | 2268 | 2147 | 1462 |
| 5 | Daman and Diu | 288 | 270 | 0 | 0 |
| 6 | Dadra and Nagar Haveli | 677 | 665 | 0 | 0 |
| 7 | Goa-WR | 475 | 299 | 0 | 0 |
| 8 | ISGS/IPPs | 1136 | 1120 | 23133 | 23134 |
| | Total WR | 45896 | 36465 | 53644 | 43396 |

ASSUMPTIONS IN BASECASE

Month : June '15

| 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 | 5271 | 4582 | 5048 | 4666 |
| 2 | Telangana | 5667 | 5464 | 2230 | 1951 |
| 3 | Karnataka | 7755 | 7025 | 7076 | 5624 |
| 4 | Tamil Nadu | 11352 | 10421 | 7157 | 6587 |
| 5 | Kerala | 2827 | 1928 | 1567 | 617 |
| 6 | Pondy | 312 | 288 | 0 | 0 |
| 7 | Goa-SR | 83 | 89 | 0 | 0 |
| 8 | ISGS/IPPs | 79 | 71 | 7622 | 7622 |
| | Total SR | 33346 | 29868 | 30700 | 27067 |
| V | NORTH-EASTERN REGION | | | | |
| 1 | Arunachal Pradesh | 70 | 39 | 0 | 0 |
| 2 | Assam | 772 | 627 | 215 | 200 |
| 3 | Manipur | 72 | 43 | 0 | 0 |
| 4 | Meghalaya | 280 | 208 | 232 | 154 |
| 5 | Mizoram | 61 | 39 | 4 | 3 |
| 6 | Nagaland | 83 | 69 | 21 | 16 |
| 7 | Tripura | 249 | 169 | 110 | 110 |
| 8 | ISGS/IPPs | 48 | 27 | 1055 | 720 |
| | Total NER | 1635 | 1221 | 1637 | 1203 |
| | Total All India | 147129 | 128850 | 153359 | 133608 |