

**National Load Despatch Centre
Total Transfer Capability for September 2013**

Issue Date: 30/08/2013

Issue Time: 1715 hrs

Revision No. 7

| 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 2013 to 30th September 2013 | 00-24 | 2500 | 500 | 2000 | 286 | 1714 | | |
| WR-NR ¹ | 1st September 2013 to 30th September 2013 | 00-17 | 5700 ^Δ | 500 | 5200 ^Δ | 2937 ^Δ | 2263 | | Revised due to Allocation of 150 MW additional power to J&K. |
| | | 23-24 | 5500 ^Δ | | 5000 ^Δ | 2937 ^Δ | 2063 | | |
| NR-ER * | 1st September 2013 to 30th September 2013 | 00-17 | 1000 | 200 | 800 | 0 | 800 | | |
| | | 23-24 | 1100 | | 900 | | 900 | | |
| ER-NR | 1st September 2013 to 30th September 2013 | 00-17 | 4000 | 300 | 3700 | 2189 | 1511 | | |
| | | 23-24 | | | | | 1511 | | |
| W3-ER | 1st September 2013 to 30th September 2013 | 00-24 | 1900 | 300 | 1600 | 0 | 1600 | | |
| ER-W3 | 1st September 2013 to 30th September 2013 | 00-24 | 1000 | 300 | 700 | 700 | 0 | | |
| WR-SR | 1st September 2013 to 30th September 2013 | 00-24 | 1000 | 0 | 1000 | 1000 | 0 | | |
| SR-WR* | 1st September 2013 to 30th September 2013 | 00-24 | 1000 | 0 | 1000 | 0 | 1000 | | |
| ER-SR | 1st September 2013 to 30th September 2013 | 00-05 | 700 | 0 | 700 | 657 | 43 | | 1. Revised due to Load Generation change in ER. 2. Allocation of additional 45 MW to karnatka. |
| | | 10-19 | 1100 | | 1100 | | 443 | | |
| SR-ER* | 1st September 2013 to 30th September 2013 | 00-17 | 800 | 0 | 800 | 197 | 603 | | |
| | | 23-24 | 900 | | 900 | | 703 | | |
| ER-NER # | 1st September 2013 to 4th September 2013 | 00-08 | 600 | 50 | 550 | 230 | 320 | | Revised due to Shutdown of 400 kV Balipara – Bongaigaon ckt-II |
| | | 23-24 | 280 | | 230 | | 0 | | |
| | | 08-17 | 600 | | 550 | | 320 | | |
| | 17-23 | 600 | 550 | 320 | | | | | |
| NER-ER # | 1st September 2013 to 4th September 2013 | 00-08 | 500 | 100 | 400 | 0 | 400 | | Revised due to Shutdown of 400 kV Balipara – Bongaigaon ckt-II |
| | | 23-24 | 130 | | 30 | | 30 | | |
| | | 08-17 | 320 | | 220 | | 220 | | |
| | 17-23 | 320 | 220 | 220 | | | | | |
| S1-S2 | 1st September 2013 to 30th September 2013 | 00-17 | 5800 | 200 | 5600 | 5200 | 400 | | |
| | | 23-24 | | | | | | | |
| Import of Punjab | 1st September 2013 to 30th September 2013 | 00-24 | 5600 | 300 | 5300 | 3475 | 1825 | | Revised due to change LTA/MTOA quantum. |
| Import TTC for DD & DNH | 1st September 2013 to 30th September 2013 | 00-24 | 980 | 0 | 980 | LTA and MTOA as per ex-pp schedule | | | |

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|-------------------|---|-------------------|---------------------------------|--------------------|-------------------------------------|--|--|-------------------------------------|----------|
| W3 zone Injection | 1st September 2013 to 30th September 2013 | 00-17, 23-24 | 9000 | 200 | 8800 | 7074 | 1726 | | |
| | | 17-23 | 9500 | | 9300 | | 2226 | | |

* Fifty Percent (50 %) Counter flow benefit on account of LTA/MTOA transactions in the reverse direction would be considered for advanced transactions (Bilateral & First Cum First Serve).

1) ER-SR TTC declared at Talcher Interconnector and Gazuwaka HVDC B/B seam

2) S1 comprises of AP and Karnataka; S2 comprises of Tamil Nadu, Kerala and Pondicherry

3) W3 comprises of the following regional entities :

a) Chattisgarh, b) Jindal Power Limited (JPL) , 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)KWPCCL, M) DB Power

Δ. includes 1500 MW on the dedicated Mundra-Mohindergarh HVDC bipole of M/s Adani Power Limited which is scheduled separately from the generation at stage-III of APL Mundra (3*660 MW).

I. WR-NR Total Transfer capability will be reduced to 3100 MW in case of outage of any one of the following sections:

- 765 kV Agra-Jhatikara
- One of the 765/400 kV 1500 MVA ICT at Agra
- 765 kV Gwalior-Agra one circuit
- 765 kV Bina-Gwalior one circuit

Limiting Constraints

| Corridor | Constraint |
|-------------------|---|
| NR-WR | (n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. |
| WR-NR | (n-1) contingency of 765/400 kV ICT at Agra |
| NR-ER | (n-1) contingency of 400 kV Allahabad-Pusauli |
| ER-NR | (n-1) contingency of 400 kV Purnea-Muzaffarpur |
| W3-ER | (n-1) contingency of either 400 kv Mejia-Maithon or (n-1) contingency of 400 kv MPL -Maithon |
| ER-W3 | High loading of 400 kV Raipur-Bhadrawati T/C, Bhilai-Bhadrawati S/C, Bhilai-Koradi and Bhilai-Seoni (n-1) contingency of 400kV Rourkela-Raigarh |
| WR-SR | Bhadrawati HVDC B/B link capacity |
| SR-WR | Bhadrawati HVDC B/B link capacity |
| ER-SR | (n-1) contingency of 220 kV Jayanagar - Jeypore and Talcher-Kolar HVDC Capacity |
| SR-ER | |
| ER-NER | (n-1) contingency of 400/220 kV,315 MVA ICT at Misa (n-1) contingency of 400 kV Binaguri-Bongaigaon |
| NER-ER | High loading of 132 kV LTTPS – Mariani S/C Insufficient generating resources in NER |
| S1-S2 | (n-1) contingency of 400 kV Kolar-Hosur D/C line, 400kV Hosur-Salem S/C and 400kV Somanahalli-Salem S/C line. |
| Import of Punjab | (n-1) contingency of ICT at Patiala/Moga |
| W3 zone Injection | (n-1-1) contingency of 400 kV Raipur-Bhadrawati D/C section |

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 ¹ | 1st September 2013 to 30th September 2013 | 00-17 23-24 | 9700 ^Δ | 1000 | 8700 ^Δ | 5126 ^Δ | 3574 | | Revised due to Allocation of 150 MW additional power to J&K. |
| | | 17-23 | 9500 ^Δ | | 8500 ^Δ | | 3374 | | |
| NER # | 1st September 2013 to 4th September 2013 | 00-08 23-24 | 600 | 50 | 550 | 230 | 320 | | Revised due to Shutdown of 400 kV Balipara – Bongaigaon ckt-II |
| | | 08-17' | 280 | | 230 | | 0 | -320 | |
| | | 17-23 | 600 | | 550 | | 320 | | |
| | 5th September 2013 to 30th September 2013 | 00-17 23-24 | 600 | 50 | 550 | 230 | 320 | | |
| 17-23 | | 600 | 550 | | 320 | | | | |
| WR | | | | | | | | | |
| SR | 1st September 2013 to 30th September 2013 | 00-05 10-19 | 1700 | 0 | 1700 | 1657 | 43 | | 1. Revised due to Load Generation change in ER. 2. Allocation of additional 45 MW to karnatka. |
| | | 05-10 19-24 | 2100 | | 2100 | | 443 | | |

Δ. includes 1500 MW on the dedicated Mundra-Mohindergarh HVDC bipole of M/s Adani Power Limited which is scheduled separately from the generation at stage-III of APL Mundra (3*660 MW).

I. WR-NR Total Transfer capability will be reduced to 3100 MW in case of outage of any one of the following sections:

- 765 kV Agra-Jhatikara
- One of the 765/400 kV 1500 MVA ICT at Agra
- 765 kV Gwalior-Agra one circuit
- 765 kV Bina-Gwalior one circuit

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 2013 to 30th September 2013 | 00-17 23-24 | 3500 | 700 | 2800 | 286 | 2514 | | |
| | | 17-23 | 3600 | | 2900 | | 2614 | | |
| NER # | 1st September 2013 to 4th September 2013 | 00-08 23-24 | 500 | 100 | 400 | 0 | 400 | | Revised due to Shutdown of 400 kV Balipara – Bongaigaon ckt-II |
| | | 08-17' | 130 | | 30 | | 30 | -370 | |
| | | 17-23 | 320 | | 220 | | 220 | | |
| | 5th September 2013 to 30th September 2013 | 00-17 23-24 | 500 | 100 | 400 | 0 | 400 | | |
| 17-23 | | 320 | 220 | | 220 | | | | |
| WR | | | | | | | | | |
| SR* | 1st September 2013 to 30th September 2013 | 00-17 23-24 | 1800 | 0 | 1800 | 197 | 1603 | | |
| | | 17-23 | 1900 | | 1900 | | 1703 | | |

* Fifty Percent (50 %) Counter flow benefit on account of LTA/MTOA transactions in the reverse direction would be considered for advanced transactions (Bilateral & First Cum First Serve).

Limiting Constraints

| | | |
|------------|---------------|---|
| NR | Import | (n-1) contingency of 400 kV Purnea-Muzaffarpur (n-1) contingency of 765/400 kV ICT at Agra |
| | Export | (n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Allahabad-Pusauli |
| NER | Import | (n-1) contingency of 400/220 kV,315 MVA ICT at Misa* (n-1) contingency of 400 kV Binaguri-Bongaigaon |
| | Export | High loading of 132 kV LTPS – Mariani S/C Insufficient generating resources in NER |
| SR | Import | Bhadrawati HVDC B/B link capacity (n-1) contingency of 220 kV Jayanagar - Jeypore and Talcher-Kolar HVDC Capacity |
| | Export | Bhadrawati HVDC B/B link capacity |

*Primary constraints

ASSUMPTIONS IN BASECASE

Month : September '13

| 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 | 7253 | 6913 | 2728 | 2423 |
| 2 | Haryana | 6245 | 5828 | 3512 | 3512 |
| 3 | Rajasthan | 6749 | 6004 | 3624 | 3616 |
| 4 | Delhi | 4432 | 3910 | 1276 | 1276 |
| 5 | Uttar Pradesh | 11080 | 12540 | 4345 | 4134 |
| 6 | Jammu & Kashmir | 1994 | 1050 | 617 | 640 |
| 7 | Uttarakhand | 1602 | 1536 | 775 | 775 |
| 8 | Himachal Pradesh | 1511 | 1000 | 955 | 975 |
| 9 | Chandigarh | 279 | 193 | 0 | 0 |
| 10 | ISGS/IPPs | | | 18230 | 15865 |
| | Total NR | 41145 | 38974 | 36062 | 33216 |
| | | | | | |
| II | EASTERN REGION | | | | |
| 1 | West Bengal | 6980 | 5310 | 4769 | 4094 |
| 2 | Jharkhand | 1045 | 660 | 544 | 354 |
| 3 | Orissa | 3630 | 2750 | 2889 | 2149 |
| 4 | Bihar | 1870 | 1320 | 0 | 0 |
| 5 | Damodar Valley Corporation | 2500 | 1980 | 3219 | 3219 |
| 6 | Sikkim | 40 | 40 | 0 | 0 |
| 7 | Bhutan | 111 | 111 | 1356 | 1356 |
| 8 | ISGS/IPPs | 21 | 21 | 5956 | 5956 |
| | Total ER | 16197 | 12192 | 18733 | 17128 |
| | | | | | |
| III | WESTERN REGION | | | | |
| 1 | Chattisgarh | 2846 | 2482 | 1373 | 2154 |
| 2 | Madhya Pradesh | 7700 | 5038 | 3908 | 2659 |
| 3 | Maharashtra | 14190 | 12362 | 9196 | 6579 |
| 4 | Gujarat | 10859 | 8313 | 10508 | 7908 |
| 5 | Goa | 398 | 238 | 0 | 0 |
| 6 | Daman and Diu | 234 | 206 | 0 | 0 |
| 7 | Dadra and Nagar Haveli | 571 | 553 | 0 | 0 |
| 8 | ISGS/IPPs | 590 | 592 | 16956 | 14488 |
| | Total WR | 37388 | 29784 | 41941 | 33788 |
| | | | | | |

ASSUMPTIONS IN BASECASE

Month : September '13

| 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 | 10964 | 8914 | 7317 | 5430 |
| 2 | Tamil Nadu | 10755 | 9192 | 6765 | 5051 |
| 3 | Karnataka | 7831 | 5859 | 5033 | 3582 |
| 4 | Kerala | 3289 | 2424 | 1892 | 1073 |
| 5 | Pondy | 314 | 243 | 0 | 0 |
| 6 | Goa | 80 | 80 | 0 | 0 |
| 7 | ISGS/IPPs | | | 10476 | 9895 |
| | Total SR | 33233 | 26712 | 31483 | 25031 |
| | | | | | |
| V | NORTH-EASTERN REGION | | | | |
| 1 | Manipur | 130 | 91 | 0 | 0 |
| 2 | Meghalaya | 280 | 196 | 148 | 68 |
| 3 | Mizoram | 85 | 60 | 8 | 6 |
| 4 | Nagaland | 120 | 84 | 12 | 10 |
| 5 | Assam | 1415 | 970 | 240 | 200 |
| 6 | Tripura | 230 | 130 | 100 | 80 |
| 7 | Arunachal Pradesh | 130 | 91 | 0 | 0 |
| 8 | ISGS/IPPs | | | 1297 | 1080 |
| | Total NER | 2390 | 1622 | 1805 | 1444 |
| | | | | | |
| | Total All India | 130353 | 109284 | 130024 | 110607 |