

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

Issue Date: 06/12/2013

Issue Time: 1200 hrs

Revision No. 11

| Corridor | Date | Time Period (hrs) | Total Transfer Capability (TTC) | Reliability Margin (RM) | 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 December 2013 to 31st December 2013 | 00-24 | 2500 | 500 | 2000 | 361 | 1639 | | |
| WR-NR ¹ | 1st December 2013 to 31st December 2013 | 00-17 | 3900 | 500 | 3400 | 3181 | 219 | | |
| | | 23-24 | | | | | | | |
| | | 17-23 | 3900 | 3400 | 3181 | 219 | | | |
| NR-ER * | 1st December 2013 to 31st December 2013 | 00-17 | 1000 | 200 | 800 | 200 | 600 | | |
| | | 23-24 | | | | | | | |
| | | 17-23 | 1100 | 900 | 700 | | | | |
| ER-NR | 1st December 2013 to 31st December 2013 | 00-24 | 3800 | 300 | 3500 | 2363 | 1137 | | |
| W3-ER | 1st December 2013 to 2nd December 2013 | 00-24 | 1800 | 300 | 1500 | 0 | 1500 | | |
| | 3rd December 2013 | 00-08 | 1800 | 300 | 1500 | 0 | 1500 | | |
| | | 15-24 | | | | | | | |
| | 04th December 2013 to 31st December 2013 | 08-15' | 1500 | 300 | 1200 | 0 | 1200 | | |
| 00-24 | | 1800 | 300 | 1500 | 0 | 1500 | | | |
| ER-W3 | 1st December 2013 to 31st December 2013 | 00-24 | 1000 | 300 | 700 | 700 | 0 | | |
| WR-SR | 1st December 2013 to 31st December 2013 | 00-24 | 1000 | 0 | 1000 | 1000 | 0 | | |
| SR-WR * | 1st December 2013 to 31st December 2013 | 00-24 | 1000 | 0 | 1000 | 0 | 1000 | | |
| ER-SR | 1st December 2013 | 00-05 | 1250 | 200 | 1050 | 657 | 393 | | |
| | | 10-19 | | | | | | | |
| | 05-10 | 19-24 | 1250 | 200 | 1050 | 657 | 393 | | |
| | | 2nd December 2013 to 3rd December 2013 | 00-05 | 1450 | 200 | 1250 | 657 | 593 | |
| | 10-19 | | | | | | | | |
| | 05-10 | 19-24 | 1450 | 1250 | 593 | | | | |
| | | 4th December 2013 to 5th December 2013 | 00-05 | 1450 | 200 | 1250 | 657 | 593 | |
| | 10-19 | | | | | | | | |
| | 05-10 | 19-24 | 1450 | 1250 | 593 | | | | |
| | | 6th December 2013 | 00-05 | 750 | 0 | 750 | 657 | 93 | |
| | 10-19 | | | | | | | | |
| | 05-10 | 19-24 | 1250 | 200 | 1050 | 657 | 393 | | |
| 7th December 2013 to 31st December 2013 | | 00-05 | 750 | 0 | 750 | 657 | 93 | | |
| | 10-19 | | | | | | | | |
| 05-10 | 19-24 | 1250 | 0 | 1250 | 657 | 593 | | Revised due to change in Load Generation Balance. | |
| | SR-ER * | 1st December 2013 to 31st December 2013 | 00-17 | 800 | 0 | 800 | 197 | 603 | |
| 23-24 | | | | | | | | | |
| 17-23 | | | 900 | 900 | 703 | | | | |
| ER-NER ² | 1st December 2013 to 31st December 2013 | 00-17 | 720 | 50 | 670 | 230 | 440 | | |
| | | 23-24 | | | | | | | |
| | | 17-23 | 640 | 590 | 360 | | | | |
| NER-ER | 1st December 2013 to 31st December 2013 | 00-17 | 570 | 100 | 470 | 0 | 470 | | |
| | | 23-24 | | | | | | | |
| | | 17-23 | 570 | 470 | 470 | | | | |

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|-------------------------|---|-------------------|---------------------------------|-------------------------|-------------------------------------|--|--|-------------------------------------|----------|
| S1-S2 | 1st December 2013 to 31st December 2013 | 00-24 | 5600 | 400 | 5200 | 4900 | 300 | | |
| Import of Punjab | 1st December 2013 to 31st December 2013 | 00-24 | 5600 | 300 | 5300 | 3800 | 1500 | | |
| Import TTC for DD & DNH | 1st December 2013 to 31st December 2013 | 00-24 | 980 | 0 | 980 | LTA and MTOA as per ex-pp schedule | | | |
| W3 zone Injection | 1st December 2013 to 31st December 2013 | 00-08 | 8500 | 200 | 8300 | 7074 | 1226 | | |
| | | 23-24 | 8000 | | 7800 | | 726 | | |
| | | 08-16' | 9000 | | 8800 | | 1726 | | |
| | | 16-17 | 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 Come 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)DB Power, m) KWPC

The figure is based on LTA/MTOA approved by CTU. In actual Operation, due to Units being on Maintenance/ Fuel shortage the LTA/MTOA utilized would be less. RLDC/ NLDC would factor this situation while issuing STOA approvals.

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

- 765 kV Gwalior-Agra one circuit
- 765 kV Bina-Gwalior one circuit

2. ER-NER Total Transfer capability will be reduced to 450 MW in case of outage of any one of the 400kV Purnea-Biharshariff circuit.

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 765 kV Agra-Gwalior (1000 MW SPS setting on each circuit of 765 kV Gwalior-Agra) |
| NR-ER | (n-1) contingency of 400 kV Allahabad-Pusauli |
| ER-NR | (n-1) contingency of 400 kV Kahalgaon-Biharshariff |
| W3-ER | (n-1) contingency of 400kV Sterlite-Rourkela S/C |
| 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 Raigarh-Sterlite |
| WR-SR | Bhadrawati HVDC B/B link capacity |
| SR-WR | Bhadrawati HVDC B/B link capacity |
| ER-SR | Peak: 1. Talcher-Kolar HVDC Capacity; 2. (n-1) contingency of 400 kV Jeypore-Gazuwaka |
| | Off-Peak: 1. Talcher-Kolar HVDC Capacity; 2. (n-1) contingency of 400 kV Jeypore-Gazuwaka |
| | From 2nd to 5th Dec: (n-1) contingency of 400 kV Rourkela-Talcher &(n-1) contingency of 400 kV Jeypore-Gazuwaka |
| SR-ER | |
| ER-NER | (n-1) continecny of 400kV Balipara-Bongaigaon* |
| | (n-1) contingency of 400/220 kV,315 MVA ICT at Misa |
| NER-ER | (n-1) contingency of 400 kV Binaguri-Bongaigaon* |
| | (n-1) contingency of 400 kV Balipara-Bongaigaon |
| 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) contingency of 400 kV 400 kV Raipur-Wardha |

*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 ¹ | 1st December 2013 to 31st December 2013 | 00-17 23-24 | 7700 | 800 | 6900 | 5544 | 1356 | | |
| | | 17-23 | 7700 | | 6900 | | 1356 | | |
| NER ² | 1st December 2013 to 31st December 2013 | 00-17 23-24 | 720 | 50 | 670 | 230 | 440 | | |
| | | 17-23 | 640 | | 590 | | 360 | | |
| WR | | | | | | | | | |
| SR | 1st December 2013 | 00-05 10-19 | 2250 | 200 | 2050 | 1657 | 393 | | |
| | | 05-10 19-24 | 2250 | 200 | 2050 | | 393 | | |
| | 2nd December 2013 to 3rd December 2013 | 00-05 10-19 | 2450 | 200 | 2250 | 1657 | 593 | | |
| | | 05-10 19-24 | 2450 | | 2250 | | 593 | | |
| | 4th December 2013 to 5th December 2013 | 00-05 10-19 | 2450 | 200 | 2250 | 1657 | 593 | | |
| | | 05-10 19-24 | 2450 | | 2250 | | 593 | | |
| | 6th December 2013 | 00-05 10-19 | 1750 | 0 | 1750 | 1657 | 93 | | |
| | | 05-10 19-24 | 2250 | 200 | 2050 | | 393 | | |
| | 7th December 2013 to 31st December 2013 | 00-05 10-19 | 1750 | 0 | 1750 | 1657 | 93 | | Revised due to change in Load Generation Balance. |
| | | 05-10 19-24 | 2250 | 0 | 2250 | | 593 | | |

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

- 765 kV Gwalior-Agra one circuit
- 765 kV Bina-Gwalior one circuit

2. ER-NER Total Transfer capability will be reduced to 450 MW in case of outage of any one of the 400kV Purnea-Biharshariff 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 December 2013 to 31st December 2013 | 00-17 23-24 | 3500 | 700 | 2800 | 561 | 2239 | | |
| | | 17-23 | 3600 | | 2900 | | 2339 | | |
| NER | 1st December 2013 to 31st December 2013 | 00-17 23-24 | 570 | 100 | 470 | 0 | 470 | | |
| | | 17-23 | 570 | | 470 | | 470 | | |
| WR | | | | | | | | | |
| SR* | 1st December 2013 to 31st December 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 Come First Serve).

Limiting Constraints

| | | |
|-----|---------------|---|
| NR | Import | (n-1) contingency of 400 kV Kahalgaon-Biharshariff* High loading of 765 kV Agra-Gwalior (1000 MW SPS setting on each circuit of 765 kV Gwalior-Agra) |
| | Export | (n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak. (n-1) contingency of 400 kV Allahabad-Pusaali |
| NER | Import | (n-1) contingency of 400kV Balipara-Bongaigaon* (n-1) contingency of 400/220 kV,315 MVA ICT at Misa |
| | Export | (n-1) contingency of 400 kV Binaguri-Bongaigaon* (n-1) contingency of 400 kV Balipara-Bongaigaon |
| SR | Import | Bhadrawati HVDC B/B link capacity 1. Talcher-Kolar HVDC Capacity; 2. (n-1) contingency of 400 kV Jeypore-Gazuwaka From 2nd to 5th Dec: (n-1) contingency of 400 kV Rourkela-Talcher &(n-1) contingency of 400 kV Jeypore-Gazuwaka |
| | Export | |

*Primary constraints

National Load Despatch Centre
Total Transfer Capability for December 2013

| Revision No | Date of Revision | Period of Revision | Reason for Revision | Corridor Affected |
|-------------|------------------|--------------------------|--|-------------------|
| 1 | 10-09-2013 | Whole Month | Revised due to commissioning of Sasan UMPP Unit 30 | WR-NR |
| | | | Increase in share of Punjab from Sasan, DSTPS, Parbati-III | Import of Punjab |
| 2 | 09-10-2013 | Whole Month | Revised considering SPS setting of 1000 MW on each circuit of 765 kV Agra-Gwalior | WR-NR |
| | | | Margin revised considering reduction in MTOA quantum. | W3 |
| 3 | 29-10-2013 | Whole Month | Margin on NR-ER Corridor revised considering the LTA/MTOA on NR-ER Path | NR-ER |
| 4 | 27-11-2013 | Whole Month | Revised due to change in Load Generation in WR/NR | WR-NR |
| | | | Commissioning of 400 kV Purnea-Biharshariff D/C and Network reconfiguration at Malda & Purnea. | ER-NR/ER-NER |
| | | | Change in Load Generation Balance in ER | ER-SR |
| | | | Revised due to Non-Commissioning of Kundankulam and NLC-II Exp unit-1. | S1-S2 |
| | | | Revised due to change in Inter-Regional flow pattern and Load generation change in ER/WR. | W3 Zone Injection |
| 5 | 27-11-2013 | Whole Month | Reliability Margin included. | ER-SR |
| | | | Revised due to increase in LTA/MTOA quantum. | NR-WR |
| 6 | 27-11-2013 | 1st Dec 13 to 2nd Dec 13 | Revised due to reduction in Talcher Stage-2 Generation | ER-SR |
| 7 | 01-12-2013 | 2nd Dec 13 to 3rd Dec 13 | Revised due to reduction in Talcher Stage-2 Generation | ER-SR |
| 8 | 02-12-2013 | 3rd Dec 13 | Revised due to emergency shutdown of 400 kV SEL-Rourkela Ckt 1 | W3-ER |
| 9 | 03-12-2013 | 4th Dec 13 to 6th Dec 13 | Revised due to reduction in Talcher Stage-2 Generation | ER-SR |
| 10 | 05-12-2013 | 06th Dec 13 | Revised due to increase in Talcher Stage-2 Generation | ER-SR |
| 11 | 06-12-2013 | 7th Dec 13 | Revised due to change in Load Generation Balance. | ER-SR |

ASSUMPTIONS IN BASECASE

Month : December '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 | 7000 | 4924 | 2546 | 2351 |
| 2 | Haryana | 5559 | 4660 | 2770 | 2770 |
| 3 | Rajasthan | 7051 | 6539 | 4002 | 4002 |
| 4 | Delhi | 3974 | 3720 | 1514 | 1514 |
| 5 | Uttar Pradesh | 11000 | 10322 | 6008 | 5756 |
| 6 | Jammu & Kashmir | 1876 | 1185 | 584 | 429 |
| 7 | Uttarakhand | 1543 | 902 | 713 | 340 |
| 8 | Himachal Pradesh | 1327 | 730 | 444 | 523 |
| 9 | Chandigarh | 224 | 118 | 0 | 0 |
| 10 | ISGS/IPPs | | | 16740 | 11303 |
| | Total NR | 39554 | 33100 | 35321 | 28988 |
| II | EASTERN REGION | | | | |
| 1 | West Bengal | 4900 | 4500 | 4837 | 3944 |
| 2 | Jharkhand | 1110 | 770 | 561 | 561 |
| 3 | Orissa | 3500 | 2200 | 2430 | 1699 |
| 4 | Bihar | 1820 | 1320 | 0 | 0 |
| 5 | Damodar Valley Corporation | 2600 | 2035 | 3439 | 3039 |
| 6 | Sikkim | 40 | 40 | | |
| 7 | Bhutan | 110 | 110 | 648 | 648 |
| 8 | ISGS/IPPs | 131 | 241 | 6494 | 6762 |
| | Total ER | 14211 | 11216 | 18409 | 16653 |
| III | WESTERN REGION | | | | |
| 1 | Chattisgarh | 3181 | 2462 | 1804 | 1065 |
| 2 | Madhya Pradesh | 7637 | 5600 | 9905 | 7817 |
| 3 | Maharashtra | 15506 | 12500 | 4366 | 2928 |
| 4 | Gujarat | 11119 | 10121 | 11221 | 8374 |
| 5 | Goa | 432 | 281 | 0 | 0 |
| 6 | Daman and Diu | 245 | 208 | 0 | 0 |
| 7 | Dadra and Nagar Haveli | 604 | 471 | 0 | 0 |
| 8 | ISGS/IPPs | 590 | 590 | 16763 | 15466 |
| | Total WR | 39314 | 32233 | 44059 | 35650 |

| | | | | | |
|-----------|-----------------------------|---------------|---------------|---------------|---------------|
| IV | SOUTHERN REGION | | | | |
| 1 | Andhra Pradesh | 10900 | 9350 | 7204 | 6066 |
| 2 | Tamil Nadu | 11300 | 8617 | 6433 | 4962 |
| 3 | Karnataka | 7800 | 6499 | 5213 | 3549 |
| 4 | Kerala | 3225 | 2234 | 1917 | 760 |
| 5 | Pondy | 320 | 244 | 0 | 0 |
| 6 | Goa | 80 | 80 | 0 | 0 |
| 7 | ISGS/IPPs | | | 11130 | 10168 |
| | Total SR | 33625 | 27024 | 31897 | 25505 |
| V | NORTH-EASTERN REGION | | | | |
| 1 | Manipur | 130 | 91 | 0 | 0 |
| 2 | Meghalaya | 280 | 196 | 110 | 95 |
| 3 | Mizoram | 85 | 60 | 8 | 4 |
| 4 | Nagaland | 120 | 84 | 20 | 10 |
| 5 | Assam | 1350 | 970 | 220 | 180 |
| 6 | Tripura | 260 | 130 | 100 | 100 |
| 7 | Arunachal Pradesh | 130 | 91 | 0 | 0 |
| 8 | ISGS/IPPs | | | 1020 | 735 |
| | Total NER | 2355 | 1622 | 1478 | 1124 |
| | Total All India | 129059 | 105195 | 131164 | 107920 |