

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

Issue Date: 15/02/2013

Issue Time: 1030 hrs

Revision No. 4

| 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) | Comments  |
|-------------------------|-----------------------------------|-------------------|---------------------------------|--------------------|-------------------------------------|--|--|---|
| NR-WR                   | 1st March 2013 to 31st March 2013 | 00-24             | 1500                            | 200                | 1300                                | 286  | 1014   |   |
| WR-NR#                  | 1st March 2013 to 31st March 2013 | 00-24             | 2000                            | 200                | 1800                                | 1040   | 760  | Review and dynamic studies carried out to reassess transfer capability  |
| NR-ER                   | 1st March 2013 to 31st March 2013 | 00-17             | 800                             | 200                | 600                                 | 0  | 600  |   |
|                         |                                   | 23-24             | 900                             |                    | 700                                 |  | 700  |   |
| ER-NR                   | 1st March 2013 to 31st March 2013 | 00-17             | 2500                            | 300                | 2200                                | 1912   | 288  |   |
|                         |                                   | 23-24             |                                 |                    |                                     | 1912   | 288  |   |
| W3-ER                   | 1st March 2013 to 31st March 2013 | 00-24             | 1400                            | 300                | 1100                                | 0  | 1100   |   |
| ER-W3                   | 1st March 2013 to 31st March 2013 | 00-24             | 1000                            | 300                | 700                                 | 650  | 50   |   |
| WR-SR                   | 1st March 2013 to 31st March 2013 | 00-24             | 1000                            | 0                  | 1000                                | 992  | 8  |   |
| SR-WR                   | 1st March 2013 to 31st March 2013 | 00-24             | 1000                            | 0                  | 1000                                | 0  | 1000   |   |
| ER-SR                   | 1st March 2013 to 31st March 2013 | 00-05             | 700                             | 0                  | 700                                 | 170  | 530  |   |
|                         |                                   | 10-19             | 700                             |                    | 700                                 |  | 530  |   |
| SR-ER                   | 1st March 2013 to 31st March 2013 | 00-17             | 700                             | 0                  | 700                                 | 197  | 503  |   |
|                         |                                   | 23-24             | 700                             |                    | 700                                 |  | 503  |   |
| ER-NER                  | 1st March 2013 to 31st March 2013 | 00-17             | 400                             | 35                 | 365                                 | 228  | 137  |   |
|                         |                                   | 23-24             | 400                             |                    | 365                                 | 228  | 137  |   |
| NER-ER                  | 1st March 2013 to 31st March 2013 | 00-17             | 510                             | 100                | 410                                 | 0  | 410  |   |
|                         |                                   | 23-24             | 280                             |                    | 180                                 |  | 180  |   |
| S1-S2                   | 1st March 2013 to 31st March 2013 | 00-24             | 5800                            | 200                | 5600                                | 4400   | 1200   |   |
| Import of Punjab        | 1st March 2013 to 31st March 2013 | 00-24             | 5400                            | 300                | 5100                                | 3243   | 1857   |   |
| Import TTC for DD & DNH | 1st March 2013 to 31st March 2013 | 00-24             | 980                             | 0                  | 980                                 | LTA and MTOA as per ex-pp schedule                     |  |   |
| W3 zone Injection       | 1st March 2013 to 31st March 2013 | 00-17,            | 8000                            | 200                | 7800                                | 6413   | 1387   | 6413 MW corresponds to maximum effective LTA from W3. Export Margin from W3 would vary as per the maintenance schedule of generators in the zone. |
|                         |                                   | 23-24             | 8500                            |                    | 8300                                |  | 1887   |   |

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 and would be operational wef 0000 hrs of 18th September 2012

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

## Limiting Constraints

| Corridor                  | Constraint   |
|---------------------------|--|
| <b>NR-WR</b>              | (n-1) contingency of 400kV Bina(PG)-Bina(MP)   |
| <b>WR-NR</b>              | (n-1) contingency of 400 kV Bina-Satna leading to high loading of 765/ 400 kV Bina transformer   |
| <b>NR-ER</b>              | (n-1) contingency of 400 kV Pusauli-Biharsharif  |
| <b>ER-NR</b>              | (n-1) contingency of 400 kV Farakka-Malda  |
| <b>WR-ER</b>              | (n-1) contingency of 400 kV Sterlite-Rourkela  |
| <b>ER-WR</b>              | High loading of 400 kV Raipur-Wardha, Raipur-Bhadrawati T/C, Bhilai-Bhadrawati S/C, Bhilai-Koradi and Bhilai-Seoni*<br>(n-1) contingency of 400kV Rourkela-Raigarh |
| <b>WR-SR</b>              | Bhadrawati HVDC B/B link capacity  |
| <b>SR-WR</b>              | Bhadrawati HVDC B/B link capacity  |
| <b>ER-SR</b>              | (n-1) contingency of 400 kV Vijaywada-Nellore*<br>Low Voltage in Chennai Area<br>(n-1) contingency of 400 kV Rourkela-Talcher*                                     |
| <b>SR-ER</b>              | (n-1) contingency of 400 kV Farakka-Malda*<br>(n-1) contingency of 400 kV Kadappa-Kolar and Neyvelli- Sriperumbudur  |
| <b>ER-NER</b>             | (n-1) contingency of 400 kV Farakka-Malda*<br>High Loading of 220 kV BTPS-Agia<br>(n-1) contingency of 400 kV Balipara – Bongaigaon-I                              |
| <b>NER-ER</b>             | (n-1) contingency of 400 kV Balipara-Bongaigaon-I<br>(n-1) contingency of 220 kV Samaguri – Saruajai I*  |
| <b>S1-S2</b>              | (n-1) contingency of 400 kV Hosur-Salem D/C line   |
| <b>Import of Punjab</b>   | (n-1) contingency of ICT at Moga   |
| <b>W3 zone export TTC</b> | (n-1) contingency of 400 kV Raipur-Wardha and High loading of 400 kV Bhilai-Koradi   |

\*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) | Comments   |
|----------|-----------------------------------|-------------------|---------------------------------|--------------------|-------------------------------------|--|--|--|
| ER       |                                   |                   |                                 |                    |                                     |  |  |  |
| NR#      | 1st March 2013 to 31st March 2013 | 00-17             | 4500                            | 500                | 4000                                | 2952   | 1048   | Review and dynamic studies carried out to reassess transfer capability |
|          |                                   | 23-24             |                                 |                    | 4000                                |  |  |  |
| NER      | 1st March 2013 to 31st March 2013 | 00-17             | 400                             | 35                 | 365                                 | 228  | 137  |  |
|          |                                   | 23-24             |                                 |                    | 365                                 |  |  |  |
| WR       |                                   | 17-23             | 400                             |                    |                                     |  |  |  |
|          |                                   |                   |                                 |                    |                                     |  |  |  |
| SR       | 1st March 2013 to 31st March 2013 | 00-05             | 1700                            | 0                  | 1700                                | 1162   | 538  |  |
|          |                                   | 10-19             |                                 |                    | 1700                                |  | 538  |  |
|          |                                   | 05-10             |                                 |                    |                                     |  |  |  |
|          |                                   | 19-24             |                                 |                    |                                     |  |  |  |

### 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) | Comments |
|----------------|-----------------------------------|-------------------|---------------------------------|--------------------|-------------------------------------|--|--|----------|
| ER-NR + ER-NER | 1st March 2013 to 31st March 2013 | 00-17             | 2700                            | 350                | 2350                                | 2132   | 218  |          |
|                |                                   | 23-24             | 2700                            |                    | 2350                                |  | 218  |          |
| NR             | 1st March 2013 to 31st March 2013 | 00-17             | 2300                            | 200                | 2100                                | 286  | 1814   |          |
|                |                                   | 23-24             | 2400                            |                    | 2200                                |  | 1914   |          |
| NER            | 1st March 2013 to 31st March 2013 | 00-17             | 510                             | 100                | 410                                 | 0  | 410  |          |
|                |                                   | 23-24             | 280                             |                    | 180                                 |  | 180  |          |
| WR             |                                   | 17-23             |                                 |                    |                                     |  |  |          |
|                |                                   |                   |                                 |                    |                                     |  |  |          |
| SR             | 1st March 2013 to 31st March 2013 | 00-17             | 1700                            | 0                  | 1700                                | 197  | 1503   |          |
|                |                                   | 23-24             |                                 |                    | 1700                                |  | 1503   |          |
|                |                                   | 17-23             |                                 |                    |                                     |  |  |          |

## Limiting Constraints

|                           |               |  |
|---------------------------|---------------|--|
| <b>NR</b>                 | <b>Import</b> | (n-1) contingency of 400 kV Farakka-Malda*   |
|                           | <b>Export</b> | (n-1) contingency of 400 kV Bina-Satna leading to high loading of 765/ 400 kV Bina transformers*<br>(n-1) contingency of 400kV Bina(PG)-Bina(MP)<br>(n-1) contingency of 400 kV Pusauli-Biharsharif        |
| <b>NER</b>                | <b>Import</b> | High Loading of 220 kV BTPS-Agia<br>(n-1) contingency of 400 kV Balipara – Bongaigaon-I<br>(n-1) contingency of 400 kV Farakka-Malda*  |
|                           | <b>Export</b> | (n-1) contingency of 220 kV Samaguri – Saruajai I*<br>(n-1) contingency of 400 kV Balipara-Bongaigaon-I  |
| <b>SR</b>                 | <b>Import</b> | (n-1) Coningency of 400kV Gooty-Somanhalli & 400kV Gooty-Nelamangala line<br>(n-1) contingency of 400 kV Rourkela-Talcher*<br>Low Voltage in Chennai Area<br>(n-1) contingency of 400 kV Vijaywada-Nellore |
|                           | <b>Export</b> | (n-1) contingency of 400 kV Farakka-Malda<br>(n-1) contingency of 400 kV Maithon-Kahalgaon<br>(n-1) contingency of 400 kV Kadappa-Kolar and Neyvelli- Sriperumbudur  |
| <b>ER-NR +<br/>ER-NER</b> | <b>Export</b> | (n-1) contingency of 400 kV Farakka-Malda*   |

## ASSUMPTIONS IN BASECASE

| S.No.      | Name of State/Area          | Load           |                    | Generation    |               |
|------------|-----------------------------|----------------|--------------------|---------------|---------------|
|            |                             | Peak Load (MW) | Off Peak Load (MW) | Peak (MW)     | Off Peak (MW) |
| <b>I</b>   | <b>NORTHERN REGION</b>      |                |                    |               |               |
| 1          | Punjab                      | 5678           | 4250               | 2437          | 2318          |
| 2          | Haryana                     | 5592           | 4591               | 3623          | 3623          |
| 3          | Rajasthan                   | 7243           | 6793               | 4084          | 4089          |
| 4          | Delhi                       | 4090           | 3299               | 1206          | 1206          |
| 5          | Uttar Pradesh               | 10774          | 9516               | 6020          | 5839          |
| 6          | Jammu & Kashmir             | 1800           | 1359               | 333           | 339           |
| 7          | Uttarakhand                 | 1365           | 1100               | 523           | 302           |
| 8          | Himachal Pradesh            | 1043           | 959                | 218           | 131           |
| 9          | Chandigarh                  | 188            | 86                 | 0             | 0             |
| 10         | ISGS                        |                |                    | 16384         | 11062         |
|            | <b>Total NR</b>             | <b>37773</b>   | <b>31952</b>       | <b>34828</b>  | <b>28910</b>  |
| <b>II</b>  | <b>EASTERN REGION</b>       |                |                    |               |               |
| 1          | West Bengal                 | 6457           | 5456               | 4744          | 4088          |
| 2          | Jharkhand                   | 964            | 650                | 354           | 354           |
| 3          | Orissa                      | 3009           | 2300               | 1710          | 1611          |
| 4          | Bihar                       | 1805           | 1450               | 101           | 101           |
| 5          | Damodar Valley Corporation  | 2303           | 2000               | 2954          | 2954          |
| 6          | Sikkim                      | 44             | 44                 | 0             | 0             |
| 7          | Bhutan                      | 112            | 112                | 245           | 245           |
| 8          | ISGS                        |                |                    | 6505          | 5995          |
|            | <b>Total ER</b>             | <b>14694</b>   | <b>12012</b>       | <b>16613</b>  | <b>15348</b>  |
| <b>III</b> | <b>WESTERN REGION</b>       |                |                    |               |               |
| 1          | Chattisgarh                 | 3153           | 2242               | 2518          | 2025          |
| 2          | Madhya Pradesh              | 7200           | 5146               | 3443          | 2802          |
| 3          | Maharashtra                 | 15717          | 13582              | 13113         | 9454          |
| 4          | Gujarat                     | 10497          | 8800               | 9933          | 7564          |
| 5          | Goa                         | 420            | 280                |               |               |
| 6          | Daman and Diu               | 252            | 190                |               |               |
| 7          | Dadra and Nagar Haveli      | 602            | 504                |               |               |
| 8          | ISGS                        |                |                    | 11920         | 11796         |
|            | <b>Total WR</b>             | <b>37841</b>   | <b>30744</b>       | <b>40927</b>  | <b>33641</b>  |
| <b>IV</b>  | <b>SOUTHERN REGION</b>      |                |                    |               |               |
| 1          | Andhra Pradesh              | 10835          | 9993               | 8217          | 6817          |
| 2          | Tamil Nadu                  | 10456          | 8310               | 5148          | 4619          |
| 3          | Karnataka                   | 8521           | 7469               | 5482          | 4397          |
| 4          | Kerala                      | 3314           | 2209               | 2248          | 645           |
| 5          | Pondy                       | 320            | 231                |               |               |
| 6          | Goa                         | 84             | 84                 |               |               |
| 7          | ISGS                        |                |                    | 10955         | 10772         |
|            | <b>Total SR</b>             | <b>33530</b>   | <b>28296</b>       | <b>32050</b>  | <b>27250</b>  |
| <b>V</b>   | <b>NORTH-EASTERN REGION</b> |                |                    |               |               |
| 1          | Manipur                     | 100            | 70                 | 0             | 0             |
| 2          | Meghalaya                   | 280            | 196                | 99            | 71            |
| 3          | Mizoram                     | 70             | 49                 | 4             | 3             |
| 4          | Nagaland                    | 110            | 77                 | 11            | 10            |
| 5          | Assam                       | 1230           | 840                | 222           | 203           |
| 6          | Tripura                     | 221            | 155                | 94            | 91            |
| 7          | Arunachal Pradesh           | 105            | 74                 | 0             | 0             |
| 8          | ISGS                        | 0              | 0                  | 934           | 499           |
|            | <b>Total NER</b>            | <b>2116</b>    | <b>1461</b>        | <b>1364</b>   | <b>877</b>    |
|            | <b>Total All India</b>      | <b>125954</b>  | <b>104465</b>      | <b>125782</b> | <b>106026</b> |