# National Load Despatch Centre Total Transfer Capability for February 2019

Issue Date: 28th January 2019 Issue Time: 1600 hrs Revision No. 3

| Corridor | Date  | Time<br>Period<br>(hrs) | Total<br>Transfer<br>Capability<br>(TTC) | Reliability<br>Margin        | Available<br>Transfer<br>Capability<br>(ATC) | Long Term<br>Access (LTA)/<br>Medium Term<br>Open Access<br>(MTOA) # | Margin<br>Available for<br>Short Term<br>Open Access<br>(STOA) | Changes<br>in TTC<br>w.r.t.<br>Last<br>Revision | Comments  |  |  |
|----------|---|-------------------------|--|------------------------------|--|--|--|---|---|--|--|
|          | 1st February                                  | 00-06                   |  |                              |  | 195  | 1805   |   |   |  |  |
| NR-WR*   | 2019 to 28th                                  | 06-18                   | 2500                                     | 500                          | 2000   | 250  | 1750   |   |   |  |  |
|          | February 2019                                 | 18-24                   |  |                              |  | 195  | 1805   |   |   |  |  |
| WR-NR*   | 1st February<br>2019 to 28th<br>February 2019 | 00-24                   | 13250<br>12300**                         | 500                          | 12750<br>11800**                             | 9383<br>8433**   | 3367<br>3367**   | 1000  | Revised TTC due to normalization of Champa Kurukshetra bipole |  |  |
|          | 1-4 E-1                                       | 00.06                   | 2000                                     |                              | 1000   | 102  | 1607   | 1   | I   |  |  |
| NR-ER*   | 1st February<br>2019 to 28th                  | 00-06<br>06-18          | 2000<br>2000                             | 200                          | 1800<br>1800                                 | 193<br>303   | 1607<br>1497   |   |   |  |  |
| I I I I  | February 2019                                 | 18-24                   | 2000                                     | 200                          | 1800   | 193  | 1607   |   |   |  |  |
| ER-NR*   | 1st February<br>2019 to 28th<br>February 2019 | 00-24                   | 5250                                     | 300                          | 4950   | 3892   | 1058   |   |   |  |  |
| W3-ER    | 1st February<br>2019 to 28th<br>February 2019 | 00-24                   |  | No limit is being specified. |  |  |  |   |   |  |  |
| ER-W3    | 1st February<br>2019 to 28th<br>February 2019 | 00-24                   |  | No limit is being specified. |  |  |  |   |   |  |  |
|          |   |                         |  |                              |  |  |  |   |   |  |  |
|          | 1st February                                  | 00-05                   | 5550                                     |                              | 5050   |  | 615  |   | Revised STOA margin due to                                    |  |  |
| WR-SR    | 2019 to 28th                                  |                         |  | 05-22                        | 5550   | 500  | 5050   | 4435  | 615   |  | termination of 100 MW MTOA from<br>LANCO Anpara power limited to |
|          | February 2019                                 | 22-24                   | 5550                                     |                              | 5050   |  | 615  |   | TANGEDCO  |  |  |
| SR-WR *  | 1st February<br>2019 to 28th<br>February 2019 | 00-24                   |  | No limit is being Specified. |  |  |  |   |   |  |  |
|          | 4 - 5 - 1                                     | 00-06                   |  |                              |  | 2762   | 1938   |   |   |  |  |
| ER-SR    | 1st February<br>2019 to 28th                  | 06-18                   | 4950                                     | 250                          | 4700   | 2847   | 1853   |   |   |  |  |
| DIC-DIC  | February 2019                                 | 18-24                   | 4750                                     | 250                          | 4700   | 2762   | 1938   |   |   |  |  |
| SR-ER *  | 1st February<br>2019 to 28th<br>February 2019 | 00-24                   |  | No limit is being Specified. |  |  |  |   |   |  |  |

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|----------------------|---|-------------------------|--|-----------------------|--|--|--|---|------------------------------------|
| ER-NER               | 1st February<br>2019 to 28th                  | 00-17<br>17-23          | 1250<br>1110                             | 45                    | 1205<br>1065                                 | 225  | 980<br>840   |   |                                    |
|                      | February 2019                                 | 23-24                   | 1250                                     |                       | 1205   | 220  | 980  |   |                                    |
|                      | 1st February                                  | 00-17                   | 2030                                     |                       | 1985   |  | 1985   |   |                                    |
| NER-ER               | 2019 to 28th                                  | 17-23                   | 2100                                     | 45                    | 2055   | 0  | 2055   |   |                                    |
|                      | February 2019                                 | 23-24                   | 2030                                     |                       | 1985   |  | 1985   |   |                                    |
|                      |   |                         |  |                       |  |  |  |   |                                    |
| W3 zone<br>Injection | 1st February<br>2019 to 28th<br>February 2019 | 00-24                   | No limit is be                           | eing specified        | (In case ofany                               | constraints appear   | ing in the system,   | W3 zone ex                                      | port would be revised accordingly) |

Note: TTC/ATC of S1-(S2&S3) corridor, Import of S3(Kerala), Import of Punjab and Import of DD & DNH is uploaded on NLDC website under Intra-Regional Section in Monthly ATC.

- 1) S1 comprises of Telangana, AP and Karnataka; S2 comprises of Tamil Nadu and Puducherry; S3 comprises Kerala
- 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) KWPCL, n)Vandana Vidyut o)RKM, p)GMR Raikheda, q)Ind Barath and any other regional entity generator in Chhattisgarh

# 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 commissionned 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 willl be revised to normal values if the shutdown is not being availed in real time.

<sup>\*</sup> 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).

<sup>\*\*</sup>Considering 400 kV Rihand stage-III - Vindhyachal PS D/C line as inter-regional line for the purpose of scheduling, metering and accounting and 950 MW ex-bus generation in Rihand stage-III. Rihand Stage-III generation is considered as NR regional entity.

#### **Simultaneous Import Capability**

| Corrido<br>r | Date                         | Time<br>Period<br>(hrs) | Total<br>Transfer<br>Capability<br>(TTC) | Reliability<br>Margin | Available<br>Transfer<br>Capability<br>(ATC) | Long Term<br>Access (LTA)/<br>Medium Term<br>Open Access<br>(MTOA) | Margin<br>Available for<br>Short Term<br>Open Access<br>(STOA) | Changes<br>in TTC<br>w.r.t.<br>Last<br>Revision | Comments  |  |
|--------------|------------------------------|-------------------------|--|-----------------------|--|--|--|---|---|--|
| ER           |                              |                         |  |                       |  |  |  |   |   |  |
|              |                              |                         | 17650                                    |                       | 16850  |  | 3575   |   |   |  |
|              |                              | 00-06                   | 16700**                                  |                       | 15900**                                      |  | 3575**   | 150   |   |  |
|              |                              | 0.6.15                  | 18900                                    |                       | 18100  |  | 4825   | 1.400   |   |  |
|              |                              | 06-17                   | 17950**                                  |                       | 17150**                                      |  | 4825**   | 1400  | Revised TTC due to: (a) Normalization of Champa Kurukshetra bipole (b) change in pattern of inter- regional flow towards NR |  |
| NR           | 1st February<br>2019 to 28th | 17-18                   | 17000                                    | 800                   | 16200  | 13275  | 2925   | -500  |   |  |
|              | February 2019                |                         | 16050**                                  |                       | 15250**                                      | 12325**  | 2925**   |   |   |  |
|              |                              | 18-23                   | 17000                                    | 16200                 |  | 2925   | 1300   |   |   |  |
|              |                              | 16-23                   | 16050**                                  |                       | 15250**                                      |  | 2925**   |   |   |  |
|              |                              | 22.24                   | 17000                                    |                       | 16200  |  | 2925   |   |   |  |
|              |                              | 23-24                   | 4 16050**                                |                       | 15250**                                      |  | 2925**   | -500  |   |  |
|              | 1st February                 | 00-17                   | 1250                                     |                       | 1205   |  | 980  |   |   |  |
| NER          | 2019 to 28th                 | 17-23                   | 1110<br>1250                             | 45                    | 1065   | 225  | 980<br>980   |   |   |  |
|              | February 2019                | 23-24                   | 1250                                     |                       | 1205   |  | 980  |   |   |  |
| WR           |                              |                         |  |                       |  |  |  |   |   |  |
|              | 1st February                 | 00-06                   | 10500                                    |                       | 9750   | 7197   | 2553   |   | Revised STOA margin due to  |  |
| SR           | 2019 to 28th                 | 06-18                   | 10500                                    | 750                   | 9750   | 7282   | 2468   |   | termination of 100 MW MTOA from LANCO Anpara power  |  |
|              | February 2019                | 18-24                   | 10500                                    |                       | 9750   | 7197   | 2553   |   | limited to TANGEDCO   |  |

<sup>\*</sup> 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).

\*\*Considering 400 kV Rihand stage-III - Vindhyachal PS D/C line as inter-regional line for the purpose of scheduling, metering and accounting and 950 MW ex-bus generation in Rihand stage-III. Rihand Stage-III generation is considered as NR regional entity.

Margin in Simultaneous import of NR = A

WR-NR ATC =B

ER-NRATC = C

Margin for WR-NR applicants = A \* B/(B+C)

Margin for ER-NR Applicants = A \* C/(B+C)

<sup>\*</sup> For approving STOA Bilateral transactions, margin available in Simultaneous Import of NR would be apportioned on WR-NR Corridor & ER-NR Corridor in the following ratio:

## **Simultaneous Export Capability**

| Corridor |               | Time<br>Period<br>(hrs) | Total<br>Transfer<br>Capability<br>(TTC) | Reliability<br>Margin | Available<br>Transfer<br>Capability<br>(ATC) | Long Term<br>Access (LTA)/<br>Medium Term<br>Open Access<br>(MTOA) | Margin<br>Available for<br>Short Term<br>Open Access<br>(STOA) | Changes<br>in TTC<br>w.r.t.<br>Last<br>Revision | Comments |
|----------|---------------|-------------------------|--|-----------------------|--|--|--|---|----------|
|          | 1st February  | 00-06                   | 4500                                     | 4500                  | 3800   | 388  | 3412   |   |          |
| NR*      | 2019 to 28th  | 06-18                   |  | 700                   | 3800   | 553  | 3247   |   |          |
|          | February 2019 | 18-24                   | 4500                                     |                       | 3800   | 388  | 3412   |   |          |
|          | 1st February  | 00-17                   | 2030                                     |                       | 1985   | 0  | 1985   |   |          |
| NER      | 2019 to 28th  | 17-23                   | 2100                                     | 45                    | 2055   |  | 2055   |   |          |
|          | February 2019 | 23-24                   | 2030                                     |                       | 1985   |  | 1985   |   |          |
| WD       |               |                         |  |                       |  |  |  |   |          |
| WR       |               |                         |  |                       |  |  |  |   |          |
|          | 1st February  |                         |  | •                     | •  |  |  |   |          |
| SR *     | 2019 to 28th  | 00-24                   |  |                       |  | No limit is be   | eing Specified.  |   |          |
|          | February 2019 |                         |  |                       |  |  |  |   |          |

<sup>\*</sup> 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 (Corridor wise)**

|                      |  | <b>Applicable Revisions</b> |
|----------------------|--|-----------------------------|
| Corridor             | Constraint   |                             |
| NR-WR                | (n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak  | Rev-0 to 3                  |
|                      | (n-1) Contingnecy of 765kV Aligarh-Jhatikara leads to 2500 MW loading on 765kV Aligarh-Greater Noida.  | Rev-0 to 2                  |
|                      | n-1 contingency of 2x1500 MVA, 765/400 kV ICTs at Agra (PG) will lead to overloading of the second ICT   | Rev-3                       |
| WR-NR                | Frequent tripping of HVDC Champa - Kurukshetra poles   | Rev-0 to 1                  |
| ,,,===,==            | RVO operation of HVDC Champa Kurukshetra Poles   | Rev-2                       |
|                      | Reversal of BNC-Agra pole towards BNC & blocking of APD-Agra pole due to lean hydro period in NER  | Rev - 2                     |
| NR-ER                | (n-1) contingency of 400 kV Saranath-Pusauli   | Rev-0 to 3                  |
| ER-NR                | 1. N-1 contingencies of 400 kv Mejia-Maithon A S/c 2. N-1 contingencies of 400 kv Kahalgaon-Banka S/c 3. N-1 contingencies of 400kV MPL- Maithon S/C | Rev-0 to 3                  |
| WR-SR                | n-1 contingency of 2x315 MVA, 400/220 kV ICTs at Mardam will lead to overloading of the second ICT   | Rev-0 to 3                  |
| and ER-              | n-1 contingency of 2x1500 MVA, 765/400 kV ICTs at Vemagiri (PG) will lead to overloading of the second ICT   | Rev-1 to 3                  |
| SR                   | Low Voltage at Gazuwaka (East) Bus.  | Rev-0 to 3                  |
| ER-NER               | a. (n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa<br>b. High loading of 220 kV Balipara-Sonabil line(200 MW)                                | Rev-0 to 3                  |
| NER-ER               | (n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other ICT at Misa   | Rev-0 to 3                  |
| W3 zone<br>Injection |  | Rev-0 to 3                  |

## **Limiting Constraints (Simultaneous)**

|     |        |  | Applicable Revisions |
|-----|--------|--|----------------------|
|     |        | 1. N-1 contingencies of 400 kv Mejia-Maithon A S/c 2. N-1 contingencies of 400 kv Kahalgaon-Banka S/c 3. N-1 contingencies of 400kV MPL- Maithon S/c | Rev-0 to 3           |
|     | Import | (n-1) Contingnecy of 765kV Aligarh-Jhatikara leads to 2500 MW loading on 765kV Aligarh-Greater Noida.  | Rev-0 to 2           |
|     | -      | n-1 contingency of 2x1500 MVA, 765/400 kV ICTs at Agra (PG) will lead to overloading of the second ICT   | Rev - 3              |
| NR  |        | Frequent tripping of HVDC Champa - Kurukshetra poles   | Rev-0 to 1           |
|     |        | RVO operation of HVDC Champa Kurukshetra Poles   | Rev-2                |
|     |        | Reversal of BNC-Agra pole towards BNC & blocking of APD-Agra pole due to lean hydro period in NER  | Rev-2                |
|     | Export | (n-1) contingency of 400kV Zerda-Bhinmal and (n-1) contingency of 220kV Badod-Modak.   | Rev-0 to 3           |
|     |        | (n-1) contingency of 400 kV Saranath-Pusauli   | Kev-0 to 3           |
| NER | Import | <ul><li>a. (n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa</li><li>b. High loading of 220 kV Balipara-Sonabil line(200 MW)</li></ul>         | Rev-0 to 3           |
|     | Export | (n-1) contingency of 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other ICT at Misa   | Rev-0 to 3           |
|     | Import | n-1 contingency of 2x315 MVA, 400/220 kV ICTs at Mardam will lead to overloading of the second ICT   | Rev-0 to 3           |
| SR  |        | n-1 contingency of 2x1500 MVA, 765/400 kV ICTs at Vemagiri (PG) will lead to overloading of the second ICT   | Rev-1 to 3           |
|     |        | Low Voltage at Gazuwaka (East) Bus.  | Rev-0 to 3           |

# National Load Despatch Centre Total Transfer Capability for February 2019

| Revision<br>No | Date of<br>Revision | Period of<br>Revision | Reason for Revision/Comment   | Corridor<br>Affected            |
|----------------|---------------------|-----------------------|---|---------------------------------|
| 1              | 1 26th Nov<br>2018  |                       | Revised considering (a) recent commissioning of 765 kV Jharsuguda - Dharamjaygarh 3&4, 765 kV Gadarwara - Warora PS D/C, 765 kV Warora PS - Parli D/C, LILO of Kurnool - Thirvualam D/C at Cuddapah, 400 kV Cuddapah- Hindupur D/C, Salem PS - Madhugiri PS S/C, 765 kV Dharamjaigarh - Champa S/C, 765 kV Champa-Raigarh S/C and 765 kV Sipat-Bilaspur ckt-3 and some other 400 kV lines | WR-SR/ER-<br>SR/Import of<br>SR |
|                |                     |                       | Revised STOA margin due to operatiionalization of additional 20 MW LTA from OKWPL to UP discom  | WR-<br>NR/Import of<br>NR       |
|                | 4th Jan 2019        |                       | Revised STOA margins due to: (i) Additional 20 MW LTA to Delhi from Ostro Kutch Wind Power Ltd (OKWPL) (ii) Operationalization of 108 MW MTOA from SKS Power Gen Ltd to Noida Power Company   | WR-<br>NR/Import of<br>NR       |
| 2              |                     | Whole Month           | Revised TTC due to: (i) Change in load generation balance (ii) Commissioning of circuit 3 & 4 of 765 kV Angul Jharsuguda (iii) Prevailing pattern of load in downstream of 400/220 kV Maradam ICTs  | ER-SR/WR-<br>SR/Import of<br>SR |
|                |                     |                       | Revised TTC due to normalization of Champa Kurukshetra<br>bipole  | WR-<br>NR/Import of<br>NR       |
| 3              | 28th Jan 2019       | Whole Month           | Change in pattern of inter-regional flow towards NR   | Import of NR                    |
|                |                     |                       | Revised STOA margin due to termination of 100 MW MTOA from LANCO Anpara power limited to TANGEDCO   | WR-<br>SR/Import of<br>SR       |

| ASSUN | MPTIONS IN BASECASE        |                |                    |                     |               |
|-------|----------------------------|----------------|--------------------|---------------------|---------------|
|       |                            |                |                    | Month : February'19 |               |
| 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                     | 7631           | 5772               | 3251                | 3146          |
| 2     | Haryana                    | 7632           | 5724               | 2416                | 2391          |
| 3     | Rajasthan                  | 10162          | 9776               | 5870                | 5810          |
| 4     | Delhi                      | 4284           | 2411               | 541                 | 535           |
| 5     | Uttar Pradesh              | 13764          | 12749              | 6360                | 6225          |
| 6     | Uttarakhand                | 1805           | 1059               | 722                 | 371           |
| 7     | Himachal Pradesh           | 1447           | 430                | 204                 | 27            |
| 8     | Jammu & Kashmir            | 2034           | 1268               | 292                 | 235           |
| 9     | Chandigarh                 | 241            | 122                | 0                   | 0             |
| 10    | ISGS/IPPs                  | 30             | 30                 | 18516               | 9378          |
|       | Total NR                   | 49030          | 39342              | 38172               | 28120         |
|       |                            |                |                    |                     |               |
| П     | EASTERN REGION             |                |                    |                     |               |
| 1     | Bihar                      | 3735           | 2405               | 351                 | 207           |
| 2     | Jharkhand                  | 970            | 758                | 360                 | 223           |
| 3     | Damodar Valley Corporation | 2950           | 2695               | 5233                | 4381          |
| 4     | Orissa                     | 3969           | 3029               | 2364                | 1707          |
| 5     | West Bengal                | 6784           | 4742               | 5378                | 4065          |
| 6     | Sikkim                     | 104            | 102                | 0                   | 0             |
| 7     | Bhutan                     | 207            | 199                | 643                 | 643           |
| 8     | ISGS/IPPs                  | 1120           | 1112               | 12272               | 9164          |
|       | Total ER                   | 19839          | 15041              | 26600               | 20390         |
|       |                            |                |                    |                     |               |
| III   | WESTERN REGION             |                |                    |                     |               |
| 1     | Maharashtra                | 17960          | 12988              | 12516               | 9289          |
| 2     | Gujarat                    | 13475          | 11417              | 8764                | 7972          |
| 3     | Madhya Pradesh             | 10868          | 6191               | 5106                | 4336          |
| 4     | Chattisgarh                | 3606           | 2644               | 2248                | 1867          |
| 5     | Daman and Diu              | 324            | 287                | 0                   | 0             |
| 6     | Dadra and Nagar Haveli     | 793            | 707                | 0                   | 0             |
| 7     | Goa-WR                     | 522            | 327                | 0                   | 0             |
| 8     | ISGS/IPPs                  | 4337           | 3466               | 37969               | 26997         |
|       | Total WR                   | 51885          | 38026              | 66603               | 50461         |

| 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       | 8132           | 7088               | 6103       | 4712          |
| 2     | Telangana            | 9743           | 8088               | 4823       | 4423          |
| 3     | Karnataka            | 10431          | 7051               | 7633       | 5219          |
| 4     | Tamil Nadu           | 14513          | 10993              | 6958       | 5513          |
| 5     | Kerala               | 3871           | 2460               | 1678       | 402           |
| 6     | Pondy                | 329            | 347                | 0          | 0             |
| 7     | Goa-SR               | 74             | 78                 | 0          | 0             |
| 8     | ISGS/IPPs            | 0              | 0                  | 14302      | 12230         |
|       | Total SR             | 47093          | 36106              | 41497      | 32500         |
| V     | NORTH-EASTERN REGION |                |                    |            |               |
| 1     | Arunachal Pradesh    | 133            | 76                 | 0          | 0             |
| 2     | Assam                | 1233           | 1073               | 185        | 142           |
| 3     | Manipur              | 162            | 100                | 0          | 0             |
| 4     | Meghalaya            | 301            | 215                | 197        | 96            |
| 5     | Mizoram              | 90             | 67                 | 8          | 8             |
| 6     | Nagaland             | 115            | 74                 | 12         | 12            |
| 7     | Tripura              | 198            | 193                | 72         | 74            |
| 8     | ISGS/IPPs            | 116            | 116                | 1902       | 1449          |
|       | Total NER            | 2348           | 1913               | 2376       | 1781          |
|       | Total All India      | 170195         | 130428             | 175247     | 133253        |