

National Load Despatch Centre
Total Transfer Capability for September 2016

Issue Date: 19/9/2016

Issue Time: 1245 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 Sep 2016 to 30th Sep 2016 | 00-24 | 2500 | 500 | 2000 | 55 | 1945 | | |
| WR-NR* | 1st Sep 2016 to 14th Sep 2016 | 00-24 | 6800 | 500 | 6300 | 6170 | 130 | | |
| | 15th Sep 2016 to 30th Sep 2016 | 00-24 | 6600 | | 6100 | 6170 | 0 | | |
| NR-ER* | 1st Sep 2016 to 30th Sep 2016 | 00-06 | 2000 | 200 | 1800 | 93 | 1707 | | |
| | | 06-18' | 2000 | | 1800 | 158 | 1642 | | |
| | | 18-24 | 2000 | | 1800 | 93 | 1707 | | |
| ER-NR* | 1st Sep 2016 to 30th Sep 2016 | 00-24 | 4400 | 300 | 4100 | 2531 | 1569 | | |
| W3-ER ^s | 1st Sep 2016 to 30th Sep 2016 | 00-24 | No limit is being specified. | | | | | | |
| ER-W3 | 1st Sep 2016 to 30th Sep 2016 | 00-24 | No limit is being specified. | | | | | | |
| WR-SR | 1st Sep 2016 to 19th Sep 2016 | 00-24 | 4000 | 750 | 3250 | 3250 | 0 | | |
| | 20th Sep 2016 to 21st Sep 2016 | 00-07 | 4000 | 750 | 3250 | 3250 | 0 | | |
| | | 07-24 | 3500 | 750 | 2750 | 3250 | 0 | -500 | Revised due to the shutdown of HVDC Bhadrawati Block-1. |
| 22nd Sep 2016 to 30th Sep | 00-24 | 4000 | 750 | 3250 | 3250 | 0 | | | |
| SR-WR * | 1st Sep 2016 to 30th Sep 2016 | 00-24 | No limit is being Specified. | | | | | | |
| ER-SR | 1st Sep 2016 to 13th Sep 2016 | 00-06 | 2650 | 0 | 2650 | 2142 | 508 | | |
| | | 06-18' | | | | 2207 | 443 | | |
| | | 18-24 | | | | 2142 | 508 | | |
| | 14th Sep 2016 to 23rd Sep 2016 | 00-06 | 2650 | 0 | 2650 | 2142 | 508 | | |
| | | 06-18' | | | | 2207 | 443 | | |
| | | 18-24 | | | | 2142 | 508 | | |
| 24th Sep 2016 to 30th Sep 2016 | 00-06 | 2650 | 0 | 2650 | 2585 | 65 | | | |
| | 06-18' | | | | 2650 | 0 | | | |
| | 18-24 | | | | 2585 | 65 | | | |
| SR-ER * | 1st Sep 2016 to 30th Sep 2016 | 00-24 | No limit is being Specified. | | | | | | |
| ER-NER | 1st Sep 2016 to 30th Sep 2016 | 00-17 | 1030 | 45 | 985 | 210 | 775 | | |
| | | 17-23 | 940 | | 895 | | 685 | | |
| | | 23-24 | 1030 | | 985 | | 775 | | |
| NER-ER | 1st Sep 2016 to 30th Sep 2016 | 00-17 | 1530 | 45 | 1485 | 0 | 1485 | | |
| | | 17-23 | 1500 | | 1455 | | 1455 | | |
| | | 23-24 | 1530 | | 1485 | | 1485 | | |
| W3 zone Injection | 1st Sep 2016 to 30th Sep 2016 | 00-24 | No limit is being specified (In case of any constraints appearing in the system, W3 zone export would be revised accordingly) | | | | | | |

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

* 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).

National Load Despatch Centre
Total Transfer Capability for September 2016

Issue Date: 19/9/2016

Issue Time: 1245 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 |
|----------|------|-------------------|---------------------------------|--------------------|-------------------------------------|--|--|-------------------------------------|----------|
|----------|------|-------------------|---------------------------------|--------------------|-------------------------------------|--|--|-------------------------------------|----------|

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 Vidyut o)RKM, p)GMR Raikhada, 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 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-Bhinmal and (n-1) contingency of 220kV Badod-Modak |
| WR-NR | 1. (n-1) Contingency of 765kV Gwalior-Agra one ckt leads to 2750 MW loading on second circuit. 2.High Loading of 400kV Singrauli-Anpara S/C. |
| NR-ER | (n-1) contingency of 400 kV Saranath-Pusauli |
| ER-NR | n-1 contingency of one circuit of 400 kV Biharshariff- Lakhisarai leads to high loading on the other circuit |
| WR-SR & ER-SR | (n-1) contingency of one circuit of 765 kV Raichur - Sholapur will lead to 2500 MW loading on the other circuit Low Voltage at Gazuwaka (East) Bus. |
| ER-NER | (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. n-1 contingency of 400/132 kV, 2 x 200 MVA ICTs at Silchar |
| 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 |
| W3 zone Injection | --- |

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 Sep 2016 to 14th Sep 2016 | 00-18 | 10800 | 800 | 10000 | 8701 | 1299 | | |
| | | 18-23' | 10000 | | 9200 | | 499 | | |
| | | 23-24 | 10800 | | 10000 | | 1299 | | |
| | 15th Sep 2016 to 30th Sep 2016 | 00-18 | 10500 | | 9700 | 8701 | 999 | | |
| | | 18-23' | 9700 | | 8900 | | 199 | | |
| | | 23-24 | 10500 | | 9700 | | 999 | | |
| NER | 1st Sep 2016 to 30th Sep 2016 | 00-17 | 1030 | 45 | 985 | 210 | 775 | | |
| | | 23-24 | | | 940 | | 685 | | |
| | | 17-23 | 940 | | 895 | | | | |
| WR | | | | | | | | | |
| SR | 1st Sep 2016 to 13th Sep 2016 | 00-06 | 6650 | 750 | 5900 | 5392 | 508 | | |
| | | 06-18' | 6650 | | 5900 | 5457 | 443 | | |
| | | 18-24 | 6650 | | 5900 | 5392 | 508 | | |
| | 14th Sep 2016 to 19th Sep 2016 | 00-06 | 6650 | 750 | 5900 | 5392 | 508 | | |
| | | 06-18' | 6650 | | 5900 | 5457 | 443 | | |
| | | 18-24 | 6650 | | 5900 | 5392 | 508 | | |
| | 20th Sep 2016 to 21st Sep 2016 | 00-06 | 6650 | 750 | 5900 | 5392 | 508 | | |
| | | 06-07' | 6650 | | 5900 | 5457 | 443 | | |
| | | 07-18' | 6150 | | 5400 | 5457 | 0 | -500 | Revised due to the shutdown of HVDC Bhadrawati Block-1. |
| | 18-24 | 6150 | 5400 | 5392 | 8 | | | | |
| | 22nd Sep 2016 to 23rd Sep 2016 | 00-06 | 6650 | 750 | 5900 | 5392 | 508 | | |
| | | 06-18' | 6650 | | 5900 | 5457 | 443 | | |
| | | 18-24 | 6650 | | 5900 | 5392 | 508 | | |
| | 24th Sep 2016 to 30th Sep 2016 | 00-06 | 6650 | 750 | 5900 | 5835 | 65 | | |
| | | 06-18' | 6650 | | 5900 | 5900 | 0 | | |
| | | 18-24 | 6650 | | 5900 | 5835 | 65 | | |

* 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).

* 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:

Margin in Simultaneous import of NR = A

WR-NR ATC = B

ER-NR ATC = C

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

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

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 Sep 2016 to 30th Sep 2016 | 00-06 | 4500 | 700 | 3800 | 148 | 3652 | | |
| | | 06-18' | | | 3800 | 213 | 3587 | | |
| | | 18-24 | 4500 | | 3800 | 148 | 3652 | | |
| NER | 1st Sep 2016 to 30th Sep 2016 | 00-17 | 1530 | 45 | 1485 | 0 | 1485 | | |
| | | 23-24 | 1500 | | 1455 | | 1455 | | |
| | | 17-23 | | | | | | | |
| WR | | | | | | | | | |
| SR * | 1st Sep 2016 to 30th Sep 2016 | 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 one circuit of 400 kV Biharshariff- Lakhisarai leads to high loading on the other circuit 1. (n-1) Contingency of 765kV Gwalior-Agra one ckt leads to 2750 MW loading on second circuit. 2.High Loading of 400kV Singrauli-Anpara S/C. |
| | 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 400/220 kV, 2x315 MVA ICTs at Misa results in high loading of other 400/220 kV, 315 MVA ICT at Misa. n-1 contingency of 400/132 kV, 2 x 200 MVA ICTs at Silchar |
| | Export | (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. |
| SR | Import | (n-1) contingency of one circuit of 765 kV Raichur - Sholapur will lead to 2500 MW loading on the other circuit Low Voltage at Gazuwaka (East) Bus. |

**National Load Despatch Centre
Total Transfer Capability for September 2016**

| Revision No | Date of Revision | Period of Revision | Reason for Revision | Corridor Affected |
|--------------------|-------------------------|---------------------------|--|--|
| 1 | 8/1/2016 | Whole month | STOA margin revised due to change in LTA/MTOA allocation | NR-ER/ NR-WR/ Simultaneous Export of NR |
| | | | Revised due to commissioning of 400 kV Ranchi-Chandawa-Gaya D/C, 765kV Varanasi-Kanpur D/C, 765kV Kanpur-Jhatikara S/C , 400kV Kanpur (GIS)-Kanpur D/C and considering total gen at Kawai, Chhabra, Kalisindh as 2500 MW and considering the present inter regional flow pattern | WR-NR/ Simultaneous import of NR |
| 2 | 26/8/2016 | 01-08-16 to 13-08-16 | STOA margin revised due to outage of Talcher Stage-2 Unit -6 approved in 121st OCC of SRPC. | ER-SR/ Import of SR |
| 3 | 29/8/2016 | Whole month | Revised considering the present Inter-Regional flow pattern. | WR-NR/ Import of NR |
| 4 | 12/9/2016 | 14/9/2016 to 23/9/2016 | STOA margin revised due to extended outage of Talcher Stage-2 Unit -6. | ER-SR/ Import of SR |
| 5 | 14/9/2016 | 15/9/2016 to 30/9/2016 | Revised considering the current rating of 400 kV isolators at Dhanaunda as 2000 A | WR-NR/ Simultaneous import of NR |
| 6 | 19/09/2016 | 20/09/2016 to 21/09/2016 | Revised due to the shutdown of HVDC Bhadrawati Block-1. | WR-SR/ Import of SR |

| ASSUMPTIONS IN BASECASE | | | | | |
|-------------------------|----------------------------|----------------|--------------------|-----------------------|---------------|
| | | | | Month : September '16 | |
| 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 | 9400 | 8059 | 5466 | 5258 |
| 2 | Haryana | 7798 | 7260 | 2610 | 2610 |
| 3 | Rajasthan | 10027 | 10099 | 6333 | 6382 |
| 4 | Delhi | 4844 | 4498 | 962 | 962 |
| 5 | Uttar Pradesh | 13618 | 12577 | 7131 | 7179 |
| 6 | Uttarakhand | 1688 | 1250 | 804 | 722 |
| 7 | Himachal Pradesh | 1184 | 901 | 815 | 850 |
| 8 | Jammu & Kashmir | 2246 | 1356 | 841 | 807 |
| 9 | Chandigarh | 286 | 191 | 0 | 0 |
| 10 | ISGS/IPPs | 0 | 0 | 20482 | 15017 |
| | Total NR | 51091 | 46191 | 45444 | 39787 |
| II | EASTERN REGION | | | | |
| 1 | Bihar | 3260 | 2746 | 200 | 110 |
| 2 | Jharkhand | 1023 | 883 | 400 | 350 |
| 3 | Damodar Valley Corporation | 2582 | 2207 | 3400 | 2871 |
| 4 | Orissa | 3708 | 2852 | 2929 | 2000 |
| 5 | West Bengal | 7601 | 6081 | 4768 | 3830 |
| 6 | Sikkim | 93 | 49 | 0 | 0 |
| 7 | Bhutan | 215 | 215 | 1504 | 1472 |
| 8 | ISGS/IPPs | 415 | 419 | 9645 | 9015 |
| | Total ER | 18897 | 15452 | 22846 | 19647 |
| III | WESTERN REGION | | | | |
| 1 | Maharashtra | 20103 | 13051 | 13552 | 9451 |
| 2 | Gujarat | 14488 | 8693 | 11414 | 5676 |
| 3 | Madhya Pradesh | 8537 | 5486 | 4790 | 2285 |
| 4 | Chhattisgarh | 4088 | 2975 | 3236 | 1989 |
| 5 | Daman and Diu | 314 | 229 | 0 | 0 |
| 6 | Dadra and Nagar Haveli | 680 | 626 | 0 | 0 |
| 7 | Goa-WR | 487 | 221 | 0 | 0 |
| 8 | ISGS/IPPs | 902 | 904 | 28078 | 22617 |
| | Total WR | 49599 | 32185 | 61071 | 42019 |

| | | | | | |
|----|----------------------|--------|--------|--------|--------|
| | | | | | |
| IV | SOUTHERN REGION | | | | |
| 1 | Andhra Pradesh | 7073 | 5389 | 6385 | 5627 |
| 2 | Telangana | 9564 | 7551 | 4263 | 2964 |
| 3 | Karnataka | 9054 | 7496 | 6966 | 5130 |
| 4 | Tamil Nadu | 14003 | 12691 | 7036 | 5417 |
| 5 | Kerala | 3973 | 2663 | 1643 | 638 |
| 6 | Pondy | 391 | 327 | 0 | 0 |
| 7 | Goa-SR | 89 | 89 | 0 | 0 |
| 8 | ISGS/IPPs | 28 | 28 | 14187 | 11953 |
| | Total SR | 44175 | 36234 | 40480 | 31729 |
| | | | | | |
| V | NORTH-EASTERN REGION | | | | |
| 1 | Arunachal Pradesh | 130 | 102 | 0 | 0 |
| 2 | Assam | 1228 | 1007 | 275 | 225 |
| 3 | Manipur | 164 | 76 | 0 | 0 |
| 4 | Meghalaya | 279 | 206 | 300 | 243 |
| 5 | Mizoram | 93 | 63 | 8 | 0 |
| 6 | Nagaland | 120 | 84 | 24 | 16 |
| 7 | Tripura | 234 | 148 | 91 | 91 |
| 8 | ISGS/IPPs | 100 | 60 | 1869 | 1763 |
| | Total NER | 2348 | 1746 | 2567 | 2338 |
| | | | | | |
| | Total All India | 166356 | 132052 | 173941 | 136992 |