

LOAD GENERATION BALANCE REPORT

Maximum Load/Demand till Date

| Date | Time | Load(MW) |
|-----------|----------|----------|
| 27-Dec-18 | 18:18hrs | 399.35MW |

Date: June 19, 2019
Hours: 19:00 Hours

| Sl. No. | Hydropower Plant | Unit | MW | Name of Feeders | Load (MW) | Sign | Remarks |
|---------|------------------|--------------|---------------|--|--------------|------|--|
| 1 | THP | Unit- I | 100.40 | 400kV THP - Siliguri Fdr- I | 118.45 | + | Unit-V Standby 400kV THP-SIL Fdr IV Standby |
| | | Unit- II | 80.17 | 400kV THP - Siliguri Fdr- II | 118.37 | + | |
| | | Unit- III | 80.43 | 400kV THP - Siliguri Fdr- IV | 0.00 | | |
| | | Unit- IV | 101.09 | 400kV THP - Malbase Fdr- III | 218.50 | + | |
| | | Unit- V | 0.00 | 400kV Malbase - Siliguri | 88.23 | + | |
| | | Unit- VI | 100.39 | | | | |
| | | Total | 462.48 | Error At Station/Auxiliary Consumption/Losses | 7.16 | | |
| 2 | CHP | Unit- I | 70.25 | 220kV CHP - Birpara Fdr- I | 40.27 | + | Unit-II Standby |
| | | Unit- II | 0.00 | 220kV CHP - Birpara Fdr- II | 40.51 | + | |
| | | Unit- III | 69.23 | 220kV CHP - Malbase Fdr- III | 67.69 | + | |
| | | Unit- IV | 70.62 | 220kV CHP - Semtokha Fdr- IV | 44.69 | + | |
| | | | | 220kV Malbase - Birpara Fdr. | 13.90 | + | |
| | | | | 66kV CHP - Chumdo Fdr. | 6.45 | + | |
| | | | | 66kV CHP - Gedu Fdr. | 6.77 | + | |
| | | | | 3x3MVA, 66/11kV TFR | 1.14 | + | |
| | | Total | 210.10 | Error At Station/Auxiliary Consumption/Losses | 2.58 | | |
| 3 | BHP (U/S) | Unit- I | 0.00 | 220kV BHP - Semtokha Fdr. | -14.49 | - | Upper stage & Lower stage unit I standby |
| | | Unit- II | 6.40 | 66kV BHP - Lobeysa Fdr. | 9.79 | + | |
| | | Total | 6.40 | 220kV BHP - Tsirang Fdr. | 22.06 | + | |
| | BHP (L/S) | Unit- I | 0.00 | 5MVA, 66/11kV TFR | 0.46 | + | |
| | | Unit- II | 12.40 | 30MVA ICT, 220/66kV | | | |
| | | Total | 12.40 | Error At Station/Auxiliary Consumption/Losses | 0.98 | | |
| 4 | DHPC | Unit-I | 22.26 | 220kV DHPC - Tsirang Fdr. | 22.04 | + | Unit-II Standby |
| | | Unit-II | 0.00 | 220kV DHPC - Jigmeling Fdr. | | | |
| | | | | 5MVA, 220/33kV TFR | | | |
| | | Total | 22.26 | Error At Station/Auxiliary Consumption/Losses | 0.22 | | |
| 5 | KHP | Unit- I | 16.52 | 132kV KHP - Nangkhor Fdr- I | 59.46 | + | NOTE:MOTANGA SUBSTATION IS BYPASSED THROUGH ERS TOWER |
| | | Unit-II | 16.68 | 132kV KHP - Kilikhar Fdr- II | 6.38 | + | |
| | | Unit- III | 16.57 | 5MVA, 132/11kV TFR | 0.50 | + | |
| | | Unit- IV | 16.35 | 132kV Gelephu - Salakati Fdr. | -2.77 | - | |
| | | | | 132kV Motanga - Rangia Fdr. | 49.15 | + | |
| | | | | 220kV Tsirang - Jigmeling | 41.27 | + | |
| | | Total | 66.12 | Error At Station/Auxiliary Consumption/Losses | -0.22 | | |

Note: Load summary on June 19, 2019 at 19:00hrs.

| Sl. No | Region | Total Generation (MW) | Total Load (Generation - Export, MW) | Total Load (Feeder Summation, MW) | Total Export/Import | Load Balance |
|--------|--------------|-----------------------|--------------------------------------|-----------------------------------|---------------------|--------------|
| 1 | Western Grid | 713.64 | 252.64 | 241.70 | 419.73 | 10.94 |
| 2 | Eastern Grid | 66.12 | 61.01 | 61.23 | 46.38 | -0.22 |
| | Total | 779.76 | 313.65 | 302.93 | 466.11 | 10.72 |

Note: Load Summary on June 19, 2018 at 19:00hrs

| Sl. No | Region | 19:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1 | Western Grid | 220.04 | 230.80 | 261.96 |
| 2 | Eastern Grid | 53.06 | 53.06 | 61.02 |
| | National | 273.10 | 283.86 | 322.98 |

1. The Instantaneous load balance is calculated as (Total generation - (Total export-Import) - Total domestic load) do not tend towards zero. This could be due to the following reasons:

- i) Not all the meters are digital and nor are all the meter at all locations can be read at same time (say 9:00hrs) due to many meter to be read manually.
- ii) The clocks of all the locations are not synchronized

2. This report is generated to give an idea of the generation & load flow for the system at a particular instant.

LOAD GENERATION BALANCE REPORT

Maximum Load/Demand till Date

| Date | Time | Load(MW) |
|-----------|----------|----------|
| 27-Dec-18 | 18:18hrs | 399.35MW |

Date: June 20, 2019
Hours: 09:00 Hours

| Sl. No. | Hydropower Plant | Unit | MW | Name of Feeders | Load (MW) | Sign | Remarks |
|---------|------------------|--------------|---------------|--|--------------|------|--|
| 1 | THP | Unit- I | 79.80 | 400kV THP - Siliguri Fdr- I | 94.29 | + | Unit-V Standby 400kV THP_SIL Fdr.IV Standby |
| | | Unit- II | 69.87 | 400kV THP - Siliguri Fdr- II | 90.61 | + | |
| | | Unit- III | 70.45 | 400kV THP - Siliguri Fdr- IV | 0.00 | + | |
| | | Unit- IV | 70.80 | 400kV THP - Malbase Fdr- III | 169.12 | + | |
| | | Unit- V | 0.00 | 400kV Malbase - Siliguri | 71.18 | + | |
| | | Unit- VI | 71.35 | | | | |
| | | Total | 362.27 | Error At Station/Auxiliary Consumption/Losses | 8.25 | | |
| 2 | CHP | Unit- I | 59.66 | 220kV CHP - Birpara Fdr- I | 37.70 | + | Unit-II standby. |
| | | Unit- II | 0.00 | 220kV CHP - Birpara Fdr- II | 37.68 | + | |
| | | Unit- III | 62.02 | 220kV CHP - Malbase Fdr- III | 77.12 | + | |
| | | Unit- IV | 67.44 | 220kV CHP - Semtokha Fdr- IV | 26.05 | + | |
| | | | | 220kV Malbase - Birpara Fdr. | 3.61 | + | |
| | | | | 66kV CHP - Chumdo Fdr. | 3.90 | + | |
| | | | | 66kV CHP - Gedu Fdr. | 6.92 | + | |
| | | Total | 189.12 | Error At Station/Auxiliary Consumption/Losses | -0.96 | | |
| 3 | BHP (U/S) | Unit- I | 0.00 | 220kV BHP - Semtokha Fdr. | 0.02 | + | Upper stage & Lower Stage unit I Standby |
| | | Unit- II | 6.17 | 66kV BHP - Lobeysa Fdr. | 8.63 | + | |
| | | Total | 6.17 | 220kV BHP - Tsirang Fdr. | 9.30 | + | |
| | BHP (L/S) | Unit- I | 0.00 | 5MVA, 66/11kV TFR | 0.42 | + | |
| | | Unit- II | 12.10 | 30MVA ICT, 220/66kV | | | |
| | | Total | 12.10 | Error At Station/Auxiliary Consumption/Losses | -0.10 | | |
| 4 | DHPC | Unit-I | 23.59 | 220kV DHPC - Tsirang Fdr. | 23.39 | + | Unit-II standby. |
| | | Unit-II | 0.00 | 220kV DHPC - Jigmeling Fdr. | | | |
| | | | | 5MVA, 220/33kV TFR | | | |
| | | Total | 23.59 | Error At Station/Auxiliary Consumption/Losses | 0.20 | | |
| 5 | KHP | Unit- I | 16.49 | 132kV KHP - Nangkhor Fdr- I | 62.15 | + | NOTE:MOTANGA SUBSTATION IS BYPASSED THROUGH ERS TOWER |
| | | Unit-II | 16.72 | 132kV KHP - Kilikhar Fdr- II | 3.75 | + | |
| | | Unit- III | 16.65 | 5MVA, 132/11kV TFR | 0.30 | + | |
| | | Unit- IV | 16.64 | 132kV Gelephu - Salakati Fdr. | 4.16 | + | |
| | | | | 132kV Motanga - Rangia Fdr. | 44.38 | + | |
| | | | | 220kV Tsirang - Jigmeling | 34.90 | + | |
| | | Total | 66.50 | Error At Station/Auxiliary Consumption/Losses | 0.30 | | |

Note: Load summary on June 20, 2019 at 09:00hrs.

| Sl. No | Region | Total Generation (MW) | Total Load (Generation - Export, MW) | Total Load (Feeder Summation, MW) | Total Export/Import | Load Balance |
|--------|--------------|-----------------------|--------------------------------------|-----------------------------------|---------------------|--------------|
| 1 | Western Grid | 593.25 | 223.28 | 215.89 | 335.07 | 7.39 |
| 2 | Eastern Grid | 66.50 | 52.86 | 52.56 | 48.54 | 0.30 |
| | Total | 659.75 | 276.14 | 268.45 | 383.61 | 7.69 |

Note: Load Summary on June 20, 2018 at 09:00hrs

| Sl. No | Region | 09:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1 | Western Grid | 197.96 | 242.26 | 261.96 |
| 2 | Eastern Grid | 46.72 | 52.35 | 61.02 |
| | National | 244.68 | 294.61 | 322.98 |

NOTES:

1. The Instantaneous load balance is calculated as (Total generation - (Total export-Import) - Total domestic load) do not tend towards zero. This could be due to the following reasons:
 - i) Not all the meters are digital and nor are all the meter at all locations can be read at same time (say 9:00hrs) due to many meter to be read manually.
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