

LOAD GENERATION BALANCE REPORT

Maximum Load/Demand till Date

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

Date: June 22, 2019
Hours: 19:00 Hours

| Sl. No. | Hydropower Plant | Unit | MW | Name of Feeders | Load (MW) | Sign | Remarks |
|---------|------------------|--------------|---------------|--|-------------|------|--|
| 1 | THP | Unit- I | 118.51 | 400kV THP - Siliguri Fdr- I | 103.07 | + | Unit-II,IV & V Standby 400kV THP-SIL Fdr IV Standby |
| | | Unit- II | 0.00 | 400kV THP - Siliguri Fdr- II | 101.06 | + | |
| | | Unit- III | 139.48 | 400kV THP - Siliguri Fdr- IV | 0.00 | | |
| | | Unit- IV | 0.00 | 400kV THP - Malbase Fdr- III | 178.35 | + | |
| | | Unit- V | 0.00 | 400kV Malbase - Siliguri | 78.97 | + | |
| | | Unit- VI | 129.56 | | | | |
| | | Total | 387.55 | Error At Station/Auxiliary Consumption/Losses | 5.07 | | |
| 2 | CHP | Unit- I | 64.64 | 220kV CHP - Birpara Fdr- I | 40.08 | + | Unit-II Standby |
| | | Unit- II | 0.00 | 220kV CHP - Birpara Fdr- II | 40.06 | + | |
| | | Unit- III | 65.75 | 220kV CHP - Malbase Fdr- III | 73.76 | + | |
| | | Unit- IV | 66.71 | 220kV CHP - Semtokha Fdr- IV | 28.59 | + | |
| | | | | 220kV Malbase - Birpara Fdr. | 9.30 | + | |
| | | | | 66kV CHP - Chumdo Fdr. | 5.38 | + | |
| | | | | 66kV CHP - Gedu Fdr. | 7.03 | + | |
| | | | | 3x3MVA, 66/11kV TFR | 1.10 | + | |
| | | Total | 197.10 | Error At Station/Auxiliary Consumption/Losses | 1.10 | | |
| 3 | BHP (U/S) | Unit- I | 0.00 | 220kV BHP - Semtokha Fdr. | 1.14 | + | Upper stage Unit I standby |
| | | Unit- II | 13.58 | 66kV BHP - Lobeysa Fdr. | 13.69 | + | |
| | | Total | 13.58 | 220kV BHP - Tsirang Fdr. | 21.07 | + | |
| | BHP (L/S) | Unit- I | 11.14 | 5MVA, 66/11kV TFR | 0.70 | + | |
| | | Unit- II | 12.16 | 30MVA ICT, 220/66kV | | | |
| | | Total | 23.30 | Error At Station/Auxiliary Consumption/Losses | 0.28 | | |
| 4 | DHPC | Unit-I | 26.52 | 220kV DHPC - Tsirang Fdr. | 26.28 | + | Unit-II Standby |
| | | Unit-II | 0.00 | 220kV DHPC - Jigmeling Fdr. | | | |
| | | | | 5MVA, 220/33kV TFR | | | |
| | | Total | 26.52 | Error At Station/Auxiliary Consumption/Losses | 0.24 | | |
| 5 | KHP | Unit- I | 16.48 | 132kV KHP - Nangkhor Fdr- I | 57.66 | + | NOTE:MOTANGA SUBSTATION IS BYPASSED THROUGH ERS TOWER |
| | | Unit-II | 16.30 | 132kV KHP - Kilikhar Fdr- II | 7.19 | + | |
| | | Unit- III | 16.36 | 5MVA, 132/11kV TFR | 0.40 | + | |
| | | Unit- IV | 16.54 | 132kV Gelephu - Salakati Fdr. | 1.96 | + | |
| | | | | 132kV Motanga - Rangia Fdr. | 43.54 | + | |
| | | | | 220kV Tsirang - Jigmeling | 47.27 | + | |
| | | Total | 65.68 | Error At Station/Auxiliary Consumption/Losses | 0.43 | | |

Note: Load summary on June 22, 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 | 648.05 | 228.24 | 221.55 | 372.54 | 6.69 |
| 2 | Eastern Grid | 65.68 | 67.45 | 67.02 | 45.50 | 0.43 |
| | Total | 713.73 | 295.69 | 288.57 | 418.04 | 7.12 |

Note: Load Summary on June 22, 2018 at 19:00hrs

| Sl. No | Region | 19:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1 | Western Grid | 230.37 | 235.82 | 261.96 |
| 2 | Eastern Grid | 39.80 | 45.19 | 61.02 |
| | National | 270.17 | 281.01 | 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 23, 2019
Hours: 09:00 Hours

| Sl. No. | Hydropower Plant | Unit | MW | Name of Feeders | Load (MW) | Sign | Remarks |
|---------|------------------|--------------|---------------|--|--------------|------|--|
| 1 | THP | Unit- I | 158.29 | 400kV THP - Siliguri Fdr- I | 141.10 | + | Unit-II,IV & V Standby 400kV THP-SIL Fdr IV Standby |
| | | Unit- II | 0.00 | 400kV THP - Siliguri Fdr- II | 139.46 | + | |
| | | Unit- III | 172.37 | 400kV THP - Siliguri Fdr- IV | 0.00 | + | |
| | | Unit- IV | 0.00 | 400kV THP - Malbase Fdr- III | 189.80 | + | |
| | | Unit- V | 0.00 | 400kV Malbase - Siliguri | 120.40 | + | |
| | | Unit- VI | 149.99 | | | | |
| | | Total | 480.65 | Error At Station/Auxiliary Consumption/Losses | 10.29 | | |
| 2 | CHP | Unit- I | 81.61 | 220kV CHP - Birpara Fdr- I | 56.21 | + | Unit-II standby. |
| | | Unit- II | 0.00 | 220kV CHP - Birpara Fdr- II | 55.98 | + | |
| | | Unit- III | 87.17 | 220kV CHP - Malbase Fdr- III | 109.75 | + | |
| | | Unit- IV | 84.06 | 220kV CHP - Semtokha Fdr- IV | 17.38 | + | |
| | | | | 220kV Malbase - Birpara Fdr. | 7.03 | + | |
| | | | | 66kV CHP - Chumdo Fdr. | 3.94 | + | |
| | | | | 66kV CHP - Gedu Fdr. | 6.69 | + | |
| | | | | 3x3MVA, 66/11kV TFR | 0.83 | + | |
| | | Total | 252.84 | Error At Station/Auxiliary Consumption/Losses | 2.06 | | |
| 3 | BHP (U/S) | Unit- I | 0.00 | 220kV BHP - Semtokha Fdr. | 6.93 | + | Upper stage unit I Standby |
| | | Unit- II | 9.04 | 66kV BHP - Lobeysa Fdr. | 9.88 | + | |
| | | Total | 9.04 | 220kV BHP - Tsirang Fdr. | 8.62 | + | |
| | BHP (L/S) | Unit- I | 8.37 | 5MVA, 66/11kV TFR | 0.43 | + | |
| | | Total | 17.10 | Error At Station/Auxiliary Consumption/Losses | 0.28 | | |
| 4 | DHPC | Unit-I | 33.31 | 220kV DHPC - Tsirang Fdr. | 33.10 | + | Unit-II standby. |
| | | Unit-II | 0.00 | 220kV DHPC - Jigmeling Fdr. | | | |
| | | | | 5MVA, 220/33kV TFR | | | |
| | | Total | 33.31 | Error At Station/Auxiliary Consumption/Losses | 0.21 | | |
| 5 | KHP | Unit- I | 15.76 | 132kV KHP - Nangkhor Fdr- I | 60.44 | + | NOTE:MOTANGA SUBSTATION IS BYPASSED THROUGH ERS TOWER |
| | | Unit-II | 16.14 | 132kV KHP - Kilikhar Fdr- II | 3.88 | + | |
| | | Unit- III | 16.41 | 5MVA, 132/11kV TFR | 0.20 | + | |
| | | Unit- IV | 16.46 | 132kV Gelephu - Salakati Fdr. | 11.61 | + | |
| | | | | 132kV Motanga - Rangia Fdr. | 41.60 | + | |
| | | | | 220kV Tsirang - Jigmeling | 40.60 | + | |
| | | Total | 64.77 | Error At Station/Auxiliary Consumption/Losses | 0.25 | | |

Note: Load summary on June 23, 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 | 792.94 | 232.16 | 219.32 | 520.18 | 12.84 |
| 2 | Eastern Grid | 64.77 | 52.16 | 51.91 | 53.21 | 0.25 |
| | Total | 857.71 | 284.32 | 271.23 | 573.39 | 13.09 |

Note: Load Summary on June 23, 2018 at 09:00hrs

| Sl. No | Region | 09:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1 | Western Grid | 231.01 | 248.36 | 261.96 |
| 2 | Eastern Grid | 35.88 | 45.01 | 61.02 |
| | National | 266.89 | 293.37 | 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.
 - ii) The clocks of all the locations are not synchronized
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