

LOAD GENERATION BALANCE REPORT

Maximum Load/Demand till Date

Date: June 9, 2019
Hours: 19:00 Hours

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

| Sl. No. | Hydropower Plant | Unit | MW | Name of Feeders | Load (MW) | Sign | Remarks |
|---------|------------------|--------------|---------------|--|--------------|------|--|
| 1 | THP | Unit- I | 109.34 | 400kV THP - Siliguri Fdr- I | 99.84 | + | 400kV THP - Siliguri Fdr IV Standby, Unit-III,IV & V standby ☐ |
| | | Unit- II | 147.10 | 400kV THP - Siliguri Fdr- II | 99.68 | + | |
| | | Unit- III | 0.00 | 400kV THP - Siliguri Fdr- IV | 0.00 | | |
| | | Unit- IV | 0.00 | 400kV THP - Malbase Fdr- III | 193.65 | + | |
| | | Unit- V | 0.00 | 400kV Malbase - Siliguri | 73.03 | + | |
| | | Unit- VI | 139.90 | | | | |
| | | Total | 396.34 | Error At Station/Auxiliary Consumption/Losses | 3.17 | | |
| 2 | CHP | Unit- I | 69.30 | 220kV CHP - Birpara Fdr- I | 36.72 | + | Unit-III Standby |
| | | Unit- II | 67.78 | 220kV CHP - Birpara Fdr- II | 36.26 | + | |
| | | Unit- III | 0.00 | 220kV CHP - Malbase Fdr- III | 74.48 | + | |
| | | Unit- IV | 69.23 | 220kV CHP - Semtokha Fdr- IV | 41.83 | + | |
| | | | | 220kV Malbase - Birpara Fdr. | 2.24 | + | |
| | | | | 66kV CHP - Chumdo Fdr. | 7.34 | + | |
| | | | | 66kV CHP - Gedu Fdr. | 6.10 | + | |
| | | | | 3x3MVA, 66/11kV TFR | 1.09 | + | |
| | | Total | 206.31 | Error At Station/Auxiliary Consumption/Losses | 2.49 | | |
| 3 | BHP (U/S) | Unit- I | 0.00 | 220kV BHP - Semtokha Fdr. | -9.00 | - | Upper stage unit I & Lower stage unit-II standby |
| | | Unit- II | 5.60 | 66kV BHP - Lobeysa Fdr. | 9.14 | + | |
| | | Total | 5.60 | 220kV BHP - Tsirang Fdr. | 14.80 | + | |
| | BHP (L/S) | Unit- I | 10.00 | 5MVA, 66/11kV TFR | 0.98 | + | |
| | | Unit- II | 0.00 | 30MVA ICT, 220/66kV | | | |
| | | Total | 10.00 | Error At Station/Auxiliary Consumption/Losses | -0.32 | | |
| 4 | DHPC | Unit-I | 0.00 | 220kV DHPC - Tsirang Fdr. | 20.10 | + | Unit-I Standby |
| | | Unit-II | 20.29 | 220kV DHPC - Jigmeling Fdr. | | | |
| | | | | 5MVA, 220/33kV TFR | | | |
| | | Total | 20.29 | Error At Station/Auxiliary Consumption/Losses | 0.19 | | |
| 5 | KHP | Unit- I | 16.53 | 132kV KHP - Nangkhor Fdr- I | 58.54 | + | NOTE:MOTANGA SUBSTATION IS BYPASSED THROUGH ERS TOWER |
| | | Unit-II | 16.58 | 132kV KHP - Kilikhar Fdr- II | 7.53 | + | |
| | | Unit- III | 16.92 | 5MVA, 132/11kV TFR | 0.40 | + | |
| | | Unit- IV | 16.65 | 132kV Gelephu - Salakati Fdr. | 4.65 | + | |
| | | | | 132kV Motanga - Rangia Fdr. | 56.30 | + | |
| | | | | 220kV Tsirang - Jigmeling | 33.00 | + | |
| | | Total | 66.68 | Error At Station/Auxiliary Consumption/Losses | 0.21 | | |

Note: Load summary on June 09, 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 | 638.54 | 257.77 | 252.24 | 347.77 | 5.53 |
| 2 | Eastern Grid | 66.68 | 38.73 | 38.52 | 60.95 | 0.21 |
| | Total | 705.22 | 296.50 | 290.76 | 408.72 | 5.74 |

Note: Load Summary on June 09, 2018 at 19:00hrs

| Sl. No | Region | 19:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1 | Western Grid | 226.37 | 246.97 | 261.96 |
| 2 | Eastern Grid | 50.47 | 50.65 | 61.02 |
| | National | 276.84 | 297.62 | 322.98 |

NOTE BHP loads are collected from site

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: June 10, 2019
Hours: 09:00 Hours

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

| Sl. No. | Hydropower Plant | Unit | MW | Name of Feeders | Load (MW) | Sign | Remarks |
|--------------|------------------|--|---------------|--|-------------|------|--|
| 1 | THP | Unit- I | 88.30 | 400kV THP - Siliguri Fdr- I | 88.46 | + | 400kV THP_Siliguri Fdr- IV Standby. Unit-IV,V & III standby |
| | | Unit- II | 148.40 | 400kV THP - Siliguri Fdr- II | 86.27 | + | |
| | | Unit- III | 0.00 | 400kV THP - Siliguri Fdr- IV | 0.00 | | |
| | | Unit- IV | 0.00 | 400kV THP - Malbase Fdr- III | 157.57 | + | |
| | | Unit- V | 0.00 | 400kV Malbase - Siliguri | 66.94 | + | |
| | | Unit- VI | 100.86 | | | | |
| | | Total | 337.56 | Error At Station/Auxiliary Consumption/Losses | 5.26 | | |
| 2 | CHP | Unit- I | 59.42 | 220kV CHP - Birpara Fdr- I | 25.15 | + | Unit-III Standby □ |
| | | Unit- II | 49.81 | 220kV CHP - Birpara Fdr- II | 25.21 | + | |
| | | Unit- III | 0.00 | 220kV CHP - Malbase Fdr- III | 78.09 | + | |
| | | Unit- IV | 62.46 | 220kV CHP - Semtokha Fdr- IV | 30.84 | + | |
| | | | | 220kV Malbase - Birpara Fdr. | 0.00 | | |
| | | | | 66kV CHP - Chumdo Fdr. | 5.16 | + | |
| | | | | 66kV CHP - Gedu Fdr. | 5.70 | + | |
| | | | | 3x3MVA, 66/11kV TFR | 0.70 | + | |
| | | Total | 171.69 | Error At Station/Auxiliary Consumption/Losses | 0.84 | | |
| 3 | BHP (U/S) | Unit- I | 0.00 | 220kV BHP - Semtokha Fdr. | -5.30 | - | Upper stage unit I & Lower stage unit-II standby |
| | | Unit- II | 6.07 | 66kV BHP - Lobeysa Fdr. | 8.02 | + | |
| | | Total | 5.19 | 220kV BHP - Tsirang Fdr. | 12.08 | + | |
| | BHP (L/S) | Unit- I | 10.69 | 5MVA, 66/11kV TFR | 0.92 | + | |
| | | Unit- II | 0.00 | 30MVA ICT, 220/66kV | | | |
| Total | 10.69 | Error At Station/Auxiliary Consumption/Losses | 0.16 | | | | |
| 4 | DHPC | Unit-I | 0.00 | 220kV DHPC - Tsirang Fdr. | 18.48 | + | Unit-I standby. |
| | | Unit-II | 18.73 | 220kV DHPC - Jigmeling Fdr. | | | |
| | | | | 5MVA, 220/33kV TFR | | | |
| | | Total | 18.73 | Error At Station/Auxiliary Consumption/Losses | 0.25 | | |
| 5 | KHP | Unit- I | 16.48 | 132kV KHP - Nangkhor Fdr- I | 60.83 | + | NOTE:MOTANGA SUBSTATION IS BYPASSED THROUGH ERS TOWER |
| | | Unit-II | 16.54 | 132kV KHP - Kilikhar Fdr- II | 3.41 | + | |
| | | Unit- III | 16.35 | 5MVA, 132/11kV TFR | 0.40 | + | |
| | | Unit- IV | 16.36 | 132kV Gelephu - Salakati Fdr. | -1.66 | - | |
| | | | | 132kV Motanga - Rangia Fdr. | 41.16 | + | |
| | | | | 220kV Tsirang - Jigmeling | 29.73 | + | |
| | | Total | 65.73 | Error At Station/Auxiliary Consumption/Losses | 1.09 | | |

Note: Load summary on June 10, 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 | 543.86 | 222.10 | 215.59 | 292.03 | 6.51 |
| 2 | Eastern Grid | 65.73 | 55.96 | 54.87 | 39.50 | 1.09 |
| | Total | 609.59 | 278.06 | 270.46 | 331.53 | 7.60 |

Note: Load Summary on June 10, 2018 at 09:00hrs

| Sl. No | Region | 09:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1 | Western Grid | 223.26 | 226.78 | 261.96 |
| 2 | Eastern Grid | 38.70 | 53.38 | 61.02 |
| | National | 261.96 | 280.16 | 322.98 |

NOTES BHP Loads are collected from site

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:

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ii) The clocks of all the locations are not synchronized

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