

## LOAD GENERATION BALANCE REPORT

Maximum Load/Demand till Date

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

**Date:** June 6, 2019  
**Hours:** 19:00 Hours

| Sl. No. | Hydropower Plant | Unit         | MW            | Name of Feeders                                      | Load (MW)    | Sign | Remarks  |
|---------|------------------|--------------|---------------|--|--------------|------|--|
| 1       | THP              | Unit- I      | 150.00        | 400kV THP - Siliguri Fdr- I                          | 99.00        | +    | 400kV THP - Siliguri Fdr III Standby, Unit-III,IV & V standby                    |
|         |                  | Unit- II     | 130.00        | 400kV THP - Siliguri Fdr- II                         | 98.00        | +    |  |
|         |                  | Unit- III    | 0.00          | 400kV THP - Siliguri Fdr- IV                         | 182.00       | +    |  |
|         |                  | Unit- IV     | 0.00          | 400kV THP - Malbase Fdr- III                         | 0.00         | +    |  |
|         |                  | Unit- V      | 0.00          | 400kV Malbase - Siliguri                             | 56.00        | +    |  |
|         |                  | Unit- VI     | 100.00        |  |              |      |  |
|         |                  | <b>Total</b> | <b>380.00</b> | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>1.00</b>  |      |  |
| 2       | CHP              | Unit- I      | 0.00          | 220kV CHP - Birpara Fdr- I                           | 28.10        | +    | Unit-I & III Standby   |
|         |                  | Unit- II     | 89.00         | 220kV CHP - Birpara Fdr- II                          | 27.70        | +    |  |
|         |                  | Unit- III    | 0.00          | 220kV CHP - Malbase Fdr- III                         | 65.10        | +    |  |
|         |                  | Unit- IV     | 90.00         | 220kV CHP - Semtokha Fdr- IV                         | 43.90        | +    |  |
|         |                  |              |               | 220kV Malbase - Birpara Fdr.                         | 3.00         | +    |  |
|         |                  |              |               | 66kV CHP - Chumdo Fdr.                               | 7.00         | +    |  |
|         |                  |              |               | 66kV CHP - Gedu Fdr.                                 | 6.10         | +    |  |
|         |                  |              |               | 3x3MVA, 66/11kV TFR                                  | 1.09         | +    |  |
|         |                  | <b>Total</b> | <b>179.00</b> | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.01</b>  |      |  |
| 3       | BHP (U/S)        | Unit- I      | 0.00          | 220kV BHP - Semtokha Fdr.                            | -14.17       | -    | Upper stage unit I Standby<br>Lower stage unit-II standby                        |
|         |                  | Unit- II     | 6.40          | 66kV BHP - Lobeysa Fdr.                              | 9.80         | +    |  |
|         |                  | <b>Total</b> | <b>6.40</b>   | 220kV BHP - Tsirang Fdr.                             | 20.92        | +    |  |
|         | BHP (L/S)        | Unit- I      | 12.00         | 5MVA, 66/11kV TFR                                    | 0.92         | +    |  |
|         |                  | Unit- II     | 0.00          | 30MVA ICT, 220/66kV                                  |              |      |  |
|         |                  | <b>Total</b> | <b>12.00</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.93</b>  |      |  |
| 4       | DHPC             | Unit-I       | 0.00          | 220kV DHPC - Tsirang Fdr.                            | 24.01        | +    | Unit-I Standby   |
|         |                  | Unit-II      | 24.29         | 220kV DHPC - Jigmeling Fdr.                          |              |      |  |
|         |                  |              |               | 5MVA, 220/33kV TFR                                   |              |      |  |
|         |                  | <b>Total</b> | <b>24.29</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.28</b>  |      |  |
| 5       | KHP              | Unit- I      | 16.50         | 132kV KHP - Nangkhor Fdr- I                          | 41.69        | +    | Unit -II Standby<br><b>NOTE:MOTANGA SUBSTATION IS BYPASSED THROUGH ERS TOWER</b> |
|         |                  | Unit-II      | 0.00          | 132kV KHP - Kilikhar Fdr- II                         | 7.75         | +    |  |
|         |                  | Unit- III    | 15.50         | 5MVA, 132/11kV TFR                                   | 0.40         | +    |  |
|         |                  | Unit- IV     | 15.50         | 132kV Gelephu - Salakati Fdr.                        | 2.00         | +    |  |
|         |                  |              |               | 132kV Motanga - Rangia Fdr.                          | 33.00        | +    |  |
|         |                  |              |               | 220kV Tsirang - Jigmeling                            | 41.58        | +    |  |
|         |                  | <b>Total</b> | <b>47.50</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>-2.34</b> |      |  |

**Note: Load summary on June 06, 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 | 601.69                | 66.31                                | 64.09                             | 493.80              | 2.22         |
| 2      | Eastern Grid | 47.50                 | 54.08                                | 56.42                             | 35.00               | -2.34        |
|        | <b>Total</b> | 649.19                | 120.39                               | 120.51                            | 528.80              | -0.12        |

**Note: Load Summary on June 06, 2018 at 19:00hrs**

| Sl. No | Region          | 19:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1      | Western Grid    | 229.76             | 241.83             | 261.96               |
| 2      | Eastern Grid    | 54.98              | 55.89              | 61.02                |
|        | <b>National</b> | <b>284.74</b>      | <b>297.72</b>      | <b>322.98</b>        |

**NOTE :ALL 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      | Time     | Load(MW) |
|-----------|----------|----------|
| 27-Dec-18 | 18:18hrs | 399.35MW |

**Date:** June 7, 2019  
**Hours:** 09:00 Hours

| Sl. No. | Hydropower Plant | Unit         | MW            | Name of Feeders                                      | Load (MW)    | Sign | Remarks  |
|---------|------------------|--------------|---------------|--|--------------|------|--|
| 1       | THP              | Unit- I      | 140.00        | 400kV THP - Siliguri Fdr- I                          | 77.00        | +    | 400kV THP_Siliguri Fdr- IV Standby.<br>Unit-IV,V & III standby |
|         |                  | Unit- II     | 70.00         | 400kV THP - Siliguri Fdr- II                         | 76.00        | +    |  |
|         |                  | Unit- III    | 0.00          | 400kV THP - Siliguri Fdr- IV                         | 0.00         | +    |  |
|         |                  | Unit- IV     | 0.00          | 400kV THP - Malbase Fdr- III                         | 149.00       | +    |  |
|         |                  | Unit- V      | 0.00          | 400kV Malbase - Siliguri                             | 52.00        | +    |  |
|         |                  | Unit- VI     | 100.00        |  |              |      |  |
|         |                  | <b>Total</b> | <b>310.00</b> | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>8.00</b>  |      |  |
| 2       | CHP              | Unit- I      | 0.00          | 220kV CHP - Birpara Fdr- I                           | 32.20        | +    | Unit-I & III Standby   |
|         |                  | Unit- II     | 86.00         | 220kV CHP - Birpara Fdr- II                          | 32.20        | +    |  |
|         |                  | Unit- III    | 0.00          | 220kV CHP - Malbase Fdr- III                         | 79.40        | +    |  |
|         |                  | Unit- IV     | 87.00         | 220kV CHP - Semtokha Fdr- IV                         | 19.50        | +    |  |
|         |                  |              |               | 220kV Malbase - Birpara Fdr.                         | -9.00        | -    |  |
|         |                  |              |               | 66kV CHP - Chumdo Fdr.                               | 4.50         | +    |  |
|         |                  |              |               | 66kV CHP - Gedu Fdr.                                 | 6.00         | +    |  |
|         |                  |              |               | 3x3MVA, 66/11kV TFR                                  | 0.70         | +    |  |
|         |                  | <b>Total</b> | <b>173.00</b> | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>-1.50</b> |      |  |
| 3       | BHP (U/S)        | Unit- I      | 0.00          | 220kV BHP - Semtokha Fdr.                            | 4.71         | +    | Upper stage unit I Standby<br>Lower stage unit-II standby      |
|         |                  | Unit- II     | 8.90          | 66kV BHP - Lobeysa Fdr.                              | 8.50         | +    |  |
|         |                  | <b>Total</b> | <b>8.90</b>   | 220kV BHP - Tsirang Fdr.                             | 8.06         | +    |  |
|         | BHP (L/S)        | Unit- I      | 10.30         | 5MVA, 66/11kV TFR                                    | 0.78         | +    |  |
|         |                  | Unit- II     | 0.00          | 30MVA ICT, 220/66kV                                  |              |      |  |
|         |                  | <b>Total</b> | <b>10.30</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>-2.85</b> |      |  |
| 4       | DHPC             | Unit-I       | 0.00          | 220kV DHPC - Tsirang Fdr.                            | 21.20        | +    | Unit-I standby.  |
|         |                  | Unit-II      | 21.45         | 220kV DHPC - Jigmeling Fdr.                          |              |      |  |
|         |                  |              |               | 5MVA, 220/33kV TFR                                   |              |      |  |
|         |                  | <b>Total</b> | <b>21.45</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.25</b>  |      |  |
| 5       | KHP              | Unit- I      | 16.62         | 132kV KHP - Nangkhor Fdr- I                          | 62.74        | +    | <b>NOTE:MOTANGA SUBSTATION IS BYPASSED THROUGH ERS TOWER</b>   |
|         |                  | Unit-II      | 16.71         | 132kV KHP - Kilikhar Fdr- II                         | 3.01         | +    |  |
|         |                  | Unit- III    | 16.63         | 5MVA, 132/11kV TFR                                   | 0.40         | +    |  |
|         |                  | Unit- IV     | 16.73         | 132kV Gelephu - Salakati Fdr.                        | 6.67         | +    |  |
|         |                  |              |               | 132kV Motanga - Rangia Fdr.                          | 43.13        | +    |  |
|         |                  |              |               | 220kV Tsirang - Jigmeling                            | 26.04        | +    |  |
|         |                  | <b>Total</b> | <b>66.69</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.54</b>  |      |  |

**Note: Load summary on June 07, 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 | 523.65                | 237.21                               | 233.31                            | 260.40              | 3.90         |
| 2      | Eastern Grid | 66.69                 | 42.93                                | 42.39                             | 49.80               | 0.54         |
|        | <b>Total</b> | 590.34                | 280.14                               | 275.70                            | 310.20              | 4.44         |

**Note: Load Summary on June 07, 2018 at 09:00hrs**

| Sl. No | Region          | 09:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1      | Western Grid    | 209.49             | 235.82             | 261.96               |
| 2      | Eastern Grid    | 46.87              | 61.02              | 61.02                |
|        | <b>National</b> | <b>256.36</b>      | <b>296.84</b>      | <b>322.98</b>        |

**NOTES** WDC 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.