

## LOAD GENERATION BALANCE REPORT

Maximum Load/Demand till Date

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

**Date:** March 31, 2019  
**Hours:** 19:00 Hours

| Sl. No.      | Hydropower Plant | Unit   | Load (MW)     | Name of Feeders                                      | Sign        | Remarks  |   |
|--------------|------------------|--|---------------|--|-------------|--|---|
| 1            | THP              | Unit- I  | 0.00          | 400kV THP - Siliguri Fdr- I                          | +           | Fdr IV Idle charged. Fdr II Standby.<br>Unit V standby.<br>Unit-I, II & III under AMP                              |   |
|              |                  | Unit- II   | 0.00          | 400kV THP - Siliguri Fdr- II                         | +           |  |   |
|              |                  | Unit- III  | 0.00          | 400kV THP - Siliguri Fdr- IV                         | +           |  |   |
|              |                  | Unit- IV   | 186.52        | 400kV THP - Malbase Fdr- III                         | +           |  |   |
|              |                  | Unit- V  | 0.00          | 400kV Malbase - Siliguri                             | +           |  |   |
|              |                  | Unit- VI   | 184.93        |  |             |  |   |
|              |                  | <b>Total</b>   | <b>371.45</b> | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>7.72</b> |  |   |
| 2            | CHP              | Unit- I  | 0.00          | 220kV CHP - Birpara Fdr- I                           | +           | Unit I under AM.<br>Unit-IV Standby.<br>220kV CHP_Birpara I Shut down<br>220kV CHP_Birpara II tripped at 08:23hrs. |   |
|              |                  | Unit- II   | 91.00         | 220kV CHP - Birpara Fdr- II                          | +           |  |   |
|              |                  | Unit- III  | 89.47         | 220kV CHP - Malbase Fdr- III                         | +           |  |   |
|              |                  | Unit- IV   | 0.00          | 220kV CHP - Semtokha Fdr- IV                         | +           |  |   |
|              |                  |  |               | 220kV Malbase - Birpara Fdr.                         | 15.94       |  | + |
|              |                  |  |               | 66kV CHP - Chumdo Fdr.                               | 12.16       |  | + |
|              |                  |  |               | 66kV CHP - Gedu Fdr.                                 | 5.30        |  | + |
|              |                  |  |               | 3x3MVA, 66/11kV TFR                                  | 1.76        |  | + |
| <b>Total</b> | <b>180.47</b>    | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>4.50</b>   |  |             |  |   |
| 3            | BHP (U/S)        | Unit- I  | 0.00          | 220kV BHP - Semtokha Fdr.                            | +           | Upper stage Unit I in Standby.<br>Lower Stage Unit I under standby.  |   |
|              |                  | Unit- II   | 7.98          | 66kV BHP - Lobeysa Fdr.                              | +           |  |   |
|              |                  | <b>Total</b>   | <b>7.98</b>   | 220kV BHP - Tsirang Fdr.                             | -14.97      |  | - |
|              | BHP (L/S)        | Unit- I  | 0.00          | 5MVA, 66/11kV TFR                                    | 0.80        |  | + |
|              |                  | Unit- II   | 16.91         | 30MVA ICT, 220/66kV                                  |             |  |   |
|              |                  | <b>Total</b>   | <b>16.91</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.31</b> |  |   |
| 4            | DHPC             | Unit-I   | 0.00          | 220kV DHPC - Tsirang Fdr.                            | +           | Unit-I under AM  |   |
|              |                  | Unit-II  | 40.21         | 220kV DHPC - Jigmeling Fdr.                          | 0.00        |  |   |
|              |                  |  |               | 5MVA, 220/33kV TFR                                   | 0.00        |  |   |
|              |                  | <b>Total</b>   | <b>40.21</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.31</b> |  |   |
| 5            | KHP              | Unit- I  | 0.00          | 132kV KHP - Nangkhor Fdr- I                          | +           | Unit-I under AM  |   |
|              |                  | Unit-II  | 15.32         | 132kV KHP - Kilikhar Fdr- II                         | 10.35       |  | + |
|              |                  | Unit- III  | 16.58         | 5MVA, 132/11kV TFR                                   | 0.50        |  | + |
|              |                  | Unit- IV   | 16.36         | 132kV Gelephu - Salakati Fdr.                        | -3.00       |  | - |
|              |                  |  |               | 132kV Motanga - Rangia Fdr.                          | 15.13       |  | + |
|              |                  |  |               | 220kV Tsirang - Jigmeling                            | 20.89       |  | + |
|              |                  | <b>Total</b>   | <b>48.26</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.23</b> |  |   |

**Note: Load summary on March 31, 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 | 617.02                | 281.25                               | 268.41                            | 314.88              | 12.84        |
| 2      | Eastern Grid | 48.26                 | 57.02                                | 56.79                             | 12.13               | 0.23         |
|        | <b>Total</b> | 665.28                | 338.27                               | 325.20                            | 327.01              | 13.07        |

**Note: Load Summary on March 31, 2018 at 19:00hrs**

| Sl. No | Region          | 19:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1      | Western Grid    | 294.04             | 301.73             | 309.57               |
| 2      | Eastern Grid    | 56.12              | 56.12              | 70.44                |
|        | <b>National</b> | <b>350.16</b>      |                    | <b>380.01</b>        |

**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
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:** April 1, 2019

**Hours:** 09:00 Hours

| Sl. No. | Hydropower Plant | Unit         | MW            | Name of Feeders                                      | Load (MW)   | Sign | Remarks   |
|---------|------------------|--------------|---------------|--|-------------|------|---|
| 1       | THP              | Unit- I      | 0.00          | 400kV THP - Siliguri Fdr- I                          | 0.00        | +    | Fdr IV Idle charged. 400kV Tala-Siliguri Fdr I under break down.<br>Unit V standby.<br>Unit-I, II & III under AMP |
|         |                  | Unit- II     | 0.00          | 400kV THP - Siliguri Fdr- II                         | 169.11      | +    |   |
|         |                  | Unit- III    | 0.00          | 400kV THP - Siliguri Fdr- IV                         | 0.00        | +    |   |
|         |                  | Unit- IV     | 184.82        | 400kV THP - Malbase Fdr- III                         | 195.15      | +    |   |
|         |                  | Unit- V      | 0.00          | 400kV Malbase - Siliguri                             | 150.05      | +    |   |
|         |                  | Unit- VI     | 185.74        |  |             |      |   |
|         |                  | <b>Total</b> | <b>370.56</b> | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>6.30</b> |      |   |
| 2       | CHP              | Unit- I      | 0.00          | 220kV CHP - Birpara Fdr- I                           | 0.00        | +    | Unit I under AM.<br>Unit-IV Standby.<br>220kV CHP_Birpara I Shut down<br>220kV CHP_Birpara II under break down.   |
|         |                  | Unit- II     | 92.00         | 220kV CHP - Birpara Fdr- II                          | 0.00        | +    |   |
|         |                  | Unit- III    | 90.00         | 220kV CHP - Malbase Fdr- III                         | 148.25      | +    |   |
|         |                  | Unit- IV     | 0.00          | 220kV CHP - Semtokha Fdr- IV                         | 15.03       | +    |   |
|         |                  |              |               | 220kV Malbase - Birpara Fdr.                         | 9.65        | +    |   |
|         |                  |              |               | 66kV CHP - Chumdo Fdr.                               | 5.97        | +    |   |
|         |                  |              |               | 66kV CHP - Gedu Fdr.                                 | 7.10        | +    |   |
|         |                  | <b>Total</b> | <b>182.00</b> | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>4.72</b> |      |   |
| 3       | BHP (U/S)        | Unit- I      | 0.00          | 220kV BHP - Semtokha Fdr.                            | 21.97       | +    | Upper stage Unit I under standby.<br>Lower Stage Unit I under standby.  |
|         |                  | Unit- II     | 6.23          | 66kV BHP - Lobeysa Fdr.                              | 10.70       | +    |   |
|         |                  | <b>Total</b> | <b>6.23</b>   | 220kV BHP - Tsirang Fdr.                             | -13.38      | -    |   |
|         | BHP (L/S)        | Unit- I      | 0.00          | 5MVA, 66/11kV TFR                                    | 0.42        | +    |   |
|         |                  | Unit- II     | 13.68         | 30MVA ICT, 220/66kV                                  |             |      |   |
|         |                  | <b>Total</b> | <b>13.68</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.20</b> |      |   |
| 4       | DHPC             | Unit-I       | 0.00          | 220kV DHPC - Tsirang Fdr.                            | 35.00       | +    | Unit-I under AM   |
|         |                  | Unit-II      | 35.23         | 220kV DHPC - Jigmeling Fdr.                          | 0.00        |      |   |
|         |                  |              |               | 5MVA, 220/33kV TFR                                   | 0.00        |      |   |
|         |                  | <b>Total</b> | <b>35.23</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.23</b> |      |   |
| 5       | KHP              | Unit- I      | 0.00          | 132kV KHP - Nangkhor Fdr- I                          | 28.44       | +    | Unit-I under AM   |
|         |                  | Unit-II      | 11.22         | 132kV KHP - Kilikhar Fdr- II                         | 4.81        | +    |   |
|         |                  | Unit- III    | 11.31         | 5MVA, 132/11kV TFR                                   | 0.30        | +    |   |
|         |                  | Unit- IV     | 11.26         | 132kV Gelephu - Salakati Fdr.                        | -2.60       | -    |   |
|         |                  |              |               | 132kV Motanga - Rangia Fdr.                          | 14.39       | +    |   |
|         |                  |              |               | 220kV Tsirang - Jigmeling                            | 19.70       | +    |   |
|         |                  | <b>Total</b> | <b>33.79</b>  | <b>Error At Station/Auxiliary Consumption/Losses</b> | <b>0.24</b> |      |   |

**Note: Load summary on April 01, 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 | 607.70                | 259.19                               | 247.74                            | 328.81              | 11.45        |
| 2      | Eastern Grid | 33.79                 | 41.70                                | 41.46                             | 11.79               | 0.24         |
|        | <b>Total</b> | 641.49                | 300.89                               | 289.20                            | 340.60              | 11.69        |

**Note: Load Summary on April 01, 2018 at 09:00hrs**

| Sl. No | Region          | 09:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1      | Western Grid    | 304.53             | 304.53             | 304.53               |
| 2      | Eastern Grid    | 68.35              | 68.35              | 71.59                |
|        | <b>National</b> | <b>372.88</b>      | <b>372.88</b>      | <b>376.12</b>        |

**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