

**LOAD-GENERATION BALANCE REPORT**

Maximum Load/Demand till Date

|        |                   |
|--------|-------------------|
| Date:  | November 29, 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            | 1020MW THP       | Unit- I  | 77.47         | 400kV THP - Siliguri Fdr- I                          | 81.05       | +    | Unit-II at standby.<br>Unit- V & VI under shutdown.<br>400kV THP_SILI-IV standby. |
|              |                  | Unit- II   | 0.00          | 400kV THP - Siliguri Fdr- II                         | 79.30       | +    |   |
|              |                  | Unit- III  | 99.37         | 400kV THP - Siliguri Fdr- IV                         | 0.00        | +    |   |
|              |                  | Unit- IV   | 140.55        | 400kV THP - Malbase Fdr- III                         | 149.91      | +    |   |
|              |                  | Unit- V  | 0.00          | 400kV Malbase - Siliguri                             | 60.56       | +    |   |
|              |                  | Unit- VI   | 0.00          | -  | -           | -    |   |
|              |                  | <b>Total</b>   | <b>317.39</b> | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>7.13</b> |      |   |
| 2            | 720MW MHP        | Unit-I   | 16.16         | 400kV MHP - Jigmeling Fdr - I                        | 156.08      | +    | Unit III & IV under maintenance.<br>400kV MHP-JLG II under breakdown.             |
|              |                  | Unit-II  | 141.50        | 400kV MHP - Jigmeling Fdr - II                       | 0.00        | +    |   |
|              |                  | Unit-III   | 0.00          | 400kV MHP - Jigmeling Fdr - III                      | 0.00        |      |   |
|              |                  | Unit-IV  | 0.00          | 400kV MHP - Jigmeling Fdr - IV                       | 0.00        |      |   |
|              |                  | -  | -             | 200MVA, 400/132kV ICT                                | 0.00        |      |   |
|              |                  | -  | -             | (Local Load)   | 0.00        |      |   |
|              |                  | <b>Total</b>   | <b>157.66</b> | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>1.58</b> |      |   |
| 2            | 336MW CHP        | Unit- I  | 0.00          | 220kV CHP - Birpara Fdr- I                           | 47.90       | +    | Unit-I & II under shutdown.<br>220kV CHP-Mal Fdr III under maintenance.           |
|              |                  | Unit- II   | 0.00          | 220kV CHP - Birpara Fdr- II                          | 47.80       | +    |   |
|              |                  | Unit- III  | 78.80         | 220kV CHP - Malbase Fdr- III                         | 0.00        | +    |   |
|              |                  | Unit- IV   | 80.66         | 220kV CHP - Sementokha Fdr- IV                       | 39.96       | +    |   |
|              |                  | -  | -             | 220kV Malbase - Birpara Fdr.                         | -81.28      | -    |   |
|              |                  | -  | -             | 66kV CHP - Chumdo Fdr.                               | 12.60       | +    |   |
|              |                  | -  | -             | 66kV CHP - Gedu Fdr.                                 | 8.46        | +    |   |
|              |                  | -  | -             | 3x3MVA, 66/11kV TFR                                  | 1.72        | +    |   |
|              |                  | <b>Total</b>   | <b>159.46</b> | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>1.02</b> |      |   |
| 3            | 24MW BHP (U/S)   | Unit- I  | 10.10         | 220kV BHP - Sementokha Fdr.                          | 13.61       | +    | U/S Unit-II at standby.<br>L/S Unit-I at standby.                                 |
|              |                  | Unit- II   | 0.00          | 66kV BHP - Lobeysa Fdr.                              | 15.82       | +    |   |
|              |                  | <b>Total</b>   | <b>10.10</b>  | 220kV BHP - Tsirang Fdr.                             | -1.49       | -    |   |
|              | 40MW BHP (L/S)   | Unit- I  | 0.00          | 5MVA, 66/11kV TFR                                    | 0.73        | +    |   |
|              |                  | Unit- II   | 19.90         | 30MVA ICT, 220/66kV                                  |             |      |   |
| <b>Total</b> | <b>19.90</b>     | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>1.33</b>   |  |             |      |   |
| 4            | 126MW DHPC       | Unit-I   | 31.29         | 220kV DHPC - Tsirang Fdr.                            | 31.07       | +    | Unit II at Standby  |
|              |                  | Unit-II  | 0.00          | 220kV Jigmeling - Dagapela Fdr.                      |             |      |   |
|              |                  | -  | -             | 5MVA, 220/33kV TFR                                   |             |      |   |
|              |                  | <b>Total</b>   | <b>31.29</b>  | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>0.22</b> |      |   |
|              |                  |  |               |  |             |      |   |
| 5            | 60MW KHP         | Unit- I  | 14.10         | 132kV KHP - Nangkhoh Fdr- I                          | 21.60       | +    | Unit-II under shutdown<br>Unit-IV at standby                                      |
|              |                  | Unit-II  | 0.00          | 132kV KHP - Kilikhar Fdr- II                         | 7.11        | +    |   |
|              |                  | Unit- III  | 15.31         | 5MVA, 132/11kV TFR                                   | 0.30        | +    |   |
|              |                  | Unit- IV   | 0.00          | 132kV Gelephu - Salakati Fdr.                        | -13.80      | -    |   |
|              |                  | -  | -             | 132kV Motanga - Rangia Fdr.                          | -8.64       | +    |   |
|              |                  | -  | -             | 220kV Tsirang - Jigmeling                            | 26.91       | +    |   |
|              |                  | <b>Total</b>   | <b>29.41</b>  | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>0.40</b> |      |   |

Note: Load summary on November 29, 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 | 538.14                | 275.90                                | 266.20                             | 235.33              | 9.70         |
| 2      | Eastern Grid | 187.07                | 80.34                                 | 78.36                              | 133.64              | 1.98         |
|        | <b>Total</b> | <b>725.21</b>         | <b>356.24</b>                         | <b>344.56</b>                      | <b>368.97</b>       | <b>11.68</b> |

Note: Load Summary on November 29, 2018 at 19:00hrs

| Sl. No | Region          | 19:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1      | Western Grid    | 293.93             | 293.93             | 281.60               |
| 2      | Eastern Grid    | 51.24              | 57.06              | 62.24                |
|        | <b>National</b> | <b>345.17</b>      | <b>350.99</b>      | <b>343.84</b>        |

**NOTES:**

- 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:
  - 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.
  - The clocks of all the locations are not synchronized.
- 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:  | November 30, 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            | 1020MW THP       | Unit- I  | 77.97         | 400kV THP - Siliguri Fdr- I                          | 56.55       |      | Unit- II at standby.<br>Unit- V & VI under shutdown.<br>400kV THP_SILI-IV standby. |
|              |                  | Unit- II   | 0.00          | 400kV THP - Siliguri Fdr- II                         | 54.90       | +    |  |
|              |                  | Unit- III  | 70.59         | 400kV THP - Siliguri Fdr- IV                         | 0.00        | +    |  |
|              |                  | Unit- IV   | 89.80         | 400kV THP - Malbase Fdr- III                         | 123.07      | +    |  |
|              |                  | Unit- V  | 0.00          | 400kV Malbase - Siliguri                             | 38.75       | +    |  |
|              |                  | Unit- VI   | 0.00          | -  | -           | -    |  |
|              |                  | <b>Total</b>   | <b>238.36</b> | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>3.84</b> |      |  |
| 2            | 720MW MHP        | Unit-I   | 44.99         | 400kV MHP - Jigmeling Fdr - I                        | 149.50      | +    | Unit-III & IV under breakdown  |
|              |                  | Unit-II  | 104.82        | 400kV MHP - Jigmeling Fdr - II                       | 0.00        | +    |  |
|              |                  | Unit-III   | 0.00          | 400kV MHP - Jigmeling Fdr - III                      | 0.00        |      |  |
|              |                  | Unit-IV  | 0.00          | 400kV MHP - Jigmeling Fdr - IV                       | 0.00        |      |  |
|              |                  | -  | -             | 200MVA, 400/132kV ICT                                | 0.00        |      |  |
|              |                  | -  | -             | (Local Load)   |             |      |  |
|              |                  | <b>Total</b>   | <b>149.81</b> | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>0.31</b> |      |  |
| 3            | 336MW CHP        | Unit- I  | 0.00          | 220kV CHP - Birpara Fdr- I                           | 38.96       | +    | Unit-I & II under shutdownn.   |
|              |                  | Unit- II   | 0.00          | 220kV CHP - Birpara Fdr- II                          | 39.04       | +    |  |
|              |                  | Unit- III  | 57.55         | 220kV CHP - Malbase Fdr- III                         | 0.00        | +    |  |
|              |                  | Unit- IV   | 59.94         | 220kV CHP - Sementokha Fdr- IV                       | 19.40       | +    |  |
|              |                  | -  | -             | 220kV Malbase - Birpara Fdr.                         | -99.19      | -    |  |
|              |                  | -  | -             | 66kV CHP - Chumdo Fdr.                               | 10.00       | +    |  |
|              |                  | -  | -             | 66kV CHP - Gedu Fdr.                                 | 8.19        | +    |  |
|              |                  | -  | -             | 3x3MVA, 66/11kV TFR                                  | 1.23        | +    |  |
|              |                  | <b>Total</b>   | <b>117.49</b> | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>0.67</b> |      |  |
| 4            | 24MW BHP (U/S)   | Unit- I  | 9.64          | 220kV BHP - Sementokha Fdr.                          | 26.83       | +    | Upper stage Unit-II standby.Lower Stage Unit-I standby.                            |
|              |                  | Unit- II   | 0.00          | 66kV BHP - Lobeysa Fdr.                              | 13.88       | +    |  |
|              |                  | <b>Total</b>   | <b>9.64</b>   | 220kV BHP - Tsirang Fdr.                             | -11.96      | -    |  |
|              | 40MW BHP (L/S)   | Unit- I  | 0.00          | 5MVA, 66/11kV TFR                                    | 0.42        | +    |  |
|              |                  | Unit- II   | 19.90         | 30MVA ICT, 220/66kV                                  |             |      |  |
| <b>Total</b> | <b>19.90</b>     | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>0.37</b>   |  |             |      |  |
| 5            | 126MW DHPC       | Unit-I   | 30.25         | 220kV DHPC - Tsirang Fdr.                            | 30.03       | +    | Unit-II at Standby   |
|              |                  | Unit-II  | 0.00          | 220kV Jigmeling - Dagapela Fdr.                      |             |      |  |
|              |                  | -  | -             | 5MVA, 220/33kV TFR                                   |             |      |  |
|              |                  | <b>Total</b>   | <b>30.25</b>  | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>0.22</b> |      |  |
| 6            | 60MW KHP         | Unit- I  | 14.50         | 132kV KHP - Nangkhon Fdr- I                          | 25.92       | +    | Unit-II under shutdown.<br>Unit-IV Standby   |
|              |                  | Unit-II  | 0.00          | 132kV KHP - Kilikhar Fdr- II                         | 4.54        | +    |  |
|              |                  | Unit- III  | 16.29         | 5MVA, 132/11kV TFR                                   | 0.20        | +    |  |
|              |                  | Unit- IV   | 0.00          | 132kV Gelephu - Salakati Fdr.                        | -13.00      | -    |  |
|              |                  | -  | -             | 132kV Motanga - Rangia Fdr.                          | -17.70      | -    |  |
|              |                  | -  | -             | 220kV Tsirang - Jigmeling                            | 16.13       | +    |  |
|              |                  | <b>Total</b>   | <b>30.79</b>  | <b>Error at Station/Auxiliary Consumption/Losses</b> | <b>0.13</b> |      |  |

Note: Load summary on November 30, 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 | 415.64                | 270.50                                | 265.40                             | 129.01              | 5.10         |
| 2      | Eastern Grid | 180.60                | 77.93                                 | 77.49                              | 118.80              | 0.44         |
|        | <b>Total</b> | <b>596.24</b>         | <b>348.43</b>                         | <b>342.89</b>                      | <b>247.81</b>       | <b>5.54</b>  |

Note: Load Summary on November 30, 2018 at 09:00hrs

| Sl. No | Region          | 09:00Hrs Load (MW) | Day Peak Load (MW) | Month Peak Load (MW) |
|--------|-----------------|--------------------|--------------------|----------------------|
| 1      | Western Grid    | 254.85             | 290.41             | 293.93               |
| 2      | Eastern Grid    | 40.86              | 51.88              | 62.30                |
|        | <b>National</b> | <b>295.71</b>      | <b>342.29</b>      | <b>356.23</b>        |

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