



འཇུག་ལྷན་ཁང་འཕེལ་རྒྱུ་ལྟོན་ལྷན་ དཔལ་ལྷན་འཇུག་གཞུང་།
 Ministry of Energy and Natural Resources
 Royal Government of Bhutan
 Office of the Bhutan Power System Operator
 Thimphu: Bhutan



THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 09-Nov-2024(-ve:import, +ve:export)

| Report Details | Date | Time | National Coincidental Peak Load (MW) | Date | Time | Load |
|----------------|-----------|-----------|--------------------------------------|-----------|-----------|--------|
| | 08-Nov-24 | 09:00 hrs | | 30-Dec-23 | 18:00 hrs | 955.51 |

| Sl. No. | Hydropower Plant | Unit | MW | Transmission Lines and Elements | Load (MW) | Remarks |
|--------------|--------------------|---|---------------|---|---------------|--|
| 1 | 6 x 170MW THP | Unit-I | 159.33 | 400kV THP - Siliguri Line - I | 152.98 | Unit-V under AMP. Unit-II under Breakdown. Unit-IV under shutdown. 400kV THP-MAL line under Shutdown |
| | | Unit-II | 0.00 | 400kV THP - Siliguri Line - II | 152.87 | |
| | | Unit-III | 151.14 | 400kV THP - Siliguri Line - IV | 145.86 | |
| | | Unit-IV | 0.00 | 400kV THP - Malbase Line - III | 0.00 | |
| | | Unit-V | 0.00 | 400kV Malbase - Siliguri Line | -246.11 | |
| | | Unit-VI | 140.36 | - | - | |
| | | Total | 450.83 | Auxiliary Consumption & Transformation Losses at Generator end | -0.20% | |
| 2 | 4 x 180MW MHP | Unit-I | 0.00 | 400kV MHP - Jigmeling Line - I | 0.00 | Unit-I under AMP. Unit-II on Standby. 400kV MHP-JLG Line I under Breakdown. 400kV MHP-JLG line II on Standby. 132kV MHP_Yurmo Line- I not in Service. 400kV JLG_ALI Interim Line II on Standby. |
| | | Unit-II | 0.00 | 400kV MHP - Jigmeling Line - II | 0.00 | |
| | | Unit-III | 131.65 | 400kV MHP - Jigmeling Line - III | 145.03 | |
| | | Unit-IV | 170.95 | 400kV MHP - Jigmeling Line - IV | 144.29 | |
| | | - | - | 132kV MHP - Yurmo Line - I | 0.00 | |
| | | - | - | 132kV MHP - Yurmo Line - II | 62.28 | |
| | | - | - | 500MVA, 400/220kV ICT at Jigmeling (HV) | 158.55 | |
| | | - | - | 400kV Jigmeling - Puna - Alipurduar Line - I | 39.27 | |
| | | - | - | 400kV Jigmeling - Puna - Alipurduar Line - II | 0.00 | |
| | | - | - | 400kV Jigmeling - Alipurduar Line - I | 54.55 | |
| | | - | - | 400kV Jigmeling - Alipurduar Line - II | 55.27 | |
| | | - | - | 80MVA, 220/132kV ICT - I (HV) | 19.37 | |
| | | - | - | 80MVA, 220/132kV ICT - II (HV) | 19.22 | |
| | | - | - | 220kV Tsirang - Jigmeling Line | -64.17 | |
| | | - | - | 132kV Gelephu - Salakati Line | 10.53 | |
| Total | 302.60 | Auxiliary Consumption & Transformation Losses at Generator end | 0.01% | | | |
| 3 | 4 x 84MW CHP | Unit-I | 69.62 | 220kV CHP - Birpara Line - I | 0.00 | Unit-IV on Standby. 220kV CHP-Birpara Line-I& II under Shutdown. 220kV Malbase-Birpara line under shutdown. |
| | | Unit-II | 68.48 | 220kV CHP - Birpara Line - II | 0.00 | |
| | | Unit-III | 66.73 | 220kV CHP - Gedu | -9.67 | |
| | | Unit-IV | 0.00 | 220kV CHP - Jamjee (old) - I | 70.20 | |
| | | - | - | 220kV CHP - Jamjee - II (new) | 70.68 | |
| | | - | - | 220kV CHP - Jamjee - III (new) | 68.19 | |
| | | - | - | 220kV Malbase - Birpara Line | 0.00 | |
| | | - | - | 66kV CHP - Gedu Line | 4.63 | |
| | | - | - | 3x3MVA, 66/11kV TFR | 1.23 | |
| Total | 204.83 | Auxiliary Consumption & Transformation Losses at Generator end | -0.21% | | | |
| 4 | 2 x 12MW BHP (U/S) | Unit-I | 6.30 | 220kV BHP - Semtokha Line | 121.00 | |
| | | Unit-II | 6.40 | 66kV BHP - Lobeyasa Line | 26.13 | |
| | | Total | 12.70 | 220kV BHP - Tsirang Line | -111.00 | |
| 5 | 2 x 20MW BHP (L/S) | Unit-I | 12.00 | 5MVA, 66/11kV TFR | 0.38 | |
| | | Unit-II | 12.00 | 30MVA ICT, 220/66kV (HV) | 14.07 | |
| | | Total | 24.00 | Auxiliary Consumption & Transformation Losses at Generator end | 0.52% | |
| 6 | 2 x 63MW DHP | Unit-I | 0.00 | 220kV DHP - Tsirang Line | 50.69 | Unit I on Standby. 220kV DHP_Dagapela Line on Standby. |
| | | Unit-II | 50.99 | 220kV DHP - Dagapela Line | 0.00 | |
| | | - | - | 220kV Jigmeling - Dagapela Line | 52.74 | |
| | | - | - | 5MVA, 220/33kV TFR | 0.28 | |
| Total | 50.99 | Auxiliary Consumption & Transformation Losses at Generator end | 0.04% | | | |
| 7 | 4 x 15MW KHP | Unit-I | 15.17 | 132kV KHP - Nangkhor Line | 28.14 | Unit-IV under Shutdown. |
| | | Unit-II | 15.26 | 132kV KHP - Kilikhar Line | 16.65 | |
| | | Unit-III | 15.19 | 5MVA, 132/11kV TFR | 0.31 | |
| | | Unit-IV | 0.00 | 132kV Motanga - Rangia Line | 26.48 | |
| | | Total | 45.62 | Auxiliary Consumption & Transformation Losses at Generator end | 1.14% | |
| 8 | 2 x 59MW NHP | Unit-I | 25.06 | 132kV NHP-MHP-I | 24.59 | |
| | | Unit-II | 25.04 | 132kV NHP-MHP-II | 24.45 | |
| | | Total | 50.10 | Auxiliary Consumption & Transformation Losses at Generator end | 2.12% | |

Note: Generation-Load Summary (MW) for 08-Nov-24 at 09:00 hrs

| Sl. No. | Region | Total Generation | Total Load (Gen. - Exp.) | Total Load (Feeder Summation) | Total Export/Import | Auxiliary Consumption & Transformation Losses |
|--------------|--------------|------------------|--------------------------|-------------------------------|---------------------|---|
| 1 | Western Grid | 743.35 | 601.92 | 603.02 | 205.60 | -1.10 |
| 2 | Eastern Grid | 398.32 | 148.05 | 146.43 | 186.10 | 1.62 |
| Total | | 1,141.67 | 749.97 | 749.45 | 391.70 | 0.52 |

Note: Generation-Load Summary for 08-Nov-23 at 09:00 hrs

| Sl. No. | Region | Total Generation | Total Load (Gen. - Exp.) | Total Load (Feeder Summation) | Total Export/Import | Auxiliary Consumption & Transformation Losses |
|--------------|--------------|------------------|--------------------------|-------------------------------|---------------------|---|
| 1 | Western Grid | 623.83 | 583.20 | 580.79 | 67.77 | 2.41 |
| 2 | Eastern Grid | 261.97 | 200.80 | 220.39 | 34.03 | -19.59 |
| Total | | 885.80 | 784.00 | 801.18 | 101.80 | -17.18 |

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 09-Nov-2024(-ve:import, +ve:export)

| Report Details | Date | Time | National Coincidental Peak Load (MW) | Date | Time | Load |
|----------------|------------|-----------|--------------------------------------|-------------|-----------|--------|
| | 8-Nov-2024 | 18:00 hrs | | 30-Dec-2023 | 18:00 hrs | 955.51 |

| Sl. No. | Hydropower Plant | Unit | MW | Transmission Lines and Elements | Load (MW) | Remarks |
|--------------|--------------------|---|---------------|---|---------------|--|
| 1 | 6 x 170MW THP | Unit-I | 144.53 | 400kV THP - Siliguri Line - I | 152.50 | Unit-IV under shutdown. Unit-V under AMP. 400kV THP - Malbase Line - III under Shutdown. |
| | | Unit-II | 59.08 | 400kV THP - Siliguri Line - II | 152.19 | |
| | | Unit-III | 148.43 | 400kV THP - Siliguri Line - IV | 146.77 | |
| | | Unit-IV | 0.00 | 400kV THP - Malbase Line - III | 0.00 | |
| | | Unit-V | 0.00 | 400kV Malbase - Siliguri Line | -198.98 | |
| | | Unit-VI | 99.57 | | - | |
| | | Total | 451.61 | Auxiliary Consumption & Transformation Losses at Generator end | 0.03% | |
| 2 | 4 x 180MW MHP | Unit-I | 0.00 | 400kV MHP - Jigmeling Line - I | 0.00 | Unit-I under AMP. Unit-II on Standby. 400kV MHP-JLG Line I under Breakdown. 400kV MHP-JLG line II on Standby. 132kV MHP_Yurmo Line- I not in Service. 400kV JLG_ALI Interim Line II on Standby. |
| | | Unit-II | 0.00 | 400kV MHP - Jigmeling Line - II | 0.00 | |
| | | Unit-III | 146.91 | 400kV MHP - Jigmeling Line - III | 144.55 | |
| | | Unit-IV | 156.59 | 400kV MHP - Jigmeling Line - IV | 143.81 | |
| | | - | - | 132kV MHP - Yurmo Line - I | 0.00 | |
| | | - | - | 132kV MHP - Yurmo Line - II | 63.71 | |
| | | - | - | 500MVA, 400/220kV ICT at Jigmeling (HV) | 157.68 | |
| | | - | - | 400kV Jigmeling - Puna - Alipurduar Line - I | 32.21 | |
| | | - | - | 400kV Jigmeling - Puna - Alipurduar Line - II | 0.00 | |
| | | - | - | 400kV Jigmeling - Alipurduar Line - I | 48.74 | |
| | | - | - | 400kV Jigmeling - Alipurduar Line - II | 47.51 | |
| | | - | - | 80MVA, 220/132kV ICT - I (HV) | 26.00 | |
| | | - | - | 80MVA, 220/132kV ICT - II (HV) | 25.76 | |
| | | - | - | 220kV Tsirang - Jigmeling Line | -51.38 | |
| | | - | - | 132kV Gelephu - Salakati Line | 7.90 | |
| Total | 303.50 | Auxiliary Consumption & Transformation Losses at Generator end | 0.34% | | | |
| 3 | 4 x 84MW CHP | Unit-I | 69.43 | 220kV CHP - Birpara Line - I | 0.00 | Unit-IV on Standby. 220kV CHP - Birpara Line - I under Shutdown. |
| | | Unit-II | 68.48 | 220kV CHP - Birpara Line - II | -50.80 | |
| | | Unit-III | 66.70 | 220kV CHP - Gedu | 0.88 | |
| | | Unit-IV | 0.00 | 220kV CHP - Jamjee (old) - I | 82.96 | |
| | | - | - | 220kV CHP - Jamjee - II (new) | 83.47 | |
| | | - | - | 220kV CHP - Jamjee - III (new) | 80.95 | |
| | | - | - | 220kV Malbase - Birpara Line | -39.61 | |
| | | - | - | 66kV CHP - Gedu Line | 6.24 | |
| | | - | - | 3x3MVA, 66/11kV TFR | 1.80 | |
| | | Total | 204.61 | Auxiliary Consumption & Transformation Losses at Generator end | -0.43% | |
| 4 | 2 x 12MW BHP (U/S) | Unit-I | 5.90 | 220kV BHP - Semotha Line | 105.40 | |
| | | Unit-II | 6.30 | 66kV BHP - Lobeyasa Line | 26.90 | |
| | | Total | 12.20 | 220kV BHP - Tsirang Line | -97.49 | |
| 5 | 2 x 20MW BHP (L/S) | Unit-I | 11.20 | 5MVA, 66/11kV TFR | 0.57 | |
| | | Unit-II | 12.00 | 30MVA ICT, 220/66kV (HV) | 16.08 | |
| | | Total | 23.20 | Auxiliary Consumption & Transformation Losses at Generator end | 0.06% | |
| 6 | 2 x 63MW DHP | Unit-I | 0.00 | 220kV DHP - Tsirang Line | 50.22 | Unit I on Standby. 220kV DHP_Dagapela line on Standby. |
| | | Unit-II | 50.52 | 220kV DHP - Dagapela Line | 0.00 | |
| | | - | - | 220kV Jigmeling - Dagapela Line | 53.94 | |
| | | - | - | 5MVA, 220/33kV TFR | 0.20 | |
| | | Total | 50.52 | Auxiliary Consumption & Transformation Losses at Generator end | 0.20% | |
| 7 | 4 x 15MW KHP | Unit-I | 13.44 | 132kV KHP - Nangkor Line | 20.85 | KHP Unit-IV on Standby. |
| | | Unit-II | 13.49 | 132kV KHP - Kilikhar Line | 18.68 | |
| | | Unit-III | 13.49 | 5MVA, 132/11kV TFR | 0.47 | |
| | | Unit-IV | 0.00 | 132kV Motanga - Rangia Line | 23.21 | |
| | | Total | 40.42 | Auxiliary Consumption & Transformation Losses at Generator end | 1.04% | |
| 8 | 2 x 59MW NHP | Unit-I | 24.97 | 132kV NHP-MHP-I | 24.82 | |
| | | Unit-II | 24.99 | 132kV NHP-MHP-II | 24.79 | |
| | | Total | 49.96 | Auxiliary Consumption & Transformation Losses at Generator end | 0.70% | |

Note: Generation-Load Summary (MW) for 08-Nov-2024 at 18:00 hrs

| Sl. No. | Region | Total Generation | Total Load (Gen. - Exp.) | Total Load (Feeder Summation) | Total Export/Import | Auxiliary Consumption & Transformation Losses |
|--------------|--------------|------------------|--------------------------|-------------------------------|---------------------|---|
| 1 | Western Grid | 742.14 | 631.45 | 632.07 | 162.07 | -0.62 |
| 2 | Eastern Grid | 393.88 | 182.93 | 181.12 | 159.57 | 1.81 |
| Total | | 1,136.02 | 814.38 | 813.19 | 321.64 | 1.19 |

Note: Generation-Load Summary (MW) for 08-Nov-2023, at 18:00 hrs

| Sl. No. | Region | Total Generation | Total Load (Gen. - Exp.) | Total Load (Feeder Summation) | Total Export/Import | Auxiliary Consumption & Transformation Losses |
|--------------|--------------|------------------|--------------------------|-------------------------------|---------------------|---|
| 1 | Western Grid | 661.85 | 527.88 | 519.84 | 188.51 | 8.04 |
| 2 | Eastern Grid | 257.74 | 192.04 | 187.98 | 11.16 | 4.06 |
| Total | | 919.59 | 719.92 | 707.82 | 199.67 | 12.10 |

Note: Daily Energy (MUs) and Power(MW) Statistics for 08-Nov-2024

| Sl. No. | Net Energy Export (Bilateral) | Net Energy Import (Bilateral) | Daily Energy Met | Total Energy Generation | Peak Cross-border (MW) | Imp./Exp. through Exchange (MUs) |
|---------|-------------------------------|-------------------------------|------------------|-------------------------|------------------------|----------------------------------|
| 1 | 7.89 | 0.00 | 19.04 | 27.04 | 421.97 | 0.00 |

1. The instantaneous load balance, 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 900hrs) due to many meter to be read manually. ii) The clocks of all the locations are not synchronized.
 2. This report, compiled using the SCADA data, is prepared to give an overall idea of the generation & load flow for the system at a particular instant. This report also gives energy and import/export figures.
 3. When SCADA data are unavailable for certain stations due to technical issues, required data are collected from the site.