



འཇུག་ལྷན་པུས་འཕེལ་རྒྱུ་ལྷན་ཁག་ རྒྱལ་ཡོད་འཇུག་ལྷན་པུས་  
 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 27-Oct-2024(-ve:import, +ve:export)**

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	26-Oct-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	149.22	400kV THP - Siliguri Line - I	139.02	Unit-V on AMP. 400kV MAL-SIL line under shutdown.
		Unit- II	148.33	400kV THP - Siliguri Line - II	138.61	
		Unit- III	128.42	400kV THP - Siliguri Line- IV	133.67	
		Unit- IV	147.12	400kV THP - Malbase Line - III	262.58	
		Unit- V	0.00	400kV Malbase - Siliguri Line	0.00	
		Unit- VI	99.42	-	-	
		<b>Total</b>	<b>672.51</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.20%</b>	
2	4 x 180MW MHP	Unit-I	144.84	400kV MHP - Jigmeling Line - I	0.00	Unit-IV Under shutdown. 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	197.83	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	150.44	400kV MHP - Jigmeling Line - III	255.81	
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	254.64	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	61.55	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	99.64	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	101.09	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	152.73	
		-	-	400kV Jigmeling - Alipurduar Line - II	152.00	
		-	-	80MVA, 220/132kV ICT - I (HV)	23.92	
		-	-	80MVA, 220/132kV ICT - II (HV)	23.75	
		-	-	220kV Tsirang - Jigmeling Line	1.43	
		-	-	132kV Gelephu - Salakati Line	19.50	
<b>Total</b>	<b>493.11</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.16%</b>			
3	4 x 84MW CHP	Unit- I	79.03	220kV CHP - Birpara Line - I	3.73	
		Unit- II	83.34	220kV CHP - Birpara Line - II	3.80	
		Unit- III	74.25	220kV CHP - Gedu	71.27	
		Unit- IV	81.11	220kV CHP - Jamjee (old) - I	77.28	
		-	-	220kV CHP - Jamjee - II (new)	77.91	
		-	-	220kV CHP - Jamjee - III (new)	75.04	
		-	-	220kV Malbase - Birpara Line	-5.58	
		-	-	66kV CHP - Gedu Line	7.25	
		-	-	3x3MVA, 66/11kV TFR	0.89	
<b>Total</b>	<b>317.73</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.18%</b>			
4	2 x 12MW BHP (U/S)	Unit- I	8.19	220kV BHP - Semtokha Line	94.57	
		Unit- II	9.39	66kV BHP - Lobeyasa Line	25.72	
		<b>Total</b>	<b>17.58</b>	<b>220kV BHP - Tsirang Line</b>	<b>-70.70</b>	
5	2 x 20MW BHP (L/S)	Unit- I	16.52	5MVA, 66/11kV TFR	0.45	
		Unit- II	15.92	30MVA ICT, 220/66kV (HV)	9.22	
		<b>Total</b>	<b>32.44</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.04%</b>	
6	2 x 63MW DHP	Unit-I	37.32	220kV DHP - Tsirang Line	74.88	220kV DHP_Dagapela Line on Standby.
		Unit-II	37.99	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	52.74	
		-	-	5MVA, 220/33kV TFR	0.24	
<b>Total</b>	<b>75.31</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.25%</b>			
7	4 x 15MW KHP	Unit- I	16.54	132kV KHP - Nangkhor Line	43.19	
		Unit-II	16.53	132kV KHP - Kilikhar Line	22.89	
		Unit- III	16.66	5MVA, 132/11kV TFR	0.22	
		Unit- IV	16.71	132kV Motanga - Rangia Line	38.09	
		<b>Total</b>	<b>66.44</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.21%</b>	
8	2 x 59MW NHP	Unit-I	39.97	132kV NHP-MHP-I	39.70	
		Unit-II	40.06	132kV NHP-MHP-II	40.00	
		<b>Total</b>	<b>80.03</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.41%</b>	

Note: Generation-Load Summary (MW) for 26-Oct-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	1,115.57	700.89	701.53	413.25	-0.64
2	Eastern Grid	639.58	177.60	176.32	463.41	1.28
	<b>Total</b>	<b>1,755.15</b>	<b>878.49</b>	<b>877.85</b>	<b>876.66</b>	<b>0.64</b>

Note: Generation-Load Summary for 26-Oct-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	788.72	634.47	633.05	181.82	1.42
2	Eastern Grid	311.38	190.48	190.28	93.33	0.20
	<b>Total</b>	<b>1,100.10</b>	<b>824.95</b>	<b>823.33</b>	<b>275.15</b>	<b>1.62</b>

**THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 27-Oct-2024(-ve:import, +ve:export)**

Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	26-Oct-2024	19:00 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	79.77	400kV THP - Siliguri Line - I	100.90	Unit-V on AMP. 400kV MAL-SIL line under shutdown.	
		Unit-II	167.30	400kV THP - Siliguri Line - II	100.60		
		Unit-III	74.15	400kV THP - Siliguri Line - IV	97.02		
		Unit-IV	167.65	400kV THP - Malbase Line - III	288.80		
		Unit-V	0.00	400kV Malbase - Siliguri Line	0.00		
		Unit-VI	99.47	-	-		
		<b>Total</b>	<b>588.34</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.17%</b>		
2	4 x 180MW MHP	Unit-I	122.19	400kV MHP - Jigmeling Line - I	0.00	Unit-IV 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	197.86	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	130.69	400kV MHP - Jigmeling Line - III	233.92		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	232.79		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	63.39		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	122.18		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	85.09		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	127.27		
		-	-	400kV Jigmeling - Alipurduar Line - II	127.27		
		-	-	80MVA, 220/132kV ICT - I (HV)	24.03		
		-	-	80MVA, 220/132kV ICT - II (HV)	23.88		
		-	-	220kV Tsirang - Jigmeling Line	-22.21		
		-	-	132kV Gelephu - Salakati Line	11.80		
<b>Total</b>	<b>450.74</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.08%</b>				
3	4 x 84MW CHP	Unit-I	69.23	220kV CHP - Birpara Line - I	-7.93		
		Unit-II	69.60	220kV CHP - Birpara Line - II	-7.90		
		Unit-III	70.10	220kV CHP - Gedu	51.90		
		Unit-IV	70.38	220kV CHP - Jamjee (old) - I	78.21		
		-	-	220kV CHP - Jamjee - II (new)	78.79		
		-	-	220kV CHP - Jamjee - III (new)	76.32		
		-	-	220kV Malbase - Birpara Line	-10.23		
		-	-	66kV CHP - Gedu Line	7.64		
		-	-	3x3MVA, 66/11kV TFR	1.01		
<b>Total</b>	<b>279.31</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.45%</b>				
4	2 x 12MW BHP (U/S)	Unit-I	8.10	220kV BHP - Sentokha Line	106.15		
		Unit-II	9.09	66kV BHP - Lobeyasa Line	27.72		
		<b>Total</b>	<b>17.19</b>	<b>220kV BHP - Tsirang Line</b>	<b>-87.22</b>		
5	2 x 20MW BHP (L/S)	Unit-I	15.30	5MVA, 66/11kV TFR	0.57		
		Unit-II	14.75	30MVA ICT, 220/66kV (HV)	11.98		
		<b>Total</b>	<b>30.05</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.04%</b>		
6	2 x 63MW DHP	Unit-I	34.25	220kV DHP - Tsirang Line	68.87	220kV DHP_Dagapela Line on Standby.	
		Unit-II	34.99	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.40		
		-	-	5MVA, 220/33kV TFR	0.35		
<b>Total</b>	<b>69.24</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.03%</b>				
7	4 x 15MW KHP	Unit-I	16.56	132kV KHP - Nangkor Line	41.79		
		Unit-II	16.53	132kV KHP - Kilikhar Line	23.46		
		Unit-III	16.60	5MVA, 132/11kV TFR	0.31		
		Unit-IV	16.54	132kV Motanga - Rangia Line	40.50		
<b>Total</b>	<b>66.23</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>1.01%</b>				
8	2 x 59MW NHP	Unit-I	40.02	132kV NHP-MHP-I	39.71		
		Unit-II	39.98	132kV NHP-MHP-II	40.00		
		<b>Total</b>	<b>80.00</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.36%</b>		

**Note: Generation-Load Summary (MW) for 26-Oct-2024 at 19:00 hrs**

Sl. No.	Region	Total Generation	Total Load (Gen. - Exp.)	Total Load (Feeder Summation)	Total Export/Import	Auxiliary Consumption & Transformation Losses
1	Western Grid	984.13	733.88	731.55	272.46	2.33
2	Eastern Grid	596.97	182.83	181.52	391.93	1.31
<b>Total</b>		<b>1,581.10</b>	<b>916.71</b>	<b>913.07</b>	<b>664.39</b>	<b>3.64</b>

**Note: Generation-Load Summary (MW) for 26-Oct-2023, at 19:00 hrs**

Sl. No.	Region	Total Generation	Total Load (Gen. - Exp.)	Total Load (Feeder Summation)	Total Export/Import	Auxiliary Consumption & Transformation Losses
1	Western Grid	776.01	690.73	689.34	140.4	1.39
2	Eastern Grid	311.56	191.74	190.82	64.7	0.92
<b>Total</b>		<b>1,087.57</b>	<b>882.47</b>	<b>880.16</b>	<b>205.10</b>	<b>2.31</b>

**Note: Daily Energy (MUs) and Power(MW) Statistics for 26-Oct-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	18.05	0.00	20.42	39.68	998.04	1.01

- 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:
  - 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, 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.
- When SCADA data are unavailable for certain stations due to technical issues, required data are collected from the site.