



ལྷན་ཁག་དང་འཕེལ་རྒྱུ་ཚོད་ཀྱི་ཉམས་ཞུགས་ དཔལ་འདུན་པ་ལྷན་ཁག་གི་ལྷན་པོ།  
 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 03-Oct-2024(-ve:import, +ve:export)**

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	02-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	185.66	400kV THP - Siliguri Line - I	236.00	
		Unit- II	185.97	400kV THP - Siliguri Line - II	234.29	
		Unit- III	185.46	400kV THP - Siliguri Line - IV	225.88	
		Unit- IV	185.62	400kV THP - Malbase Line - III	421.36	
		Unit- V	184.82	400kV Malbase - Siliguri Line	181.81	
		Unit- VI	185.89	-	-	
		<b>Total</b>	<b>1,113.42</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.37%</b>	
2	4 x 180MW MHP	Unit-I	197.93	400kV MHP - Jigmeling Line - I	0.00	400kV MHP-JLG Line I on Standby. 132kV MHP_Yurmoo Line- I not in Service. 400kV JLG_ALI Interim Line II on Standby.
		Unit-II	197.85	400kV MHP - Jigmeling Line - II	277.98	
		Unit-III	193.41	400kV MHP - Jigmeling Line - III	288.00	
		Unit-IV	198.10	400kV MHP - Jigmeling Line - IV	285.94	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	61.78	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	87.18	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	188.70	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	283.54	
		-	-	400kV Jigmeling - Alipurduar Line - II	282.56	
		-	-	80MVA, 220/132kV ICT - I (HV)	37.19	
		-	-	80MVA, 220/132kV ICT - II (HV)	36.89	
		-	-	220kV Tsirang - Jigmeling Line	40.01	
		-	-	132kV Gelephu - Salakati Line	26.92	
<b>Total</b>	<b>787.29</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.06%</b>			
3	4 x 84MW CHP	Unit- I	92.23	220kV CHP - Birpara Line - I	33.30	
		Unit- II	92.53	220kV CHP - Birpara Line - II	33.00	
		Unit- III	91.96	220kV CHP - Gedu	109.71	
		Unit- IV	92.20	220kV CHP - Jamjee (old) - I	60.26	
		-	-	220kV CHP - Jamjee - II (new)	60.91	
		-	-	220kV CHP - Jamjee - III (new)	58.97	
		-	-	220kV Malbase - Birpara Line	13.12	
		-	-	66kV CHP - Gedu Line	8.70	
<b>Total</b>	<b>368.92</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.85%</b>			
4	2 x 12MW BHP (U/S)	Unit- I	12.00	220kV BHP - Semtokha Line	119.80	
		Unit- II	11.90	66kV BHP - Lobeyasa Line	28.14	
		<b>Total</b>	<b>23.90</b>	220kV BHP - Tsirang Line	-82.29	
5	2 x 20MW BHP (L/S)	Unit- I	20.80	5MVA, 66/11kV TFR	0.46	
		Unit- II	21.00	30MVA ICT, 220/66kV (HV)	-2.39	
		<b>Total</b>	<b>41.80</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.62%</b>	
6	2 x 63MW DHP	Unit-I	63.58	220kV DHP - Tsirang Line	126.17	220kV DHP_Dagapela Line on Standby.
		Unit-II	63.09	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	52.92	
		-	-	5MVA, 220/33kV TFR	0.50	
<b>Total</b>	<b>126.67</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.00%</b>			
7	4 x 15MW KHP	Unit- I	16.50	132kV KHP - Nangkor Line	42.68	
		Unit-II	16.50	132kV KHP - Kilikhar Line	22.54	
		Unit- III	16.50	5MVA, 132/11kV TFR	0.26	
		Unit- IV	16.50	132kV Motanga - Rangia Line	51.92	
		<b>Total</b>	<b>66.00</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.79%</b>	
8	2 x 59MW NHP	Unit-I	64.90	132kV NHP-MHP-I	63.46	
		Unit-II	64.90	132kV NHP-MHP-II	63.39	
		<b>Total</b>	<b>129.80</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>2.27%</b>	

Note: Generation-Load Summary (MW) for 02-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	1,674.71	677.30	678.67	957.40	-1.37
2	Eastern Grid	983.09	189.46	185.55	833.64	3.91
	<b>Total</b>	<b>2,657.80</b>	<b>866.76</b>	<b>864.22</b>	<b>1,791.04</b>	<b>2.54</b>

Note: Generation-Load Summary for 02-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	1,278.30	639.20	633.28	624.63	5.92
2	Eastern Grid	536.87	186.72	183.90	364.62	2.82
	<b>Total</b>	<b>1,815.17</b>	<b>825.92</b>	<b>817.18</b>	<b>989.25</b>	<b>8.74</b>

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 03-Oct-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	2-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	185.59	400kV THP - Siliguri Line - I	225.50		
		Unit-II	185.86	400kV THP - Siliguri Line - II	225.72		
		Unit-III	185.75	400kV THP - Siliguri Line - IV	215.86		
		Unit-IV	185.73	400kV THP - Malbase Line - III	443.87		
		Unit-V	185.09	400kV Malbase - Siliguri Line	165.58		
		Unit-VI	185.64	-	-		
		<b>Total</b>	<b>1,113.66</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.24%</b>		
2	4 x 180MW MHP	Unit-I	197.95	400kV MHP - Jigmeling Line - I	0.00	400kV MHP-JLG Line I on Standby. 132kV MHP_Yurmo Line-I not in Service. 400kV JLG_ALI Interim Line II on Standby.	
		Unit-II	197.82	400kV MHP - Jigmeling Line - II	278.04		
		Unit-III	194.52	400kV MHP - Jigmeling Line - III	287.87		
		Unit-IV	198.12	400kV MHP - Jigmeling Line - IV	286.15		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	62.82		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	106.55		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	184.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	275.64		
		-	-	400kV Jigmeling - Alipurduar Line - II	275.64		
		-	-	80MVA, 220/132kV ICT - I (HV)	39.75		
		-	-	80MVA, 220/132kV ICT - II (HV)	39.28		
		-	-	220kV Tsirang - Jigmeling Line	26.99		
		-	-	132kV Gelephu - Salakati Line	28.28		
<b>Total</b>	<b>788.41</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.31%</b>				
3	4 x 84MW CHP	Unit-I	91.48	220kV CHP - Birpara Line - I	37.02		
		Unit-II	91.26	220kV CHP - Birpara Line - II	36.99		
		Unit-III	91.26	220kV CHP - Gedu	92.87		
		Unit-IV	91.42	220kV CHP - Jamjee (old) - I	63.28		
		-	-	220kV CHP - Jamjee - II (new)	64.01		
		-	-	220kV CHP - Jamjee - III (new)	61.54		
		-	-	220kV Malbase - Birpara Line	31.25		
		-	-	66kV CHP - Gedu Line	9.03		
		-	-	3x3MVA, 66/11kV TFR	1.03		
<b>Total</b>	<b>365.42</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.10%</b>				
4	2 x 12MW BHP (U/S)	Unit-I	11.91	220kV BHP - Sentsokha Line	129.16		
		Unit-II	11.91	66kV BHP - Lobeyasa Line	31.02		
		<b>Total</b>	<b>23.82</b>	220kV BHP - Tsirang Line	-94.66		
5	2 x 20MW BHP (L/S)	Unit-I	21.25	5MVA, 66/11kV TFR	0.62		
		Unit-II	20.45	30MVA ICT, 220/66kV (HV)	8.19		
		<b>Total</b>	<b>41.70</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.95%</b>		
6	2 x 63MW DHP	Unit-I	63.64	220kV DHP - Tsirang Line	126.27	220kV DHP_Dagapela Line on Standby.	
		Unit-II	63.31	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.79		
		-	-	5MVA, 220/33kV TFR	0.67		
<b>Total</b>	<b>126.95</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.01%</b>				
7	4 x 15MW KHP	Unit-I	16.49	132kV KHP - Nangkor Line	41.29		
		Unit-II	16.46	132kV KHP - Kilikhar Line	23.68		
		Unit-III	16.61	5MVA, 132/11kV TFR	0.38		
		Unit-IV	16.54	132kV Motanga - Rangia Line	48.73		
		<b>Total</b>	<b>66.10</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>1.13%</b>		
8	2 x 59MW NHP	Unit-I	64.93	132kV NHP-MHP-I	64.46		
		Unit-II	64.88	132kV NHP-MHP-II	64.48		
		<b>Total</b>	<b>129.81</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.67%</b>		

Note: Generation-Load Summary (MW) for 02-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	1,671.55	706.64	784.89	937.92	1.75
2	Eastern Grid	984.32	199.02	194.93	812.29	4.09
	<b>Total</b>	<b>2,655.87</b>	<b>905.66</b>	<b>899.82</b>	<b>1,750.21</b>	<b>5.84</b>

Note: Generation-Load Summary (MW) for 02-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	1,526.22	643.66	634.68	879.16	8.98
2	Eastern Grid	487.50	195.3	193.19	295.6	2.11
	<b>Total</b>	<b>2,013.72</b>	<b>838.96</b>	<b>827.87</b>	<b>1,174.76</b>	<b>11.09</b>

Note: Daily Energy (MUs) and Power(MW) Statistics for 02-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)
	40.33	0.00	20.55	62.72	1,807.41	1.82

- 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. ii) 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.