



འཇུག་ལྷན་པོའི་འཕེལ་རྒྱུ་ལྷན་ཁག་ འཕེལ་རྒྱུ་ལྷན་ཁག་གི་འཕེལ་རྒྱུ་  
 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 01-Nov-2024(-ve:import, +ve:export)**

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	31-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	75.02	400kV THP - Siliguri Line - I	0.00	400kV THP_Siliguri line-I on standby. Unit-V under AMP. 400kV MAL-SIL line under Shutdown.
		Unit- II	156.92	400kV THP - Siliguri Line - II	117.89	
		Unit- III	52.36	400kV THP - Siliguri Line- IV	111.57	
		Unit- IV	141.03	400kV THP - Malbase Line - III	293.71	
		Unit- V	0.00	400kV Malbase - Siliguri Line	0.00	
		Unit- VI	99.12	-	-	
		<b>Total</b>	<b>524.45</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.24%</b>	
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I 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	190.21	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	100.66	400kV MHP - Jigmeling Line - III	180.60	
		Unit-IV	71.34	400kV MHP - Jigmeling Line - IV	179.56	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	61.80	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	110.55	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	61.09	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	92.36	
		-	-	400kV Jigmeling - Alipurduar Line - II	92.36	
		-	-	80MVA, 220/132kV ICT - I (HV)	21.48	
		-	-	80MVA, 220/132kV ICT - II (HV)	21.32	
		-	-	220kV Tsirang - Jigmeling Line	-14.11	
		-	-	132kV Gelephu - Salakati Line	12.28	
<b>Total</b>	<b>362.21</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.01%</b>			
3	4 x 84MW CHP	Unit- I	78.46	220kV CHP - Birpara Line - I	-19.37	Unit-II under Shutdown.
		Unit- II	0.00	220kV CHP - Birpara Line - II	-19.18	
		Unit- III	83.80	220kV CHP - Gedu	39.88	
		Unit- IV	80.44	220kV CHP - Jamjee (old) - I	78.46	
		-	-	220kV CHP - Jamjee - II (new)	78.61	
		-	-	220kV CHP - Jamjee - III (new)	76.11	
		-	-	220kV Malbase - Birpara Line	-19.78	
		-	-	66kV CHP - Gedu Line	8.16	
		-	-	3x3MVA, 66/11kV TFR	1.20	
<b>Total</b>	<b>242.70</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.48%</b>			
4	2 x 12MW BHP (U/S)	Unit- I	6.94	220kV BHP - Semtokha Line	88.90	
		Unit- II	8.30	66kV BHP - Lobeyasa Line	24.47	
<b>Total</b>	<b>15.24</b>	<b>220kV BHP - Tsirang Line</b>	<b>-71.85</b>			
5	2 x 20MW BHP (L/S)	Unit- I	12.70	5MVA, 66/11kV TFR	0.45	
		Unit- II	14.20	30MVA ICT, 220/66kV (HV)	10.43	
<b>Total</b>	<b>26.90</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.40%</b>			
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	60.71	Unit-I on standby. 220kV DHP_Dagapela Line on Standby.
		Unit-II	60.71	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	53.08	
		-	-	5MVA, 220/33kV TFR	0.30	
<b>Total</b>	<b>60.71</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.49%</b>			
7	4 x 15MW KHP	Unit- I	12.58	132kV KHP - Nangkhor Line	31.80	
		Unit-II	12.55	132kV KHP - Kilikhar Line	17.71	
		Unit- III	12.62	5MVA, 132/11kV TFR	0.23	
		Unit- IV	12.59	132kV Motanga - Rangia Line	24.39	
		<b>Total</b>	<b>50.34</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>1.19%</b>	
8	2 x 59MW NHP	Unit-I	15.01	132kV NHP-MHP-I	14.85	
		Unit-II	44.90	132kV NHP-MHP-II	44.87	
		<b>Total</b>	<b>59.91</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.32%</b>	

Note: Generation-Load Summary (MW) for 31-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	870.00	712.98	713.00	171.13	-0.02
2	Eastern Grid	472.46	175.87	175.11	282.48	0.76
<b>Total</b>		<b>1,342.46</b>	<b>888.85</b>	<b>888.11</b>	<b>453.61</b>	<b>0.74</b>

Note: Generation-Load Summary for 31-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	763.93	654.14	651.99	155.62	2.15
2	Eastern Grid	281.15	184.62	182.46	50.70	2.16
<b>Total</b>		<b>1,045.08</b>	<b>838.76</b>	<b>834.45</b>	<b>206.32</b>	<b>4.31</b>

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 01-Nov-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	31-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	74.75	400kV THP - Siliguri Line - I	0.00	Unit-V on AMP. 400kV THP_Siliguri line-I on standby 400kV MAL-SIL line under Shutdown.	
		Unit-II	137.17	400kV THP - Siliguri Line - II	103.21		
		Unit-III	49.37	400kV THP - Siliguri Line- IV	97.40		
		Unit-IV	140.66	400kV THP - Malbase Line - III	303.23		
		Unit-V	0.00	400kV Malbase - Siliguri Line	0.00		
		Unit-VI	99.32	-	-		
		<b>Total</b>	<b>501.27</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.51%</b>		
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I 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	190.20	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	80.21	400kV MHP - Jigmeling Line - III	169.68		
		Unit-IV	71.37	400kV MHP - Jigmeling Line - IV	168.65		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	60.98		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	129.09		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	51.64		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	76.36		
		-	-	400kV Jigmeling - Alipurduar Line - II	78.55		
		-	-	80MVA, 220/132kV ICT - I (HV)	24.65		
		-	-	80MVA, 220/132kV ICT - II (HV)	24.42		
		-	-	220kV Tsirang - Jigmeling Line	-26.51		
		-	-	132kV Gelephu - Salakati Line	5.47		
<b>Total</b>	<b>341.78</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.52%</b>				
3	4 x 84MW CHP	Unit-I	83.75	220kV CHP - Birpara Line - I	-14.91	Unit IV on Standby	
		Unit-II	83.26	220kV CHP - Birpara Line - II	-14.77		
		Unit-III	87.27	220kV CHP - Gedu	29.71		
		Unit-IV	0.00	220kV CHP - Jamjee (old) - I	82.92		
		-	-	220kV CHP - Jamjee - II (new)	83.28		
		-	-	220kV CHP - Jamjee - III (new)	80.53		
		-	-	220kV Malbase - Birpara Line	-4.32		
		-	-	66kV CHP - Gedu Line	6.99		
		-	-	3x3MVA, 66/11kV TFR	1.60		
<b>Total</b>	<b>254.28</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.42%</b>				
4	2 x 12MW BHP (U/S)	Unit-I	6.74	220kV BHP - Sentokha Line	94.51		
		Unit-II	8.38	66kV BHP - Lobeyasa Line	26.91		
		<b>Total</b>	<b>15.12</b>	220kV BHP - Tsirang Line	-80.17		
5	2 x 20MW BHP (L/S)	Unit-I	13.59	5MVA, 66/11kV TFR	0.52		
		Unit-II	13.08	30MVA ICT, 220/66kV (HV)	12.99		
		<b>Total</b>	<b>26.67</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.05%</b>		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	57.69	Unit I on Stanby. 220kV DHP_Dagapela Line on Standby.	
		Unit-II	58.00	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.56		
		-	-	5MVA, 220/33kV TFR	0.20		
<b>Total</b>	<b>58.00</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.19%</b>				
7	4 x 15MW KHP	Unit-I	15.15	132kV KHP - Nangkor Line	26.23	Unit-IV under Shutdown	
		Unit-II	15.19	132kV KHP - Kilikhar Line	18.44		
		Unit-III	15.21	5MVA, 132/11kV TFR	0.39		
		Unit-IV	0.00	132kV Motanga - Rangia Line	25.71		
		<b>Total</b>	<b>45.55</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>1.08%</b>		
8	2 x 59MW NHP	Unit-I	15.06	132kV NHP-MHP-I	14.76		
		Unit-II	45.04	132kV NHP-MHP-II	44.55		
		<b>Total</b>	<b>60.10</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>1.31%</b>		

Note: Generation-Load Summary (MW) for 31-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	855.34	715.24	718.75	166.61	-3.51
2	Eastern Grid	447.43	183.19	180.13	237.73	3.06
	<b>Total</b>	<b>1,302.77</b>	<b>898.43</b>	<b>898.88</b>	<b>404.34</b>	<b>-0.45</b>

Note: Generation-Load Summary (MW) for 31-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	731.65	654.05	649.55	133.71	4.50
2	Eastern Grid	283.84	200.61	198.37	27.12	2.24
	<b>Total</b>	<b>1,015.49</b>	<b>854.66</b>	<b>847.92</b>	<b>160.83</b>	<b>6.74</b>

Note: Daily Energy (MUs) and Power(MW) Statistics for 31-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	10.50	0.00	20.66	32.10	561.69	0.79

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 9:00hrs) 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.