



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 03-Nov-2024(-ve:import, +ve:export)**

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	02-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	68.50	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	137.04	400kV THP - Siliguri Line - II	116.56	
		Unit- III	60.28	400kV THP - Siliguri Line- IV	110.33	
		Unit- IV	137.76	400kV THP - Malbase Line - III	275.59	
		Unit- V	0.00	400kV Malbase - Siliguri Line	0.00	
		Unit- VI	99.38	-	-	
		<b>Total</b>	<b>502.96</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.10%</b>	
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I on AMP. 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	190.07	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	95.23	400kV MHP - Jigmeling Line - III	187.00	
		Unit-IV	81.01	400kV MHP - Jigmeling Line - IV	186.37	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	60.98	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	109.79	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	64.73	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	96.73	
		-	-	400kV Jigmeling - Alipurduar Line - II	98.18	
		-	-	80MVA, 220/132kV ICT - I (HV)	20.42	
		-	-	80MVA, 220/132kV ICT - II (HV)	20.21	
		-	-	220kV Tsirang - Jigmeling Line	-17.44	
-	-	132kV Gelephu - Salakati Line	12.94			
<b>Total</b>	<b>366.31</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.38%</b>			
3	4 x 84MW CHP	Unit- I	75.77	220kV CHP - Birpara Line - I	-23.69	Unit-IV on Standby.
		Unit- II	79.30	220kV CHP - Birpara Line - II	-23.11	
		Unit- III	75.08	220kV CHP - Gedu	32.40	
		Unit- IV	0.00	220kV CHP - Jamjee (old) - I	79.18	
		-	-	220kV CHP - Jamjee - II (new)	79.93	
		-	-	220kV CHP - Jamjee - III (new)	77.08	
		-	-	220kV Malbase - Birpara Line	-19.97	
		-	-	66kV CHP - Gedu Line	6.62	
		-	-	3x3MVA, 66/11kV TFR	1.17	
<b>Total</b>	<b>230.15</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.25%</b>			
4	2 x 12MW BHP (U/S)	Unit- I	6.24	220kV BHP - Semtokha Line	86.14	
		Unit- II	7.29	66kV BHP - Lobeysa Line	24.14	
<b>Total</b>	<b>13.53</b>	<b>220kV BHP - Tsirang Line</b>	<b>-70.57</b>			
5	2 x 20MW BHP (L/S)	Unit- I	13.55	5MVA, 66/11kV TFR	0.37	
		Unit- II	13.05	30MVA ICT, 220/66kV (HV)	10.66	
<b>Total</b>	<b>26.60</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.12%</b>			
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	55.89	Unit I on Standby. 220kV DHP_Dagapela Line on Standby.
		Unit-II	56.28	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	52.97	
		-	-	5MVA, 220/33kV TFR	0.35	
<b>Total</b>	<b>56.28</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.07%</b>			
7	4 x 15MW KHP	Unit- I	12.56	132kV KHP - Nangkor Line	31.77	
		Unit-II	12.58	132kV KHP - Kilikhar Line	17.82	
		Unit- III	12.61	5MVA, 132/11kV TFR	0.22	
		Unit- IV	12.60	132kV Motanga - Rangia Line	21.55	
		<b>Total</b>	<b>50.35</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>1.07%</b>	
8	2 x 59MW NHP	Unit-I	25.00	132kV NHP-MHP-I	24.79	
		Unit-II	45.06	132kV NHP-MHP-II	44.63	
		<b>Total</b>	<b>70.06</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.91%</b>	

Note: Generation-Load Summary (MW) for 02-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	829.52	686.84	685.70	160.12	1.14
2	Eastern Grid	486.72	175.15	172.59	294.13	2.56
<b>Total</b>		<b>1,316.24</b>	<b>861.99</b>	<b>858.29</b>	<b>454.25</b>	<b>3.70</b>

Note: Generation-Load Summary for 02-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	690.22	640.41	644.27	99.64	-3.86
2	Eastern Grid	278.98	179.36	178.25	49.79	1.11
<b>Total</b>		<b>969.20</b>	<b>819.77</b>	<b>822.52</b>	<b>149.43</b>	<b>-2.75</b>

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 03-Nov-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	2-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	69.93	400kV THP - Siliguri Line - I	0.00	Unit-V under AMP. 400kV THP_Siliguri line-1 on Standby. 400kV MAL-SIL line under Shutdown.	
		Unit-II	106.98	400kV THP - Siliguri Line - II	94.49		
		Unit-III	60.28	400kV THP - Siliguri Line- IV	89.29		
		Unit-IV	140.53	400kV THP - Malbase Line - III	293.37		
		Unit-V	0.00	400kV Malbase - Siliguri Line	0.00		
		Unit-VI	99.65	-	-		
		<b>Total</b>	<b>477.37</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.05%</b>		
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I under AMP. 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	190.16	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	80.51	400kV MHP - Jigmeling Line - III	179.05		
		Unit-IV	81.01	400kV MHP - Jigmeling Line - IV	178.16		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	63.88		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	130.18		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	56.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	83.64		
		-	-	400kV Jigmeling - Alipurduar Line - II	84.36		
		-	-	80MVA, 220/132kV ICT - I (HV)	25.16		
		-	-	80MVA, 220/132kV ICT - II (HV)	24.96		
		-	-	220kV Tsirang - Jigmeling Line	-25.39		
		-	-	132kV Gelephu - Salakati Line	8.68		
<b>Total</b>	<b>351.68</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.03%</b>				
3	4 x 84MW CHP	Unit-I	74.78	220kV CHP - Birpara Line - I	-18.13	Unit-IV on Standby.	
		Unit-II	84.25	220kV CHP - Birpara Line - II	-17.68		
		Unit-III	85.82	220kV CHP - Gedu	28.88		
		Unit-IV	0.00	220kV CHP - Jamjee (old) - I	81.94		
		-	-	220kV CHP - Jamjee - II (new)	82.43		
		-	-	220kV CHP - Jamjee - III (new)	79.54		
		-	-	220kV Malbase - Birpara Line	-9.78		
		-	-	66kV CHP - Gedu Line	6.81		
		-	-	3x3MVA, 66/11kV TFR	1.54		
<b>Total</b>	<b>244.85</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.20%</b>				
4	2 x 12MW BHP (U/S)	Unit-I	6.40	220kV BHP - Sentokha Line	92.50		
		Unit-II	8.02	66kV BHP - Lobeyasa Line	26.44		
		<b>Total</b>	<b>14.42</b>	<b>220kV BHP - Tsirang Line</b>	<b>-78.46</b>		
5	2 x 20MW BHP (L/S)	Unit-I	13.71	5MVA, 66/11kV TFR	0.70		
		Unit-II	13.20	30MVA ICT, 220/66kV (HV)	13.40		
		<b>Total</b>	<b>26.91</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.36%</b>		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	57.05	Unit I on Stanby. 220kV DHP_Dagapela line on Sandby.	
		Unit-II	57.46	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.79		
		-	-	5MVA, 220/33kV TFR	0.18		
<b>Total</b>	<b>57.46</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.40%</b>				
7	4 x 15MW KHP	Unit-I	12.56	132kV KHP - Nangkor Line	28.73		
		Unit-II	12.58	132kV KHP - Kilikhar Line	20.70		
		Unit-III	12.57	5MVA, 132/11kV TFR	0.31		
		Unit-IV	12.57	132kV Motanga - Rangia Line	26.02		
		<b>Total</b>	<b>50.28</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>1.07%</b>		
8	2 x 59MW NHP	Unit-I	25.06	132kV NHP-MHP-I	24.77		
		Unit-II	45.11	132kV NHP-MHP-II	44.73		
		<b>Total</b>	<b>70.17</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.95%</b>		

Note: Generation-Load Summary (MW) for 02-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	821.01	708.21	708.09	138.19	0.12
2	Eastern Grid	472.13	188.04	186.74	258.70	1.30
	<b>Total</b>	<b>1,293.14</b>	<b>896.25</b>	<b>894.83</b>	<b>396.89</b>	<b>1.42</b>

Note: Generation-Load Summary (MW) for 02-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	695.57	693.43	683.38	68.01	10.05
2	Eastern Grid	269.28	201.11	199.79	2.3	1.32
	<b>Total</b>	<b>964.85</b>	<b>894.54</b>	<b>883.17</b>	<b>70.31</b>	<b>11.37</b>

Note: Daily Energy (MUs) and Power(MW) Statistics for 02-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	11.15	0.00	20.15	31.45	524.66	0.00

- 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.