



ལྷན་ཁག་གི་འཕེལ་རྒྱུ་ལྟོན་ལྟེན་གྱི་ལྷན་ཁག་ རྒྱལ་ལོ་ལྷན་ཁག་གི་འཕེལ་རྒྱུ་ལྟོན་ལྟེན་གྱི་ལྷན་ཁག་  
 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 26-Oct-2024(-ve:import, +ve:export)**

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	25-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	119.89	400kV THP - Siliguri Line - I	0.00	Unit-V on AMP. 400kV THP_Siliguri Line-I on Standby.
		Unit- II	148.56	400kV THP - Siliguri Line - II	137.48	
		Unit- III	93.96	400kV THP - Siliguri Line- IV	129.45	
		Unit- IV	147.73	400kV THP - Malbase Line - III	342.91	
		Unit- V	0.00	400kV Malbase - Siliguri Line	84.28	
		Unit- VI	99.69	-	-	
		<b>Total</b>	<b>609.83</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.01%</b>	
2	4 x 180MW MHP	Unit-I	80.25	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	197.92	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	155.52	400kV MHP - Jigmeling Line - III	229.04	
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	228.19	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	54.72	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	103.88	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	87.23	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	129.46	
		-	-	400kV Jigmeling - Alipurduar Line - II	129.46	
		-	-	80MVA, 220/132kV ICT - I (HV)	20.11	
		-	-	80MVA, 220/132kV ICT - II (HV)	19.89	
		-	-	220kV Tsirang - Jigmeling Line	-11.55	
		-	-	132kV Gelephu - Salakati Line	13.85	
<b>Total</b>	<b>433.69</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.29%</b>			
3	4 x 84MW CHP	Unit- I	67.52	220kV CHP - Birpara Line - I	-5.96	
		Unit- II	77.43	220kV CHP - Birpara Line - II	-5.96	
		Unit- III	68.64	220kV CHP - Gedu	69.67	
		Unit- IV	70.22	220kV CHP - Jamjee (old) - I	73.22	
		-	-	220kV CHP - Jamjee - II (new)	73.58	
		-	-	220kV CHP - Jamjee - III (new)	71.06	
		-	-	220kV Malbase - Birpara Line	-20.81	
		-	-	66kV CHP - Gedu Line	7.96	
		-	-	3x3MVA, 66/11kV TFR	0.96	
<b>Total</b>	<b>283.81</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.25%</b>			
4	2 x 12MW BHP (U/S)	Unit- I	8.36	220kV BHP - Semtokha Line	102.60	
		Unit- II	8.83	66kV BHP - Lobeysa Line	25.75	
		<b>Total</b>	<b>17.19</b>	220kV BHP - Tsirang Line	-80.87	
5	2 x 20MW BHP (L/S)	Unit- I	15.70	5MVA, 66/11kV TFR	0.43	
		Unit- II	15.12	30MVA ICT, 220/66kV (HV)	9.65	
		<b>Total</b>	<b>30.82</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.21%</b>	
6	2 x 63MW DHP	Unit-I	36.31	220kV DHP - Tsirang Line	72.35	220kV DHP_Dagapela Line on Standby.
		Unit-II	36.50	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	52.83	
		-	-	5MVA, 220/33kV TFR	0.20	
<b>Total</b>	<b>72.81</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.36%</b>			
7	4 x 15MW KHP	Unit- I	15.10	132kV KHP - Nangkhor Line	39.03	
		Unit-II	15.02	132kV KHP - Kilikhar Line	20.46	
		Unit- III	15.10	5MVA, 132/11kV TFR	0.22	
		Unit- IV	15.09	132kV Motanga - Rangia Line	34.36	
		<b>Total</b>	<b>60.31</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.99%</b>	
8	2 x 59MW NHP	Unit-I	24.90	132kV NHP-MHP-I	24.89	
		Unit-II	54.97	132kV NHP-MHP-II	54.64	
		<b>Total</b>	<b>79.87</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.43%</b>	

Note: Generation-Load Summary (MW) for 25-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	1,014.46	707.61	707.90	318.40	-0.29
2	Eastern Grid	573.87	167.96	165.75	394.36	2.21
	<b>Total</b>	<b>1,588.33</b>	<b>875.57</b>	<b>873.65</b>	<b>712.76</b>	<b>1.92</b>

Note: Generation-Load Summary for 25-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	838.17	632.78	632.08	227.62	0.70
2	Eastern Grid	324.22	202.18	200.94	99.81	1.24
	<b>Total</b>	<b>1,162.39</b>	<b>834.96</b>	<b>833.02</b>	<b>327.43</b>	<b>1.94</b>

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 26-Oct-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	25-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	109.74	400kV THP - Siliguri Line - I	103.75	Unit-V on AMP. 400kV MAL-SIL line under shutdown.	
		Unit-II	148.92	400kV THP - Siliguri Line - II	102.00		
		Unit-III	74.19	400kV THP - Siliguri Line - IV	98.64		
		Unit-IV	148.31	400kV THP - Malbase Line - III	277.06		
		Unit-V	0.00	400kV Malbase - Siliguri Line	0.00		
		Unit-VI	100.02	-	-		
		<b>Total</b>	<b>581.18</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.05%</b>		
2	4 x 180MW MHP	Unit-I	65.20	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	197.20	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	120.66	400kV MHP - Jigmeling Line - III	201.21		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	200.01		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	61.98		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	112.95		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	70.55		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	104.73		
		-	-	400kV Jigmeling - Alipurduar Line - II	106.18		
		-	-	80MVA, 220/132kV ICT - I (HV)	19.56		
		-	-	80MVA, 220/132kV ICT - II (HV)	19.38		
		-	-	220kV Tsirang - Jigmeling Line	-21.99		
		-	-	132kV Gelephu - Salakati Line	3.44		
<b>Total</b>	<b>383.06</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.20%</b>				
3	4 x 84MW CHP	Unit-I	69.03	220kV CHP - Birpara Line - I	-8.92		
		Unit-II	77.31	220kV CHP - Birpara Line - II	-8.39		
		Unit-III	69.05	220kV CHP - Gedu	57.71		
		Unit-IV	69.86	220kV CHP - Jamjee (old) - I	79.46		
		-	-	220kV CHP - Jamjee - II (new)	80.04		
		-	-	220kV CHP - Jamjee - III (new)	76.76		
		-	-	220kV Malbase - Birpara Line	-15.20		
		-	-	66kV CHP - Gedu Line	7.73		
		-	-	3x3MVA, 66/11kV TFR	1.12		
<b>Total</b>	<b>285.25</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.09%</b>				
4	2 x 12MW BHP (U/S)	Unit-I	9.10	220kV BHP - Sentokha Line	110.00		
		Unit-II	9.54	66kV BHP - Lobeyasa Line	29.09		
		<b>Total</b>	<b>18.64</b>	220kV BHP - Tsirang Line	-90.22		
5	2 x 20MW BHP (L/S)	Unit-I	15.73	5MVA, 66/11kV TFR	0.58		
		Unit-II	15.15	30MVA ICT, 220/66kV (HV)	11.69		
		<b>Total</b>	<b>30.88</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.14%</b>		
6	2 x 63MW DHP	Unit-I	36.33	220kV DHP - Tsirang Line	71.81	220kV DHP_Dagapela Line on Standby.	
		Unit-II	36.00	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.26		
		-	-	5MVA, 220/33kV TFR	0.30		
<b>Total</b>	<b>72.33</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.30%</b>				
7	4 x 15MW KHP	Unit-I	15.54	132kV KHP - Nangkor Line	39.12		
		Unit-II	15.54	132kV KHP - Kilikhar Line	22.29		
		Unit-III	15.70	5MVA, 132/11kV TFR	0.32		
		Unit-IV	15.63	132kV Motanga - Rangia Line	39.47		
<b>Total</b>	<b>62.41</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>1.09%</b>				
8	2 x 59MW NHP	Unit-I	24.96	132kV NHP-MHP-I	24.80		
		Unit-II	55.02	132kV NHP-MHP-II	54.59		
		<b>Total</b>	<b>79.98</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.74%</b>		

Note: Generation-Load Summary (MW) for 25-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	988.28	738.39	738.63	271.88	-0.24
2	Eastern Grid	525.45	179.09	178.57	324.37	0.52
<b>Total</b>		<b>1,513.73</b>	<b>917.48</b>	<b>917.20</b>	<b>596.25</b>	<b>0.28</b>

Note: Generation-Load Summary (MW) for 25-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	830.32	687.68	688.79	197.96	-1.11
2	Eastern Grid	324.72	183.7	182.20	85.7	1.50
<b>Total</b>		<b>1,155.04</b>	<b>871.38</b>	<b>870.99</b>	<b>283.66</b>	<b>0.39</b>

Note: Daily Energy (MUs) and Power(MW) Statistics for 25-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	15.88	0.00	20.54	37.63	771.07	1.07

- 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.