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 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 02-Jan-2025(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	01-Jan-25	09:00 hrs		25-Dec-24	18:38:16	1026.44

Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks	
1	6 x 170MW THP	Unit-I	119.65	400kV THP - Silguri Line - I	0.00	Unit-II on Standby. Unit-III under Shutdown. Unit-VI under AMP. 400kV THP-SIL Line I under Shutdown. 400kV THP-SIL Line IV on Standby.	
		Unit-II	0.00	400kV THP - Silguri Line - II	68.13		
		Unit-III	0.00	400kV THP - Silguri Line - IV	0.00		
		Unit-IV	118.45	400kV THP - Malbase Line - III	303.35		
		Unit-V	130.25	400kV Malbase - Silguri Line	12.39		
		Unit-VI	0.00	-	-		
		<b>Total</b>	<b>368.35</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.85%</b>		
2	4 x 180MW MHP	Unit-I	39.87	400kV MHP - Jigmeling Line - I	0.00	Unit-III on Standby. Unit-IV under AMP. 400kV MHP-JLG Line I on Standby. 400kV MHP-JLG Line II under Shutdown. 132kV MHP_Yurmoo Line- I not in Service.	
		Unit-II	174.83	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	86.70		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	86.30		
		-	-	132kV MHP - Yurmoo Line - I	0.00		
		-	-	132kV MHP - Yurmoo Line - II	63.81		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	202.79		
		-	-	400kV Jigmeling - Alipurduar Line - I <i>direct lines</i>	63.34		
		-	-	400kV Jigmeling - Alipurduar Line - II	68.09		
		-	-	80MVA, 220/132kV ICT - I (HV)	14.04		
		-	-	80MVA, 220/132kV ICT - II (HV)	13.91		
		-	-	220kV Tsirang - Jigmeling Line	-120.25		
		-	-	132kV Gelephu - Salakati Line	-14.91		
		<b>Total</b>	<b>214.70</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.13%</b>		
		3	6 x 170MW PHP-II	Unit-I	0.00		400kV PHP II - Jigmeling - I <i>erstwhile interim lines</i>
Unit-II	170.10			400kV PHP II - Jigmeling - II	169.50		
Unit-III	0.00			400kV PHP II - Alipurduar - I	0.00		
Unit-IV	0.00			400kV PHP II - Alipurduar - II	0.00		
Unit-V	0.00			-	-		
Unit-VI	0.00			-	-		
<b>Total</b>	<b>170.10</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.35%</b>				
4	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-51.63	Unit-I under AMP. Unit-II on Standby.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-50.95		
		Unit-III	70.39	220kV CHP - Gedu	9.76		
		Unit-IV	75.20	220kV CHP - Jamjee (old) - I	77.82		
		-	-	220kV CHP - Jamjee - II (new)	78.18		
		-	-	220kV CHP - Jamjee - III (new)	75.77		
		-	-	220kV Malbase - Birpara Line	-49.41		
		-	-	66kV CHP - Gedu Line	5.94		
		-	-	3x3MVA, 66/11kV TFR	1.67		
<b>Total</b>	<b>145.59</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.67%</b>				
5	2 x 12MW BHP (U/S)	Unit-I	0.00	220kV BHP - Semtokha Line	132.00	U/S Unit-I on Standby. L/S Unit-I on Standby.	
		Unit-II	6.60	66kV BHP - Lobeyasa Line	28.18		
		<b>Total</b>	<b>6.60</b>	220kV BHP - Tsirang Line	-140.76		
6	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.62	U/S Unit-I on Standby. L/S Unit-I on Standby.	
		Unit-II	13.40	30MVA ICT, 220/66kV (HV)	22.33		
		<b>Total</b>	<b>13.40</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.20%</b>		
7	2 x 63MW DHP	Unit-I	25.03	220kV DHP - Tsirang Line	24.84	Unit I under Shutdown 220kV DHP_Dagapela line on Standby.	
		Unit-II	0.00	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.56		
		-	-	5MVA, 220/33kV TFR	0.18		
<b>Total</b>	<b>25.03</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.04%</b>				
8	4 x 15MW KHP	Unit-I	0.00	132kV KHP - Nangkhor Line	11.70	Unit-I on Standby. Unit-IV under AMP	
		Unit-II	12.68	132kV KHP - Kikhar Line	13.10		
		Unit-III	12.73	5MVA, 132/11kV TFR	0.31		
		Unit-IV	0.00	132kV Motanga - Rangia Line	2.26		
<b>Total</b>	<b>25.41</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>1.18%</b>				
9	2 x 59MW NHP	Unit-I	0.00	132kV NHP-MHP-I	0.00	Unit-I under AMP. 132kV NHP-MHP line-I under Shutdown.	
		Unit-II	21.98	132kV NHP-MHP-II	21.83		
		<b>Total</b>	<b>21.98</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.68%</b>		

Note: Generation-Load Summary (MW) for 01-Jan-25 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	729.07	920.79	924.32	-71.47	-3.53
2	Eastern Grid	262.09	23.06	22.89	118.78	0.17
	<b>Total</b>	<b>991.16</b>	<b>943.85</b>	<b>947.21</b>	<b>47.31</b>	<b>-3.36</b>

Note: Generation-Load Summary for 01-Jan-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	596.74	695.71	692.69	21.53	3.02
2	Eastern Grid	257.18	184.06	179.26	-47.38	4.80
	<b>Total</b>	<b>853.92</b>	<b>879.77</b>	<b>871.95</b>	<b>-25.85</b>	<b>7.82</b>

**THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 02-Jan-2025(-ve:import, +ve:export)**

Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	1-Jan-2025	18:00 hrs			25-Dec-2024	18:36	1026.44
Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks	
1	6 x 170MW THP	Unit-I	160.40	400kV THP - Siliguri Line - I	0.00	400kV THP-SIL Line I under Shutdown. 400kV THP-SIL Line IV on Standby.	
		Unit-II	0.00	400kV THP - Siliguri Line - II	89.45		
		Unit-III	0.00	400kV THP - Siliguri Line - IV	0.00		
		Unit-IV	129.11	400kV THP - Malbase Line - III	331.24		
		Unit-V	130.28	400kV Malbase - Siliguri Line	28.86		
		Unit-VI	0.00	-	-		
		<b>Total</b>	<b>419.79</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.21%</b>		
2	4 x 180MW MHP	Unit-I	30.18	400kV MHP - Jigmeling Line - I	0.00	400kV MHP-JLG Line I under Shutdown. 400kV MHP-JLG Line II under Shutdown. 132kV MHP_Yurmo Line-I not in Service.	
		Unit-II	139.87	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	63.50		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	63.25		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	65.27		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	237.46		
		-	-	400kV Jigmeling - Alipurduar Line - I <i>direct lines</i>	118.55		
		-	-	400kV Jigmeling - Alipurduar Line - II	120.00		
		-	-	80MVA, 220/132kV ICT - I (HV)	21.56		
		-	-	80MVA, 220/132kV ICT - II (HV)	21.27		
		-	-	220kV Tsirang - Jigmeling Line	-140.02		
		-	-	132kV Gelephu - Salakati Line	-19.48		
		<b>Total</b>	<b>170.05</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.10%</b>		
3	6 x 170MW PHP-II	Unit-I	171.07	400kV PHP II - Jigmeling -I	169.12	400kV PHP-II_ALI line I & II under shutdown.	
		Unit-II	170.59	400kV PHP II - Jigmeling -II	170.20		
		Unit-III	0.00	400kV PHP II - Alipurduar -I	0.00		
		Unit-IV	0.00	400kV PHP II - Alipurduar -II	0.00		
		Unit-V	0.00	-	-		
		Unit-VI	0.00	-	-		
		<b>Total</b>	<b>341.66</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.68%</b>		
4	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-52.30	Unit-I under AMP. Unit-II on Standby.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-51.54		
		Unit-III	70.86	220kV CHP - Gedu	6.78		
		Unit-IV	76.41	220kV CHP - Jamjee - I	79.50		
		-	-	220kV CHP - Jamjee - II	80.09		
		-	-	220kV CHP - Jamjee - III	77.32		
		-	-	220kV Malbase - Birpara Line	-47.90		
		-	-	66kV CHP - Gedu Line	6.34		
		-	-	3x3MVA, 66/11kV TFR	2.17		
		<b>Total</b>	<b>147.27</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.74%</b>		
5	2 x 12MW BHP (U/S)	Unit-I	0.00	220kV BHP - Sementokha Line	151.50	U/S Unit-I on Standby. L/S Unit-I on Standby.	
		Unit-II	6.95	66kV BHP - Lobeyasa Line	29.51		
		<b>Total</b>	<b>6.95</b>	220kV BHP - Tsirang Line	-161.56		
6	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.91		
		Unit-II	13.32	30MVA ICT, 220/66kV (HV)	23.85		
		<b>Total</b>	<b>13.32</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>-0.44%</b>		
7	2 x 63MW DHP	Unit-I	24.72	220kV DHP - Tsirang Line	24.49	Unit-II on Standby. 220kV DHP-Dagapela line on Standby.	
		Unit-II	0.00	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	54.28		
		-	-	5MVA, 220/33kV TFR	0.20		
<b>Total</b>	<b>24.72</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.12%</b>				
8	4 x 15MW KHP	Unit-I	0.00	132kV KHP - Nangkor Line	2.02	Unit-I and Unit-II on Standby. Unit-IV under AMP	
		Unit-II	0.00	132kV KHP - Kilikhar Line	12.69		
		Unit-III	15.42	5MVA, 132/11kV TFR	0.48		
		Unit-IV	0.00	132kV Motanga - Rangia Line	-8.18		
		<b>Total</b>	<b>15.42</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>1.49%</b>		
9	2 x 59MW NHP	Unit-I	0.00	132kV NHP-MHP-I	0.00	Unit-I under AMP. 132kV NHP-MHP line-I under Shutdown.	
		Unit-II	21.95	132kV NHP-MHP-II	21.80		
		<b>Total</b>	<b>21.95</b>	<b>Auxiliary Consumption &amp; Transformation Losses at Generator end</b>	<b>0.68%</b>		

**Note: Generation-Load Summary (MW) for 01-Jan-2025 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	953.71	1,127.16	1,126.87	-33.43	0.29
2	Eastern Grid	207.42	-143.49	-143.70	210.89	0.21
	<b>Total</b>	<b>1,161.13</b>	<b>983.67</b>	<b>983.17</b>	<b>177.46</b>	<b>0.50</b>

**Note: Generation-Load Summary (MW) for 01-Jan-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	571.49	723.62	717.79	-15.17	5.83
2	Eastern Grid	150.15	195.87	193.03	-182.68	2.84
	<b>Total</b>	<b>721.64</b>	<b>919.49</b>	<b>910.82</b>	<b>-197.85</b>	<b>8.67</b>

**Note: Daily Energy (MUs) and Power(MW) Statistics for 01-Jan-2025**

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	0.74	0.00	21.74	18.41	-468.16	-4.34

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.