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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 25-Dec-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	16-Dec-24	09:00 hrs			11-Dec-24	18:15:04	1007.33
Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks	
1	6 x 170MW THP	Unit-I	139.80	400kV THP - Silguri Line - I	0.00	Unit-II on Standby. Unit-V & 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	69.99		
		Unit-III	110.18	400kV THP - Silguri Line - IV	0.00		
		Unit-IV	103.53	400kV THP - Malbase Line - III	285.01		
		Unit-V	0.00	400kV Malbase - Silguri Line	18.00		
		Unit-VI	0.00	-	-		
		Total	353.51	Auxiliary Consumption & Transformation Losses at Generator end	-0.42%		
2	4 x 180MW MHP	Unit-I	122.24	400kV MHP - Jigmeling Line - I	132.29	Unit-III on Standby. Unit-IV under AMP. 400kV MHP-JLG Line II under Shutdown. 400kV MHP-JLG Line IV on Standby. 132kV MHP_Yurmoo Line-I not in Service.	
		Unit-II	179.80	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	133.52		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	64.16		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	35.74		
		-	-	400kV Jigmeling - Alipurduar Line - I <i>direct lines</i>	60.02		
		-	-	400kV Jigmeling - Alipurduar Line - II	61.12		
		-	-	80MVA, 220/132kV ICT - I (HV)	11.54		
		-	-	80MVA, 220/132kV ICT - II (HV)	11.41		
		-	-	220kV Tsirang - Jigmeling Line	-86.16		
		-	-	132kV Gelephu - Salakati Line	-13.89		
		Total	302.04	Auxiliary Consumption & Transformation Losses at Generator end	-0.04%		
3	6 x 170MW PHP-II	Unit-I	0.00	400kV PHP II - Jigmeling - I <i>erstwhile interim lines</i>	0.00		
		Unit-II	0.00	400kV PHP II - Jigmeling - II	0.00		
		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	-	-		
Total	0.00	Auxiliary Consumption & Transformation Losses at Generator end	0.00%				
4	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-52.40	Unit-I under AMP. Unit-II on Standby.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-51.90		
		Unit-III	84.94	220kV CHP - Gedu	9.15		
		Unit-IV	85.91	220kV CHP - Jamjee (old) - I	87.35		
		-	-	220kV CHP - Jamjee - II (new)	88.23		
		-	-	220kV CHP - Jamjee - III (new)	84.89		
		-	-	220kV Malbase - Birpara Line	-49.61		
		-	-	66kV CHP - Gedu Line	5.20		
-	-	3x3MVA, 66/11kV TFR	1.81				
Total	170.85	Auxiliary Consumption & Transformation Losses at Generator end	-0.87%				
5	2 x 12MW BHP (U/S)	Unit-I	7.78	220kV BHP - Semtokha Line	111.88	U/S Unit-II under AMP. L/S Unit-I on Standby	
		Unit-II	0.00	66kV BHP - Lobeyasa Line	28.20		
		Total	7.78	220kV BHP - Tsirang Line	-117.97		
6	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.54		
		Unit-II	14.50	30MVA ICT, 220/66kV (HV)	21.33		
		Total	14.50	Auxiliary Consumption & Transformation Losses at Generator end	-1.66%		
7	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	28.75	Unit I under Shutdown 220kV DHP_Dagapela line on Standby.	
		Unit-II	28.99	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	28.53		
		-	-	5MVA, 220/33kV TFR	0.20		
Total	28.99	Auxiliary Consumption & Transformation Losses at Generator end	0.14%				
8	4 x 15MW KHP	Unit-I	0.00	132kV KHP - Nangkhor Line	11.57	Unit-I on Standby. Unit-III under AMP.	
		Unit-II	12.74	132kV KHP - Kikhar Line	13.40		
		Unit-III	0.00	5MVA, 132/11kV TFR	0.37		
		Unit-IV	12.79	132kV Motanga - Rangia Line	-1.04		
Total	25.53	Auxiliary Consumption & Transformation Losses at Generator end	0.74%				
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	28.04	132kV NHP-MHP-II	27.80		
		Total	28.04	Auxiliary Consumption & Transformation Losses at Generator end	0.86%		

Note: Generation-Load Summary (MW) for 16-Dec-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	575.63	727.71	731.01	-65.92	-3.30
2	Eastern Grid	355.61	163.24	162.94	106.21	0.30
Total		931.24	890.95	893.95	40.29	-3.00

Note: Generation-Load Summary for 16-Dec-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	617.67	677.21	675.23	54.38	1.98
2	Eastern Grid	267.49	164.53	161.28	-10.96	3.25
Total		885.16	841.74	836.51	43.42	5.23

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 25-Dec-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	16-Dec-2024	18:00 hrs			11-Dec-2024	18:15	1007.33
Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks	
1	6 x 170MW THP	Unit-I	153.06	400kV THP - Siliguri Line - I	0.00	Unit-II on Standby. Unit-VI under AMP. 400kV THP-SIL Line I under Shutdown. 400kV THP-SIL Line IV on Standby	
		Unit-II	0.00	400kV THP - Siliguri Line - II	97.11		
		Unit-III	140.56	400kV THP - Siliguri Line - IV	0.00		
		Unit-IV	125.43	400kV THP - Malbase Line - III	343.43		
		Unit-V	21.24	400kV Malbase - Siliguri Line	36.36		
		Unit-VI	0.00	-	-		
		Total	440.29	Auxiliary Consumption & Transformation Losses at Generator end	-0.06%		
2	4 x 180MW MHP	Unit-I	150.73	400kV MHP - Jigmeling Line - I	130.64	Unit-III on Standby. Unit-IV under AMP. 400kV MHP-JLG Line II under Shutdown. 400kV MHP-JLG Line IV on Standby. 132kV MHP_Yurmoo Line-I not in Service.	
		Unit-II	149.78	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	131.96		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	65.49		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	184.00		
		-	-	400kV Jigmeling - Alipurduar Line - I <i>direct lines</i>	38.02		
		-	-	400kV Jigmeling - Alipurduar Line - II	35.23		
		-	-	80MVA, 220/132kV ICT - I (HV)	17.25		
		-	-	80MVA, 220/132kV ICT - II (HV)	17.21		
		-	-	220kV Tsirang - Jigmeling Line	-94.46		
		-	-	132kV Gelephu - Salakati Line	-20.23		
		Total	300.51	Auxiliary Consumption & Transformation Losses at Generator end	0.06%		
3	6 x 170MW PHP-II	Unit-I	18.27	400kV PHP II - Jigmeling-I	0.00	Unit-I was under trial phase.	
		Unit-II	0.00	400kV PHP II - Jigmeling-II	18.00		
		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	-	-		
		Total	18.27	Auxiliary Consumption & Transformation Losses at Generator end	1.48%		
4	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-55.50	Unit-I under AMP. Unit-II under Standby.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-55.13		
		Unit-III	84.53	220kV CHP - Gedu	-3.89		
		Unit-IV	84.74	220kV CHP - Jamjee - I	93.09		
		-	-	220kV CHP - Jamjee - II	93.50		
		-	-	220kV CHP - Jamjee - III	90.22		
		-	-	220kV Malbase - Birpara Line	-43.68		
		-	-	66kV CHP - Gedu Line	5.63		
		-	-	3x3MVA, 66/11kV TFR	2.35		
		Total	169.27	Auxiliary Consumption & Transformation Losses at Generator end	-0.59%		
5	2 x 12MW BHP (U/S)	Unit-I	7.85	220kV BHP - Sementokha Line	109.72	U/S unit-II under AMP. L/S Unit-I on Standby	
		Unit-II	0.00	66kV BHP - Lobeyasa Line	30.43		
		Total	7.85	220kV BHP - Tsirang Line	-117.02		
6	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.82		
		Unit-II	15.65	30MVA ICT, 220/66kV (HV)	23.83		
		Total	15.65	Auxiliary Consumption & Transformation Losses at Generator end	-1.91%		
7	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	28.74	Unit I under Shutdown. 220kV DHP_Dagapela line on Standby.	
		Unit-II	29.00	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	54.68		
		-	-	5MVA, 220/33kV TFR	0.26		
Total	29.00	Auxiliary Consumption & Transformation Losses at Generator end	0.00%				
8	4 x 15MW KHP	Unit-I	0.00	132kV KHP - Nangkor Line	12.28	Unit-I and Unit-II on Standby.	
		Unit-II	0.00	132kV KHP - Kilikhar Line	17.33		
		Unit-III	15.20	5MVA, 132/11kV TFR	0.48		
		Unit-IV	15.12	132kV Motanga - Rangia Line	4.03		
Total	30.32	Auxiliary Consumption & Transformation Losses at Generator end	0.76%				
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	27.96	132kV NHP-MHP-II	27.75		
		Total	27.96	Auxiliary Consumption & Transformation Losses at Generator end	0.75%		

Note: Generation-Load Summary (MW) for 16-Dec-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	680.33	795.63	797.06	-20.84	-1.43
2	Eastern Grid	358.79	207.28	206.67	57.05	0.61
	Total	1,039.12	1,002.91	1,003.73	36.21	-0.82

Note: Generation-Load Summary (MW) for 16-Dec-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	567.96	597.1	595.33	64.93	1.77
2	Eastern Grid	241.84	182.19	180.68	-34.42	1.51
	Total	809.80	779.29	776.01	30.51	3.28

Note: Daily Energy (MUs) and Power(MW) Statistics for 16-Dec-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	0.30	0.00	21.49	15.36	-518.87	-6.46

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.