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

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	28-Dec-24	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	141.60	400kV THP - Silguri Line - I	0.00	Unit-II & IV 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 - Silguri Line - II	95.01		
		Unit-III	148.11	400kV THP - Silguri Line - IV	0.00		
		Unit-IV	0.00	400kV THP - Malbase Line - III	323.85		
		Unit-V	129.28	400kV Malbase - Silguri Line	36.75		
		Unit-VI	0.00	-	-		
		Total	418.99	Auxiliary Consumption & Transformation Losses at Generator end	0.03%		
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I on standby. Unit-IV under AMP. 400kV MHP-JLG Line II under shutdown. 400kV MHP-JLG Line I on standby. 132kV MHP_Yurmo Line - I not in Service. 400kV JLG_ALI Interim Line I & II under Shutdown.	
		Unit-II	154.81	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	148.50	400kV MHP - Jigmeling Line - III	132.11		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	131.78		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	62.00		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	205.95		
		-	-	400kV Jigmeling - Alipurduar Line - I <i>direct lines</i>	29.09		
		-	-	400kV Jigmeling - Alipurduar Line - II	27.81		
		-	-	80MVA, 220/132kV ICT - I (HV)	-17.14		
		-	-	80MVA, 220/132kV ICT - II (HV)	-17.00		
		-	-	220kV Tsirang - Jigmeling Line	-118.85		
		-	-	132kV Gelephu - Salakati Line	-19.94		
		Total	303.31	Auxiliary Consumption & Transformation Losses at Generator end	0.72%		
		3	6 x 170MW PHP-II	Unit-I	0.00		400kV PHP II - Jigmeling - I <i>erstwhile interim lines</i>
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	-43.55	Unit-I under AMP. Unit-II on Standby.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-43.01		
		Unit-III	82.05	220kV CHP - Gedu	10.66		
		Unit-IV	81.19	220kV CHP - Jamjee (old) - I	78.28		
		-	-	220kV CHP - Jamjee - II (new)	78.64		
		-	-	220kV CHP - Jamjee - III (new)	76.09		
		-	-	220kV Malbase - Birpara Line	-35.47		
		-	-	66kV CHP - Gedu Line	5.69		
		-	-	3x3MVA, 66/11kV TFR	1.77		
Total	163.24	Auxiliary Consumption & Transformation Losses at Generator end	-0.81%				
5	2 x 12MW BHP (U/S)	Unit-I	0.00	220kV BHP - Semtokha Line	129.56	U/S Unit-I under AMP. L/S Unit-I on Standby	
		Unit-II	6.90	66kV BHP - Lobeyasa Line	28.14		
		Total	6.90	220kV BHP - Tsirang Line	-137.72		
6	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.69		
		Unit-II	13.64	30MVA ICT, 220/66kV (HV)	22.09		
		Total	13.64	Auxiliary Consumption & Transformation Losses at Generator end	-0.63%		
7	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	25.56	Unit I under Shutdown 220kV DHP_Dagapela line on Standby.	
		Unit-II	25.78	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.56		
		-	-	5MVA, 220/33kV TFR	0.23		
		Total	25.78	Auxiliary Consumption & Transformation Losses at Generator end	-0.04%		
8	4 x 15MW KHP	Unit-I	15.35	132kV KHP - Nangkhor Line	3.94	Unit-II on Standby Unit-III on Standby. Unit-IV under AMP	
		Unit-II	0.00	132kV KHP - Kikhar Line	10.88		
		Unit-III	0.00	5MVA, 132/11kV TFR	0.29		
		Unit-IV	0.00	132kV Motanga - Rangia Line	-1.96		
		Total	15.35	Auxiliary Consumption & Transformation Losses at Generator end	1.55%		
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	25.02	132kV NHP-MHP-II	24.76		
		Total	25.02	Auxiliary Consumption & Transformation Losses at Generator end	1.04%		

Note: Generation-Load Summary (MW) for 28-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	628.55	737.67	739.01	9.73	-1.34
2	Eastern Grid	343.68	189.83	187.15	35.00	2.68
	Total	972.23	927.50	926.16	44.73	1.34

Note: Generation-Load Summary for 28-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	723.97	694.29	688.68	149.95	5.61
2	Eastern Grid	192.95	185.31	182.76	-112.63	2.55
	Total	916.92	879.60	871.44	37.32	8.16

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 29-Dec-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	28-Dec-2024	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	162.55	400kV THP - Siliguri Line - I	0.00	Unit-II & IV 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	119.96		
		Unit-III	158.13	400kV THP - Siliguri Line - IV	0.00		
		Unit-IV	0.00	400kV THP - Malbase Line - III	370.65		
		Unit-V	168.60	400kV Malbase - Siliguri Line	58.90		
		Unit-VI	0.00	-	-		
		Total	489.28	Auxiliary Consumption & Transformation Losses at Generator end	-0.27%		
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I on Standby. Unit-IV under AMP. 400kV MHP-JLG Line I on Standby. 400kV MHP-JLG Line II under Shutdown. 132kV MHP_Yurmo Line - I not in Service. 400kV JLG_ALL Interim Line I & II under Shutdown.	
		Unit-II	149.97	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	140.55	400kV MHP - Jigmeling Line - III	124.62		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	124.40		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	65.78		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	39.79		
		-	-	400kV Jigmeling - Alipurduar Line - I <i>direct lines</i>	13.82		
		-	-	400kV Jigmeling - Alipurduar Line - II	11.64		
		-	-	80MVA, 220/132kV ICT - I (HV)	14.24		
		-	-	80MVA, 220/132kV ICT - II (HV)	14.56		
		-	-	220kV Tsirang - Jigmeling Line	-136.43		
		-	-	132kV Gelephu - Salakati Line	-29.92		
		Total	290.52	Auxiliary Consumption & Transformation Losses at Generator end	0.09%		
		3	6 x 170MW PHP-II	Unit-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	-46.80	Unit-I under AMP. Unit-II under Standby.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-46.40		
		Unit-III	80.95	220kV CHP - Gedu	4.24		
		Unit-IV	75.76	220kV CHP - Jamjee - I	80.00		
		-	-	220kV CHP - Jamjee - II	80.39		
		-	-	220kV CHP - Jamjee - III	77.58		
		-	-	220kV Malbase - Birpara Line	-37.30		
		-	-	66kV CHP - Gedu Line	6.50		
		-	-	3x3MVA, 66/11kV TFR	2.18		
		Total	156.71	Auxiliary Consumption & Transformation Losses at Generator end	-0.63%		
5	2 x 12MW BHP (U/S)	Unit-I	0.00	220kV BHP - Semtokha Line	146.30	BHP (L/S) Unit-I on Standby. BHP (U/S) Unit-I under AMP.	
		Unit-II	7.20	66kV BHP - Lobeyasa Line	29.60		
		Total	7.20	220kV BHP - Tsirang Line	-155.95		
6	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.89		
		Unit-II	13.70	30MVA ICT, 220/66kV (HV)	23.90		
		Total	13.70	Auxiliary Consumption & Transformation Losses at Generator end	0.29%		
7	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	25.56	Unit-I under Shutdown. 220kV DHP-Dagapela line on Standby.	
		Unit-II	25.80	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	54.60		
		-	-	5MVA, 220/33kV TFR	0.22		
		Total	25.80	Auxiliary Consumption & Transformation Losses at Generator end	0.08%		
8	4 x 15MW KHP	Unit-I	12.70	132kV KHP - Nangkor Line	9.18	Unit-II on Standby. Unit-IV under AMP	
		Unit-II	0.00	132kV KHP - Kilikhar Line	15.47		
		Unit-III	12.70	5MVA, 132/11kV TFR	0.41		
		Unit-IV	0.00	132kV Motanga - Rangia Line	-5.70		
		Total	25.40	Auxiliary Consumption & Transformation Losses at Generator end	1.34%		
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	25.02	132kV NHP-MHP-II	24.55		
		Total	25.02	Auxiliary Consumption & Transformation Losses at Generator end	1.88%		

Note: Generation-Load Summary (MW) for 28-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	692.69	780.76	782.99	48.36	-2.23
2	Eastern Grid	340.94	214.67	213.59	-10.16	1.08
	Total	1,033.63	995.43	996.58	38.20	-1.15

Note: Generation-Load Summary (MW) for 28-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	692.03	701.28	695.10	125.66	6.18
2	Eastern Grid	242.32	197.62	194.80	-90.21	2.82
	Total	934.35	898.90	889.90	35.45	9.00

Note: Daily Energy (MUs) and Power(MW) Statistics for 28-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	22.01	13.19	-696.82	-8.98

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.