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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
	24-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	140.00	400kV THP - Siliguri Line - I	0.00	Unit-II & V 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	101.08		
		Unit-III	148.00	400kV THP - Siliguri Line - IV	0.00		
		Unit-IV	140.00	400kV THP - Malbase Line - III	324.46		
		Unit-V	0.00	400kV Malbase - Siliguri Line	44.36		
		Unit-VI	0.00	-	-		
		Total	428.00	Auxiliary Consumption & Transformation Losses at Generator end	0.57%		
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	125.33	Unit-I 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. 400kV JLG_ALL Interim Line I & II under Shutdown.	
		Unit-II	145.27	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	146.96	400kV MHP - Jigmeling Line - III	126.56		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmoo Line - I	0.00		
		-	-	132kV MHP - Yurmoo Line - II	63.70		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	193.79		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	28.62		
		-	-	400kV Jigmeling - Alipurduar Line - II	27.09		
		-	-	80MVA, 220/132kV ICT - I (HV)	7.93		
		-	-	80MVA, 220/132kV ICT - II (HV)	7.85		
		-	-	220kV Tsirang - Jigmeling Line	-125.40		
		-	-	132kV Gelephu - Salakati Line	-24.60		
Total	292.23	Auxiliary Consumption & Transformation Losses at Generator end	-0.62%				
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-48.20	Unit-I under AMP. Unit-II on Shutdown.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-47.70		
		Unit-III	75.83	220kV CHP - Gedu	13.92		
		Unit-IV	81.20	220kV CHP - Janjee (old) - I	77.36		
		-	-	220kV CHP - Janjee - II (new)	77.80		
		-	-	220kV CHP - Janjee - III (new)	75.15		
		-	-	220kV Malbase - Birpara Line	-45.76		
		-	-	66kV CHP - Gedu Line	5.50		
-	-	3x3MVA, 66/11kV TFR	1.96				
Total	157.03	Auxiliary Consumption & Transformation Losses at Generator end	0.79%				
4	2 x 12MW BHP (U/S)	Unit-I	7.30	220kV BHP - Semtokha Line	138.40	U/S Unit-II under AMP. L/S Unit-I on Standby	
		Unit-II	0.00	66kV BHP - Lobeyasa Line	28.65		
Total	7.30	220kV BHP - Tsirang Line	-145.27				
5	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.54		
		Unit-II	14.40	30MVA ICT, 220/66kV (HV)	22.37		
Total	14.40	Auxiliary Consumption & Transformation Losses at Generator end	-2.86%				
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	26.70	Unit I under Shutdown 220kV DHP_Dagapela line on Standby.	
		Unit-II	26.73	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.47		
		-	-	5MVA, 220/33kV TFR	0.24		
Total	26.73	Auxiliary Consumption & Transformation Losses at Generator end	-0.79%				
7	4 x 15MW KHP	Unit-I	15.37	132kV KHP - Nangkor Line	4.01	Unit-II & Unit-III on Standby. Unit-IV under AMP.	
		Unit-II	0.00	132kV KHP - Kilikhar Line	10.77		
		Unit-III	0.00	5MVA, 132/11kV TFR	0.38		
		Unit-IV	0.00	132kV Motanga - Rangia Line	-3.06		
		Total	15.37	Auxiliary Consumption & Transformation Losses at Generator end	1.37%		
8	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	22.00	132kV NHP-MHP-II	21.50		
		Total	22.00	Auxiliary Consumption & Transformation Losses at Generator end	2.27%		

Note: Generation-Load Summary (MW) for 24-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	633.46	755.08	752.21	3.78	2.87
2	Eastern Grid	329.60	176.15	177.24	28.05	-1.09
Total		963.06	931.23	929.45	31.83	1.78

Note: Generation-Load Summary for 24-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	667.16	698.80	695.96	116.21	2.84
2	Eastern Grid	223.58	165.76	164.47	-76.68	1.29
Total		890.74	864.56	860.43	39.53	4.13

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Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	24-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	166.05	400kV THP - Siliguri Line - I	0.00	Unit-II & V on Standby. Unit-VI under AMP. 400kV THP-SIL Line I under Shutdown.	
		Unit-II	0.00	400kV THP - Siliguri Line - II	78.28		
		Unit-III	145.06	400kV THP - Siliguri Line - IV	73.59		
		Unit-IV	159.06	400kV THP - Malbase Line - III	318.27		
		Unit-V	0.00	400kV Malbase - Siliguri Line	21.59		
		Unit-VI	0.00	-	-		
		Total	470.17	Auxiliary Consumption & Transformation Losses at Generator end	0.01%		
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	119.38	Unit-I on Standby. Unit-IV under AMP. 400kV MHP-JLG Line II under Shutdown. 400kV MHP-JLG Line IV on Standby. 132kV MHP_Yurmo Line- I not in Service. 400kV JLG_ALI Interim Line I & II under Shutdown.	
		Unit-II	135.19	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	146.59	400kV MHP - Jigmeling Line - III	120.53		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	64.15		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	226.55		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	6.12		
		-	-	400kV Jigmeling - Alipurduar Line - II	5.07		
		-	-	80MVA, 220/132kV ICT - I (HV)	14.69		
		-	-	80MVA, 220/132kV ICT - II (HV)	15.49		
		-	-	220kV Tsirang - Jigmeling Line	-140.28		
		-	-	132kV Gelephu - Salakati Line	-26.42		
Total	281.78	Auxiliary Consumption & Transformation Losses at Generator end	0.88%				
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-42.75	Unit-I under AMP. Unit-II under Shutdown.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-42.13		
		Unit-III	89.35	220kV CHP - Gedu	12.65		
		Unit-IV	89.31	220kV CHP - Jamjee (old) - I	81.20		
		-	-	220kV CHP - Jamjee - II (new)	81.70		
		-	-	220kV CHP - Jamjee - III (new)	78.83		
		-	-	220kV Malbase - Birpara Line	-36.59		
		-	-	66kV CHP - Gedu Line	6.97		
		-	-	3x3MVA, 66/11kV TFR	2.54		
		Total	178.66	Auxiliary Consumption & Transformation Losses at Generator end	-0.20%		
4	2 x 12MW BHP (U/S)	Unit-I	7.28	220kV BHP - Semothka Line	148.02	U/S unit-II under AMP. L/S Unit-I on Standby	
		Unit-II	0.00	66kV BHP - Lobeyasa Line	32.61		
		Total	7.28	220kV BHP - Tsirang Line	-160.39		
5	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.87		
		Unit-II	13.55	30MVA ICT, 220/66kV (HV)	26.59		
		Total	13.55	Auxiliary Consumption & Transformation Losses at Generator end	-1.34%		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	26.75	Unit I under Shutdown. 220kV DHP_Dagapela line on Standby.	
		Unit-II	27.01	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	54.49		
		-	-	5MVA, 220/33kV TFR	0.20		
Total	27.01	Auxiliary Consumption & Transformation Losses at Generator end	0.22%				
7	4 x 15MW KHP	Unit-I	11.18	132kV KHP - Nangkor Line	6.91	Unit-III on Standby. Unit-IV under AMP.	
		Unit-II	12.17	132kV KHP - Kilikhar Line	15.70		
		Unit-III	0.00	5MVA, 132/11kV TFR	0.44		
		Unit-IV	0.00	132kV Motanga - Rangia Line	-1.21		
		Total	23.35	Auxiliary Consumption & Transformation Losses at Generator end	1.28%		
8	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	24.99	132kV NHP-MHP-II	24.77		
		Total	24.99	Auxiliary Consumption & Transformation Losses at Generator end	0.88%		

Note: Generation-Load Summary (MW) for 24-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	696.67	784.96	785.50	51.99	-0.54
2	Eastern Grid	330.12	206.28	203.27	-16.44	3.01
	Total	1,026.79	991.24	988.77	35.55	2.47

Note: Generation-Load Summary (MW) for 24-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	626.85	577.35	569.17	152.37	8.18
2	Eastern Grid	152.41	174.23	171.18	-124.69	3.05
	Total	779.26	751.58	740.35	27.68	11.23

Note: Daily Energy (MUs) and Power(MW) Statistics for 24-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	0.29	0.00	21.81	13.92	-655.88	-7.73

- 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 900hrs) 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.