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

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	14-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	107.94	400kV THP - Siliguri Line - I	0.00	Unit-IV on Standby. Unit-V & VI under AMP. 400kV THP-SIL Line I under Shutdown. 400kV THP-SIL Line IV on Standby.
		Unit- II	157.06	400kV THP - Siliguri Line - II	91.91	
		Unit- III	160.62	400kV THP - Siliguri Line - IV	0.00	
		Unit- IV	0.00	400kV THP - Malbase Line - III	328.30	
		Unit- V	0.00	400kV Malbase - Siliguri Line	32.72	
		Unit- VI	0.00		-	
		Total	425.62	Auxiliary Consumption & Transformation Losses at Generator end	1.27%	
2	4 x 180MW MHP	Unit-I	140.21	400kV MHP - Jigmeling Line - I	125.35	Unit-III 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	140.83	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	126.47	
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	55.90	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	163.39	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	44.26	
		-	-	400kV Jigmeling - Alipurduar Line - II	42.53	
		-	-	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	-16.56			
Total	281.04	Auxiliary Consumption & Transformation Losses at Generator end	0.39%			
3	4 x 84MW CHP	Unit- I	0.00	220kV CHP - Birpara Line - I	-55.89	Unit-I under AMP. Unit-II on Standby.
		Unit- II	0.00	220kV CHP - Birpara Line - II	-55.49	
		Unit- III	77.00	220kV CHP - Gedu	-2.93	
		Unit- IV	74.00	220kV CHP - Jamjee (old) - I	86.79	
				220kV CHP - Jamjee - II (new)	87.68	
				220kV CHP - Jamjee - III (new)	84.52	
		-	-	220kV Malbase - Birpara Line	-45.72	
		-	-	66kV CHP - Gedu Line	4.77	
-	-	3x3MVA, 66/11kV TFR	1.55			
Total	151.00	Auxiliary Consumption & Transformation Losses at Generator end	0.00%			
4	2 x 12MW BHP (U/S)	Unit- I	8.10	220kV BHP - Semtokha Line	106.90	U/S Unit-II under AMP. L/S Unit-I on Standby
		Unit- II	0.00	66kV BHP - Lobeyasa Line	27.49	
Total	8.10	220kV BHP - Tsirang Line	-110.83			
5	2 x 20MW BHP (L/S)	Unit- I	0.00	5MVA, 66/11kV TFR	0.70	
		Unit- II	15.90	30MVA ICT, 220/66kV (HV)	20.42	
Total	15.90	Auxiliary Consumption & Transformation Losses at Generator end	-1.08%			
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	30.40	Unit I under Shutdown 220kV DHP_Dagapela line on Standby.
		Unit-II	30.15	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	53.76	
		-	-	5MVA, 220/33kV TFR	0.20	
Total	30.15	Auxiliary Consumption & Transformation Losses at Generator end	-1.49%			
7	4 x 15MW KHP	Unit- I	14.18	132kV KHP - Nangkhor Line	14.74	Unit-II on Standby. Unit-III under AMP.
		Unit-II	0.00	132kV KHP - Kilikhar Line	13.79	
		Unit- III	0.00	5MVA, 132/11kV TFR	0.37	
		Unit- IV	14.23	132kV Motanga - Rangia Line		
Total	28.41	Auxiliary Consumption & Transformation Losses at Generator end	-1.71%			
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	28.02	132kV NHP-MHP-II	27.77	
		Total	28.02	Auxiliary Consumption & Transformation Losses at Generator end	0.89%	

Note: Generation-Load Summary (MW) for 14-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	630.77	577.08	572.38	-32.47	4.70
2	Eastern Grid	337.47	353.40	352.55	70.23	0.85
Total		968.24	930.48	924.93	37.76	5.55

Note: Generation-Load Summary for 14-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	628.10	708.13	703.70	41.86	4.43
2	Eastern Grid	273.11	158.30	156.35	-7.08	1.95
Total		901.21	866.43	860.05	34.78	6.38

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Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	14-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	168.87	400kV THP - Siliguri Line - I	0.00	Unit-II on Standby. Unit-VI & V 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	110.19		
		Unit-III	161.17	400kV THP - Siliguri Line - IV	0.00		
		Unit-IV	147.79	400kV THP - Malbase Line - III	370.14		
		Unit-V	0.00	400kV Malbase - Siliguri Line	43.01		
		Unit-VI	0.00	-	-		
		Total	477.83	Auxiliary Consumption & Transformation Losses at Generator end	-0.52%		
2	4 x 180MW MHP	Unit-I	184.82	400kV MHP - Jigmeling Line - I	120.67	Unit-III 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	101.84	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	121.55		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	65.99		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	181.82		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	29.72		
		-	-	400kV Jigmeling - Alipurduar Line - II	28.30		
		-	-	80MVA, 220/132kV ICT - I (HV)	16.65		
		-	-	80MVA, 220/132kV ICT - II (HV)	16.44		
		-	-	220kV Tsirang - Jigmeling Line	-93.88		
		-	-	132kV Gelephu - Salakati Line	-21.02		
Total	286.66	Auxiliary Consumption & Transformation Losses at Generator end	0.07%				
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-58.81	Unit-I under AMP. Unit-II under Shutdown.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-58.35		
		Unit-III	75.38	220kV CHP - Gedu	-12.83		
		Unit-IV	81.82	220kV CHP - Jamjee (old) - I	94.29		
		-	-	220kV CHP - Jamjee - II (new)	94.61		
		-	-	220kV CHP - Jamjee - III (new)	91.30		
		-	-	220kV Malbase - Birpara Line	-43.86		
		-	-	66kV CHP - Gedu Line	5.79		
		-	-	3x3MVA, 66/11kV TFR	2.26		
		Total	157.20	Auxiliary Consumption & Transformation Losses at Generator end	-0.67%		
4	2 x 12MW BHP (U/S)	Unit-I	8.10	220kV BHP - Sertokha Line	109.30	U/S unit-II under AMP. L/S Unit-I on Standby	
		Unit-II	0.00	66kV BHP - Lobeyasa Line	30.65		
		Total	8.10	220kV BHP - Tsirang Line	-117.19		
5	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.84		
		Unit-II	15.60	30MVA ICT, 220/66kV (HV)	23.30		
		Total	15.60	Auxiliary Consumption & Transformation Losses at Generator end	0.42%		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	29.19	Unit I under Shutdown. 220kV DHP_Dagapela line on Standby.	
		Unit-II	29.49	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	54.81		
		-	-	5MVA, 220/33kV TFR	0.20		
Total	29.49	Auxiliary Consumption & Transformation Losses at Generator end	0.34%				
7	4 x 15MW KHP	Unit-I	13.17	132kV KHP - Nangkor Line	9.56	Unit-II on Standby. Unit-III under AMP.	
		Unit-II	0.00	132kV KHP - Kilikhar Line	16.11		
		Unit-III	0.00	5MVA, 132/11kV TFR	0.52		
		Unit-IV	13.20	132kV Motanga - Rangia Line	3.78		
		Total	26.37	Auxiliary Consumption & Transformation Losses at Generator end	0.68%		
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	21.97	132kV NHP-MHP-II	21.75		
		Total	21.97	Auxiliary Consumption & Transformation Losses at Generator end	1.00%		

Note: Generation-Load Summary (MW) for 14-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	688.22	789.92	793.28	-7.82	-3.36
2	Eastern Grid	335.00	200.34	199.74	40.78	0.60
	Total	1,023.22	990.26	993.02	32.96	-2.76

Note: Generation-Load Summary (MW) for 14-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	659.31	729.29	725.65	61.91	3.64
2	Eastern Grid	284.03	184.15	181.89	-32.01	2.26
	Total	943.34	913.44	907.54	29.90	5.90

Note: Daily Energy (MUs) and Power(MW) Statistics for 14-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	0.35	0.00	18.32	16.02	-522.49	-5.11

- 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.