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

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	20-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	0.00	400kV THP - Siliguri Line - I	0.00	Unit-I under Shutdown. Unit-II on Standby. Unit-VI under AMP. 400kV THP-SIL Line I under Shutdown. 400kV THP-SIL Line IV under Shutdown.
		Unit-II	0.00	400kV THP - Siliguri Line - II	80.05	
		Unit-III	160.62	400kV THP - Siliguri Line - IV	0.00	
		Unit-IV	160.62	400kV THP - Malbase Line - III	323.06	
		Unit-V	81.81	400kV Malbase - Siliguri Line	24.72	
		Unit-VI	0.00	-	-	
		Total	403.05	Auxiliary Consumption & Transformation Losses at Generator end	-0.01%	
2	4 x 180MW MHP	Unit-I	126.03	400kV MHP - Jigmeling Line - I	131.73	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. 400kV JLG_ALL Interim Line I & II under Shutdown.
		Unit-II	174.76	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	132.95	
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00	
		-	-	132kV MHP - Yurmoo Line - I	0.00	
		-	-	132kV MHP - Yurmoo Line - II	64.07	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	171.00	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	46.78	
		-	-	400kV Jigmeling - Alipurduar Line - II	45.36	
		-	-	80MVA, 220/132kV ICT - I (HV)	17.61	
		-	-	80MVA, 220/132kV ICT - II (HV)	17.46	
		-	-	220kV Tsirang - Jigmeling Line	-84.62	
		-	-	132kV Gelephu - Salakati Line	-11.66	
Total	300.79	Auxiliary Consumption & Transformation Losses at Generator end	0.00%			
3	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	80.84	220kV CHP - Gedu	-2.97	
		Unit-IV	88.70	220kV CHP - Janjee (old) - I	90.54	
		-	-	220kV CHP - Janjee - II (new)	91.21	
		-	-	220kV CHP - Janjee - III (new)	88.30	
		-	-	220kV Malbase - Birpara Line	-41.44	
		-	-	66kV CHP - Gedu Line	4.70	
-	-	3x3MVA, 66/11kV TFR	0.90			
Total	169.54	Auxiliary Consumption & Transformation Losses at Generator end	0.68%			
4	2 x 12MW BHP (U/S)	Unit-I	7.60	220kV BHP - Semtokha Line	103.00	U/S Unit-II under AMP. L/S Unit-I on Standby
		Unit-II	0.00	66kV BHP - Lobeyasa Line	27.50	
Total	7.60	Auxiliary Consumption & Transformation Losses at Generator end	-109.06			
5	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.72	
		Unit-II	14.80	30MVA ICT, 220/66kV (HV)	21.65	
Total	14.80	Auxiliary Consumption & Transformation Losses at Generator end	1.07%			
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	28.26	Unit I under Shutdown 220kV DHP_Dagapela line on Standby.
		Unit-II	28.50	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	53.59	
		-	-	5MVA, 220/33kV TFR	0.20	
Total	28.50	Auxiliary Consumption & Transformation Losses at Generator end	0.14%			
7	4 x 15MW KHP	Unit-I	11.20	132kV KHP - Nangkhor Line	8.79	Unit-III on Standby. Unit-IV under AMP.
		Unit-II	11.19	132kV KHP - Kilikhar Line	12.92	
		Unit-III	0.00	5MVA, 132/11kV TFR	0.35	
		Unit-IV	0.00	132kV Motanga - Rangia Line	-0.11	
		Total	22.39	Auxiliary Consumption & Transformation Losses at Generator end	1.47%	
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	28.00	132kV NHP-MHP-II	27.74	
		Total	28.00	Auxiliary Consumption & Transformation Losses at Generator end	0.00%	

Note: Generation-Load Summary (MW) for 20-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	623.49	749.08	747.70	-40.97	1.38
2	Eastern Grid	351.18	186.19	185.82	80.37	0.37
Total		974.67	935.27	933.52	39.40	1.75

Note: Generation-Load Summary for 20-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	706.16	698.80	695.96	116.21	2.84
2	Eastern Grid	195.09	165.76	164.47	-76.68	1.29
Total		901.25	864.56	860.43	39.53	4.13

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 21-Dec-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	20-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	159.26	400kV THP - Siliguri Line - I	0.00	Unit-II & V on Standby. Unit-VI under AMP. 400kV THP-SIL Line I & IV under Shutdown.	
		Unit-II	0.00	400kV THP - Siliguri Line - II	93.57		
		Unit-III	171.06	400kV THP - Siliguri Line - IV	0.00		
		Unit-IV	128.10	400kV THP - Malbase Line - III	366.80		
		Unit-V	0.00	400kV Malbase - Siliguri Line	26.00		
		Unit-VI	0.00	-	-		
		Total	458.42	Auxiliary Consumption & Transformation Losses at Generator end	-0.43%		
2	4 x 180MW MHP	Unit-I	156.92	400kV MHP - Jigmeling Line - I	130.29	Unit-III on Standby. Unit-IV under AMP. 400kV MHP-JLG Line II under Shutdown. 400kV MHP-JLG Line IV on Standby. 132kV MHP_Yurmo Line- I not in Service. 400kV JLG_ALI Interim Line I & II under Shutdown.	
		Unit-II	139.83	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	130.27		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	65.28		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	192.36		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	33.74		
		-	-	400kV Jigmeling - Alipurduar Line - II	32.12		
		-	-	80MVA, 220/132kV ICT - I (HV)	22.22		
		-	-	80MVA, 220/132kV ICT - II (HV)	21.96		
		-	-	220kV Tsirang - Jigmeling Line	-91.75		
		-	-	132kV Gelephu - Salakati Line	-13.39		
Total	296.75	Auxiliary Consumption & Transformation Losses at Generator end	-0.46%				
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-56.18	Unit-I under AMP. Unit-II under Standby.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-55.78		
		Unit-III	81.77	220kV CHP - Gedu	-17.81		
		Unit-IV	83.66	220kV CHP - Jamjee (old) - I	97.00		
		-	-	220kV CHP - Jamjee - II (new)	97.44		
		-	-	220kV CHP - Jamjee - III (new)	93.86		
		-	-	220kV Malbase - Birpara Line	-35.82		
		-	-	66kV CHP - Gedu Line	5.94		
		-	-	3x3MVA, 66/11kV TFR	2.51		
		Total	165.43	Auxiliary Consumption & Transformation Losses at Generator end	-0.94%		
4	2 x 12MW BHP (U/S)	Unit-I	7.60	220kV BHP - Sertokha Line	105.00	U/S unit-II under AMP. L/S Unit-I on Standby	
		Unit-II	0.00	66kV BHP - Lobeyasa Line	30.10		
		Total	7.60	220kV BHP - Tsirang Line	-113.69		
5	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.81		
		Unit-II	14.90	30MVA ICT, 220/66kV (HV)	24.09		
		Total	14.90	Auxiliary Consumption & Transformation Losses at Generator end	1.24%		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	27.77	Unit I under Shutdown. 220kV DHP_Dagapela line on Standby.	
		Unit-II	28.00	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	54.50		
		-	-	5MVA, 220/33kV TFR	0.20		
Total	28.00	Auxiliary Consumption & Transformation Losses at Generator end	0.11%				
7	4 x 15MW KHP	Unit-I	11.21	132kV KHP - Nangkhon Line	5.93	Unit-III on Standby. Unit-IV under AMP.	
		Unit-II	11.21	132kV KHP - Kilikhar Line	15.75		
		Unit-III	0.00	5MVA, 132/11kV TFR	0.43		
		Unit-IV	0.00	132kV Motanga - Rangia Line	6.61		
		Total	22.42	Auxiliary Consumption & Transformation Losses at Generator end	1.38%		
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	27.73		
		Total	28.02	Auxiliary Consumption & Transformation Losses at Generator end	1.03%		

Note: Generation-Load Summary (MW) for 20-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	674.35	794.31	797.50	-28.21	-3.19
2	Eastern Grid	347.19	196.36	197.12	59.08	-0.76
	Total	1,021.54	990.67	994.62	30.87	-3.95

Note: Generation-Load Summary (MW) for 20-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 20-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	21.43	14.66	-606.60	-7.20

- 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.
 - 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.