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

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	05-Dec-24	09:00 hrs		28-Nov-24	18:31:35 hrs	993.771

Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks
1	6 x 170MW THP	Unit-I	169.66	400kV THP - Siliguri Line - I	0.00	Unit-II on Standby. Unit-VI & V under AMP. 400kV THP-MAL line under Shutdown. 400kV THP-SIL Line I on Standby.
		Unit-II	0.00	400kV THP - Siliguri Line - II	208.47	
		Unit-III	164.98	400kV THP - Siliguri Line - IV	197.01	
		Unit-IV	69.33	400kV THP - Malbase Line - III	0.00	
		Unit-V	0.00	400kV Malbase - Siliguri Line	-205.40	
		Unit-VI	0.00		-	
		Total	403.97	Auxiliary Consumption & Transformation Losses at Generator end	-0.37%	
2	4 x 180MW MHP	Unit-I	145.82	400kV MHP - Jigmeling Line - I	132.74	Unit-III under Shutdown. Unit-IV under AMP. 400kV MHP-JLG Line II & IV on Standby. 132kV MHP_Yurmo Line - I not in Service. 400kV JLG_ALI Interim Line II on Standby.
		Unit-II	144.81	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	133.77	
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	64.08	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	170.16	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	23.27	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	35.21	
		-	-	400kV Jigmeling - Alipurduar Line - II	34.23	
		-	-	80MVA, 220/132kV ICT - I (HV)	12.58	
		-	-	80MVA, 220/132kV ICT - II (HV)	12.49	
		-	-	220kV Tsirang - Jigmeling Line	-91.24	
		-	-	132kV Gelephu - Salakati Line	-12.78	
Total	290.63	Auxiliary Consumption & Transformation Losses at Generator end	-0.08%			
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-67.47	Unit-I under AMP. Unit-II under Shutdown.
		Unit-II	0.00	220kV CHP - Birpara Line - II	-66.56	
		Unit-III	84.56	220kV CHP - Gedu	35.81	
		Unit-IV	71.95	220kV CHP - Jamjee (old) - I	83.42	
				220kV CHP - Jamjee - II (new)	83.85	
				220kV CHP - Jamjee - III (new)	80.69	
		-	-	220kV Malbase - Birpara Line	-94.94	
		-	-	66kV CHP - Gedu Line	6.26	
-	-	3x3MVA, 66/11kV TFR	1.70			
Total	156.51	Auxiliary Consumption & Transformation Losses at Generator end	-0.76%			
4	2 x 12MW BHP (U/S)	Unit-I	9.00	220kV BHP - Semtokha Line	117.94	U/S Unit-II under AMP. L/S Unit-I on Standby
		Unit-II	0.00	66kV BHP - Lobeyasa Line	27.84	
Total	9.00			-120.37		
5	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.51	
		Unit-II	16.60	30MVA ICT, 220/66kV (HV)	19.78	
Total	16.60	Auxiliary Consumption & Transformation Losses at Generator end	-1.25%			
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	33.54	Unit I on Shutdown. 220kV DHP_Dagapela line on Standby.
		Unit-II	33.76	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	53.15	
		-	-	5MVA, 220/33kV TFR	0.20	
Total	33.76	Auxiliary Consumption & Transformation Losses at Generator end	0.06%			
7	4 x 15MW KHP	Unit-I	12.71	132kV KHP - Nangkhor Line	11.63	Unit-II on Standby. Unit-III under AMP.
		Unit-II	0.00	132kV KHP - Kilikhar Line	13.15	
		Unit-III	0.00	5MVA, 132/11kV TFR	0.51	
		Unit-IV	12.77	132kV Motanga - Rangia Line	-2.49	
		Total	25.48	Auxiliary Consumption & Transformation Losses at Generator end	0.75%	
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	40.01	132kV NHP-MHP-II	39.74	
		Total	40.01	Auxiliary Consumption & Transformation Losses at Generator end	0.67%	

Note: Generation-Load Summary (MW) for 05-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	619.84	739.97	742.97	-28.89	-3.00
2	Eastern Grid	356.12	187.44	187.20	77.44	0.24
Total		975.96	927.41	930.17	48.55	-2.76

Note: Generation-Load Summary for 05-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	418.47	691.32	687.93	-160.21	3.39
2	Eastern Grid	222.52	177.85	175.52	-67.97	2.33
Total		640.99	869.17	863.45	-228.18	5.72

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 06-Dec-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	5-Dec-2024	18:00 hrs			28-Nov-2024	18:31:35 hrs	993.771
Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks	
1	6 x 170MW THP	Unit-I	141.23	400kV THP - Siliguri Line - I	0.00	Unit-II on standby. Unit-VI & V under AMP. 400kV THP-MAL line under Shutdown. 400kV THP-SIL Line I on Standby.	
		Unit-II	0.00	400kV THP - Siliguri Line - II	215.44		
		Unit-III	138.57	400kV THP - Siliguri Line - IV	204.64		
		Unit-IV	137.75	400kV THP - Malbase Line - III	0.00		
		Unit-V	0.00	400kV Malbase - Siliguri Line	-219.00		
		Unit-VI	0.00	-	-		
		Total	417.55	Auxiliary Consumption & Transformation Losses at Generator end	-0.61%		
2	4 x 180MW MHP	Unit-I	180.10	400kV MHP - Jigmeling Line - I	261.01	Unit-III Under Shutdown. Unit-IV under AMP. 400kV MHP-JLG Line III on Standby. 400kV MHP-JLG Line II & IV on Standby. 132kV MHP_Yurmo Line - I not in Service. 400kV JLG_ALI Interim Line I tripped at 17:05hrs. 400kV JLG_ALI Interim Line II on Standby.	
		Unit-II	120.20	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	0.00		
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	65.67		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	188.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	36.43		
		-	-	400kV Jigmeling - Alipurduar Line - II	35.37		
		-	-	80MVA, 220/132kV ICT - I (HV)	20.06		
		-	-	80MVA, 220/132kV ICT - II (HV)	19.96		
		-	-	220kV Tsirang - Jigmeling Line	-89.58		
		-	-	132kV Gelephu - Salakati Line	-15.84		
Total	300.30	Auxiliary Consumption & Transformation Losses at Generator end	0.46%				
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-58.62	Unit-I under AMP & Unit-II under Shutdown.	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-58.08		
		Unit-III	90.30	220kV CHP - Gedu	46.49		
		Unit-IV	91.08	220kV CHP - Jamjee (old) - I	82.22		
		-	-	220kV CHP - Jamjee - II (new)	82.55		
		-	-	220kV CHP - Jamjee - III (new)	79.07		
		-	-	220kV Malbase - Birpara Line	-88.33		
		-	-	66kV CHP - Gedu Line	7.63		
		-	-	3x3MVA, 66/11kV TFR	2.20		
		Total	181.38	Auxiliary Consumption & Transformation Losses at Generator end	-1.15%		
4	2 x 12MW BHP (U/S)	Unit-I	8.90	220kV BHP - Semtokha Line	111.00	U/S unit-II under AMP. L/S Unit-I on Standby	
		Unit-II	0.00	66kV BHP - Lobeyasa Line	30.00		
		Total	8.90	220kV BHP - Tsirang Line	-116.73		
5	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.76		
		Unit-II	16.16	30MVA ICT, 220/66kV (HV)	22.75		
		Total	16.16	Auxiliary Consumption & Transformation Losses at Generator end	0.12%		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	32.75	Unit I under shutdown. 220kV DHP_Dagapela line on Standby.	
		Unit-II	32.99	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	54.57		
		-	-	5MVA, 220/33kV TFR	0.20		
		Total	32.99	Auxiliary Consumption & Transformation Losses at Generator end	0.12%		
7	4 x 15MW KHP	Unit-I	15.21	132kV KHP - Nangkor Line	12.76	Unit-II on Standby. Unit-III under AMP.	
		Unit-II	0.00	132kV KHP - Kilikhar Line	16.90		
		Unit-III	0.00	5MVA, 132/11kV TFR	0.50		
		Unit-IV	15.21	132kV Motanga - Rangia Line	0.16		
		Total	30.42	Auxiliary Consumption & Transformation Losses at Generator end	0.85%		
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	27.77		
		Total	28.00	Auxiliary Consumption & Transformation Losses at Generator end	0.82%		
Note: Generation-Load Summary (MW) for 05-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	656.98	750.51	755.05	-3.95	-4.54	
2	Eastern Grid	358.72	213.02	211.14	56.12	1.88	
	Total	1,015.70	963.53	966.19	52.17	-2.66	
Note: Generation-Load Summary (MW) for 05-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	656.64	726.75	720.03	66.61	6.72	
2	Eastern Grid	295.65	186.22	181.78	-27.29	4.44	
	Total	952.29	912.97	901.81	39.32	11.16	
Note: Daily Energy (MUs) and Power(MW) Statistics for 05-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	0.40	0.00	21.93	18.13	-379.66	-4.08	

- 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 9:00hrs) 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.