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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 11-Nov-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	10-Nov-24	09:00 hrs		30-Dec-23	18:00 hrs	955.51

Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks
1	6 x 170MW THP	Unit- I	94.72	400kV THP - Siliguri Line - I	126.40	Unit- II under Shutdown. Unit-V under AMP. 400kV THP-MAL line under Shutdown
		Unit- II	0.00	400kV THP - Siliguri Line - II	126.03	
		Unit- III	118.69	400kV THP - Siliguri Line- IV	121.54	
		Unit- IV	60.54	400kV THP - Malbase Line - III	0.00	
		Unit- V	0.00	400kV Malbase - Siliguri Line	-171.16	
		Unit- VI	100.02	-	-	
		Total	373.97	Auxiliary Consumption & Transformation Losses at Generator end	0.00%	
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I under AMP. Unit-II on Standby. 400kV MHP-JLG Line I under Breakdown. 400kV MHP-JLG line II on Standby. 132kV MHP_Yurmo Line- I not in Service. 400kV JLG_ALI Interim Line II on Standby.
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	157.47	400kV MHP - Jigmeling Line - III	154.60	
		Unit-IV	155.21	400kV MHP - Jigmeling Line - IV	153.57	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	63.25	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	122.55	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	45.82	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	67.64	
		-	-	400kV Jigmeling - Alipurduar Line - II	68.36	
		-	-	80MVA, 220/132kV ICT - I (HV)	22.07	
		-	-	80MVA, 220/132kV ICT - II (HV)	21.93	
		-	-	220kV Tsirang - Jigmeling Line	-38.26	
		-	-	132kV Gelephu - Salakati Line	12.30	
Total	312.68	Auxiliary Consumption & Transformation Losses at Generator end	0.28%			
3	4 x 84MW CHP	Unit- I	59.58	220kV CHP - Birpara Line - I	-35.01	Unit-IV on Standby.
		Unit- II	79.58	220kV CHP - Birpara Line - II	-34.72	
		Unit- III	60.19	220kV CHP - Gedu	25.92	
		Unit- IV	0.00	220kV CHP - Jamjee (old) - I	80.19	
		-	-	220kV CHP - Jamjee - II (new)	80.67	
		-	-	220kV CHP - Jamjee - III (new)	77.86	
		-	-	220kV Malbase - Birpara Line	-34.50	
		-	-	66kV CHP - Gedu Line	4.31	
		-	-	3x3MVA, 66/11kV TFR	1.17	
Total	199.35	Auxiliary Consumption & Transformation Losses at Generator end	-0.52%			
4	2 x 12MW BHP (U/S)	Unit- I	5.73	220kV BHP - Semtokha Line	95.52	
		Unit- II	6.92	66kV BHP - Lobeyasa Line	24.86	
Total	12.65	Auxiliary Consumption & Transformation Losses at Generator end	-85.08			
5	2 x 20MW BHP (L/S)	Unit- I	11.76	5MVA, 66/11kV TFR	0.41	
		Unit- II	11.34	30MVA ICT, 220/66kV (HV)	13.33	
Total	23.10	Auxiliary Consumption & Transformation Losses at Generator end	0.11%			
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	49.19	Unit I on Standby. 220kV DHP_Dagapela Line on Standby.
		Unit-II	49.45	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	40.50	
		-	-	5MVA, 220/33kV TFR	0.20	
Total	49.45	Auxiliary Consumption & Transformation Losses at Generator end	0.12%			
7	4 x 15MW KHP	Unit- I	11.14	132kV KHP - Nangkhor Line	18.96	KHP Unit-IV on Standby.
		Unit-II	11.13	132kV KHP - Kilikhar Line	13.81	
		Unit- III	11.13	5MVA, 132/11kV TFR	0.23	
		Unit- IV	0.00	132kV Motanga - Rangia Line	17.46	
		Total	33.40	Auxiliary Consumption & Transformation Losses at Generator end	1.20%	
8	2 x 59MW NHP	Unit-I	15.04	132kV NHP-MHP-I	14.87	
		Unit-II	44.98	132kV NHP-MHP-II	44.75	
		Total	60.02	Auxiliary Consumption & Transformation Losses at Generator end	0.67%	

Note: Generation-Load Summary (MW) for 10-Nov-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	658.52	598.20	599.14	98.58	-0.94
2	Eastern Grid	406.10	156.26	154.58	211.58	1.68
Total		1,064.62	754.46	753.72	310.16	0.74

Note: Generation-Load Summary for 10-Nov-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	581.83	592.97	593.73	43.66	-0.76
2	Eastern Grid	265.77	184.67	185.94	26.30	-1.27
Total		847.60	777.64	779.67	69.96	-2.03

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 11-Nov-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	10-Nov-2024	18:00 hrs		30-Dec-2023	18:00 hrs	955.51

Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks
1	6 x 170MW THP	Unit-I	144.66	400kV THP - Siliguri Line - I	150.05	Unit-II under shutdown. Unit-V under AMP. 400kV THP - Malbase Line - III under Shutdown.
		Unit-II	0.00	400kV THP - Siliguri Line - II	149.60	
		Unit-III	138.45	400kV THP - Siliguri Line - IV	144.28	
		Unit-IV	60.56	400kV THP - Malbase Line - III	0.00	
		Unit-V	0.00	400kV Malbase - Siliguri Line	-192.75	
		Unit-VI	100.26	-	-	
		Total	443.93	Auxiliary Consumption & Transformation Losses at Generator end	0.00%	
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I under annual maintenance & Unit-II on standby 400kV MHP-JLG Line I under Breakdown. 400kV MHP-JLG line II on Standby. 132kV MHP_Yurmoo Line- I not in Service. 400kV JLG_ALI Interim Line II on Standby.
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	146.86	400kV MHP - Jigmeling Line - III	155.69	
		Unit-IV	170.34	400kV MHP - Jigmeling Line - IV	154.96	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	64.85	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	153.09	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	39.27	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	58.18	
		-	-	400kV Jigmeling - Alipurduar Line - II	59.64	
		-	-	80MVA, 220/132kV ICT - I (HV)	23.58	
		-	-	80MVA, 220/132kV ICT - II (HV)	23.39	
		-	-	220kV Tsirang - Jigmeling Line	-52.86	
-	-	132kV Gelephu - Salakati Line	3.62			
Total	317.20	Auxiliary Consumption & Transformation Losses at Generator end	0.38%			
3	4 x 84MW CHP	Unit-I	69.97	220kV CHP - Birpara Line - I	-35.40	Unit-IV on Standby.
		Unit-II	79.42	220kV CHP - Birpara Line - II	-34.90	
		Unit-III	60.08	220kV CHP - Gedu	22.90	
		Unit-IV	0.00	220kV CHP - Jamjee (old) - I	85.00	
		-	-	220kV CHP - Jamjee - II (new)	85.98	
		-	-	220kV CHP - Jamjee - III (new)	82.52	
		-	-	220kV Malbase - Birpara Line	-36.00	
		-	-	66kV CHP - Gedu Line	2.39	
		-	-	3x3MVA, 66/11kV TFR	1.69	
		Total	209.47	Auxiliary Consumption & Transformation Losses at Generator end	-0.34%	
4	2 x 12MW BHP (U/S)	Unit-I	5.70	220kV BHP - Semothka Line	98.70	
		Unit-II	6.30	66kV BHP - Lobeyasa Line	27.45	
		Total	12.00	220kV BHP - Tsirang Line	-91.08	
5	2 x 20MW BHP (L/S)	Unit-I	11.20	5MVA, 66/11kV TFR	0.67	
		Unit-II	12.10	30MVA ICT, 220/66kV (HV)	16.23	
		Total	23.30	Auxiliary Consumption & Transformation Losses at Generator end	-1.24%	
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	48.26	Unit I on Standby. 220kV DHP_Dagapela line on Standby.
		Unit-II	48.52	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	53.32	
		-	-	5MVA, 220/33kV TFR	0.25	
		Total	48.52	Auxiliary Consumption & Transformation Losses at Generator end	0.02%	
7	4 x 15MW KHP	Unit-I	11.17	132kV KHP - Nangkhor Line	16.94	KHP Unit-IV on Standby.
		Unit-II	11.13	132kV KHP - Kilikhar Line	15.64	
		Unit-III	11.17	5MVA, 132/11kV TFR	0.36	
		Unit-IV	0.00	132kV Motanga - Rangia Line	21.10	
		Total	33.47	Auxiliary Consumption & Transformation Losses at Generator end	1.58%	
8	2 x 59MW NHP	Unit-I	15.03	132kV NHP-MHP-I	14.82	
		Unit-II	45.00	132kV NHP-MHP-II	44.68	
		Total	60.03	Auxiliary Consumption & Transformation Losses at Generator end	0.88%	

Note: Generation-Load Summary (MW) for 10-Nov-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	737.22	645.20	646.34	144.88	-1.14
2	Eastern Grid	410.70	176.03	173.77	181.81	2.26
	Total	1,147.92	821.23	820.11	326.69	1.12

Note: Generation-Load Summary (MW) for 10-Nov-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	612.85	594.27	588.15	87.98	6.12
2	Eastern Grid	245.82	187.21	185.04	-9.89	2.17
	Total	858.67	781.48	773.19	78.09	8.29

Note: Daily Energy (MUs) and Power(MW) Statistics for 10-Nov-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	7.87	0.00	18.86	26.79	388.88	0.00

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 900hrs) 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.