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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 24-Oct-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	23-Oct-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	106.62	400kV THP - Siliguri Line - I	105.10	Unit-V on AMP
		Unit- II	176.79	400kV THP - Siliguri Line - II	103.16	
		Unit- III	68.97	400kV THP - Siliguri Line- IV	98.44	
		Unit- IV	177.31	400kV THP - Malbase Line - III	323.35	
		Unit- V	0.00	400kV Malbase - Siliguri Line	50.49	
		Unit- VI	100.00	-	-	
		Total	629.69	Auxiliary Consumption & Transformation Losses at Generator end	-0.06%	
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	400kV MHP-JLG Line I under breakdown. Unit-I under shutdown. 132kV MHP_Yurmo Line- I not in Service. 400kV JLG_ALI Interim Line II on Standby.
		Unit-II	197.11	400kV MHP - Jigmeling Line - II	157.87	
		Unit-III	130.68	400kV MHP - Jigmeling Line - III	163.77	
		Unit-IV	130.49	400kV MHP - Jigmeling Line - IV	162.38	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	62.54	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	97.09	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	95.27	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	142.55	
		-	-	400kV Jigmeling - Alipurduar Line - II	144.73	
		-	-	80MVA, 220/132kV ICT - I (HV)	23.00	
		-	-	80MVA, 220/132kV ICT - II (HV)	22.88	
		-	-	220kV Tsiwang - Jigmeling Line	-0.01	
		-	-	132kV Gelephu - Salakati Line	16.69	
Total	458.28	Auxiliary Consumption & Transformation Losses at Generator end	0.24%			
3	4 x 84MW CHP	Unit- I	64.57	220kV CHP - Birpara Line - I	-15.54	
		Unit- II	59.70	220kV CHP - Birpara Line - II	-9.99	
		Unit- III	75.67	220kV CHP - Gedu	60.34	
		Unit- IV	74.11	220kV CHP - Jamjee (old) - I	77.40	
		-	-	220kV CHP - Jamjee - II (new)	77.67	
		-	-	220kV CHP - Jamjee - III (new)	75.10	
		-	-	220kV Malbase - Birpara Line	-20.26	
		-	-	66kV CHP - Gedu Line	8.37	
		-	-	3x3MVA, 66/11kV TFR	0.89	
Total	274.05	Auxiliary Consumption & Transformation Losses at Generator end	-0.07%			
4	2 x 12MW BHP (U/S)	Unit- I	8.25	220kV BHP - Semtokha Line	91.28	
		Unit- II	8.83	66kV BHP - Lobeyasa Line	25.33	
		Total	17.08	220kV BHP - Tsiwang Line	-71.14	
5	2 x 20MW BHP (L/S)	Unit- I	14.68	5MVA, 66/11kV TFR	0.46	
		Unit- II	14.14	30MVA ICT, 220/66kV (HV)	9.36	
		Total	28.82	Auxiliary Consumption & Transformation Losses at Generator end	-0.07%	
6	2 x 63MW DHP	Unit-I	37.64	220kV DHP - Tsiwang Line	74.13	220kV DHP_Dagapela Line on Standby.
		Unit-II	36.98	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	52.46	
		-	-	5MVA, 220/33kV TFR	0.30	
Total	74.62	Auxiliary Consumption & Transformation Losses at Generator end	0.25%			
7	4 x 15MW KHP	Unit- I	13.77	132kV KHP - Nangkor Line	35.58	
		Unit-II	13.78	132kV KHP - Kilikhar Line	18.78	
		Unit- III	13.86	5MVA, 132/11kV TFR	0.21	
		Unit- IV	13.77	132kV Motanga - Rangia Line	32.64	
		Total	55.18	Auxiliary Consumption & Transformation Losses at Generator end	1.11%	
8	2 x 59MW NHP	Unit-I	45.10	132kV NHP-MHP-I	44.74	
		Unit-II	44.85	132kV NHP-MHP-II	44.62	
		Total	89.95	Auxiliary Consumption & Transformation Losses at Generator end	0.66%	

Note: Generation-Load Summary (MW) for 23-Oct-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	1,024.26	712.87	713.26	311.40	-0.39
2	Eastern Grid	603.41	171.52	169.24	431.88	2.28
	Total	1,627.67	884.39	882.50	743.28	1.89

Note: Generation-Load Summary for 23-Oct-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	847.36	625.44	626.30	243.58	-0.86
2	Eastern Grid	350.83	183.62	181.22	145.55	2.40
	Total	1,198.19	809.06	807.52	389.13	1.54

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 24-Oct-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	23-Oct-2024	19:00 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	106.55	400kV THP - Siliguri Line - I	0.00	400kV THP-Siliguri Line - I on Standby. Unit-V on AMP	
		Unit-II	147.36	400kV THP - Siliguri Line - II	112.22		
		Unit-III	59.26	400kV THP - Siliguri Line- IV	104.65		
		Unit-IV	147.11	400kV THP - Malbase Line - III	345.45		
		Unit-V	0.00	400kV Malbase - Siliguri Line	53.86		
		Unit-VI	99.86		-		
		Total	560.14	Auxiliary Consumption & Transformation Losses at Generator end	-0.39%		
2	4 x 180MW MHP	Unit-I	139.74	400kV MHP - Jigmeling Line - I	0.00	Unit II Under shutdown. 400kV MHP-JLG Line I under breakdown. 400kV MHP-JLG Line II under Shutdown. 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	160.50	400kV MHP - Jigmeling Line - III	239.65		
		Unit-IV	153.60	400kV MHP - Jigmeling Line - IV	238.44		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	63.04		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	126.58		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	86.55		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	130.18		
		-	-	400kV Jigmeling - Alipurduar Line - II	130.18		
		-	-	80MVA, 220/132kV ICT - I (HV)	25.12		
		-	-	80MVA, 220/132kV ICT - II (HV)	24.68		
		-	-	220kV Tsirang - Jigmeling Line	-23.20		
		-	-	132kV Gelephu - Salakati Line	6.90		
Total	453.84	Auxiliary Consumption & Transformation Losses at Generator end	0.46%				
3	4 x 84MW CHP	Unit-I	72.76	220kV CHP - Birpara Line - I	-5.34		
		Unit-II	72.39	220kV CHP - Birpara Line - II	-3.69		
		Unit-III	72.17	220kV CHP - Gedu	56.69		
		Unit-IV	72.42	220kV CHP - Jamjee (old) - I	78.16		
		-	-	220kV CHP - Jamjee - II (new)	78.44		
		-	-	220kV CHP - Jamjee - III (new)	75.67		
		-	-	220kV Malbase - Birpara Line	-7.31		
		-	-	66kV CHP - Gedu Line	8.65		
		-	-	3x3MVA, 66/11kV TFR	1.05		
		Total	289.74	Auxiliary Consumption & Transformation Losses at Generator end	0.04%		
4	2 x 12MW BHP (U/S)	Unit-I	8.30	220kV BHP - Sentokha Line	111.00		
		Unit-II	8.40	66kV BHP - Lobeyasa Line	28.00		
		Total	16.70	220kV BHP - Tsirang Line	-92.23		
5	2 x 20MW BHP (L/S)	Unit-I	15.40	5MVA, 66/11kV TFR	0.00		
		Unit-II	15.30	30MVA ICT, 220/66kV (HV)	12.78		
		Total	30.70	Auxiliary Consumption & Transformation Losses at Generator end	0.06%		
6	2 x 63MW DHP	Unit-I	36.62	220kV DHP - Tsirang Line	73.11	220kV DHP_Dagapela Line on Standby.	
		Unit-II	37.00	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.58		
		-	-	5MVA, 220/33kV TFR	0.20		
Total	73.62	Auxiliary Consumption & Transformation Losses at Generator end	0.42%				
7	4 x 15MW KHP	Unit-I	13.79	132kV KHP - Nangkor Line	32.79		
		Unit-II	13.79	132kV KHP - Kilikhar Line	21.28		
		Unit-III	13.84	5MVA, 132/11kV TFR	0.37		
		Unit-IV	13.82	132kV Motanga - Rangia Line	29.83		
		Total	55.24	Auxiliary Consumption & Transformation Losses at Generator end	1.45%		
8	2 x 59MW NHP	Unit-I	44.91	132kV NHP-MHP-I	44.60		
		Unit-II	44.92	132kV NHP-MHP-II	44.78		
		Total	89.83	Auxiliary Consumption & Transformation Losses at Generator end	0.50%		

Note: Generation-Load Summary (MW) for 23-Oct-2024 at 19:00 hrs

Sl. No.	Region	Total Generation	Total Load (Gen. - Exp.)	Total Load (Feeder Summation)	Total Export/Import	Auxiliary Consumption & Transformation Losses
1	Western Grid	970.90	739.71	741.44	254.39	-1.73
2	Eastern Grid	598.91	192.07	188.73	383.64	3.34
	Total	1,569.81	931.78	930.17	638.03	1.61

Note: Generation-Load Summary (MW) for 23-Oct-2023, at 19:00 hrs

Sl. No.	Region	Total Generation	Total Load (Gen. - Exp.)	Total Load (Feeder Summation)	Total Export/Import	Auxiliary Consumption & Transformation Losses
1	Western Grid	850.00	662.69	663.79	231.17	-1.10
2	Eastern Grid	324.32	189.76	188.57	90.7	1.19
	Total	1,174.32	852.45	852.36	321.87	0.09

Note: Daily Energy (MUs) and Power(MW) Statistics for 23-Oct-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	16.16	0.00	20.70	38.21	827.23	1.23

- 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.