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

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	07-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	186.06	400kV THP - Siliguri Line - I	244.75	
		Unit- II	185.75	400kV THP - Siliguri Line - II	242.56	
		Unit- III	185.19	400kV THP - Siliguri Line - IV	234.08	
		Unit- IV	185.10	400kV THP - Malbase Line - III	396.94	
		Unit- V	186.21	400kV Malbase - Siliguri Line	193.82	
		Unit- VI	185.90	-	-	
		Total	1,114.21	Auxiliary Consumption & Transformation Losses at Generator end	-0.37%	
2	4 x 180MW MHP	Unit-I	197.73	400kV MHP - Jigmeling Line - I	0.00	400kV MHP-JLG Line I on under maintenance. 132kV MHP_Yurmo Line - I not in Service. 400kV JLG_ALI Interim Line II on Standby.
		Unit-II	197.83	400kV MHP - Jigmeling Line - II	278.54	
		Unit-III	194.20	400kV MHP - Jigmeling Line - III	289.16	
		Unit-IV	198.08	400kV MHP - Jigmeling Line - IV	287.22	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	60.98	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	70.90	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	193.46	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	289.46	
		-	-	400kV Jigmeling - Alipurduar Line - II	290.18	
		-	-	80MVA, 220/132kV ICT - I (HV)	24.33	
		-	-	80MVA, 220/132kV ICT - II (HV)	24.14	
		-	-	220kV Tsirang - Jigmeling Line	30.58	
		-	-	132kV Gelephu - Salakati Line	20.01	
Total	787.84	Auxiliary Consumption & Transformation Losses at Generator end	0.05%			
3	4 x 84MW CHP	Unit- I	91.99	220kV CHP - Birpara Line - I	32.53	
		Unit- II	91.47	220kV CHP - Birpara Line - II	32.29	
		Unit- III	91.87	220kV CHP - Gedu	116.46	
		Unit- IV	91.23	220kV CHP - Jamjee (old) - I	59.03	
		-	-	220kV CHP - Jamjee - II (new)	59.37	
		-	-	220kV CHP - Jamjee - III (new)	57.35	
		-	-	220kV Malbase - Birpara Line	5.12	
		-	-	66kV CHP - Gedu Line	7.93	
Total	366.56	Auxiliary Consumption & Transformation Losses at Generator end	0.22%			
4	2 x 12MW BHP (U/S)	Unit- I	11.90	220kV BHP - Semtokha Line	128.00	
		Unit- II	12.17	66kV BHP - Lobeyasa Line	28.00	
		Total	24.07	220kV BHP - Tsirang Line	-91.38	
5	2 x 20MW BHP (L/S)	Unit- I	21.14	5MVA, 66/11kV TFR	0.41	
		Unit- II	20.35	30MVA ICT, 220/66kV (HV)	5.00	
		Total	41.49	Auxiliary Consumption & Transformation Losses at Generator end	0.81%	
6	2 x 63MW DHP	Unit-I	63.53	220kV DHP - Tsirang Line	126.21	220kV DHP_Dagapela Line on Standby.
		Unit-II	63.26	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	52.68	
		-	-	5MVA, 220/33kV TFR	0.30	
Total	126.79	Auxiliary Consumption & Transformation Losses at Generator end	0.22%			
7	4 x 15MW KHP	Unit- I	16.03	132kV KHP - Nangkor Line	43.05	
		Unit-II	16.43	132kV KHP - Kilikhar Line	21.51	
		Unit- III	16.55	5MVA, 132/11kV TFR	0.25	
		Unit- IV	16.42	132kV Motanga - Rangia Line	41.10	
		Total	65.43	Auxiliary Consumption & Transformation Losses at Generator end	0.95%	
8	2 x 59MW NHP	Unit-I	64.67	132kV NHP-MHP-I	64.17	
		Unit-II	64.73	132kV NHP-MHP-II	64.28	
		Total	129.40	Auxiliary Consumption & Transformation Losses at Generator end	0.73%	

Note: Generation-Load Summary (MW) for 07-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	1,673.12	657.39	659.91	985.15	-2.52
2	Eastern Grid	982.67	179.04	177.08	834.21	1.96
	Total	2,655.79	836.43	836.99	1,819.36	-0.56

Note: Generation-Load Summary for 07-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	1,669.72	639.51	628.85	1,011.12	10.66
2	Eastern Grid	623.09	179.49	177.01	462.69	2.48
	Total	2,292.81	819.00	805.86	1,473.81	13.14

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 08-Oct-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	7-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	185.69	400kV THP - Siliguri Line - I	230.88		
		Unit-II	185.86	400kV THP - Siliguri Line - II	230.20		
		Unit-III	185.68	400kV THP - Siliguri Line - IV	222.00		
		Unit-IV	188.07	400kV THP - Malbase Line - III	432.95		
		Unit-V	184.74	400kV Malbase - Siliguri Line	172.32		
		Unit-VI	185.99	-	-		
		Total	1,116.03	Auxiliary Consumption & Transformation Losses at Generator end	0.00%		
2	4 x 180MW MHP	Unit-I	197.73	400kV MHP - Jigmeling Line - I	0.00	400kV MHP-JLG Line I under maintenance. 132kV MHP_Yurmo Line- I not in Service. 400kV JLG_ALI Interim Line II on Standby.	
		Unit-II	197.83	400kV MHP - Jigmeling Line - II	278.54		
		Unit-III	194.20	400kV MHP - Jigmeling Line - III	289.16		
		Unit-IV	198.08	400kV MHP - Jigmeling Line - IV	287.22		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	60.98		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	98.17		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	185.46		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	277.09		
		-	-	400kV Jigmeling - Alipurduar Line - II	277.82		
		-	-	80MVA, 220/132kV ICT - I (HV)	37.61		
		-	-	80MVA, 220/132kV ICT - II (HV)	37.26		
		-	-	220kV Tsirang - Jigmeling Line	30.77		
		-	-	132kV Gelephu - Salakati Line	20.20		
		Total	787.84	Auxiliary Consumption & Transformation Losses at Generator end	0.06%		
		3	4 x 84MW CHP	Unit-I	91.13		
Unit-II	91.38			220kV CHP - Birpara Line - II	37.91		
Unit-III	91.70			220kV CHP - Gedu	95.06		
Unit-IV	91.42			220kV CHP - Jamjee (old) - I	60.03		
-	-			220kV CHP - Jamjee - II (new)	61.93		
-	-			220kV CHP - Jamjee - III (new)	59.90		
-	-			220kV Malbase - Birpara Line	29.63		
-	-			66kV CHP - Gedu Line	8.08		
-	-			3x3MVA, 66/11kV TFR	1.04		
Total	365.63			Auxiliary Consumption & Transformation Losses at Generator end	1.22%		
4	2 x 12MW BHP (U/S)	Unit-I	12.00	220kV BHP - Sentsokha Line	156.00	66kV BHP-Gewathang Line tripped @ 16:17hrs	
		Unit-II	12.20	66kV BHP - Lobeyasa Line	0.00		
		Total	24.20	220kV BHP - Tsirang Line	-91.40		
5	2 x 20MW BHP (L/S)	Unit-I	21.15	5MVA, 66/11kV TFR	0.58		
		Unit-II	20.40	30MVA ICT, 220/66kV (HV)	23.04		
		Total	41.55	Auxiliary Consumption & Transformation Losses at Generator end	0.87%		
6	2 x 63MW DHP	Unit-I	63.53	220kV DHP - Tsirang Line	126.23	220kV DHP_Dagapela Line on Standby.	
		Unit-II	63.19	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.46		
		-	-	5MVA, 220/33kV TFR	0.20		
Total	126.72	Auxiliary Consumption & Transformation Losses at Generator end	0.23%				
7	4 x 15MW KHP	Unit-I	16.47	132kV KHP - Nangkor Line	40.52		
		Unit-II	16.53	132kV KHP - Kilikhar Line	24.53		
		Unit-III	16.57	5MVA, 132/11kV TFR	0.39		
		Unit-IV	16.68	132kV Motanga - Rangia Line	55.59		
		Total	66.25	Auxiliary Consumption & Transformation Losses at Generator end	1.22%		
8	2 x 59MW NHP	Unit-I	64.67	132kV NHP-MHP-I	64.24		
		Unit-II	64.76	132kV NHP-MHP-II	64.28		
		Total	129.43	Auxiliary Consumption & Transformation Losses at Generator end	0.70%		

Note: Generation-Load Summary (MW) for 07-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	1,674.13	683.19	677.88	960.17	5.31
2	Eastern Grid	983.52	198.13	195.95	816.16	2.18
	Total	2,657.65	881.32	873.83	1,776.33	7.49

Note: Generation-Load Summary (MW) for 07-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	1,658.30	655.3	647.17	996.65	8.13
2	Eastern Grid	592.43	190.93	188.29	407.85	2.64
	Total	2,250.73	846.23	835.46	1,404.50	10.77

Note: Daily Energy (MUs) and Power(MW) Statistics for 07-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	41.29	0.00	19.98	63.60	1,877.11	2.33

- 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. 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.