



ལྷན་ཁག་དང་འཇམ་མཁོན་ཚོན་སྒྲུབ་ལྷན་ཁག་ རྒྱལ་ཁབ་དྲན་པ་ལྷན་ཁག་གི་ལྷན་ཁག་
 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 12-Oct-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	11-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	184.96	400kV THP - Siliguri Line - I	241.34	
		Unit- II	185.29	400kV THP - Siliguri Line - II	239.53	
		Unit- III	185.68	400kV THP - Siliguri Line - IV	231.00	
		Unit- IV	184.54	400kV THP - Malbase Line - III	482.63	
		Unit- V	185.47	400kV Malbase - Siliguri Line	192.00	
		Unit- VI	185.95	-	-	
		Total	1,111.89	Auxiliary Consumption & Transformation Losses at Generator end	-0.23%	
2	4 x 180MW MHP	Unit-I	197.65	400kV MHP - Jigmeling Line - I	0.00	400kV MHP-JLG Line I on Standby. 132kV MHP_Yurmoo Line- I not in Service. 400kV JLG_ALI Interim Line II on Standby.
		Unit-II	197.57	400kV MHP - Jigmeling Line - II	278.54	
		Unit-III	192.46	400kV MHP - Jigmeling Line - III	289.16	
		Unit-IV	196.78	400kV MHP - Jigmeling Line - IV	287.22	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	60.46	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	80.59	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	190.55	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	285.82	
		-	-	400kV Jigmeling - Alipurduar Line - II	287.27	
		-	-	80MVA, 220/132kV ICT - I (HV)	30.71	
		-	-	80MVA, 220/132kV ICT - II (HV)	30.61	
		-	-	220kV Tsirang - Jigmeling Line	32.99	
		-	-	132kV Gelephu - Salakati Line	25.60	
		Total	784.46	Auxiliary Consumption & Transformation Losses at Generator end	-0.27%	
3	4 x 84MW CHP	Unit- I	91.48	220kV CHP - Birpara Line - I	29.73	
		Unit- II	91.26	220kV CHP - Birpara Line - II	29.50	
		Unit- III	91.29	220kV CHP - Gedu	108.21	
		Unit- IV	91.33	220kV CHP - Jamjee (old) - I	62.86	
		-	-	220kV CHP - Jamjee - II (new)	63.56	
		-	-	220kV CHP - Jamjee - III (new)	61.26	
		-	-	220kV Malbase - Birpara Line	7.60	
		-	-	66kV CHP - Gedu Line	9.24	
		-	-	3x3MVA, 66/11kV TFR	0.80	
Total	365.36	Auxiliary Consumption & Transformation Losses at Generator end	0.05%			
4	2 x 12MW BHP (U/S)	Unit- I	11.67	220kV BHP - Semtokha Line	119.68	
		Unit- II	12.10	66kV BHP - Lobeyasa Line	27.09	
		Total	23.77	220kV BHP - Tsirang Line	-82.79	
5	2 x 20MW BHP (L/S)	Unit- I	20.61	5MVA, 66/11kV TFR	0.45	
		Unit- II	19.84	30MVA ICT, 220/66kV (HV)	4.38	
		Total	40.45	Auxiliary Consumption & Transformation Losses at Generator end	-0.33%	
6	2 x 63MW DHP	Unit-I	60.28	220kV DHP - Tsirang Line	120.10	220kV DHP_Dagapela Line on Standby.
		Unit-II	60.42	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	52.84	
		-	-	5MVA, 220/33kV TFR	0.58	
Total	120.70	Auxiliary Consumption & Transformation Losses at Generator end	0.02%			
7	4 x 15MW KHP	Unit- I	16.46	132kV KHP - Nangkor Line	43.19	
		Unit-II	16.56	132kV KHP - Kilikhar Line	21.49	
		Unit- III	16.16	5MVA, 132/11kV TFR	0.21	
		Unit- IV	16.41	132kV Motanga - Rangia Line	36.31	
		Total	65.59	Auxiliary Consumption & Transformation Losses at Generator end	1.07%	
8	2 x 59MW NHP	Unit-I	64.83	132kV NHP-MHP-I	64.36	
		Unit-II	64.97	132kV NHP-MHP-II	64.45	
		Total	129.80	Auxiliary Consumption & Transformation Losses at Generator end	0.76%	

Note: Generation-Load Summary (MW) for 11-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	1,662.17	658.48	661.08	970.70	-2.60
2	Eastern Grid	979.85	187.29	187.71	825.55	-0.42
	Total	2,642.02	845.77	848.79	1,796.25	-3.02

Note: Generation-Load Summary for 11-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	1,349.87	614.78	606.25	724.39	8.53
2	Eastern Grid	622.33	199.21	195.73	433.82	3.48
	Total	1,972.20	813.99	801.98	1,158.21	12.01

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 12-Oct-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	11-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	185.43	400kV THP - Siliguri Line - I	194.94		
		Unit-II	184.63	400kV THP - Siliguri Line - II	194.40		
		Unit-III	24.90	400kV THP - Siliguri Line- IV	187.50		
		Unit-IV	187.69	400kV THP - Malbase Line - III	377.60		
		Unit-V	185.99	400kV Malbase - Siliguri Line	141.28		
		Unit-VI	185.72	-	-		
		Total	954.36	Auxiliary Consumption & Transformation Losses at Generator end	-0.01%		
2	4 x 180MW MHP	Unit-I	197.70	400kV MHP - Jigmeling Line - I	0.00	400kV MHP-JLG Line I on Standby. 132kV MHP_Yurmo Line- I not in Service. 400kV JLG_ALI Interim Line II on Standby.	
		Unit-II	198.00	400kV MHP - Jigmeling Line - II	275.45		
		Unit-III	191.25	400kV MHP - Jigmeling Line - III	286.27		
		Unit-IV	195.41	400kV MHP - Jigmeling Line - IV	284.56		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	60.46		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	105.46		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	182.50		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	272.73		
		-	-	400kV Jigmeling - Alipurduar Line - II	273.46		
		-	-	80MVA, 220/132kV ICT - I (HV)	36.36		
		-	-	80MVA, 220/132kV ICT - II (HV)	35.95		
		-	-	220kV Tsirang - Jigmeling Line	19.60		
		-	-	132kV Gelephu - Salakati Line	23.94		
Total	782.36	Auxiliary Consumption & Transformation Losses at Generator end	0.57%				
3	4 x 84MW CHP	Unit-I	91.48	220kV CHP - Birpara Line - I	30.32		
		Unit-II	91.26	220kV CHP - Birpara Line - II	30.19		
		Unit-III	91.29	220kV CHP - Gedu	96.67		
		Unit-IV	91.33	220kV CHP - Jamjee (old) - I	66.59		
		-	-	220kV CHP - Jamjee - II (new)	67.09		
		-	-	220kV CHP - Jamjee - III (new)	64.75		
		-	-	220kV Malbase - Birpara Line	17.83		
		-	-	66kV CHP - Gedu Line	9.11		
		-	-	3x3MVA, 66/11kV TFR	0.97		
Total	365.36	Auxiliary Consumption & Transformation Losses at Generator end	-0.09%				
4	2 x 12MW BHP (U/S)	Unit-I	11.41	220kV BHP - Sentsokha Line	126.64		
		Unit-II	11.90	66kV BHP - Lobeyasa Line	29.51		
		Total	23.31	220kV BHP - Tsirang Line	-91.88		
5	2 x 20MW BHP (L/S)	Unit-I	20.57	5MVA, 66/11kV TFR	0.58		
		Unit-II	19.83	30MVA ICT, 220/66kV (HV)	7.43		
		Total	40.40	Auxiliary Consumption & Transformation Losses at Generator end	-1.79%		
6	2 x 63MW DHP	Unit-I	58.60	220kV DHP - Tsirang Line	116.58	220kV DHP_Dagapela Line on Standby.	
		Unit-II	58.47	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.39		
		-	-	5MVA, 220/33kV TFR	0.30		
Total	117.07	Auxiliary Consumption & Transformation Losses at Generator end	0.16%				
7	4 x 15MW KHP	Unit-I	16.59	132kV KHP - Nangkor Line	41.43		
		Unit-II	16.55	132kV KHP - Kilikhar Line	23.78		
		Unit-III	16.47	5MVA, 132/11kV TFR	0.35		
		Unit-IV	16.48	132kV Motanga - Rangia Line	46.50		
Total	66.09	Auxiliary Consumption & Transformation Losses at Generator end	0.80%				
8	2 x 59MW NHP	Unit-I	64.90	132kV NHP-MHP-I	64.44		
		Unit-II	64.90	132kV NHP-MHP-II	64.43		
		Total	129.80	Auxiliary Consumption & Transformation Losses at Generator end	0.72%		

Note: Generation-Load Summary (MW) for 11-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	1,500.50	684.44	685.80	796.46	-1.36
2	Eastern Grid	978.25	198.72	192.77	799.13	5.95
	Total	2,478.75	883.16	878.57	1,595.59	4.59

Note: Generation-Load Summary (MW) for 11-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	1,347.41	665.51	655.75	695.97	9.76
2	Eastern Grid	566.74	199.33	196.52	353.34	2.81
	Total	1,914.15	864.84	852.27	1,049.31	12.57

Note: Daily Energy (MUs) and Power(MW) Statistics for 11-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	39.27	0.00	20.03	61.60	1,851.23	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.