



འཇུག་ལྷན་པོའི་འཕེལ་རྒྱུ་ལྟུང་ལྷན་པོ། རྒྱལ་ཁབ་འཕུལ་གྲུབ་ལྷན་པོ།
 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 15-Nov-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	14-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	100.02	400kV THP - Siliguri Line - I	129.71	Unit-III under Shutdown, Unit-V under AMP, 400kV THP-MAL line under Shutdown.
		Unit- II	78.50	400kV THP - Siliguri Line - II	129.15	
		Unit- III	0.00	400kV THP - Siliguri Line- IV	123.07	
		Unit- IV	104.21	400kV THP - Malbase Line - III	0.00	
		Unit- V	0.00	400kV Malbase - Siliguri Line	-220.53	
		Unit- VI	100.01	-	-	
		Total	382.74	Auxiliary Consumption & Transformation Losses at Generator end	0.21%	
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 I & II on Standby.
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	135.70	400kV MHP - Jigmeling Line - III	137.11	
		Unit-IV	152.75	400kV MHP - Jigmeling Line - IV	136.42	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	64.26	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	146.59	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	62.55	
		-	-	400kV Jigmeling - Alipurduar Line - II	63.27	
		-	-	80MVA, 220/132kV ICT - I (HV)	18.42	
		-	-	80MVA, 220/132kV ICT - II (HV)	18.26	
		-	-	220kV Tsirang - Jigmeling Line	-51.65	
		-	-	132kV Gelephu - Salakati Line	6.83	
Total	288.45	Auxiliary Consumption & Transformation Losses at Generator end	0.08%			
3	4 x 84MW CHP	Unit- I	65.51	220kV CHP - Birpara Line - I	-51.32	Unit-III under standby.
		Unit- II	60.55	220kV CHP - Birpara Line - II	-50.60	
		Unit- III	0.00	220kV CHP - Gedu	46.50	
		Unit- IV	60.50	220kV CHP - Jamjee (old) - I	78.80	
		-	-	220kV CHP - Jamjee - II (new)	79.54	
		-	-	220kV CHP - Jamjee - III (new)	76.55	
		-	-	220kV Malbase - Birpara Line	-76.21	
		-	-	66kV CHP - Gedu Line	5.38	
		-	-	3x3MVA, 66/11kV TFR	1.30	
Total	186.56	Auxiliary Consumption & Transformation Losses at Generator end	0.22%			
4	2 x 12MW BHP (U/S)	Unit- I	5.75	220kV BHP - Semtokha Line	105.60	
		Unit- II	5.85	66kV BHP - Lobeyasa Line	25.51	
		Total	11.60	220kV BHP - Tsirang Line	-97.53	
5	2 x 20MW BHP (L/S)	Unit- I	11.30	5MVA, 66/11kV TFR	0.40	
		Unit- II	11.10	30MVA ICT, 220/66kV (HV)	14.71	
		Total	22.40	Auxiliary Consumption & Transformation Losses at Generator end	0.06%	
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	45.55	Unit I on Standby. 220kV DHP_Dagapela Line on Standby.
		Unit-II	45.81	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	53.28	
		-	-	5MVA, 220/33kV TFR	0.20	
Total	45.81	Auxiliary Consumption & Transformation Losses at Generator end	0.13%			
7	4 x 15MW KHP	Unit- I	12.17	132kV KHP - Nangkor Line	21.51	KHP Unit-IV on Standby.
		Unit-II	12.17	132kV KHP - Kilikhar Line	14.36	
		Unit- III	12.17	5MVA, 132/11kV TFR	0.23	
		Unit- IV	0.00	132kV Motanga - Rangia Line	18.93	
		Total	36.51	Auxiliary Consumption & Transformation Losses at Generator end	1.12%	
8	2 x 59MW NHP	Unit-I	25.01	132kV NHP-MHP-I	24.79	
		Unit-II	25.02	132kV NHP-MHP-II	24.79	
		Total	50.03	Auxiliary Consumption & Transformation Losses at Generator end	0.90%	

Note: Generation-Load Summary (MW) for 14-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	649.11	717.49	716.19	-16.73	1.30
2	Eastern Grid	374.99	171.76	170.66	151.58	1.10
Total		1,024.10	889.25	886.85	134.85	2.40

Note: Generation-Load Summary for 14-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	544.93	671.95	667.41	-46.83	4.54
2	Eastern Grid	231.51	176.11	173.63	-24.79	2.48
Total		776.44	848.06	841.04	-71.62	7.02

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Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	14-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	112.50	400kV THP - Siliguri Line - I	133.86	Unit- III on standby. Unit-V under AMP. 400kV THP-MAL line under Shutdown.	
		Unit-II	79.17	400kV THP - Siliguri Line - II	133.46		
		Unit-III	0.00	400kV THP - Siliguri Line - IV	128.71		
		Unit-IV	104.34	400kV THP - Malbase Line - III	0.00		
		Unit-V	0.00	400kV Malbase - Siliguri Line	-246.58		
		Unit-VI	100.03	-	-		
		Total	396.04	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 I & II on Standby.	
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	144.10	400kV MHP - Jigmeling Line - III	128.16		
		Unit-IV	135.45	400kV MHP - Jigmeling Line - IV	127.49		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	65.90		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	170.18		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	44.00		
		-	-	400kV Jigmeling - Alipurduar Line - II	41.00		
		-	-	80MVA, 220/132kV ICT - I (HV)	24.46		
		-	-	80MVA, 220/132kV ICT - II (HV)	24.21		
		-	-	220kV Tsirang - Jigmeling Line	-66.85		
		-	-	132kV Gelephu - Salakati Line	3.20		
Total	279.55	Auxiliary Consumption & Transformation Losses at Generator end	2.74%				
3	4 x 84MW CHP	Unit-I	65.05	220kV CHP - Birpara Line - I	-51.60	Unit-III under Shutdown..	
		Unit-II	64.49	220kV CHP - Birpara Line - II	-51.10		
		Unit-III	0.00	220kV CHP - Gedu	36.26		
		Unit-IV	64.34	220kV CHP - Jamjee (old) - I	84.20		
		-	-	220kV CHP - Jamjee - II (new)	84.96		
		-	-	220kV CHP - Jamjee - III (new)	82.02		
		-	-	220kV Malbase - Birpara Line	-69.76		
		-	-	66kV CHP - Gedu Line	7.80		
		-	-	3x3MVA, 66/11kV TFR	1.93		
		Total	193.88	Auxiliary Consumption & Transformation Losses at Generator end	-0.30%		
4	2 x 12MW BHP (U/S)	Unit-I	6.00	220kV BHP - Semotha Line	111.80		
		Unit-II	5.80	66kV BHP - Lobeyasa Line	28.72		
		Total	11.80	220kV BHP - Tsirang Line	-107.31		
5	2 x 20MW BHP (L/S)	Unit-I	10.80	5MVA, 66/11kV TFR	0.68		
		Unit-II	10.90	30MVA ICT, 220/66kV (HV)	18.22		
		Total	21.70	Auxiliary Consumption & Transformation Losses at Generator end	-1.16%		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	45.12	Unit I on Standby. 220kV DHP_Dagapela line on Standby.	
		Unit-II	45.39	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	54.11		
		-	-	5MVA, 220/33kV TFR	0.25		
		Total	45.39	Auxiliary Consumption & Transformation Losses at Generator end	0.04%		
7	4 x 15MW KHP	Unit-I	13.50	132kV KHP - Nangkhor Line	20.82	Unit-IV under shutdown	
		Unit-II	13.52	132kV KHP - Kilikhar Line	18.88		
		Unit-III	13.50	5MVA, 132/11kV TFR	0.24		
		Unit-IV	0.00	132kV Motanga - Rangia Line	26.00		
		Total	40.52	Auxiliary Consumption & Transformation Losses at Generator end	1.43%		
8	2 x 59MW NHP	Unit-I	25.01	132kV NHP-MHP-I	24.84		
		Unit-II	24.97	132kV NHP-MHP-II	24.82		
		Total	49.98	Auxiliary Consumption & Transformation Losses at Generator end	0.64%		

Note: Generation-Load Summary (MW) for 14-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	668.81	758.67	759.62	-23.01	-0.95
2	Eastern Grid	370.05	189.00	180.44	114.20	8.56
	Total	1,038.86	947.67	940.06	91.19	7.61

Note: Generation-Load Summary (MW) for 14-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	579.55	706.08	701.02	-29.84	5.06
2	Eastern Grid	224.16	188.28	189.13	-60.81	-0.85
	Total	803.71	894.36	890.15	-90.65	4.21

Note: Daily Energy (MUs) and Power(MW) Statistics for 14-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	3.26	0.00	20.80	24.17	214.14	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 9:00hrs) 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.