



འཇུག་ལྷན་པོའི་མཉེན་ཆུང་ལྷན་ཁག་ རྒྱལ་ལམ་དཔྱད་འཇུག་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 19-Nov-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	18-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	84.95	400kV THP - Siliguri Line - I	0.00	Unit-II & Unit III on Standby. Unit-V under AMP. 400kV THP-MAL line under Shutdown. 400kV THP_SIL Line I on Standby.
		Unit-II	0.00	400kV THP - Siliguri Line - II	143.29	
		Unit-III	0.00	400kV THP - Siliguri Line - IV	139.89	
		Unit-IV	59.24	400kV THP - Malbase Line - III	0.00	
		Unit-V	0.00	400kV Malbase - Siliguri Line	-221.16	
		Unit-VI	138.99	-	-	
		Total	283.18	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	107.67	400kV MHP - Jigmeling Line - III	114.39	
		Unit-IV	145.25	400kV MHP - Jigmeling Line - IV	113.37	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	63.50	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	137.46	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	44.36	
		-	-	400kV Jigmeling - Alipurduar Line - II	45.82	
		-	-	80MVA, 220/132kV ICT - I (HV)	18.53	
		-	-	80MVA, 220/132kV ICT - II (HV)	18.18	
		-	-	220kV Tsirang - Jigmeling Line	-90.16	
		-	-	132kV Gelephu - Salakati Line	4.34	
Total	252.92	Auxiliary Consumption & Transformation Losses at Generator end	0.55%			
3	4 x 84MW CHP	Unit-I	34.71	220kV CHP - Birpara Line - I	-54.98	
		Unit-II	53.69	220kV CHP - Birpara Line - II	-54.53	
		Unit-III	44.28	220kV CHP - Gedu	40.41	
		Unit-IV	51.24	220kV CHP - Jamjee (old) - I	82.40	
		-	-	220kV CHP - Jamjee - II (new)	82.69	
		-	-	220kV CHP - Jamjee - III (new)	79.94	
		-	-	220kV Malbase - Birpara Line	-78.82	
		-	-	66kV CHP - Gedu Line	7.15	
		-	-	3x3MVA, 66/11kV TFR	1.38	
Total	183.92	Auxiliary Consumption & Transformation Losses at Generator end	-0.29%			
4	2 x 12MW BHP (U/S)	Unit-I	4.97	220kV BHP - Semtokha Line	93.01	
		Unit-II	6.17	66kV BHP - Lobeyasa Line	25.23	
Total	11.14	220kV BHP - Tsirang Line	-87.16			
5	2 x 20MW BHP (L/S)	Unit-I	9.98	5MVA, 66/11kV TFR	0.42	
		Unit-II	9.62	30MVA ICT, 220/66kV (HV)	15.12	
Total	19.60	Auxiliary Consumption & Transformation Losses at Generator end	-2.47%			
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	0.00	Unit I on Standby. 220kV DHP_Tsirang line on Standby.
		Unit-II	42.34	220kV DHP - Dagapela Line	42.09	
		-	-	220kV Jigmeling - Dagapela Line	10.89	
		-	-	5MVA, 220/33kV TFR	0.20	
Total	42.34	Auxiliary Consumption & Transformation Losses at Generator end	0.12%			
7	4 x 15MW KHP	Unit-I	11.47	132kV KHP - Nangkhor Line	19.48	KHP Unit-IV on Standby.
		Unit-II	11.51	132kV KHP - Kilikhar Line	14.28	
		Unit-III	11.49	5MVA, 132/11kV TFR	0.31	
		Unit-IV	0.00	132kV Motanga - Rangia Line	15.04	
Total	34.47	Auxiliary Consumption & Transformation Losses at Generator end	1.16%			
8	2 x 59MW NHP	Unit-I	0.00	132kV NHP-MHP-I	0.00	Unit-I & 132kV NHP-MHP line-I on standby.
		Unit-II	40.01	132kV NHP-MHP-II	39.74	
Total	40.01	Auxiliary Consumption & Transformation Losses at Generator end	0.67%			

Note: Generation-Load Summary (MW) for 18-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	540.18	756.65	757.90	-126.31	-1.25
2	Eastern Grid	327.40	127.68	125.61	109.56	2.07
Total		867.58	884.33	883.51	-16.75	0.82

Note: Generation-Load Summary for 18-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	520.22	676.07	672.20	-59.74	3.87
2	Eastern Grid	215.52	178.83	176.70	-59.42	2.13
Total		735.74	854.90	848.90	-119.16	6.00

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 19-Nov-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	18-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	139.39	400kV THP - Siliguri Line - I	0.00	Unit-II & Unit III on Standby. Unit-V under AMP. 400kV THP-MAL line under Shutdown. 400kV THP-SIL Line I on standby.	
		Unit-II	0.00	400kV THP - Siliguri Line - II	198.95		
		Unit-III	0.00	400kV THP - Siliguri Line - IV	194.24		
		Unit-IV	114.76	400kV THP - Malbase Line - III	0.00		
		Unit-V	0.00	400kV Malbase - Siliguri Line	-276.72		
		Unit-VI	139.04	-	-		
		Total	393.19	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 on Standby. 400kV JLG_ALI Direct Line I on Standby	
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	117.80	400kV MHP - Jigmeling Line - III	126.54		
		Unit-IV	155.35	400kV MHP - Jigmeling Line - IV	125.90		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	64.02		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	80.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	66.91		
		-	-	400kV Jigmeling - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - II	101.82		
		-	-	80MVA, 220/132kV ICT - I (HV)	32.30		
		-	-	80MVA, 220/132kV ICT - II (HV)	32.07		
		-	-	220kV Tsirang - Jigmeling Line	-3.18		
		-	-	132kV Gelephu - Salakati Line	12.09		
Total	273.15	Auxiliary Consumption & Transformation Losses at Generator end	0.51%				
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-86.30	Unit-I under AMP	
		Unit-II	59.54	220kV CHP - Birpara Line - II	-85.57		
		Unit-III	64.86	220kV CHP - Gedu	-14.57		
		Unit-IV	64.73	220kV CHP - Jamjee (old) - I	124.18		
		-	-	220kV CHP - Jamjee - II (new)	123.98		
		-	-	220kV CHP - Jamjee - III (new)	120.18		
		-	-	220kV Malbase - Birpara Line	-86.63		
		-	-	66kV CHP - Gedu Line	6.08		
		-	-	3x3MVA, 66/11kV TFR	1.95		
		Total	189.13	Auxiliary Consumption & Transformation Losses at Generator end	-0.42%		
4	2 x 12MW BHP (U/S)	Unit-I	4.99	220kV BHP - Semtokha Line	4.04		
		Unit-II	5.76	66kV BHP - Lobeyasa Line	25.35		
		Total	10.75	220kV BHP - Tsirang Line	0.00		
5	2 x 20MW BHP (L/S)	Unit-I	9.96	5MVA, 66/11kV TFR	0.68		
		Unit-II	9.56	30MVA ICT, 220/66kV (HV)	15.50		
		Total	19.52	Auxiliary Consumption & Transformation Losses at Generator end	0.66%		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	42.26	Unit I on Standby. 220kV DHP_Tsirang line under Shutdown.	
		Unit-II	42.49	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	12.14		
		-	-	5MVA, 220/33kV TFR	0.20		
		Total	42.49	Auxiliary Consumption & Transformation Losses at Generator end	0.07%		
7	4 x 15MW KHP	Unit-I	12.19	132kV KHP - Nangkor Line	17.00	Unit-III under AMP	
		Unit-II	12.18	132kV KHP - Kilikhar Line	18.66		
		Unit-III	0.00	5MVA, 132/11kV TFR	0.38		
		Unit-IV	12.10	132kV Motanga - Rangia Line	21.46		
		Total	36.47	Auxiliary Consumption & Transformation Losses at Generator end	1.18%		
8	2 x 59MW NHP	Unit-I	0.00	132kV NHP-MHP-I	0.00	Unit-I & 132kV NHP-MHP line-I on standby.	
		Unit-II	45.01	132kV NHP-MHP-II	44.69		
		Total	45.01	Auxiliary Consumption & Transformation Losses at Generator end	0.71%		

Note: Generation-Load Summary (MW) for 18-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	655.08	800.29	800.86	-142.03	-0.57
2	Eastern Grid	354.63	149.17	147.04	202.28	2.13
	Total	1,009.71	949.46	947.90	60.25	1.56

Note: Generation-Load Summary (MW) for 18-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	515.89	710.5	706.04	-79.78	4.46
2	Eastern Grid	216.90	205.22	199.60	-103.15	5.62
	Total	732.79	915.72	905.64	-182.93	10.08

Note: Daily Energy (MUs) and Power(MW) Statistics for 18-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	1.97	0.00	20.96	22.04	107.63	-0.89

- 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.