



ལྷན་ཁག་གི་འཕེལ་རྒྱུ་ལྟོ་སྟེན་ལྷན་ཁག་ འཕེལ་རྒྱུ་ལྟོ་སྟེན་ལྷན་ཁག་གི་འཕེལ་རྒྱུ་ལྟོ་སྟེན་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 31-Oct-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	30-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	84.68	400kV THP - Siliguri Line - I	0.00	400kV THP_Siliguri line-I on standby. Unit-V under AMP. 400kV MAL-SIL line under Shutdown.
		Unit- II	158.97	400kV THP - Siliguri Line - II	140.04	
		Unit- III	86.99	400kV THP - Siliguri Line- IV	134.97	
		Unit- IV	139.76	400kV THP - Malbase Line - III	292.35	
		Unit- V	0.00	400kV Malbase - Siliguri Line	0.00	
		Unit- VI	99.54	-	-	
		Total	569.94	Auxiliary Consumption & Transformation Losses at Generator end	0.45%	
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I under Shutdown. 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 II on Standby.
		Unit-II	190.16	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	100.60	400kV MHP - Jigmeling Line - III	184.74	
		Unit-IV	80.09	400kV MHP - Jigmeling Line - IV	183.63	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	61.46	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	107.64	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	64.73	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	95.27	
		-	-	400kV Jigmeling - Alipurduar Line - II	97.46	
		-	-	80MVA, 220/132kV ICT - I (HV)	21.54	
		-	-	80MVA, 220/132kV ICT - II (HV)	21.36	
		-	-	220kV Tsiwang - Jigmeling Line	-12.68	
		-	-	132kV Gelephu - Salakati Line	10.84	
Total	370.85	Auxiliary Consumption & Transformation Losses at Generator end	0.13%			
3	4 x 84MW CHP	Unit- I	85.74	220kV CHP - Birpara Line - I	-11.59	Unit-III under Shutdown.
		Unit- II	85.18	220kV CHP - Birpara Line - II	-12.49	
		Unit- III	0.00	220kV CHP - Gedu	44.53	
		Unit- IV	88.36	220kV CHP - Jamjee (old) - I	77.44	
		-	-	220kV CHP - Jamjee - II (new)	77.80	
		-	-	220kV CHP - Jamjee - III (new)	75.19	
		-	-	220kV Malbase - Birpara Line	-9.41	
		-	-	66kV CHP - Gedu Line	7.55	
		-	-	3x3MVA, 66/11kV TFR	1.22	
Total	259.28	Auxiliary Consumption & Transformation Losses at Generator end	-0.14%			
4	2 x 12MW BHP (U/S)	Unit- I	7.07	220kV BHP - Semtokha Line	88.54	
		Unit- II	8.31	66kV BHP - Lobeysa Line	24.78	
Total	15.38	220kV BHP - Tsiwang Line	-71.70			
5	2 x 20MW BHP (L/S)	Unit- I	13.68	5MVA, 66/11kV TFR	0.42	
		Unit- II	13.16	30MVA ICT, 220/66kV (HV)	10.47	
Total	26.84	Auxiliary Consumption & Transformation Losses at Generator end	0.43%			
6	2 x 63MW DHP	Unit-I	31.29	220kV DHP - Tsiwang Line	61.87	220kV DHP_Dagapela Line on Standby.
		Unit-II	31.03	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	52.85	
		-	-	5MVA, 220/33kV TFR	0.31	
Total	62.32	Auxiliary Consumption & Transformation Losses at Generator end	0.22%			
7	4 x 15MW KHP	Unit- I	12.77	132kV KHP - Nangkhor Line	32.39	
		Unit-II	12.76	132kV KHP - Kilikhar Line	17.98	
		Unit- III	12.80	5MVA, 132/11kV TFR	0.21	
		Unit- IV	12.78	132kV Motanga - Rangia Line	26.14	
		Total	51.11	Auxiliary Consumption & Transformation Losses at Generator end	1.04%	
8	2 x 59MW NHP	Unit-I	15.04	132kV NHP-MHP-I	14.81	
		Unit-II	45.09	132kV NHP-MHP-II	44.67	
		Total	60.13	Auxiliary Consumption & Transformation Losses at Generator end	1.08%	

Note: Generation-Load Summary (MW) for 30-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	933.76	704.92	702.39	241.52	2.53
2	Eastern Grid	482.09	174.97	173.29	294.44	1.68
Total		1,415.85	879.89	875.68	535.96	4.21

Note: Generation-Load Summary for 30-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	760.81	638.82	635.09	161.78	3.73
2	Eastern Grid	290.89	183.63	180.82	67.47	2.81
Total		1,051.70	822.45	815.91	229.25	6.54

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 31-Oct-2024(-ve:import, +ve:export)							
Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	30-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	75.00	400kV THP - Siliguri Line - I	0.00	Unit-V on AMP. 400kV THP_Siliguri line-I on standby 400kV MAL-SIL line under Shutdown.	
		Unit-II	157.40	400kV THP - Siliguri Line - II	103.14		
		Unit-III	49.37	400kV THP - Siliguri Line - IV	96.77		
		Unit-IV	137.37	400kV THP - Malbase Line - III	321.00		
		Unit-V	0.00	400kV Malbase - Siliguri Line	0.00		
		Unit-VI	99.14	-	-		
		Total	518.28	Auxiliary Consumption & Transformation Losses at Generator end	-0.66%		
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I under shutdown. 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 II on Standby.	
		Unit-II	190.14	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	72.21	400kV MHP - Jigmeling Line - III	174.75		
		Unit-IV	79.96	400kV MHP - Jigmeling Line - IV	173.76		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	60.98		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	133.82		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	53.12		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	80.33		
		-	-	400kV Jigmeling - Alipurduar Line - II	79.39		
		-	-	80MVA, 220/132kV ICT - I (HV)	28.63		
		-	-	80MVA, 220/132kV ICT - II (HV)	28.22		
		-	-	220kV Tsirang - Jigmeling Line	-22.87		
		-	-	132kV Gelephu - Salakati Line	9.90		
Total	342.31	Auxiliary Consumption & Transformation Losses at Generator end	0.66%				
3	4 x 84MW CHP	Unit-I	87.45	220kV CHP - Birpara Line - I	-12.47	Unit II on Standby	
		Unit-II	0.00	220kV CHP - Birpara Line - II	-12.18		
		Unit-III	87.01	220kV CHP - Gedu	30.56		
		Unit-IV	85.65	220kV CHP - Jamjee (old) - I	82.27		
		-	-	220kV CHP - Jamjee - II (new)	82.77		
		-	-	220kV CHP - Jamjee - III (new)	79.68		
		-	-	220kV Malbase - Birpara Line	-1.50		
		-	-	66kV CHP - Gedu Line	8.08		
		-	-	3x3MVA, 66/11kV TFR	1.62		
Total	260.11	Auxiliary Consumption & Transformation Losses at Generator end	-0.08%				
4	2 x 12MW BHP (U/S)	Unit-I	6.92	220kV BHP - Sentokha Line	96.46		
		Unit-II	8.25	66kV BHP - Lobeyasa Line	27.00		
		Total	15.17	220kV BHP - Tsirang Line	-81.38		
5	2 x 20MW BHP (L/S)	Unit-I	14.15	5MVA, 66/11kV TFR	0.56		
		Unit-II	13.62	30MVA ICT, 220/66kV (HV)	13.43		
		Total	27.77	Auxiliary Consumption & Transformation Losses at Generator end	0.70%		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	62.19	Unit I on Stanby. 220kV DHP_Dagapela Line on Standby.	
		Unit-II	62.49	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	53.70		
		-	-	5MVA, 220/33kV TFR	0.20		
Total	62.49	Auxiliary Consumption & Transformation Losses at Generator end	0.16%				
7	4 x 15MW KHP	Unit-I	12.78	132kV KHP - Nangkor Line	30.12		
		Unit-II	12.76	132kV KHP - Kilikhar Line	20.15		
		Unit-III	12.83	5MVA, 132/11kV TFR	0.34		
		Unit-IV	12.74	132kV Motanga - Rangia Line	33.21		
		Total	51.11	Auxiliary Consumption & Transformation Losses at Generator end	0.98%		
8	2 x 59MW NHP	Unit-I	25.02	132kV NHP-MHP-I	24.78		
		Unit-II	45.07	132kV NHP-MHP-II	44.67		
		Total	70.09	Auxiliary Consumption & Transformation Losses at Generator end	0.91%		

Note: Generation-Load Summary (MW) for 30-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	883.82	732.93	736.18	173.76	-3.25
2	Eastern Grid	463.51	184.69	181.28	255.95	3.41
Total		1,347.33	917.62	917.46	429.71	0.16

Note: Generation-Load Summary (MW) for 30-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	749.55	652	672.52	157.26	-20.52
2	Eastern Grid	302.65	147.9	145.53	95.04	2.37
Total		1,052.20	799.90	818.05	252.30	-18.15

Note: Daily Energy (MUs) and Power(MW) Statistics for 30-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	11.51	0.00	20.55	32.97	599.30	0.74

- 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.