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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 04-Dec-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	03-Dec-24	09:00 hrs		28-Nov-24	18:31:35 hrs	993.771

Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks
1	6 x 170MW THP	Unit-I	159.65	400kV THP - Siliguri Line - I	0.00	Unit-II on standby Unit-VI under annual maintenance. 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	203.12	
		Unit-III	105.22	400kV THP - Siliguri Line - IV	191.99	
		Unit-IV	128.91	400kV THP - Malbase Line - III	0.00	
		Unit-V	0.00	400kV Malbase - Siliguri Line	-198.54	
		Unit-VI	0.00		-	
		Total	393.78	Auxiliary Consumption & Transformation Losses at Generator end	-0.34%	
2	4 x 180MW MHP	Unit-I	136.79	400kV MHP - Jigmeling Line - I	128.47	Unit-II on Standby. Unit-IV under AMP. 400kV MHP-JLG Line II & IV on Standby. 132kV MHP, Yurmoo Line- I not in Service. 400kV JLG_ALI Interim Line I & II Under Shutdown.
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	140.49	400kV MHP - Jigmeling Line - III	129.20	
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	64.06	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	166.91	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	44.68	
		-	-	400kV Jigmeling - Alipurduar Line - II	43.25	
		-	-	80MVA, 220/132kV ICT - I (HV)	10.25	
		-	-	80MVA, 220/132kV ICT - II (HV)	10.15	
		-	-	220kV Tsirang - Jigmeling Line	-91.80	
		-	-	132kV Gelephu - Salakati Line	-14.45	
Total	277.28	Auxiliary Consumption & Transformation Losses at Generator end	-1.72%			
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-67.54	Unit-I under AMP.
		Unit-II	59.76	220kV CHP - Birpara Line - II	-66.99	
		Unit-III	44.44	220kV CHP - Gedu	33.25	
		Unit-IV	45.87	220kV CHP - Jamjee (old) - I	82.24	
		-	-	220kV CHP - Jamjee - II (new)	82.44	
		-	-	220kV CHP - Jamjee - III (new)	79.84	
		-	-	220kV Malbase - Birpara Line	-93.10	
		-	-	66kV CHP - Gedu Line	5.62	
		-	-	3x3MVA, 66/11kV TFR	1.83	
Total	150.07	Auxiliary Consumption & Transformation Losses at Generator end	-0.41%			
4	2 x 12MW BHP (U/S)	Unit-I	9.10	220kV BHP - Semtokha Line	120.10	U/S Unit-II under AMP. L/S Unit-I on Standby
		Unit-II	0.00	66kV BHP - Lobeyasa Line	28.45	
Total	9.10	Auxiliary Consumption & Transformation Losses at Generator end	-122.38			
5	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.53	U/S Unit-II under AMP. L/S Unit-I on Standby
		Unit-II	17.40	30MVA ICT, 220/66kV (HV)	20.33	
Total	17.40	Auxiliary Consumption & Transformation Losses at Generator end	-0.75%			
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	34.76	Unit I on Standby. 220kV DHP_Dagapela line on Standby.
		Unit-II	34.98	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	53.33	
		-	-	5MVA, 220/33kV TFR	0.27	
Total	34.98	Auxiliary Consumption & Transformation Losses at Generator end	-0.14%			
7	4 x 15MW KHP	Unit-I	15.21	132kV KHP - Nangkhor Line	15.83	Unit-II on standby & Unit-III under AMP.
		Unit-II	0.00	132kV KHP - Kilikhar Line	13.93	
		Unit-III	0.00	5MVA, 132/11kV TFR	0.31	
		Unit-IV	15.20	132kV Motanga - Rangia Line	-0.44	
		Total	30.41	Auxiliary Consumption & Transformation Losses at Generator end	1.12%	
8	2 x 59MW NHP	Unit-I	0.00	132kV NHP-MHP-I	0.00	Unit-I under AMP. 132kV NHP-MHP line-I under Shutdown.
		Unit-II	40.03	132kV NHP-MHP-II	39.69	
		Total	40.03	Auxiliary Consumption & Transformation Losses at Generator end	0.85%	

Note: Generation-Load Summary (MW) for 03-Dec-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	605.33	728.19	730.39	-31.06	-2.20
2	Eastern Grid	347.72	182.88	186.96	73.04	-4.08
Total		953.05	911.07	917.35	41.98	-6.28

Note: Generation-Load Summary for 03-Dec-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	637.04	677.01	672.03	64.43	4.98
2	Eastern Grid	293.07	215.54	211.76	-26.87	3.78
Total		930.11	892.55	883.79	37.56	8.76

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 04-Dec-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	3-Dec-2024	18:00 hrs		28-Nov-2024	18:31:35 hrs	993.771

Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks
1	6 x 170MW THP	Unit-I	140.14	400kV THP - Siliguri Line - I	0.00	Unit-II on standby & Unit-VI on annual maintenance. Unit-IV under AMP. 400kV THP-MAL line under Shutdown. 400kV THP-SIL Line I on Standby.
		Unit-II	0.00	400kV THP - Siliguri Line - II	226.61	
		Unit-III	148.42	400kV THP - Siliguri Line - IV	213.78	
		Unit-IV	146.42	400kV THP - Malbase Line - III	0.00	
		Unit-V	0.00	400kV Malbase - Siliguri Line	-198.96	
		Unit-VI	0.00		-	
		Total	434.98	Auxiliary Consumption & Transformation Losses at Generator end	-1.24%	
2	4 x 180MW MHP	Unit-I	140.80	400kV MHP - Jigmeling Line - I	126.56	Unit-II on Standby. Unit-IV under AMP. 400kV MHP-JLG Line II & IV on Standby. 132kV MHP_Yurmo Line-I not in Service. 400kV JLG_ALI Interim Line I & II Under Shutdown.
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	140.77	400kV MHP - Jigmeling Line - III	127.57	
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	0.00	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	65.82	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	178.18	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	34.27	
		-	-	400kV Jigmeling - Alipurduar Line - II	32.87	
		-	-	80MVA, 220/132kV ICT - I (HV)	14.71	
		-	-	80MVA, 220/132kV ICT - II (HV)	14.55	
		-	-	220kV Tsirang - Jigmeling Line	-93.81	
		-	-	132kV Gelephu - Salakati Line	-21.35	
Total	281.57	Auxiliary Consumption & Transformation Losses at Generator end	0.47%			
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-58.12	Unit-I under AMP & Unit-II under Shutdown.
		Unit-II	0.00	220kV CHP - Birpara Line - II	-57.61	
		Unit-III	84.35	220kV CHP - Gedu	55.61	
		Unit-IV	85.83	220kV CHP - Jamjee (old) - I	74.04	
				220kV CHP - Jamjee - II (new)	74.64	
				220kV CHP - Jamjee - III (new)	71.87	
		-	-	220kV Malbase - Birpara Line	-94.33	
		-	-	66kV CHP - Gedu Line	7.76	
		-	-	3x3MVA, 66/11kV TFR	2.26	
		Total	170.18	Auxiliary Consumption & Transformation Losses at Generator end	-0.16%	
4	2 x 12MW BHP (U/S)	Unit-I	9.05	220kV BHP - Sertokha Line	115.95	U/S unit-II under AMP.
		Unit-II	0.00	66kV BHP - Lobeyasa Line	30.99	
		Total	9.05	220kV BHP - Tsirang Line	-120.82	
5	2 x 20MW BHP (L/S)	Unit-I	0.00	5MVA, 66/11kV TFR	0.83	L/S Unit-I on Standby
		Unit-II	17.56	30MVA ICT, 220/66kV (HV)	23.18	
		Total	17.56	Auxiliary Consumption & Transformation Losses at Generator end	-1.28%	
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	33.54	Unit I on Standby. 220kV DHP_Dagapela line on Standby.
		Unit-II	33.79	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	54.38	
		-	-	5MVA, 220/33kV TFR	0.23	
Total	33.79	Auxiliary Consumption & Transformation Losses at Generator end	0.06%			
7	4 x 15MW KHP	Unit-I	13.67	132kV KHP - Nangkor Line	10.59	Unit-II on Standby. Unit-III under AMP.
		Unit-II	0.00	132kV KHP - Kilikhar Line	16.11	
		Unit-III	0.00	5MVA, 132/11kV TFR	0.41	
		Unit-IV	13.69	132kV Motanga - Rangia Line	-1.80	
		Total	27.36	Auxiliary Consumption & Transformation Losses at Generator end	0.91%	
8	2 x 59MW NHP	Unit-I	0.00	132kV NHP-MHP-I	0.00	Unit-I under AMP. 132kV NHP-MHP line-I under Shutdown.
		Unit-II	40.00	132kV NHP-MHP-II	39.71	
		Total	40.00	Auxiliary Consumption & Transformation Losses at Generator end	0.72%	

Note: Generation-Load Summary (MW) for 03-Dec-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	665.56	728.00	734.00	31.37	-6.00
2	Eastern Grid	348.93	211.13	209.26	43.99	1.87
	Total	1,014.49	939.13	943.26	75.36	-4.13

Note: Generation-Load Summary (MW) for 03-Dec-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	627.50	719.56	714.65	34.67	4.91
2	Eastern Grid	312.68	190.91	186.16	-4.96	4.75
	Total	940.18	910.47	900.81	29.71	9.66

Note: Daily Energy (MUs) and Power(MW) Statistics for 03-Dec-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	0.48	0.00	21.51	18.09	-399.77	-3.80

- 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 900hrs) 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.