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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 13-Nov-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	12-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	94.75	400kV THP - Siliguri Line - I	129.08	Unit- IV on Standby. Unit-V under AMP. 400kV THP-MAL line under Shutdown
		Unit- II	78.23	400kV THP - Siliguri Line - II	128.69	
		Unit- III	108.74	400kV THP - Siliguri Line- IV	124.11	
		Unit- IV	0.00	400kV THP - Malbase Line - III	0.00	
		Unit- V	0.00	400kV Malbase - Siliguri Line	-213.18	
		Unit- VI	100.16	-	-	
		Total	381.88	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	151.58	400kV MHP - Jigmeling Line - III	149.32	
		Unit-IV	151.24	400kV MHP - Jigmeling Line - IV	148.73	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	64.79	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	144.73	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00	
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00	
		-	-	400kV Jigmeling - Alipurduar Line - I	74.91	
		-	-	400kV Jigmeling - Alipurduar Line - II	75.64	
		-	-	80MVA, 220/132kV ICT - I (HV)	18.49	
		-	-	80MVA, 220/132kV ICT - II (HV)	18.32	
		-	-	220kV Tsirang - Jigmeling Line	-54.59	
		-	-	132kV Gelephu - Salakati Line	4.55	
Total	302.82	Auxiliary Consumption & Transformation Losses at Generator end	-0.17%			
3	4 x 84MW CHP	Unit- I	71.13	220kV CHP - Birpara Line - I	-46.21	Unit-IV on Standby.
		Unit- II	59.67	220kV CHP - Birpara Line - II	-45.30	
		Unit- III	60.19	220kV CHP - Gedu	63.13	
		Unit- IV	0.00	220kV CHP - Jamjee (old) - I	71.63	
		-	-	220kV CHP - Jamjee - II (new)	72.01	
		-	-	220kV CHP - Jamjee - III (new)	69.48	
		-	-	220kV Malbase - Birpara Line	-79.67	
		-	-	66kV CHP - Gedu Line	6.19	
		-	-	3x3MVA, 66/11kV TFR	1.30	
Total	190.99	Auxiliary Consumption & Transformation Losses at Generator end	-0.65%			
4	2 x 12MW BHP (U/S)	Unit- I	5.62	220kV BHP - Semtokha Line	107.00	
		Unit- II	6.10	66kV BHP - Lobeyasa Line	25.30	
		Total	11.72	220kV BHP - Tsirang Line	-98.12	
5	2 x 20MW BHP (L/S)	Unit- I	11.10	30MVA, 66/11kV TFR	0.42	
		Unit- II	11.80	30MVA ICT, 220/66kV (HV)	14.55	
		Total	22.90	Auxiliary Consumption & Transformation Losses at Generator end	0.06%	
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	46.75	Unit I on Standby. 220kV DHP_Dagapela Line on Standby.
		Unit-II	47.02	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	52.80	
		-	-	5MVA, 220/33kV TFR	0.23	
Total	47.02	Auxiliary Consumption & Transformation Losses at Generator end	0.09%			
7	4 x 15MW KHP	Unit- I	12.07	132kV KHP - Nangkhor Line	21.18	KHP Unit-IV on Standby.
		Unit-II	12.07	132kV KHP - Kilikhar Line	14.43	
		Unit- III	12.08	5MVA, 132/11kV TFR	0.20	
		Unit- IV	0.00	132kV Motanga - Rangia Line	17.39	
		Total	36.22	Auxiliary Consumption & Transformation Losses at Generator end	1.13%	
8	2 x 59MW NHP	Unit-I	15.01	132kV NHP-MHP-I	14.81	
		Unit-II	45.02	132kV NHP-MHP-II	44.71	
		Total	60.03	Auxiliary Consumption & Transformation Losses at Generator end	0.85%	

Note: Generation-Load Summary (MW) for 12-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	654.51	711.58	712.76	-2.48	-1.18
2	Eastern Grid	399.07	171.99	171.57	172.49	0.42
Total		1,053.58	883.57	884.33	170.01	-0.76

Note: Generation-Load Summary for 12-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	604.48	663.68	657.75	19.74	5.93
2	Eastern Grid	235.39	180.05	182.94	-23.60	-2.89
Total		839.87	843.73	840.69	-3.86	3.04

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Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	12-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	119.50	400kV THP - Siliguri Line - I	209.62	Unit-III under Shutdown. Unit-V under AMP. 400kV THP-MAL line under Shutdown. 400kV THP - Siliguri Line - II under Shutdown.	
		Unit-II	78.40	400kV THP - Siliguri Line - II	0.00		
		Unit-III	0.00	400kV THP - Siliguri Line - IV	198.40		
		Unit-IV	107.68	400kV THP - Malbase Line - III	0.00		
		Unit-V	0.00	400kV Malbase - Siliguri Line	-233.68		
		Unit-VI	99.82	-	-		
		Total	405.40	Auxiliary Consumption & Transformation Losses at Generator end	-0.65%		
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	167.58	400kV MHP - Jigmeling Line - III	163.22		
		Unit-IV	166.20	400kV MHP - Jigmeling Line - IV	162.54		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	64.26		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	172.73		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	75.10		
		-	-	400kV Jigmeling - Alipurduar Line - II	74.14		
		-	-	80MVA, 220/132kV ICT - I (HV)	25.36		
		-	-	80MVA, 220/132kV ICT - II (HV)	25.13		
		-	-	220kV Tsirang - Jigmeling Line	-67.68		
		-	-	132kV Gelephu - Salakati Line	3.67		
Total	333.78	Auxiliary Consumption & Transformation Losses at Generator end	0.99%				
3	4 x 84MW CHP	Unit-I	70.53	220kV CHP - Birpara Line - I	-46.66	Unit-IV on Standby.	
		Unit-II	64.52	220kV CHP - Birpara Line - II	-46.09		
		Unit-III	65.08	220kV CHP - Gedu	41.96		
		Unit-IV	0.00	220kV CHP - Jamjee (old) - I	82.30		
		-	-	220kV CHP - Jamjee - II (new)	82.81		
		-	-	220kV CHP - Jamjee - III (new)	79.93		
		-	-	220kV Malbase - Birpara Line	-66.43		
		-	-	66kV CHP - Gedu Line	5.34		
		-	-	3x3MVA, 66/11kV TFR	1.83		
		Total	200.13	Auxiliary Consumption & Transformation Losses at Generator end	-0.64%		
4	2 x 12MW BHP (U/S)	Unit-I	5.56	220kV BHP - Semothka Line	114.54		
		Unit-II	6.47	66kV BHP - Lobeyasa Line	28.59		
		Total	12.03	220kV BHP - Tsirang Line	-108.59		
5	2 x 20MW BHP (L/S)	Unit-I	11.55	5MVA, 66/11kV TFR	0.70		
		Unit-II	11.13	30MVA ICT, 220/66kV (HV)	17.79		
		Total	22.68	Auxiliary Consumption & Transformation Losses at Generator end	-1.53%		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	46.72	Unit I on Standby. 220kV DHP_Dagapela line on Standby.	
		Unit-II	46.99	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	54.01		
		-	-	5MVA, 220/33kV TFR	0.25		
Total	46.99	Auxiliary Consumption & Transformation Losses at Generator end	0.04%				
7	4 x 15MW KHP	Unit-I	12.13	132kV KHP - Nangkhori Line	17.90	KHP Unit-IV on Standby.	
		Unit-II	12.12	132kV KHP - Kilikhar Line	17.74		
		Unit-III	12.15	5MVA, 132/11kV TFR	0.37		
		Unit-IV	0.00	132kV Motanga - Rangia Line	19.20		
		Total	36.40	Auxiliary Consumption & Transformation Losses at Generator end	1.07%		
8	2 x 59MW NHP	Unit-I	14.94	132kV NHP-MHP-I	14.84		
		Unit-II	44.93	132kV NHP-MHP-II	44.70		
		Total	59.87	Auxiliary Consumption & Transformation Losses at Generator end	0.55%		

Note: Generation-Load Summary (MW) for 12-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	687.23	739.75	744.17	15.16	-4.42
2	Eastern Grid	430.05	190.26	186.24	172.11	4.02
	Total	1,117.28	930.01	930.41	187.27	-0.40

Note: Generation-Load Summary (MW) for 12-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	625.18	703.44	695.91	17.23	7.53
2	Eastern Grid	235.59	192.9	187.93	-52.8	4.97
	Total	860.77	896.34	883.84	-35.57	12.50

Note: Daily Energy (MUs) and Power(MW) Statistics for 12-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	4.82	0.00	20.88	25.73	246.73	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.