ནུས་ཤུགས་དང་རང་བཞིན་ཐོན་སྐྱེད་ལྷན་ཁག དཔལ་ལྡན་འབྲུག་གཞུང་།

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

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	29-Dec-24	09:00 hrs		25-Dec-24	18:38:16	1026.44

Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks
1	6 x 170MW THP	Unit- I	159.01	400kV THP - Siliguri Line - I	0.00	Unit-II & IV on Standby. Unit-VI under AMP. 400kV THP-SIL Line I under Shutdown. 400kV THP-SIL Line IV on Standby.
		Unit- II	0.00	400kV THP - Siliguri Line - II	103.94	
		Unit- III	148.05	400kV THP - Siliguri Line- IV	0.00	
		Unit- IV	0.00	400kV THP - Malbase Line - III	327.15	
		Unit- V	122.20	400kV Malbase - Siliguri Line	47.73	
		Unit- VI	0.00	-	-	
		Total	**429.26**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-0.43%**	
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I on Standby. Unit IV under AMP. 400kV MHP-JLG Line I on Standby. 400kV MHP-JLG Line II under Shutdown. 132kV MHP_Yurmoo Line- I not in Service. 400kV JLG_ALI Interim Line I & II on Standby.
		Unit-II	130.16	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	120.74	400kV MHP - Jigmeling Line - III	104.81	
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	104.53	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	63.21	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	189.46	
		-	-	400kV Jigmeling - Alipurduar Line - I *(direct lines)*	9.91	
		-	-	400kV Jigmeling - Alipurduar Line - II *(direct lines)*	8.13	
		-	-	80MVA, 220/132kV ICT - I (HV)	12.62	
		-	-	80MVA, 220/132kV ICT - II (HV)	12.52	
		-	-	220kV Tsirang - Jigmeling Line	-109.80	
		-	-	132kV Gelephu - Salakati Line	-19.66	
		Total	**250.90**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.06%**	
3	6 x 170MW PHP-II	Unit- I	0.00	400kV PHP II - Jigmeling -I *(erstwhile interim lines)*	0.00	
		Unit- II	0.00	400kV PHP II - Jigmeling -II *(erstwhile interim lines)*	0.00	
		Unit- III	0.00	400kV PHP II - Alipurduar -I *(erstwhile interim lines)*	0.00	
		Unit- IV	0.00	400kV PHP II - Alipurduar -II *(erstwhile interim lines)*	0.00	
		Unit- V	0.00	-	-	
		Unit- VI	0.00	-	-	
		Total	**0.00**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.00%**	
4	4 x 84MW CHP	Unit- I	0.00	220kV CHP - Birpara Line - I	-39.26	Unit-I under AMP. Unit-II on Standby.
		Unit- II	0.00	220kV CHP - Birpara Line - II	-39.10	
		Unit- III	90.05	220kV CHP - Gedu	18.60	
		Unit- IV	89.60	220kV CHP - Jamjee **(old)** - I	77.41	
		-	-	220kV CHP - Jamjee - II **(new)**	77.84	
		-	-	220kV CHP - Jamjee - III **(new)**	75.13	
		-	-	220kV Malbase - Birpara Line	-36.03	
		-	-	66kV CHP - Gedu Line	9.07	
		-	-	3x3MVA, 66/11kV TFR		
		Total	**179.65**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-0.02%**	
5	2 x 12MW BHP (U/S)	Unit- I	0.00	220kV BHP - Semtokha Line	124.00	U/S Unit-I under AMP. L/S Unit-I on Standby
		Unit- II	6.90	66kV BHP - Lobeysa Line	26.83	
		Total	**6.90**	220kV BHP - Tsirang Line	-130.62	
6	2 x 20MW BHP (L/S)	Unit- I	0.00	5MVA, 66/11kV TFR	0.60	
		Unit- II	13.80	30MVA ICT, 220/66kV (HV)	20.64	
		Total	**13.80**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-0.53%**	
7	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	25.26	Unit I under Shutdown 220kV DHP_Dagapela line on Standby.
		Unit-II	25.48	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	53.55	
		-	-	5MVA, 220/33kV TFR	0.20	
		Total	**25.48**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.08%**	
8	4 x 15MW KHP	Unit- I	0.00	132kV KHP - Nangkhor Line	11.46	Unit -I on Standby. Unit-IV under AMP
		Unit-II	12.69	132kV KHP - Kilikhar Line	13.28	
		Unit- III	12.70	5MVA, 132/11kV TFR	0.32	
		Unit- IV	0.00	132kV Motanga - Rangia Line	5.06	
		Total	**25.39**	**Auxiliary Consumption & Transformation Losses at Generator end**	**1.30%**	
9	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	22.11	132kV NHP-MHP-II	21.79	
		Total	**22.11**	**Auxiliary Consumption & Transformation Losses at Generator end**	**1.45%**	

Note: Generation-Load Summary (MW) for 29-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	655.09	727.61	729.57	37.28	-1.96
2	Eastern Grid	298.40	185.16	184.37	3.44	0.79
Total		**953.49**	**912.77**	**913.94**	**40.72**	**-1.17**

Note: Generation-Load Summary for 29-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	695.50	687.98	682.42	126.91	5.56
2	Eastern Grid	207.81	179.35	178.51	-90.93	0.84
Total		**903.31**	**867.33**	**860.93**	**35.98**	**6.40**

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 30-Dec-2024(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	29-Dec-2024	18:00 hrs		25-Dec-2024	18:36	1026.44

Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Remarks
1	6 x 170MW THP	Unit- I	142.40	400kV THP - Siliguri Line - I	0.00	Unit-II & IV on Standby. Unit-VI under AMP. 400kV THP-SIL Line I under Shutdown. 400kV THP-SIL Line IV on Standby.
		Unit- II	0.00	400kV THP - Siliguri Line - II	101.96	
		Unit- III	153.16	400kV THP - Siliguri Line - IV	0.00	
		Unit- IV	0.00	400kV THP - Malbase Line - III	343.75	
		Unit- V	148.71	400kV Malbase - Siliguri Line	45.18	
		Unit- VI	0.00	-	-	
		Total	**444.27**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-0.32%**	
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	0.00	Unit-I on Standby. Unit-IV under AMP. 400kV MHP-JLG Line I on Standby. 400kV MHP-JLG Line II under Shutdown. 132kV MHP_Yurmoo Line- I not in Service. 400kV JLG_ALI Interim Line I & II on Standby.
		Unit-II	144.80	400kV MHP - Jigmeling Line - II	0.00	
		Unit-III	157.42	400kV MHP - Jigmeling Line - III	129.39	
		Unit-IV	0.00	400kV MHP - Jigmeling Line - IV	128.95	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	65.04	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	217.46	
		-	-	400kV Jigmeling - Alipurduar Line - I (*direct lines*)	20.87	
		-	-	400kV Jigmeling - Alipurduar Line - II (*direct lines*)	19.01	
		-	-	80MVA, 220/132kV ICT - I (HV)	14.01	
		-	-	80MVA, 220/132kV ICT - II (HV)	13.92	
		-	-	220kV Tsirang - Jigmeling Line	-132.95	
		-	-	132kV Gelephu - Salakati Line	-26.01	
		Total	**302.22**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.22%**	
3	6 x 170MW PHP-II	Unit- I	0.00	400kV PHP II - Jigmeling -I (*erstwhile interim lines*)	0.00	
		Unit- II	0.00	400kV PHP II - Jigmeling -II (*erstwhile interim lines*)	0.00	
		Unit- III	0.00	400kV PHP II - Alipurduar -I (*erstwhile interim lines*)	0.00	
		Unit- IV	0.00	400kV PHP II - Alipurduar -II (*erstwhile interim lines*)	0.00	
		Unit- V	0.00	-	-	
		Unit- VI	0.00	-	-	
		Total	**0.00**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.00%**	
4	4 x 84MW CHP	Unit- I	0.00	220kV CHP - Birpara Line - I	-45.97	Unit-I under AMP. Unit-II under Standby.
		Unit- II	0.00	220kV CHP - Birpara Line - II	-45.50	
		Unit- III	83.85	220kV CHP - Gedu	8.09	
		Unit- IV	85.61	220kV CHP - Jamjee - I	80.98	
		-	-	220kV CHP - Jamjee - II	81.28	
		-	-	220kV CHP - Jamjee - III	78.36	
		-	-	220kV Malbase - Birpara Line	-38.64	
		-	-	66kV CHP - Gedu Line	10.33	
		-	-	3x3MVA, 66/11kV TFR	2.30	
		Total	**169.46**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-0.24%**	
5	2 x 12MW BHP (U/S)	Unit- I	0.00	220kV BHP - Semtokha Line	126.00	BHP (L/S) Unit-I on Standby. BHP (U/S) Unit-I under AMP.
		Unit- II	6.90	66kV BHP - Lobeysa Line	26.90	
		Total	**6.90**	220kV BHP - Tsirang Line	-132.75	
6	2 x 20MW BHP (L/S)	Unit- I	0.00	5MVA, 66/11kV TFR	0.54	
		Unit- II	13.80	30MVA ICT, 220/66kV (HV)	20.65	
		Total	**13.80**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.05%**	
7	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	25.54	Unit-I under Shutdown. 220kV DHP-Dagapela line on Standby.
		Unit-II	25.79	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	54.61	
		-	-	5MVA, 220/33kV TFR	0.20	
		Total	**25.79**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.19%**	
8	4 x 15MW KHP	Unit- I	0.00	132kV KHP - Nangkhor Line	9.17	Unit-I on Standby. Unit-IV under AMP
		Unit-II	12.67	132kV KHP - Kilikhar Line	15.47	
		Unit- III	12.68	5MVA, 132/11kV TFR	0.41	
		Unit- IV	0.00	132kV Motanga - Rangia Line	0.84	
		Total	**25.35**	**Auxiliary Consumption & Transformation Losses at Generator end**	**1.18%**	
9	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	22.02	132kV NHP-MHP-II	21.82	
		Total	**22.02**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.91%**	

Note: Generation-Load Summary (MW) for 29-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	660.22	776.14	777.93	17.03	-1.79
2	Eastern Grid	349.59	201.93	200.77	14.71	1.16
Total		**1,009.81**	**978.07**	**978.70**	**31.74**	**-0.63**

Note: Generation-Load Summary (MW) for 29-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	678.78	726.36	720.98	92.21	5.38
2	Eastern Grid	267.15	184.96	184.21	-57.6	0.75
Total		**945.93**	**911.32**	**905.19**	**34.61**	**6.13**

Note: Daily Energy (MUs) and Power(MW) Statistics for 29-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	**0.27**	**0.00**	**21.74**	**13.26**	**-694.90**	**-8.75**

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.