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 22-Apr-2025(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	April 22, 2025	9:00 AM		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	0.00	400kV THP - Siliguri Line - I	0.00	Unit-IV under AMP. Unit III under Shutdown. Unit- I & II on Standby. 400kV THP-SIL Line I on Standby. 400kV THP-SIL Line IV under Shutdown.
		Unit- II	0.00	400kV THP - Siliguri Line - II	-118.97	
		Unit- III	0.00	400kV THP - Siliguri Line- IV	0.00	
		Unit- IV	0.00	400kV THP - Malbase Line - III	139.64	
		Unit- V	9.60	400kV Malbase - Siliguri Line	-163.34	
		Unit- VI	11.89	-	-	
		Total	**21.49**	**Auxiliary Consumption & Transformation Losses at Generator end**	**3.82%**	
2	4 x 180MW MHP	Unit-I	45.22	400kV MHP - Jigmeling Line - I	0.00	Unit-II under AMP. Unit-III on Standby. 400kV MHP-JLG line-I & IV on Standby. 132kV MHP_Yurmoo Line- I not in Service.
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	22.83	
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	22.83	
		Unit-IV	45.42	400kV MHP - Jigmeling Line - IV	0.00	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	65.00	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	209.46	
		-	-	400kV Jigmeling - Alipurduar Line - I (*direct lines*)	23.00	
		-	-	400kV Jigmeling - Alipurduar Line - II (*direct lines*)	21.00	
		-	-	80MVA, 220/132kV ICT - I (HV)	0.07	
		-	-	80MVA, 220/132kV ICT - II (HV)	54.69	
		-	-	220kV Tsirang - Jigmeling Line	-88.03	
		-	-	132kV Gelephu - Salakati Line	-11.73	
		Total	**90.64**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-2.39%**	
3	6 x 170MW PHP-II	Unit- I	48.23	400kV PHP II - Jigmeling -I (*erstwhile interim lines*)	0.00	Unit-III on Standby. 400kV PHP-II - Jigmeling Line-I on Standby.
		Unit- II	140.18	400kV PHP II - Jigmeling -II (*erstwhile interim lines*)	190.53	
		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	**188.41**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-1.13%**	
4	4 x 84MW CHP	Unit- I	20.13	220kV CHP - Birpara Line - I	-81.97	Unit-II & Unit-III under AMP.
		Unit- II	0.00	220kV CHP - Birpara Line - II	-81.52	
		Unit- III	0.00	220kV CHP - Gedu	-20.80	
		Unit- IV	21.41	220kV CHP - Jamjee (old) - I	74.64	
		-	-	220kV CHP - Jamjee - II (new)	74.37	
		-	-	220kV CHP - Jamjee - III (new)	71.76	
		-	-	220kV Malbase - Birpara Line	-75.72	
		-	-	66kV CHP - Gedu Line	4.68	
		-	-	3x3MVA, 66/11kV TFR	1.41	
		Total	**41.54**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-2.48%**	
5	2 x 12MW BHP (U/S)	Unit- I	6.76	220kV BHP - Semtokha Line	109.22	U/S Unit-II & L/S Unit-II on Standby.
		Unit- II	0.00	66kV BHP - Lobeysa Line	25.06	
		Total	**6.76**	220kV BHP - Tsirang Line	-112.54	
6	2 x 20MW BHP (L/S)	Unit- I	14.97	5MVA, 66/11kV TFR	0.42	
		Unit- II	0.00	30MVA ICT, 220/66kV (HV)	19.06	
		Total	**14.97**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-1.98%**	
7	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	18.03	Unit-I on Standby. 220kV DHP-Dagapela line on Standby.
		Unit-II	18.26	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	51.56	
		-	-	5MVA, 220/33kV TFR	0.22	
		Total	**18.26**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.05%**	
8	4 x 15MW KHP	Unit- I	0.00	132kV KHP - Nangkhor Line	17.38	Unit- I and II on Standby
		Unit-II	0.00	132kV KHP - Kilikhar Line	12.77	
		Unit- III	15.39	5MVA, 132/11kV TFR	0.33	
		Unit- IV	15.27	132kV Motanga - Rangia Line	-1.05	
		Total	**30.66**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.59%**	
9	2 x 59MW NHP	Unit-I	0.00	132kV NHP-MHP-I	17.85	Unit-I on Standby. 132kV NHP-MHP line-II on Standby.
		Unit-II	17.99	132kV NHP-MHP-II	0.00	
		Total	**17.99**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.78%**	
10	2 x 9MW SHP	Unit- I	3.94	66kV SHP-Damdhum (Samtse)	0.00	Interim measure: evacuation is through the 33kV system. 3.94MW is an infirm power.
		Unit- II	0.00	-	-	
		Total	**3.94**	**Auxiliary Consumption & Transformation Losses at Generator end**	**100.00%**	

Note: Generation-Load Summary (MW) for 22-Apr-25 at 09:00 hrs

Sl. No.	Region	Total Generation	Total Domestic Load (Total Generation - Total Export)	Total Export(+ve)/ Import(-ve)
1	Both Eastern & Western (Whole Bhutan)	434.66	924.96	-490.30

Note: Generation-Load Summary (MW) for 22-Apr-24 at 09:00 hrs

Sl. No.	Region	Total Generation	Total Domestic Load (Total Generation - Total Export)	Total Export(+ve)/ Import(-ve)
1	Both Eastern & Western (Whole Bhutan)	243.57	895.31	-651.74

THE DAILY BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT & ENERGY FIGURES ISSUED ON 22-Apr-2025(-ve:import, +ve:export)

Report Details	Date	Time	National Coincidental Peak Load (MW)	Date	Time	Load
	April 22, 2025	18:00:00		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	71.91	400kV THP - Siliguri Line - I	0.00	Unit-IV under AMP. Unit III Under Shutdown Unit- II on Standby. 400kV THP-SIL Line I on Standby. 400kV THP-SIL Line IV under Shutdown .
		Unit- II	0.00	400kV THP - Siliguri Line - II	-31.11	
		Unit- III	0.00	400kV THP - Siliguri Line - IV	0.00	
		Unit- IV	0.00	400kV THP - Malbase Line - III	226.57	
		Unit- V	113.87	400kV Malbase - Siliguri Line	-80.89	
		Unit- VI	9.96	-	-	
		Total	**195.74**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.14%**	
2	4 x 180MW MHP	Unit-I	81.13	400kV MHP - Jigmeling Line - I	0.00	Unit II under AMP. Unit III on Standby. 400kV MHP-JLG Line I & line IV on standby.132kV MHP-Yurmoo Line- I not in Service.
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	63.08	
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	63.56	
		Unit-IV	90.36	400kV MHP - Jigmeling Line - IV	0.00	
		-	-	132kV MHP - Yurmo Line - I	0.00	
		-	-	132kV MHP - Yurmo Line - II	62.23	
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	209.46	
		-	-	400kV Jigmeling - Alipurduar Line - I (direct lines)	110.00	
		-	-	400kV Jigmeling - Alipurduar Line - II (direct lines)	128.57	
		-	-	80MVA, 220/132kV ICT - I (HV)	0.07	
		-	-	80MVA, 220/132kV ICT - II (HV)	54.69	
		-	-	220kV Tsirang - Jigmeling Line	-107.95	
		-	-	132kV Gelephu - Salakati Line	-10.77	
		Total	**171.49**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.23%**	
3	6 x 170MW PHP-II	Unit- I	160.08	400kV PHP II - Jigmeling -I (erstwhile interim lines)	0.00	400kV PHP-II - Jigmeling Line-I on Standby. Unit-III on Standby.
		Unit- II	163.92	400kV PHP II - Jigmeling -II (erstwhile interim lines)	323.78	
		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	**324.00**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.07%**	
4	4 x 84MW CHP	Unit- I	29.99	220kV CHP - Birpara Line - I	-63.04	Unit-II under AMP
		Unit- II	0.00	220kV CHP - Birpara Line - II	-62.47	
		Unit- III	30.05	220kV CHP - Gedu	1.04	
		Unit- IV	31.00	220kV CHP - Jamjee - I	70.64	
		-	-	220kV CHP - Jamjee - II	70.37	
		-	-	220kV CHP - Jamjee - III	67.72	
		-	-	220kV Malbase - Birpara Line	-61.92	
		-	-	66kV CHP - Gedu Line	6.42	
		-	-	3x3MVA, 66/11kV TFR	1.40	
		Total	**91.04**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-1.14%**	
5	2 x 12MW BHP (U/S)	Unit- I	5.60	220kV BHP - Semtokha Line	117.64	U/S Unit-II & L/S Unit-II on Standby .
		Unit- II	0.00	66kV BHP - Lobeysa Line	24.88	
		Total	**5.60**	220kV BHP - Tsirang Line	-126.39	
6	2 x 20MW BHP (L/S)	Unit- I	10.24	5MVA, 66/11kV TFR	0.39	
		Unit- II	0.00	30MVA ICT, 220/66kV (HV)	19.99	
		Total	**10.24**	**Auxiliary Consumption & Transformation Losses at Generator end**	**-4.29%**	
7	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	18.03	Unit-I on Standby. 220kV DHP-Dagapela line on Standby
		Unit-II	18.26	220kV DHP - Dagapela Line	0.00	
		-	-	220kV Jigmeling - Dagapela Line	51.55	
		-	-	5MVA, 220/33kV TFR	0.18	
		Total	**18.26**	**Auxiliary Consumption & Transformation Losses at Generator end**	**0.27%**	
8	4 x 15MW KHP	Unit- I	0.00	132kV KHP - Nangkhor Line	29.80	Unit- I and II on Standby.
		Unit-II	16.16	132kV KHP - Kilikhar Line	17.93	
		Unit- III	16.18	5MVA, 132/11kV TFR	0.31	
		Unit- IV	16.26	132kV Motanga - Rangia Line	18.53	
		Total	**48.60**	**Auxiliary Consumption & Transformation Losses at Generator end**	**1.15%**	
9	2 x 59MW NHP	Unit-I	0.00	132kV NHP-MHP-I	17.78	Unit-I on Standby. 132kV NHP-MHP line-II on Standby.
		Unit-II	18.04	132kV NHP-MHP-II	0.00	
		Total	**18.04**	**Auxiliary Consumption & Transformation Losses at Generator end**	**1.44%**	
10	2 x 9MW SHP	Unit- I	3.46	66kV SHP-Damdhum (Samtse)	0.00	Interim measure: evacuation is through the 33kV system.
		Unit- II	0.00	-	-	
		Total	**3.46**	**Auxiliary Consumption & Transformation Losses at Generator end**	**100.00%**	

Note: Generation-Load Summary (MW) for 22-Apr-2025 at 18:00 hrs

Sl. No.	Region	Total Generation	Total Domestic Load (Total Generation - Total Export)	Total Export(+ve)/ Import(-ve)
1	Both Eastern & Western (Whole Bhutan)	886.47	939.57	-53.10

Note: Generation-Load Summary (MW) for 22-Apr-2024, at 18:00 hrs

Sl. No.	Region	Total Generation	Total Domestic Load (Total Generation - Total Export)	Total Export(+ve)/ Import(-ve)
1	Both Eastern & Western (Whole Bhutan)	338.13	901.09	-562.96

Note: Daily Energy (MUs) and Power(MW) Statistics for 22-Apr-2025

Sl. No.	Total Energy Generation	Daily Energy Met	Net Energy Import (IEX and Solar)	Net Energy Export	Peak Cross-border (MW)
1	19.94	22.12	2.88	0.59	-506.27

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.