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

Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	19-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	119.82	400kV THP - Siliguri Line - I	0.00	Unit-II & Unit III on Standby. 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	188.93		
		Unit-III	0.00	400kV THP - Siliguri Line - IV	184.45		
		Unit-IV	114.13	400kV THP - Malbase Line - III	0.00		
		Unit-V	0.00	400kV Malbase - Siliguri Line	-245.56		
		Unit-VI	139.43	-	-		
		Total	373.38	Auxiliary Consumption & Transformation Losses at Generator end	0.00%		
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	113.82	Unit-I under AMP. Unit-II on Standby. 400kV MHP-JLG Line II & IV on Standby. 132kV MHP_Yurmoo Line- I not in Service. 400kV JLG_ALI Interim Line I & 400kV JLG_ALI Direct Line I on Standby.	
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	116.37	400kV MHP - Jigmeling Line - III	114.38		
		Unit-IV	136.42	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	63.28		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	139.52		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	34.18		
		-	-	400kV Jigmeling - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - II	52.36		
		-	-	80MVA, 220/132kV ICT - I (HV)	18.98		
		-	-	80MVA, 220/132kV ICT - II (HV)	18.83		
		-	-	220kV Tsirang - Jigmeling Line	-89.37		
		-	-	132kV Gelephu - Salakati Line	4.96		
Total	252.79	Auxiliary Consumption & Transformation Losses at Generator end	0.40%				
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-39.84	CHP Unit_I under AMP. 220kV CHP_Gedu Line under Shutdown.	
		Unit-II	54.87	220kV CHP - Birpara Line - II	-39.55		
		Unit-III	66.05	220kV CHP - Gedu	0.00		
		Unit-IV	64.10	220kV CHP - Jamjee (old) - I	85.19		
		-	-	220kV CHP - Jamjee - II (new)	85.41		
		-	-	220kV CHP - Jamjee - III (new)	82.36		
		-	-	220kV Malbase - Birpara Line	-110.13		
		-	-	66kV CHP - Gedu Line	10.96		
		-	-	3x3MVA, 66/11kV TFR	1.24		
Total	185.02	Auxiliary Consumption & Transformation Losses at Generator end	-0.41%				
4	2 x 12MW BHP (U/S)	Unit-I	5.00	220kV BHP - Semtokha Line	91.11		
		Unit-II	5.50	66kV BHP - Lobeyasa Line	25.24		
		Total	10.50	220kV BHP - Tsirang Line	-85.53		
5	2 x 20MW BHP (L/S)	Unit-I	10.40	5MVA, 66/11kV TFR	0.40		
		Unit-II	10.40	30MVA ICT, 220/66kV (HV)	15.21		
		Total	20.80	Auxiliary Consumption & Transformation Losses at Generator end	0.26%		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	0.00	Unit I on Standby. 220kV DHP_Tsirang line on Standby.	
		Unit-II	41.29	220kV DHP - Dagapela Line	41.04		
		-	-	220kV Jigmeling - Dagapela Line	12.05		
		-	-	5MVA, 220/33kV TFR	0.20		
Total	41.29	Auxiliary Consumption & Transformation Losses at Generator end	0.12%				
7	4 x 15MW KHP	Unit-I	12.80	132kV KHP - Nangkhor Line	22.30	KHP Unit-III under Shutdown.	
		Unit-II	12.81	132kV KHP - Kilikhar Line	15.41		
		Unit-III	0.00	5MVA, 132/11kV TFR	0.33		
		Unit-IV	12.81	132kV Motanga - Rangia Line	18.84		
		Total	38.42	Auxiliary Consumption & Transformation Losses at Generator end	0.99%		
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	40.04	132kV NHP-MHP-II	39.70		
		Total	40.04	Auxiliary Consumption & Transformation Losses at Generator end	0.85%		

Note: Generation-Load Summary (MW) for 19-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	630.99	782.06	782.68	-61.70	-0.62
2	Eastern Grid	331.25	131.54	129.81	110.34	1.73
Total		962.24	913.60	912.49	48.64	1.11

Note: Generation-Load Summary for 19-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	518.70	643.85	637.60	-31.21	6.25
2	Eastern Grid	216.69	184.30	183.42	-61.55	0.88
Total		735.39	828.15	821.02	-92.76	7.13

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Report Details	Date	Time	National Coincidental Peak Load (MW)		Date	Time	Load
	19-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	141.44	400kV THP - Siliguri Line - I	0.00	Unit-II & Unit III on Standby. 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	200.07		
		Unit-III	0.00	400kV THP - Siliguri Line - IV	178.00		
		Unit-IV	117.67	400kV THP - Malbase Line - III	0.00		
		Unit-V	0.00	400kV Malbase - Siliguri Line	-262.80		
		Unit-VI	119.42	-	-		
		Total	378.53	Auxiliary Consumption & Transformation Losses at Generator end	0.12%		
2	4 x 180MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Line - I	134.93	Unit-I under AMP. Unit-II on Standby. 400kV MHP-JLG Line II on standby. 400kV MHP-JLG line IV on Standby. 132kV MHP_Yurmo Line- I not in Service. 400kV JLG_ALI Interim Line I on Standby. 400kV JLG_ALI Direct Line I on Standby	
		Unit-II	0.00	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	121.64	400kV MHP - Jigmeling Line - III	135.03		
		Unit-IV	165.16	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	65.39		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	171.64		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Puna - Alipurduar Line - II	37.82		
		-	-	400kV Jigmeling - Alipurduar Line - I	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - II	57.46		
		-	-	80MVA, 220/132kV ICT - I (HV)	27.39		
		-	-	80MVA, 220/132kV ICT - II (HV)	27.20		
		-	-	220kV Tsirang - Jigmeling Line	-104.69		
		-	-	132kV Gelephu - Salakati Line	3.36		
Total	286.80	Auxiliary Consumption & Transformation Losses at Generator end	0.45%				
3	4 x 84MW CHP	Unit-I	0.00	220kV CHP - Birpara Line - I	-48.69	CHP Unit_I under AMP. 220kV CHP_Gedu Line under Shutdown.	
		Unit-II	58.64	220kV CHP - Birpara Line - II	-48.28		
		Unit-III	56.51	220kV CHP - Gedu	0.00		
		Unit-IV	64.39	220kV CHP - Jamjee (old) - I	88.93		
		-	-	220kV CHP - Jamjee - II (new)	89.36		
		-	-	220kV CHP - Jamjee - III (new)	86.41		
		-	-	220kV Malbase - Birpara Line	-95.07		
		-	-	66kV CHP - Gedu Line	10.56		
		-	-	3x3MVA, 66/11kV TFR	1.97		
		Total	179.54	Auxiliary Consumption & Transformation Losses at Generator end	-0.40%		
4	2 x 12MW BHP (U/S)	Unit-I	5.00	220kV BHP - Semtokha Line	102.00		
		Unit-II	5.50	66kV BHP - Lobeyasa Line	28.50		
		Total	10.50	220kV BHP - Tsirang Line	-100.29		
5	2 x 20MW BHP (L/S)	Unit-I	10.40	5MVA, 66/11kV TFR	0.66		
		Unit-II	10.40	30MVA ICT, 220/66kV (HV)	19.22		
		Total	20.80	Auxiliary Consumption & Transformation Losses at Generator end	1.37%		
6	2 x 63MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	41.22	Unit I on Standby. 220kV DHP_Dagapela line on Standby.	
		Unit-II	41.47	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	13.32		
		-	-	5MVA, 220/33kV TFR	0.28		
Total	41.47	Auxiliary Consumption & Transformation Losses at Generator end	-0.07%				
7	4 x 15MW KHP	Unit-I	11.43	132kV KHP - Nangkor Line	16.19	Unit-III under AMP	
		Unit-II	11.41	132kV KHP - Kilikhar Line	17.42		
		Unit-III	0.00	5MVA, 132/11kV TFR	0.32		
		Unit-IV	11.45	132kV Motanga - Rangia Line	15.52		
		Total	34.29	Auxiliary Consumption & Transformation Losses at Generator end	1.05%		
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	50.06	132kV NHP-MHP-II	49.85		
		Total	50.06	Auxiliary Consumption & Transformation Losses at Generator end	0.42%		

Note: Generation-Load Summary (MW) for 19-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	630.84	812.30	812.16	-76.77	0.14
2	Eastern Grid	371.15	152.30	150.43	114.16	1.87
	Total	1,001.99	964.60	962.59	37.39	2.01

Note: Generation-Load Summary (MW) for 19-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	518.61	688.07	681.39	-53.26	6.68
2	Eastern Grid	216.70	202.16	199.84	-101.66	2.32
	Total	735.31	890.23	881.23	-154.92	9.00

Note: Daily Energy (MUs) and Power(MW) Statistics for 19-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		0.00				

- 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.
 - 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.