

BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT

Maximum Load/Demand till Date

Date:	May 23, 2021
Hours:	19:00 Hours

Date	Time	Load(MW)
27-Dec-18	18:18hrs	399.35MW

Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Sign	Remarks
1	1020MW THP	Unit- I	118.79	400kV THP - Siliguri Line - I	0.00		Unit-IV, V & VI on standby. 400kV THP_SIL Line I & IV on Standby.
		Unit- II	68.87	400kV THP - Siliguri Line - II	126.54	+	
		Unit- III	139.78	400kV THP - Siliguri Line - IV	0.00		
		Unit- IV	0.00	400kV THP - Malbase Line - III	195.78	+	
		Unit- V	0.00	400kV Malbase - Siliguri Line	101.61	+	
		Unit- VI	0.00	-	-	-	
		Total	327.44	Error at Station/Auxiliary Consumption/Losses	1.564%		
2	720MW MHP	Unit-I	130.13	400kV MHP - Jigmeling Line - I	0.00		Unit -III under breakdown. 400kV MHP-JLG Line I & III on standby. 132kV MHP_Yurmoo line I & II not in service. 400/220kV ICT at JLG not in service.
		Unit-II	130.27	400kV MHP - Jigmeling Line - II	169.35	+	
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	0.00		
		Unit-IV	80.25	400kV MHP - Jigmeling Line - IV	169.53	+	
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	0.00		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	167.89	+	
		-	-	400kV Jigmeling - Alipurduar Line - II	167.26	+	
		-	-	80MVA, 220/132kV ICT - I (HV)	8.30	+	
		-	-	80MVA, 220/132kV ICT - II (HV)	8.30	+	
		-	-	220kV Tsirang - Jigmeling Line	19.42	+	
		-	-	132kV Gelephu - Salakati Line	-10.63	-	
Total	340.65	Error at Station/Auxiliary Consumption/Losses	0.520%				
3	336MW CHP	Unit- I	0.00	220kV CHP - Birpara Line - I	23.19	+	Unit-I on standby.
		Unit- II	52.24	220kV CHP - Birpara Line - II	23.40	+	
		Unit- III	53.57	220kV CHP - Malbase Line - III	44.73	+	
		Unit- IV	51.72	220kV CHP - Semtokha Line - IV	49.39	+	
		-	-	220kV Malbase - Birpara Line	2.65	+	
		-	-	66kV CHP - Chumdo Line	8.40	+	
		-	-	66kV CHP - Gedu Line	5.21	+	
		-	-	3x3MVA, 66/11kV TFR	1.40	+	
Total	157.53	Error at Station/Auxiliary Consumption/Losses	1.149%				
4	24MW BHP (U/S)	Unit- I	0.00	220kV BHP - Semtokha Line	-16.47	-	U/S Unit-I & L/S Unit II on standby.
		Unit- II	4.40	66kV BHP - Lobeysa Line	21.23	+	
		Total	4.40	220kV BHP - Tsirang Line	7.50	-	
	40MW BHP (L/S)	Unit- I	8.80	5MVA, 66/11kV TFR	0.88	+	
		Unit- II	0.00	30MVA ICT, 220/66kV (HV)	17.60	+	
Total	8.80	Error at Station/Auxiliary Consumption/Losses	0.455%				
5	126MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	13.88	+	Unit-I on standby. 220kV DHP_Dagapela Line on standby.
		Unit-II	14.16	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	1.70	+	
		-	-	5MVA, 220/33kV TFR	0.27	+	
		Total	14.16	Error at Station/Auxiliary Consumption/Losses	0.071%		
6	60MW KHP	Unit- I	16.50	132kV KHP - Nangkhor Line	42.47	+	
		Unit-II	16.50	132kV KHP - Kilikhar Line	22.55	+	
		Unit- III	16.50	5MVA, 132/11kV TFR	0.26	+	
		Unit- IV	16.50	132kV Motanga - Rangia Line	38.22	+	
		Total	66.00	Error at Station/Auxiliary Consumption/Losses	1.091%		

Note: Generation-Load Summary (MW) for May 23, 2021 at 19:00hrs.

Sl. No	Region	Total Generation (MW)	Total Load [Generation - Export (MW)]	Total Load [Feeder Summation (MW)]	Total Export/Import (MW)	Load Balance (MW)
1	Western Grid	512.33	215.52	210.22	277.39	5.30
2	Eastern Grid	406.65	63.33	60.84	362.74	2.49
Total		918.98	278.85	271.06	640.13	7.79

Note: Generation-Load Summary for May 23, 2020 at 19:00hrs.

Sl. No	Region	Total Generation (MW)	Total Load [Generation - Export (MW)]	Total Load [Feeder Summation (MW)]	Total Export/Import (MW)	Load Balance (MW)
1	Western Grid	1,511.79	232.56	216.37	1,218.01	16.19
2	Eastern Grid	737.92	66.31	55.67	732.83	10.64
Total		2,249.71	298.87	272.04	1,950.84	26.83

NOTE-BHP, KHP & MHP data collected site

- The Instantaneous load balance is 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 is generated to give an idea of the generation & load flow for the system at a particular instant.

BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT

Maximum Load/Demand till Date

Date:	May 24, 2021
Hours:	09:00 Hours

Date	Time	Load(MW)
27-Dec-18	18:18hrs	399.35MW

Sl. No.	Hydropower Plant	Unit	MW	Transmission Lines and Elements	Load (MW)	Sign	Remarks
1	1020MW THP	Unit- I	118.66	400kV THP - Siliguri Line - I	0.00		Unit- IV, V & VI on standby. 400kV THP_SIL Line I & IV on Standby.
		Unit- II	70.38	400kV THP - Siliguri Line - II	120.57	+	
		Unit- III	110.98	400kV THP - Siliguri Line- IV	0.00		
		Unit- IV	0.00	400kV THP - Malbase Line - III	172.02	+	
		Unit- V	0.00	400kV Malbase - Siliguri Line	100.22	+	
		Unit- VI	0.00	-	-	-	
		Total	300.02	Error at Station/Auxiliary Consumption/Losses		2.477%	
2	720MW MHP	Unit-I	130.20	400kV MHP - Jigmeling Line - I	0.00		Unit-III under breakdown. 400kV MHP-JLG Line I & III on standby. 132kV MHP_Yurmoo line I & II not in service. 400/220kV ICT at JLG not in service.
		Unit-II	145.22	400kV MHP - Jigmeling Line - II	209.39	+	
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	0.00		
		Unit-IV	145.48	400kV MHP - Jigmeling Line - IV	209.81	+	
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	0.00		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - I	206.50	+	
		-	-	400kV Jigmeling - Alipurduar Line - II	207.40	+	
		-	-	80MVA, 220/132kV ICT - I (HV)	7.30	+	
		-	-	80MVA, 220/132kV ICT - II (HV)	7.30	+	
		-	-	220kV Tsirang - Jigmeling Line	15.30	+	
		-	-	132kV Gelephu - Salakati Line	-5.98	-	
Total	420.90	Error at Station/Auxiliary Consumption/Losses		0.404%			
3	336MW CHP	Unit- I	0.00	220kV CHP - Birpara Line- I	30.93	+	Unit- I on standby. 66kV CHP_WAT under shutdown.
		Unit- II	56.38	220kV CHP - Birpara Line- II	30.72	+	
		Unit- III	57.80	220kV CHP - Malbase Line- III	67.84	+	
		Unit- IV	61.78	220kV CHP - Semtokha Line- IV	39.34	+	
		-	-	220kV Malbase - Birpara Line	-2.01	-	
		-	-	66kV CHP - Chumdo Line	0.00	+	
		-	-	66kV CHP - Gedu Line	5.41	+	
		-	-	3x3MVA, 66/11kV TFR	0.70	+	
Total	175.96	Error at Station/Auxiliary Consumption/Losses		0.580%			
4	24MW BHP (U/S)	Unit- I	0.00	220kV BHP - Semtokha Line	-8.92	-	U/S Unit-I & L/S Unit-II on standby.
		Unit- II	4.40	66kV BHP - Lobeyasa Line	19.86	+	
		Total	4.40	220kV BHP - Tsirang Line	2.46	+	
	40MW BHP (L/S)	Unit- I	9.90	5MVA, 66/11kV TFR	0.88	+	
		Unit- II	0.00	30MVA ICT, 220/66kV (HV)	16.34	+	
Total	9.90	Error at Station/Auxiliary Consumption/Losses		0.140%			
5	126MW DHP	Unit-I	0.00	220kV DHP - Tsirang Line	14.11	+	Unit-I on standby. 220kV DHP_Dagapela Line on standby.
		Unit-II	14.33	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	0.90	+	
		-	-	5MVA, 220/33kV TFR	0.20	+	
		Total	14.33	Error at Station/Auxiliary Consumption/Losses		0.140%	
6	60MW KHP	Unit- I	16.50	132kV KHP - Nangkhor Line	42.30	+	
		Unit-II	16.50	132kV KHP - Kilikhar Line	22.92	+	
		Unit- III	16.50	5MVA, 132/11kV TFR	0.26	+	
		Unit- IV	16.50	132kV Motanga - Rangia Line	36.26	+	
		Total	66.00	Error at Station/Auxiliary Consumption/Losses		0.788%	

Note: Generation-Load Summary (MW) for May 24, 2021 at 09:00hrs.

Sl. No	Region	Total Generation (MW)	Total Load [Generation - Export (MW)]	Total Load [Feeder Summation (MW)]	Total Export/Import (MW)	Load Balance (MW)
1	Western Grid	504.61	208.88	201.29	280.43	7.59
2	Eastern Grid	486.90	58.02	55.80	444.18	2.22
Total		991.51	266.90	257.09	724.61	9.81

Note: Generation-Load Summary for May 24, 2020 at 09:00hrs.

Sl. No	Region	Total Generation (MW)	Total Load [Generation - Export (MW)]	Total Load [Feeder Summation (MW)]	Total Export/Import (MW)	Load Balance (MW)
1	Western Grid	1,489.59	201.69	189.16	1,241.42	12.53
2	Eastern Grid	699.58	46.21	42.56	699.85	3.65
Total		2,189.17	247.90	231.72	1,941.27	16.18

NOTE-BHP, KHP & MHP data collected site

- The Instantaneous load balance is 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.
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