

BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT

Maximum Load/Demand till Date

Date:	June 20, 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	184.75	400kV THP - Siliguri Line - I	0.00		400kV THP-Siliguri Line I under maintenance
		Unit- II	183.15	400kV THP - Siliguri Line - II	360.07	+	
		Unit- III	185.22	400kV THP - Siliguri Line- IV	345.01	+	
		Unit- IV	185.35	400kV THP - Malbase Line - III	397.78	+	
		Unit- V	185.09	400kV Malbase - Siliguri Line	326.30	+	
		Unit- VI	185.17	-	-	-	
		Total	1,108.73	Error at Station/Auxiliary Consumption/Losses	0.529%		
2	720MW MHP	Unit-I	197.32	400kV MHP - Jigmeling Line - I	294.07	+	Unit-III under breakdown 400kV MHP-JLG Line II & IV on standby. 132kV MHP_Yurmoo line I & II not in service. 400kV JLG_ALI Line I(Interim) under shutdown 400kV JLG_ALI Line I(Direct) not in service
		Unit-II	197.92	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	295.69	+	
		Unit-IV	197.81	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmo Line - I	0.00		
		-	-	132kV MHP - Yurmo Line - II	0.00		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	16.30	+	
		-	-	400kV Jigmeling - Alipurduar Line - I (Interim)	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - II (Interim)	238.50	+	
		-	-	400kV Jigmeling - Alipurduar Line - I (Direct)	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - II (Direct)	359.27	+	
		-	-	80MVA, 220/132kV ICT - I (HV)	38.60	+	
		-	-	80MVA, 220/132kV ICT - II (HV)	38.50	+	
		-	-	220kV Tsirang - Jigmeling Line	95.80	+	
-	-	132kV Gelephu - Salakati Line	30.33	+			
Total	593.05	Error at Station/Auxiliary Consumption/Losses	0.555%				
3	336MW CHP	Unit- I	91.76	220kV CHP - Birpara Line- I	103.51	+	
		Unit- II	91.19	220kV CHP - Birpara Line- II	103.45	+	
		Unit- III	91.36	220kV CHP - Malbase Line- III	144.13	+	
		Unit- IV	91.51	220kV CHP - Semtokha Line- IV	-0.51	-	
		-	-	220kV Malbase - Birpara Line	57.78	+	
		-	-	66kV CHP - Chumdo Line	8.26	+	
		-	-	66kV CHP - Gedu Line	5.21	+	
		-	-	3x3MVA, 66/11kV TFR	1.35	+	
		Total	365.82	Error at Station/Auxiliary Consumption/Losses	0.115%		
4	24MW BHP (U/S)	Unit- I	8.70	220kV BHP - Semtokha Line	56.26	+	30MVA ICT(220/66kV) under shutdown.
		Unit- II	8.40	66kV BHP - Lobeysa Line	16.90	+	
		Total	17.10	220kV BHP - Tsirang Line	-26.51	-	
	40MW BHP (L/S)	Unit- I	15.40	5MVA, 66/11kV TFR	0.85	+	
		Unit- II	15.10	30MVA ICT, 220/66kV (HV)	0.00		
Total	30.50	Error at Station/Auxiliary Consumption/Losses	0.210%				
5	126MW DHP	Unit-I	63.55	220kV DHP - Tsirang Line	126.28	+	220kV DHP_Dagapela Line on standby.
		Unit-II	63.25	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	1.70	+	
		-	-	5MVA, 220/33kV TFR	0.40	+	
		Total	126.80	Error at Station/Auxiliary Consumption/Losses	0.095%		
6	60MW KHP	Unit- I	16.58	132kV KHP - Nangkhon Line	37.69	+	
		Unit-II	16.57	132kV KHP - Kilikhar Line	27.37	+	
		Unit- III	16.60	5MVA, 132/11kV TFR	0.30	+	
		Unit- IV	16.58	132kV Motanga - Rangia Line	47.52	+	
		Total	66.33	Error at Station/Auxiliary Consumption/Losses	1.462%		

Note: Generation-Load Summary (MW) for June 20, 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	1,648.95	257.03	252.22	1,296.12	4.81
2	Eastern Grid	659.38	79.56	75.30	675.62	4.26
Total		2,308.33	336.59	327.52	1,971.74	9.07

Note: Generation-Load Summary for June 20, 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	1,564.16	230.81	213.17	1,258.91	17.64
2	Eastern Grid	659.57	60.77	56.36	673.24	4.41
Total		2,223.73	291.58	269.53	1,932.15	22.05

NOTE-BHP, JLG and MHPA data collected from 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:	June 21, 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	185.67	400kV THP - Siliguri Line - I	0.00		400kV THP-Siliguri Line I under maintenance.
		Unit- II	185.46	400kV THP - Siliguri Line - II	362.57	+	
		Unit- III	186.19	400kV THP - Siliguri Line- IV	347.93	+	
		Unit- IV	184.71	400kV THP - Malbase Line - III	396.63	+	
		Unit- V	187.99	400kV Malbase - Siliguri Line	328.95	+	
		Unit- VI	185.44	-	-	-	
		Total	1,115.46	Error at Station/Auxiliary Consumption/Losses	0.747%		
2	720MW MHP	Unit-I	197.27	400kV MHP - Jigmeling Line - I	293.92	+	Unit-III on breakdown 400kV MHP-JLG Line II & IV on standby. 132kV MHP_Yurmoo line I & II not in service. 400kV JLG_ALI Line II(Interim) under shutdown. 400kV JLG_ALI Line I(Direct) not in service
		Unit-II	197.54	400kV MHP - Jigmeling Line - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Line - III	295.68	+	
		Unit-IV	197.72	400kV MHP - Jigmeling Line - IV	0.00		
		-	-	132kV MHP - Yurmoo Line - I	0.00		
		-	-	132kV MHP - Yurmoo Line - II	0.00		
		-	-	500MVA, 400/220kV ICT at Jigmeling (HV)	20.30	+	
		-	-	400kV Jigmeling - Alipurduar Line - I (Interim)	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - II (Interim)	238.52	+	
		-	-	400kV Jigmeling - Alipurduar Line - I (Direct)	0.00		
		-	-	400kV Jigmeling - Alipurduar Line - II (Direct)	362.22	+	
		-	-	80MVA, 220/132kV ICT - I (HV)	32.20	+	
		-	-	80MVA, 220/132kV ICT - II (HV)	32.20	+	
		-	-	220kV Tsirang - Jigmeling Line	86.11	+	
-	-	132kV Gelephu - Salakati Line	32.34	+			
Total	592.53	Error at Station/Auxiliary Consumption/Losses	0.494%				
3	336MW CHP	Unit- I	90.79	220kV CHP - Birpara Line- I	102.74	+	
		Unit- II	91.26	220kV CHP - Birpara Line- II	102.67	+	
		Unit- III	91.56	220kV CHP - Malbase Line- III	147.12	+	
		Unit- IV	91.41	220kV CHP - Semtokha Line- IV	-0.05	-	
		-	-	220kV Malbase - Birpara Line	53.70	+	
		-	-	66kV CHP - Chumdo Line	5.66	+	
		-	-	66kV CHP - Gedu Line	4.97	+	
		-	-	3x3MVA, 66/11kV TFR	0.71	+	
		Total	365.02	Error at Station/Auxiliary Consumption/Losses	0.329%		
4	24MW BHP (U/S)	Unit- I	7.70	220kV BHP - Semtokha Line	48.61	+	30MVA ICT(220/66kV) under shutdown.
		Unit- II	7.60	66kV BHP - Lobeyssa Line	15.00	+	
		Total	15.30	220kV BHP - Tsirang Line	-22.12	-	
	40MW BHP (L/S)	Unit- I	13.40	5MVA, 66/11kV TFR	0.89	+	
		Unit- II	13.10	30MVA ICT, 220/66kV (HV)	0.00		
Total	26.50	Error at Station/Auxiliary Consumption/Losses	-1.388%				
5	126MW DHP	Unit-I	61.46	220kV DHP - Tsirang Line	109.05	+	220kV DHP_Dagapela Line on standby.
		Unit-II	48.12	220kV DHP - Dagapela Line	0.00		
		-	-	220kV Jigmeling - Dagapela Line	1.00	+	
		-	-	5MVA, 220/33kV TFR	0.50		
		Total	109.58	Error at Station/Auxiliary Consumption/Losses	0.027%		
6	60MW KHP	Unit- I	16.50	132kV KHP - Nangkhon Line	61.78	+	
		Unit-II	16.50	132kV KHP - Kilikhar Line	3.68	+	
		Unit- III	16.50	5MVA, 132/11kV TFR	0.31	+	
		Unit- IV	16.50	132kV Motanga - Rangia Line	51.16	+	
		Total	66.00	Error at Station/Auxiliary Consumption/Losses	0.348%		

Note: Generation-Load Summary (MW) for June 21, 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	1,631.86	247.19	239.21	1,298.56	7.98
2	Eastern Grid	658.53	60.40	57.24	684.24	3.16
Total		2,290.39	307.59	296.45	1,982.80	11.14

Note: Generation-Load Summary for June 21, 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	1,575.88	206.48	192.09	1,302.32	14.39
2	Eastern Grid	657.09	47.99	43.88	676.18	4.11
Total		2,232.97	254.47	235.97	1,978.50	18.50

NOTE-BHP,JLG and MHPA data collected from site

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