

BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT

Maximum Load/Demand till Date

Date:	February 10, 2020
Hours:	19:00 Hours

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

Sl. No.	Hydropower Plant	Unit	MW	Name of Feeders	Load (MW)	Sign	Remarks
1	1020MW THP	Unit- I	0.00	400kV THP - Siliguri Fdr- I	0.00		Unit-III , IV on standby. Unit-I and II under shutdown. 400kV THP_SIL I & II under maintenance.
		Unit- II	0.00	400kV THP - Siliguri Fdr- II	0.00		
		Unit- III	0.00	400kV THP - Siliguri Fdr- IV	42.69	+	
		Unit- IV	0.00	400kV THP - Malbase Fdr- III	142.97	+	
		Unit- V	60.72	400kV Malbase - Siliguri	24.06	+	
		Unit- VI	129.78	-	-	-	
		Total	190.50	Error at Station/Auxiliary Consumption/Losses	4.84		
2	720MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Fdr - I	0.00		Unit-I & IV standby. 400kV MHP-JLG I, II & III Standby.
		Unit-II	44.69	400kV MHP - Jigmeling Fdr - II	0.00		
		Unit-III	40.27	400kV MHP - Jigmeling Fdr - III	0.00		
		Unit-IV	0.00	400kV MHP - Jigmeling Fdr - IV	82.20	+	
		-	-	200MVA, 400/132kV ICT			
		-	-	(Local Load)			
		Total	84.96	Error at Station/Auxiliary Consumption/Losses	2.76		
3	336MW CHP	Unit- I	0.00	220kV CHP - Birpara Fdr- I	-16.29	-	Unit-I & III under shutdown.220kV CHP- Birpara Fdr-II Standby.
		Unit- II	49.00	220kV CHP - Birpara Fdr- II	0.00		
		Unit- III	0.00	220kV CHP - Malbase Fdr- III	3.29	+	
		Unit- IV	49.00	220kV CHP - Sementokha Fdr- IV	86.15	+	
		-	-	220kV Malbase - Birpara Fdr.	-28.62	-	
		-	-	66kV CHP - Chumdo Fdr.	18.16	+	
		-	-	66kV CHP - Gedu Fdr.	2.34	+	
		-	-	3x3MVA, 66/11kV TFR	2.30	+	
Total	98.00	Error at Station/Auxiliary Consumption/Losses	2.05				
4	24MW BHP (U/S)	Unit- I	5.34	220kV BHP - Sementokha Fdr.	-17.72	-	U/S Unit-II & L/S Unit-I under maintenance.
		Unit- II	0.00	66kV BHP - Lobeyasa Fdr.	15.96	+	
		Total	5.34	220kV BHP - Tsirang Fdr.	17.21	+	
	40MW BHP (L/S)	Unit- I	0.00	5MVA, 66/11kV TFR	1.01	+	
		Unit- II	11.20	30MVA ICT, 220/66kV			
Total	11.20	Error at Station/Auxiliary Consumption/Losses	0.08				
5	126MW DHPC	Unit-I	0.00	220kV DHPC - Tsirang Fdr.	16.42	+	Unit I under maintenance
		Unit-II	16.67	220kV Jigmeling - Dagapela Fdr.			
		-	-	5MVA, 220/33kV TFR			
		Total	16.67	Error at Station/Auxiliary Consumption/Losses	0.25		
6	60MW KHP	Unit- I	13.50	132kV KHP - Nangkhon Fdr- I	8.87	+	Unit- III & IV under Annual Maintenance
		Unit-II	9.50	132kV KHP - Kilikhar Fdr- II	13.31	+	
		Unit- III	0.00	5MVA, 132/11kV TFR	0.50	+	
		Unit- IV	0.00	132kV Gelephu - Salakati Fdr.	-14.24	-	
		-	-	132kV Motanga - Rangia Fdr.	-1.03	-	
		-	-	220kV Tsirang - Jigmeling	30.19	+	
		Total	23.00	Error at Station/Auxiliary Consumption/Losses	0.32		

Note: Load summary on February 10, 2020 at 19:00hrs.

Sl. No	Region	Total Generation (MW)	Total Load [Generation - Export (MW)]	Total Load [Feeder Summation (MW)]	Total Export/Import	Load Balance
1	Western Grid	321.71	269.68	262.46	21.84	7.22
2	Eastern Grid	107.96	71.22	68.14	66.93	3.08
	Total	429.67	340.90	330.60	88.77	10.30

Note: Load Summary on February 10, 2019 at 19:00hrs

Sl. No	Region	19:00Hrs Load (MW)	Day Peak Load (MW)	Month Peak Load (MW)
1	Western Grid	270.85	270.85	308.60
2	Eastern Grid	60.69	60.69	65.91
	National	331.54	331.54	374.51

NOTES:

- 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:	February 11, 2020
Hours:	09:00 Hours

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

Sl. No.	Hydropower Plant	Unit	MW	Name of Feeders	Load (MW)	Sign	Remarks
1	1020MW THP	Unit- I	0.00	400kV THP - Siliguri Fdr- I	0.00		Unit- III & IV at standby. Unit- I & II under shutdown. 400kV THP_SILI-I & II under shutdown
		Unit- II	0.00	400kV THP - Siliguri Fdr- II	0.00		
		Unit- III	0.00	400kV THP - Siliguri Fdr- IV	16.18	+	
		Unit- IV	0.00	400kV THP - Malbase Fdr- III	111.79	+	
		Unit- V	59.74	400kV Malbase - Siliguri	0.00	-	
		Unit- VI	70.61	-	-	-	
		Total	130.35	Error at Station/Auxiliary Consumption/Losses	2.38		
2	720MW MHP	Unit-I	0.00	400kV MHP - Jigmeling Fdr - I	0.00		Unit-I & IV shutdown, Unit II standby 400kV MHP-JLG I & II standby.
		Unit-II	0.00	400kV MHP - Jigmeling Fdr - II	0.00		
		Unit-III	85.30	400kV MHP - Jigmeling Fdr - III	0.00		
		Unit-IV	0.00	400kV MHP - Jigmeling Fdr - IV	83.60	+	
		-	-	200MVA, 400/132kV ICT			
		-	-	(Local Load)			
		Total	85.30	Error at Station/Auxiliary Consumption/Losses	1.70		
3	336MW CHP	Unit- I	0.00	220kV CHP - Birpara Fdr- I	-25.52	-	Unit-I & III under shutdown. 220kV CHP-BIR II standby
		Unit- II	21.27	220kV CHP - Birpara Fdr- II	0.00		
		Unit- III	0.00	220kV CHP - Malbase Fdr- III	0.00	+	
		Unit- IV	33.90	220kV CHP - Semtokha Fdr- IV	64.16	+	
		-	-	220kV Malbase - Birpara Fdr.	-41.90	-	
		-	-	66kV CHP - Chumdo Fdr.	14.82	+	
		-	-	66kV CHP - Gedu Fdr.	1.66	+	
		-	-	3x3MVA, 66/11kV TFR	1.63	+	
		Total	55.17	Error at Station/Auxiliary Consumption/Losses	-1.58		
4	24MW BHP (U/S)	Unit- I	5.30	220kV BHP - Semtokha Fdr.	0.00	-	U/S Unit-II under maintenance.n Lower Stage * 220kV SY total shutdown
		Unit- II	0.00	66kV BHP - Lobeyasa Fdr.	4.76	+	
		Total	5.30	220kV BHP - Tsirang Fdr.	0.00	+	
	40MW BHP (L/S)	Unit- I	0.00	5MVA, 66/11kV TFR	0.76	+	
		Unit- II	0.00	30MVA ICT, 220/66kV			
Total	0.00	Error at Station/Auxiliary Consumption/Losses	-0.22				
5	126MW DHPC	Unit-I	0.00	220kV DHPC - Tsirang Fdr.	17.10	+	Unit I under maintenance
		Unit-II	17.16	220kV Jigmeling - Dagapela Fdr.			
		-	-	5MVA, 220/33kV TFR			
		Total	17.16	Error at Station/Auxiliary Consumption/Losses	0.06		
6	60MW KHP	Unit- I	0.00	132kV KHP - Nangkhon Fdr- I	0.00	+	Unit-III & IV Annual Maintenance. Unit-I standby
		Unit-II	13.00	132kV KHP - Kilikhar Fdr- II	12.60	+	
		Unit- III	0.00	5MVA, 132/11kV TFR	0.30	+	
		Unit- IV	0.00	132kV Gelephu - Salakati Fdr.	-15.58	-	
		-	-	132kV Motanga - Rangia Fdr.	-11.50	-	
		-	-	220kV Tsirang - Jigmeling	14.86	+	
		Total	13.00	Error at Station/Auxiliary Consumption/Losses	0.10		

Note: Load summary on February 11, 2020 at 09:00hrs.

Sl. No	Region	Total Generation (MW)	Total Load [Generation - Export (MW)]	Total Load [Feeder Summation (MW)]	Total Export/Import	Load Balance
1	Western Grid	207.98	244.36	243.72	-51.24	0.64
2	Eastern Grid	98.30	56.64	54.84	56.52	1.80
	Total	306.28	301.00	298.56	5.28	2.44

Note: Load Summary on February 11, 2019 at 09:00hrs

Sl. No	Region	09:00Hrs Load (MW)	Day Peak Load (MW)	Month Peak Load (MW)
1	Western Grid	171.51	198.06	285.13
2	Eastern Grid	51.12	66.55	66.55
	National	222.63	264.61	351.68

NOTES:

- 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:
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