

BHUTAN POWER SYSTEM OPERATOR LOAD-GENERATION BALANCE REPORT

Maximum Load/Demand till Date

Date:	January 22, 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	101.04	+	Unit- III & IV at standby. Unit- II & VI under shutdown. 400kV THP_SILI-II under shutdown & 400kV THP_SILI-IV standby.
		Unit- II	0.00	400kV THP - Siliguri Fdr- II	0.00		
		Unit- III	0.00	400kV THP - Siliguri Fdr- IV	0.00		
		Unit- IV	71.78	400kV THP - Malbase Fdr- III	184.50	+	
		Unit- V	68.29	400kV Malbase - Siliguri	74.90	+	
		Unit- VI	149.29	-	-	-	
		Total	289.36	Error at Station/Auxiliary Consumption/Losses	3.82		
2	720MW MHP	Unit-I	95.90	400kV MHP - Jigmeling Fdr - I	0.00		Unit-II & III under maintenance. Unit-IV under standby 400kV MHP-JLG I & 400kV MHP-JLG II under shutdown. 400kV MHP_JIG Fdr-IV at Standby.
		Unit-II	0.00	400kV MHP - Jigmeling Fdr - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Fdr - III	93.90	+	
		Unit-IV	0.00	400kV MHP - Jigmeling Fdr - IV	0.00		
		-	-	200MVA, 400/132kV ICT			
		-	-	(Local Load)			
		Total	95.90	Error at Station/Auxiliary Consumption/Losses	2.00		
3	336MW CHP	Unit- I	0.00	220kV CHP - Birpara Fdr- I	0.00		Unit-I & II under shutdown. 220kV CHP-BIR I standby
		Unit- II	0.00	220kV CHP - Birpara Fdr- II	-5.52	-	
		Unit- III	37.38	220kV CHP - Malbase Fdr- III	24.64	+	
		Unit- IV	71.26	220kV CHP - Sementokha Fdr- IV	65.23	+	
		-	-	220kV Malbase - Birpara Fdr.	-27.80	-	
		-	-	66kV CHP - Chumdo Fdr.	16.46	+	
		-	-	66kV CHP - Gedu Fdr.	4.52	+	
		Total	108.64	Error at Station/Auxiliary Consumption/Losses	1.36		
4	24MW BHP (U/S)	Unit- I	6.13	220kV BHP - Sementokha Fdr.	1.88	+	U/S Unit-II & L/S Unit-I under maintenance.
		Unit- II	0.00	66kV BHP - Lobeyasa Fdr.	16.50	+	
		Total	6.13	220kV BHP - Tsirang Fdr.	-0.64	-	
	40MW BHP (L/S)	Unit- I	0.00	5MVA, 66/11kV TFR	0.98	+	
		Unit- II	12.56	30MVA ICT, 220/66kV			
Total	12.56	Error at Station/Auxiliary Consumption/Losses	0.03				
5	126MW DHPC	Unit-I	0.00	220kV DHPC - Tsirang Fdr.	19.25	+	Unit I under maintenance
		Unit-II	19.48	220kV Jigmeling - Dagapela Fdr.			
		-	-	5MVA, 220/33kV TFR			
		Total	19.48	Error at Station/Auxiliary Consumption/Losses	0.23		
6	60MW KHP	Unit- I	12.39	132kV KHP - Nangkhon Fdr- I	9.81	+	Unit-II Standby Unit- III Annual Maintenance.
		Unit-II	0.00	132kV KHP - Kilikhar Fdr- II	11.83	+	
		Unit- III	0.00	5MVA, 132/11kV TFR	0.66	+	
		Unit- IV	10.01	132kV Gelephu - Salakati Fdr.	-19.53	-	
		-	-	132kV Motanga - Rangia Fdr.	-3.49	-	
		-	-	220kV Tsirang - Jigmeling	16.00	+	
		Total	22.40	Error at Station/Auxiliary Consumption/Losses	0.10		

Note: Load summary on January 22, 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	436.17	277.55	272.17	142.62	5.38
2	Eastern Grid	118.30	63.42	61.32	70.88	2.10
	Total	554.47	340.97	333.49	213.50	7.48

Note: Load Summary on January 22, 2019 at 19:00hrs

Sl. No	Region	19:00Hrs Load (MW)	Day Peak Load (MW)	Month Peak Load (MW)
1	Western Grid	267.77	248.82	308.60
2	Eastern Grid	51.89	53.21	65.91
	National	319.66	302.03	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.

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Maximum Load/Demand till Date

Date:	January 23, 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	32.06	+	Unit- III & IV at standby. Unit- II & VI under shutdown. 400kV THP_SILI-II under shutdown & 400kV THP_SILI-IV standby.
		Unit- II	0.00	400kV THP - Siliguri Fdr- II	0.00		
		Unit- III	0.00	400kV THP - Siliguri Fdr- IV	0.00		
		Unit- IV	0.00	400kV THP - Malbase Fdr- III	105.00	+	
		Unit- V	70.34	400kV Malbase - Siliguri	13.23	+	
		Unit- VI	70.46	-	-	-	
		Total	140.80	Error at Station/Auxiliary Consumption/Losses	3.74		
2	720MW MHP	Unit-I	97.62	400kV MHP - Jigmeling Fdr - I	0.00		Unit-III under maintenance. Unit-I & II standby. 400kV MHP-JLG I & II under shutdown. 400kV MHP-JLG IV standby.
		Unit-II	0.00	400kV MHP - Jigmeling Fdr - II	0.00		
		Unit-III	0.00	400kV MHP - Jigmeling Fdr - III	96.80	+	
		Unit-IV	0.00	400kV MHP - Jigmeling Fdr - IV	0.00		
		-	-	200MVA, 400/132kV ICT			
		-	-	(Local Load)			
		Total	97.62	Error at Station/Auxiliary Consumption/Losses	0.82		
3	336MW CHP	Unit- I	0.00	220kV CHP - Birpara Fdr- I	0.00		Unit-I & II under shutdownn. 220kV CHP-BIR I Standby
		Unit- II	0.00	220kV CHP - Birpara Fdr- II	-13.40	-	
		Unit- III	37.56	220kV CHP - Malbase Fdr- III	22.78	+	
		Unit- IV	29.94	220kV CHP - Semtokha Fdr- IV	40.24	+	
		-	-	220kV Malbase - Birpara Fdr.	-38.86	-	
		-	-	66kV CHP - Chumdo Fdr.	12.22	+	
		-	-	66kV CHP - Gedu Fdr.	3.64	+	
		-	-	3x3MVA, 66/11kV TFR	1.34	+	
		Total	67.50	Error at Station/Auxiliary Consumption/Losses	0.68		
4	24MW BHP (U/S)	Unit- I	6.09	220kV BHP - Semtokha Fdr.	13.89	+	U/S Unit-II & L/S Unit-I under maintenance.
		Unit- II	0.00	66kV BHP - Lobeyasa Fdr.	14.37	+	
		Total	6.09	220kV BHP - Tsirang Fdr.	-10.35	-	
	40MW BHP (L/S)	Unit- I	0.00	5MVA, 66/11kV TFR	0.80	+	
		Unit- II	12.46	30MVA ICT, 220/66kV			
Total	12.46	Error at Station/Auxiliary Consumption/Losses	-0.16				
5	126MW DHPC	Unit-I	0.00	220kV DHPC - Tsirang Fdr.	19.15	+	Unit I under maintenance
		Unit-II	19.39	220kV Jigmeling - Dagapela Fdr.			
		-	-	5MVA, 220/33kV TFR			
		Total	19.39	Error at Station/Auxiliary Consumption/Losses	0.24		
6	60MW KHP	Unit- I	0.00	132kV KHP - Nangkhon Fdr- I	8.15	+	Unit-I & II standby & III Annual Maintenance.
		Unit-II	0.00	132kV KHP - Kilikhar Fdr- II	7.46	+	
		Unit- III	0.00	5MVA, 132/11kV TFR	0.40	+	
		Unit- IV	16.00	132kV Gelephu - Salakati Fdr.	-15.26	-	
		-	-	132kV Motanga - Rangia Fdr.	-9.58	-	
		-	-	220kV Tsirang - Jigmeling	6.80	+	
		Total	16.00	Error at Station/Auxiliary Consumption/Losses	-0.01		

Note: Load summary on January 23, 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	246.24	246.41	241.91	-6.97	4.50
2	Eastern Grid	113.62	48.46	47.65	71.96	0.81
	Total	359.86	294.87	289.56	64.99	5.31

Note: Load Summary on January 23, 2019 at 09:00hrs

Sl. No	Region	09:00Hrs Load (MW)	Day Peak Load (MW)	Month Peak Load (MW)
1	Western Grid	256.19	280.92	308.60
2	Eastern Grid	50.38	57.81	65.91
	National	306.57	338.73	374.51

1. 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:

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