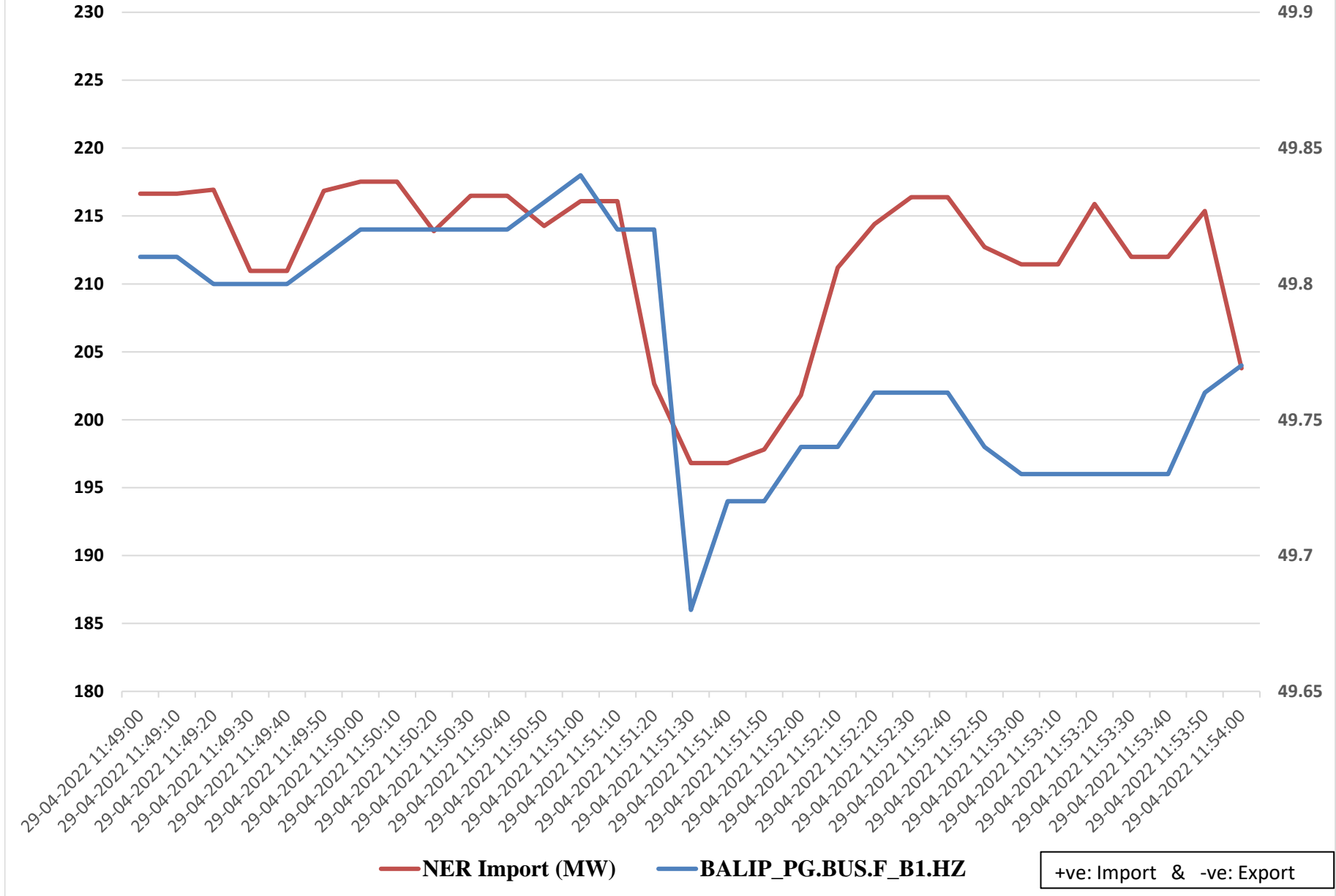


NER Import v/s Frequency



Frequency Response Characteristic in North-Eastern Region (Based on NERLDC SCADA data)

SI No.	Particulars	Dimension	Palatana	Khandong + stg II	Kopili	Doyang	RHEP	Loktak	BgTPP	Kameng	Pare
1	Installed Capacity	MW	2 x 363.3	2 x 25 +1 x 25	4 x 50	3 x 25	3 x 135	3 x 35	3 x 250	4 x 150	2 x 55
2	No of Units on Bar	MW	2	0	0	0	0	0	3	0	0
3	Installed Capacity (MCR) of Units on Bar	MW	726.6	0.0	0.0	0.0	0.0	0.0	750.0	0.0	0.0
4	Declared capacity (DC)	MW	498.0	0	0	0.0	0.0	0	683	0	0
5	105 % of MCR	MW	762.9	0.0	0.0	0.0	0.0	0.0	787.5	0.0	0.0
6	Whether on ramping (Yes/No)		No	NA	NA	NA	NA	NA	No	NA	NA
7	Margin Available	MW	263.4	0.0	0.0	0.0	0.0	0.0	91.0	0.0	0.0
8	Actual Net Interchange before the Event (11:51:10)	MW	499.5	0.00	0.0	0.0	0.0	0.0	696.5	0.0	0.0
9	Actual Net Interchange after the Event (11:52:10)	MW	499.8	0.00	0.0	0.0	0.0	0.0	694.9	0.0	0.0
10	Change in Net Interchange (9 - 8)	MW	0.3	0.0	0.0	0.0	0.0	0.0	-1.6	0.0	0.0
11	Generation Loss (+) / Load Throw off (-) during the Event	MW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Control Area Response 11-10)	MW	-0.3	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
13	Frequency before the Event	Hz	49.82	49.82	49.82	49.82	49.82	49.82	49.82	49.82	49.82
14	Frequency after the Event	Hz	49.74	49.74	49.74	49.74	49.74	49.74	49.74	49.74	49.74
15	Change in Frequency (14-13)	Hz	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08
16	Frequency Response Characteristic (12 / 15)	MW/Hz	3.8	0.0	0.0	0.0	0.0	0.0	-19.5	0.0	0.0
17	Net System Demand met before the Event	MW	0	0.0	0	0	0	0	0	0	0
18	Internal Generation before the Event (8)	MW	500	0.00	0	0	0	0	696.5	0.0	0
19	Ideal load response assuming 4% per Hz (0.04*Row 17)	MW/Hz	0	0.0	0	0	0	0	0	0	0
20	Ideal generator response assuming 5% droop.....40% per Hz (40% of Row 18)	MW/Hz	199.8	0.0	0.0	0.0	0.0	0.0	278.6	0.0	0.0
21	Composite ideal response (19 + 20)	MW/Hz	199.8	0.0	0.0	0.0	0.0	0.0	278.6	0.0	0.0
22	Percentage ideal response (16/21)	%	1.88%						-7.00%		

NER ISGS AGBPP and AGTCCPP are not mandated for FGMO/RGMO as unit wise IC is less than 50 MW.

Frequency Response Characteristic in North-Eastern Region (Based on NERLDC SCADA data)

Event	At 11:51 Hrs Dated 29th-April-2022, As reported, 400kV Pavagada-BPS-1 tripped on LL fault and Line-2 is already under outage on fault. Due to this all the lines at Bellary Pooling station(BPS) tripped and resulted in the loss of evacuation lines for the YTPS station as 400kV Jagalur SS also went in to black out. Consequently generation loss of around 1536 MW occurred at 400kV YSTPS(1036 MW) and 400kV Jindal(500 MW) and same is considered in FRC Calculation.	
Date and Time of Event	29.04.2022, 11:51:00 Hrs	

Serial No.	Particulars	Dimension	AP	Assam	Meghalaya	Manipur	Mizoram	Nagaland	Tripura*	NER*
1	Actual Net Interchange before the Event (11:51:10)	MW	81.01	1058.39	109.92	99.08	77.48	87.00	175.01	216.10
2	Actual Net Interchange after the Event (11:52:10)	MW	79.58	1064.06	109.33	98.69	77.13	86.80	177.36	211.20
3	Change in Net Interchange (2 - 1)	MW	-1.4	5.7	-0.6	-0.4	-0.4	-0.2	2.4	-4.9
4	Generation Loss (+) / Load Throw off (-) during the Event	MW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Control Area Response (3-4)	MW	-1.4	5.7	-0.6	-0.4	-0.4	-0.2	2.4	-4.9
6	Frequency before the Event	HZ	49.82	49.82	49.82	49.82	49.82	49.82	49.82	49.82
7	Frequency after the Event	HZ	49.74	49.74	49.74	49.74	49.74	49.74	49.74	49.74
8	Change in Frequency (7-6)	HZ	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08
9	Frequency Response Characteristic (5 / 8)	MW/HZ	18	-71	7	5	4.4	2.5	-29	61
10	Net System Demand met before the Event	MW	85.01	1327.37	227.56	99.08	77.48	99.00	335.48	2131.11
11	Internal Generation before the Event (10 - 1)	MW	4.0	269.0	117.6	0.0	0.0	12.0	160.5	1915.0
12	Ideal load response assuming 4% per Hz (0.04*Row 10)	MW/Hz	3.4	53.1	9.1	4.0	3.1	4.0	13.4	85.2
13	Ideal generator response assuming 5% droop.....40% per Hz (40% of Row 11)	MW/Hz	2	107.6	47.1	0.0	0	5	64.2	766.0
14	Composite ideal response (12 + 13)	MW/Hz	5	161	56	4	3	9	78	851
15	Percentage ideal response (9/14)	%	357.47%	-44.1%	13.1%	123.0%	141.2%	28.5%	-37.9%	7.20%

Note: +ve exchange=> import ; (-)ve exchange => export

* Tripura Demand Met also includes Bangladesh.

*NER Demand Met excludes Bangladesh