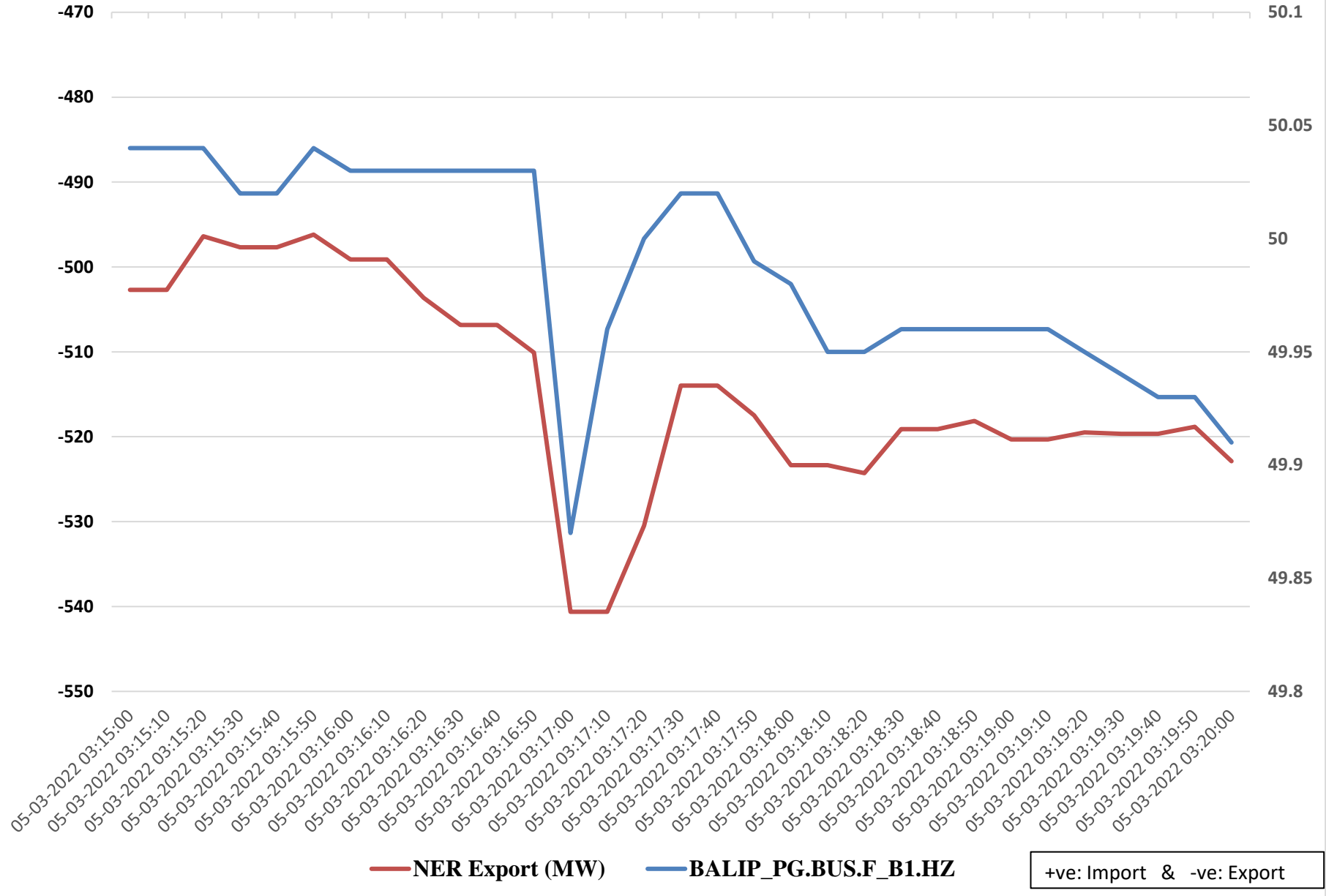


NER Export v/s Frequency



NER Export (MW)

BALIP_PG.BUS.F_B1.HZ

+ve: Import & -ve: Export

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	1	0
3	Installed Capacity (MCR) of Units on Bar	MW	726.6	0.0	0.0	0.0	0.0	0.0	750.0	150.0	0.0
4	Declared capacity (DC)	MW	516.0	0	0	0.0	0.0	0	683	150	0
5	105 % of MCR	MW	762.9	0.0	0.0	0.0	0.0	0.0	787.5	157.5	0.0
6	Whether on ramping (Yes/No)		No	NA	NA	NA	NA	NA	No	No	NA
7	Margin Available	MW	244.4	0.0	0.0	0.0	0.0	0.0	121.7	4.5	0.0
8	Actual Net Interchange before the Event (03:16:20)	MW	518.5	0.00	0.0	0.0	0.0	0.0	665.9	153.0	0.0
9	Actual Net Interchange after the Event (03:17:20)	MW	522.3	0.00	0.0	0.0	0.0	0.0	668.2	154.0	0.0
10	Change in Net Interchange (9 - 8)	MW	3.8	0.0	0.0	0.0	0.0	0.0	2.4	1.0	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	-3.8	0.0	0.0	0.0	0.0	0.0	-2.4	-1.0	0.0
13	Frequency before the Event	Hz	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03
14	Frequency after the Event	Hz	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
15	Change in Frequency (14-13)	Hz	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
16	Frequency Response Characteristic (12 / 15)	MW/Hz	126.7	0.0	0.0	0.0	0.0	0.0	78.7	33.3	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	519	0.00	0	0	0	0	665.9	153.0	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	207.4	0.0	0.0	0.0	0.0	0.0	266.3	61.2	0.0
21	Composite ideal response (19 + 20)	MW/Hz	207.4	0.0	0.0	0.0	0.0	0.0	266.3	61.2	0.0
22	Percentage ideal response (16/21)	%	61.07%						29.54%	54.47%	

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 03:16 Hrs on Dated 03rd-May-2022, As reported at 03:16 hrs, 400 KV simhadri,400kv gazuwaka,400kv kalapakka,400kv hinduja,220kV VSS,220kV gannavaram, 220kV pendurthy,220kV sarada,220kV atchutapuram,220kV abhjeet,220kV mrs vizag got dead, consequently Generation loss of around 2660 MW and Load loss of around 1200 MW occurred in the event. In this Event effective generation loss of around 1440 MW has been considered for FRC Calculation.	
Date and Time of Event	03.05.2022, 03:16:00 Hrs	

Serial No.	Particulars	Dimension	AP	Assam	Meghalaya	Manipur	Mizoram	Nagaland	Tripura*	NER*
1	Actual Net Interchange before the Event (03:16:20)	MW	63.01	691.41	91.05	61.28	51.23	52.00	121.09	-503.64
2	Actual Net Interchange after the Event (03:17:20)	MW	64.89	683.11	84.58	61.28	51.51	53.00	122.29	-530.50
3	Change in Net Interchange (2 - 1)	MW	1.9	-8.3	-6.5	0.0	0.3	1.0	1.2	-26.9
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	1.9	-8.3	-6.5	0.0	0.3	1.0	1.2	-26.9
6	Frequency before the Event	HZ	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03
7	Frequency after the Event	HZ	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
8	Change in Frequency (7-6)	HZ	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
9	Frequency Response Characteristic (5 / 8)	MW/HZ	-63	277	216	0	-9.3	-33.3	-40	895
10	Net System Demand met before the Event	MW	72.01	928.49	195.74	61.28	51.23	64.00	294.32	1577.00
11	Internal Generation before the Event (10 - 1)	MW	9.0	237.1	104.7	0.0	0.0	12.0	173.2	2080.6
12	Ideal load response assuming 4% per Hz (0.04*Row 10)	MW/Hz	2.9	37.1	7.8	2.5	2.0	2.6	11.8	63.1
13	Ideal generator response assuming 5% droop.....40% per Hz (40% of Row 11)	MW/Hz	4	94.8	41.9	0.0	0	5	69.3	832.3
14	Composite ideal response (12 + 13)	MW/Hz	6	132	50	2	2	7	81	895
15	Percentage ideal response (9/14)	%	-967.02%	209.6%	433.9%	0.0%	-455.5%	-452.9%	-49.3%	100.00%

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

* Tripura Demand Met also includes Bangladesh.

*NER Demand Met excludes Bangladesh