

**Frequency Response Characteristic and Performance Computation in NorthEastern Region (Based on SCADA data)**

Generation loss event of around 4480 MW in RE generation Complex, Rajwest (IPP) LTPS and load throw-off in UP, Punjab and Rajasthan control areas at 12:42 hrs of 19th June 2024

S No	Particulars	Dimension	Assam GBPS	Agartala GBPS	Bongaigaon TPP	Palatana	Doyang HEP	Kameng HEP	Khandong HEP	Khandong Stg-2	Kopili HEP	Loktak HEP	Panyor HEP	Pare HEP	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura*	NER Region*	
1	Actual Net Interchange before the Event (12:42:04)	MW	-140	-69	-389	-415	0	-463	0	-24	-98	-106	0	0	91	943	130	-29	42	83	117	-236	
2	Actual Net Interchange after the Event (12:42:55)	MW	-140	-70	-408	-474	0	-463	0	-26	-103	-106	0	0	91	946	130	-21	42	82	118	-314	
3	Change in Net Interchange (2 - 1)	MW	0.1	-0.9	-18.6	-59.1	0.0	0.3	0.0	-1.5	-5.1	-0.2	0.0	0.0	0.2	2.9	-0.1	8.4	0.2	-0.5	1.1	-77.6	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	Control Area Response (3 - 4)	MW	0.1	-0.9	-18.6	-59.1	0.0	0.3	0.0	-1.5	-5.1	-0.2	0.0	0.0	0.2	2.9	-0.1	8.4	0.2	-0.5	1.1	-77.6	
6	Frequency before the Event	HZ	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060	50.060
7	Frequency after the Event	HZ	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873	49.873
8	Change in Frequency (7 - 6)	HZ	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19
9	Frequency Response Characteristic (5 / 8)	MW/HZ	-1	5	100	316	0	-2	0	8	27	1	0	0	-1	-16	0	-45	-1	3	-6	415	
10	Frequency Response Obligation (FRO) of control area	MW/Hz	0	0	35	35	3	20	0	2	6	3	16	6	7	108	0	22	6	7	30	306	
11	Frequency Response Performance (FRP) (9/10)		NA	NA	2.86	9.06	No Gen	-0.08	No Gen	4.80	4.63	0.30	No Gen	No Gen	-0.16	-0.14	NA	-2.05	-0.18	0.39	-0.20	1.36	
12	Grading of Frequency Response Performance (FRP)		NA	NA	Excellent	Excellent	No Gen	Poor	No Gen	Excellent	Excellent	Poor	No Gen	No Gen	Poor	Poor	NA	Poor	Poor	Poor	Poor	Excellent	
13	Remarks		Not applicable	Not applicable				FGMO OFF due to spillage	Under Long Outage								Not applicable						

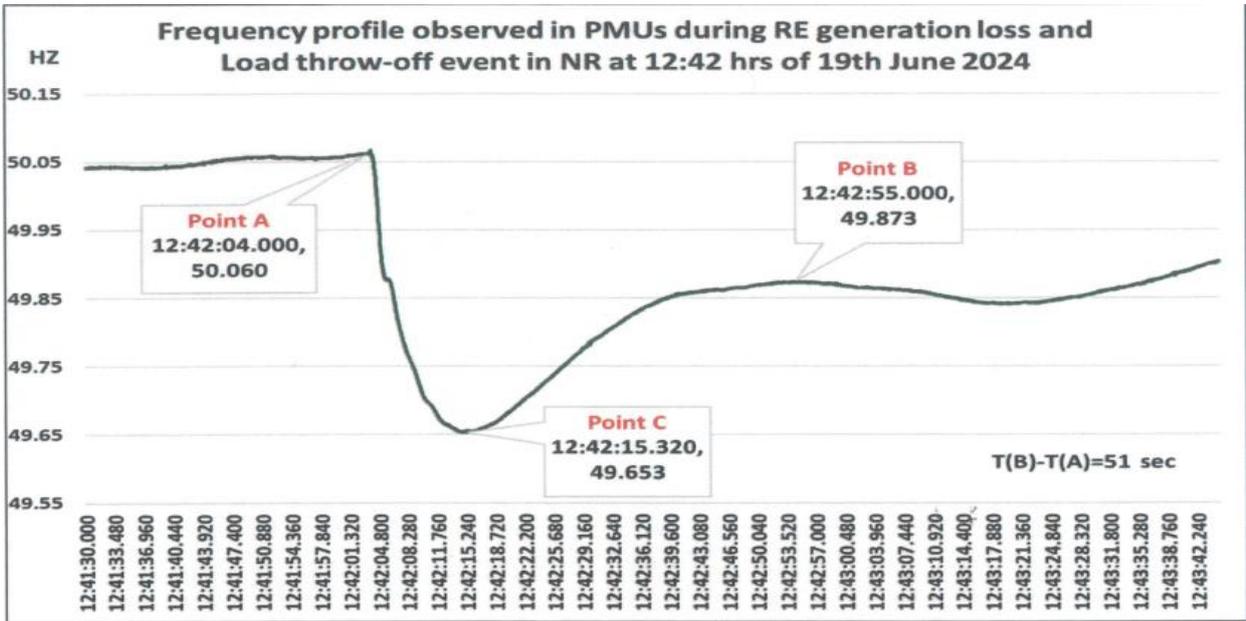


Figure 1: RE generation loss and Load throw-off event in NR at 12:42 hrs of 19<sup>th</sup> June 2024