

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

On 4th June 2024 at 10:26 hrs, dip in RE generation in Rajasthan RE generation complex (NR) was observed. The net generation loss of approx. 1090 MW occurred in this event. Therefore generation loss of 1090MW has been considered for FRC computation.

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 ( 04-06-2024 10:26:04)	MW	-151	-51	-386	-468	-19	-443	0	-25	-132	-106	-108	-55	100	1025	136	24	64	115	257	-202
2	Actual Net Interchange after the Event ( 04-06-2024 10:27:12)	MW	-151	-52	-398	-470	-19	-447	0	-25	-135	-106	-108	-55	102	1017	137	23	63	116	261	-225
3	Change in Net Interchange (2 - 1)	MW	-0.2	-0.6	-13.0	-1.3	-0.1	-3.6	0.0	-0.5	-2.4	-0.1	0.1	-0.1	2.5	-8.8	0.9	-1.0	-0.8	0.5	4.3	-22.9
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	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	-0.2	-0.6	-13.0	-1.3	-0.1	-3.6	0.0	-0.5	-2.4	-0.1	0.1	-0.1	2.5	-8.8	0.9	-1.0	-0.8	0.5	4.3	-22.9
6	Frequency before the Event	HZ	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071	50.071
7	Frequency after the Event	HZ	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995	49.995
8	Change in Frequency (7 - 6)	HZ	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08
9	Frequency Response Characteristic (5 / 8)	MW/Hz	3	8	171	17	1	47	0	6	31	2	-2	2	-32	116	-12	13	11	-7	-56	301
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	4.90	0.49	0.39	2.32	No Gen	3.83	5.33	0.63	-0.10	0.32	-4.46	1.07	NA	0.60	1.95	-0.97	-1.88	0.99

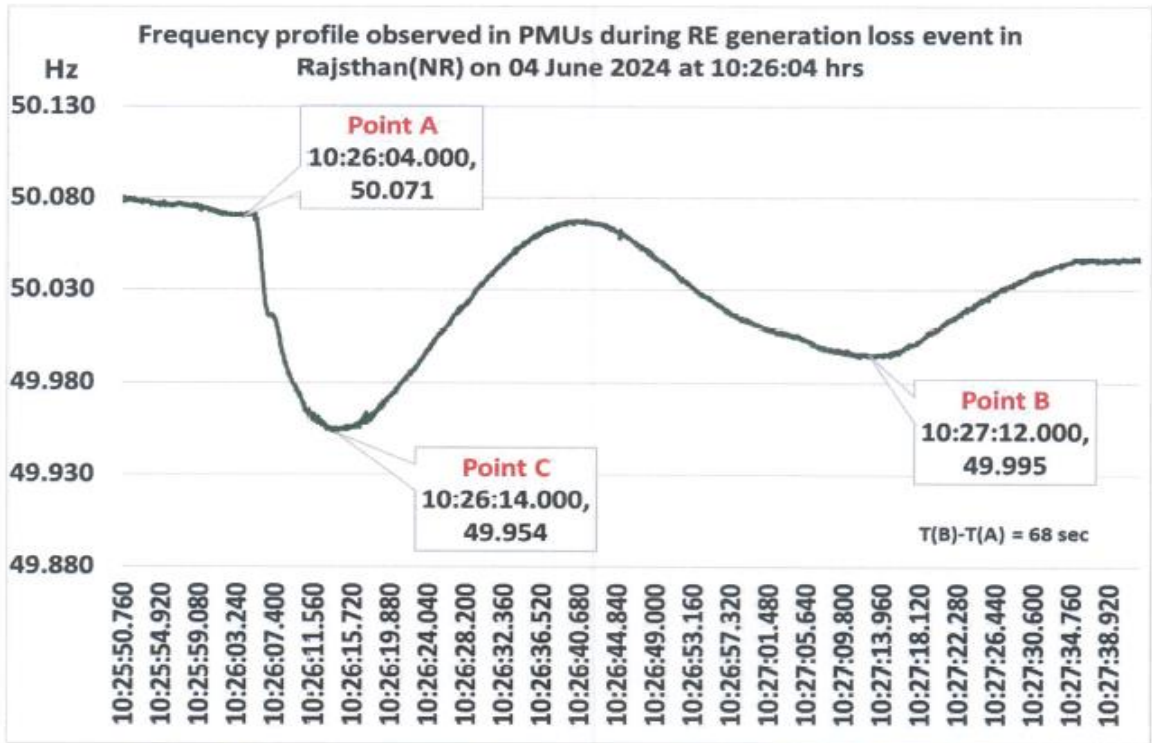


Figure 1: RE generation loss event in Rajasthan, Northern region at 10:26 hrs of 4<sup>th</sup> June 2024