

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

On 04 JUNE 2024, At 10:34 hrs, dip in RE generation in Rajasthan complex was observed.The net gen. loss of around 1295 MW (As per SCADA) was observed and has been considered for the FRC and FRP computation.

S No	Particulars	Dimension	Assam GBPS	Agartala GBPS	Bongaigaon TPP	Palatana	Doyang HEP	Kameng HEP	Khandong HEP	Khandong Stg-2	Kopli HEP	Loktak HEP	Panyor HEP	Pare HEP	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura*	NER Region*	
1	Actual Net Interchange before the Event (10:34:36)	MW	-151	-52	-392	-468	-19	-436	0	-24	-133	-105	-103	-56	102	1029	135	25	65	118	258	-198	
2	Actual Net Interchange after the Event (10:35:39)	MW	-151	-53	-409	-469	-19	-451	0	-25	-137	-106	-110	-55	103	1028	136	27	68	118	258	-225	
3	Change in Net Interchange (2 - 1)	MW	0.2	-0.7	-17.0	-1.4	0.0	-15.2	0.0	-0.5	-4.5	-0.3	-6.3	0.5	0.4	-0.9	0.9	2.1	2.8	0.5	-0.1	-27.3	
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	-0.7	-17.0	-1.4	0.0	-15.2	0.0	-0.5	-4.5	-0.3	-6.3	0.5	0.4	-0.9	0.9	2.1	2.8	0.5	-0.1	-27.3	
6	Frequency before the Event	HZ	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073	50.073
7	Frequency after the Event	HZ	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021	50.021
8	Change in Frequency (7 - 6)	HZ	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
9	Frequency Response Characteristic (5 / 8)	MW/Hz	-3	14	327	27	1	292	0	9	87	5	120	-9	-8	18	-17	-41	-54	-10	3	526	
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	9.38	0.77	0.25	14.38	No Gen	5.84	14.84	1.85	7.36	-1.59	-1.12	0.17	NA	-1.88	-9.57	-1.42	0.09	1.72		

Frequency profile observed in PMUs during RE generation loss event in Rajsthan(NR) on 04 June 2024 at 10:34:36 hrs

