

**POWER SYSTEM OPERATION CORPORATION LIMITED  
NATIONAL LOAD DESPATCH CENTRE  
NEW DELHI**

Date: 05-Jan-2021

**System Reliability Indices Report for the month of December 2020**

**Percentage (%) of times ATC was violated**

S.No.	Corridor	Number of Blocks Violated	Number of Hours Violated	%Violation
1	WR-NR	0	0.00	0.00
2	ER-NR	130	32.50	4.37
3	Import of NR	0	0.00	0.00
4	NEW-SR	0	0.00	0.00
5	NER Import	0	0.00	0.00

**Percentage(%) of times (N-1) Criteria was violated**

S.No.	Corridor	Number of Blocks Violated	Number of Hours Violated	%Violation
1	WR-NR	0	0.00	0.00
2	ER-NR	62	15.50	2.08
3	Import of NR	0	0.00	0.00
4	NEW-SR	0	0.00	0.00
4	NER Import	2	0.50	0.07

Remarks: Flows crossing Total Transfer Capability (TTC) on interregional corridors has been worked out as a proxy for (N-1) violation.

## FREQUENCY DEVIATION INDEX FOR DECEMBER 2020

Date of reporting:

05-Jan-21

Date	Percentage of time frequency is			Freq Deviation Index* (FDI)	No. of hours frequency is outside 49.95-50.05 Hz	Average Frequency (Hz)
	<49.90 Hz	49.90 - 50.05 Hz	>50.05 Hz			
01-Dec-20	1.62	74.00	24.38	26.00	6:14	50.02
02-Dec-20	2.20	80.51	17.29	19.49	4:40	50.01
03-Dec-20	7.57	79.42	13.01	20.58	4:56	49.99
04-Dec-20	11.06	74.26	14.68	25.74	6:10	49.99
05-Dec-20	6.83	78.51	14.66	21.49	5:09	50.00
06-Dec-20	6.83	78.51	14.66	21.49	5:09	50.00
07-Dec-20	8.51	72.59	18.90	27.41	6:34	50.00
08-Dec-20	0.88	75.78	23.34	24.22	5:48	50.02
09-Dec-20	2.84	75.10	22.06	24.90	5:58	50.01
10-Dec-20	0.59	68.67	30.74	31.33	7:31	50.03
11-Dec-20	6.91	78.85	14.24	21.15	5:04	49.99
12-Dec-20	3.01	76.91	20.08	23.09	5:32	50.01
13-Dec-20	8.51	72.59	18.90	27.41	6:34	50.00
14-Dec-20	8.51	72.59	18.90	27.41	6:34	50.00
15-Dec-20	6.15	76.37	17.49	23.63	5:40	50.00
16-Dec-20	8.09	74.49	17.42	25.51	6:07	49.99
17-Dec-20	8.43	72.96	18.61	27.04	6:29	50.00
18-Dec-20	7.66	71.03	21.31	28.97	6:57	50.00
19-Dec-20	0.82	77.77	21.41	22.23	5:20	50.02
20-Dec-20	8.09	74.49	17.42	25.51	6:07	49.99
21-Dec-20	3.69	72.22	24.09	27.78	6:40	50.01
22-Dec-20	6.64	76.91	16.44	23.08	5:32	50.00
23-Dec-20	2.71	78.03	19.26	21.97	5:16	50.01
24-Dec-20	4.31	75.25	20.44	24.75	5:56	50.00
25-Dec-20	4.83	76.77	18.40	23.23	5:34	50.00
26-Dec-20	1.66	81.17	17.18	18.83	4:31	50.01
27-Dec-20	1.17	82.57	16.26	17.43	4:11	50.01
28-Dec-20	2.93	74.09	22.99	25.91	6:13	50.02
29-Dec-20	8.51	72.59	18.90	27.41	6:34	50.00
30-Dec-20	10.01	77.16	12.82	22.84	5:28	49.98
31-Dec-20	12.58	77.07	10.35	22.93	5:30	49.97
<b>December 2020</b>	<b>5.62</b>	<b>75.78</b>	<b>18.60</b>	<b>24.22</b>	<b>180:10</b>	<b>50.00</b>

\*FDI is defined as percentage of time for which frequency is outside IEGC band (49.90-50.05 Hz)

क्र.स. Sl. No.	क्षेत्र REGION	उपकेंद्र SUBSTATION	VOLTAGE < V(lower)* (V=380,728 kV)	V(lower) < VOLTAGE < V(upper)*	VOLTAGE > V(upper)* (V=420,800 kV)	Voltage Deviation Index (%age of time voltage is outside range)	Number of hours voltage was outside IEGC band during month	उच्चतम (कि.वो.) Maximum(kV)	निम्नतम(कि.वो.) Minimum(kV)	औसत (कि.वो.) Average(kV)
1	पूर्वी क्षेत्र ER	अंगल ANGUL	0%	100%	0%	0%	0	798	740	775
2		गया GAYA	0%	100%	0%	0%	0	790	740	773
3		झारसगुडा JHARSUGUDA	0%	98%	2%	2%	13	804	767	788
4		रांची RANCHI	0%	100%	0%	0%	0	791	758	778
5		सासाराम SASARAM	0%	100%	0%	0%	1	808	729	765
6		दार्जिलिगंजी DARJILING	0%	100%	0%	0%	0	795	764	780
1	उत्तरी क्षेत्र NR	आगरा AGRA	0%	100%	0%	0%	0	801	745	779
2		आगरा (फतेहाबाद) AGRA (FATEHABAD)	0%	97%	3%	3%	20	808	722	783
3		अनपरा सी ANPARA-C	0%	100%	0%	0%	0	787	757	771
4		अनपरा डी ANPARA-D	0%	100%	0%	0%	0	788	755	769
5		अंता ANTA	0%	100%	0%	0%	0	798	748	779
6		बलिया BALLIA	0%	100%	0%	0%	0	793	738	774
7		बारा BARA	0%	100%	0%	0%	0	791	760	774
8		भोजपुर BHOJIPUR	0%	100%	0%	0%	1	806	738	779
9		बरेली BAREILLY	0%	97%	3%	3%	25	809	742	784
10		फतेहपुर FATEHPUR	0%	100%	0%	0%	0	795	739	767
11		ग्रेटर नोडा GREATER NOIDA	0%	96%	4%	4%	27	810	747	786
12		झाड़कवा JHARKHARA	0%	100%	0%	0%	1	802	739	780
13		कानपुर जीआईएस KANPUR GIS	0%	100%	0%	0%	0	800	743	771
14		लखनऊ LUCKNOW	0%	99%	1%	1%	8	804	741	781
15		ललितपुर LALITPUR	0%	99%	1%	1%	8	810	706	771
16		मेरठ MEERUT	0%	100%	0%	0%	2	807	741	780
17		मोगा MOGA	0%	100%	0%	0%	1	804	729	769
18		फागी PHAGI	0%	100%	0%	0%	0	806	744	778
19		वाराणसी VARANASI	0%	100%	0%	0%	0	796	748	778
20		उन्नाव UNNAO	0%	100%	0%	0%	0	799	732	769
21		चित्तौड़गढ़ CHITTOORGARH	0%	100%	0%	0%	1	805	749	780
22		अलीगढ़ ALIGARH	0%	100%	0%	0%	0	799	741	779
23		अजमेर AJMER	0%	100%	0%	0%	0	800	743	777
24		हापड़ HAPUR	0%	97%	3%	3%	21	809	708	784
25	मैनपुरी MAINPURI	0%	98%	2%	2%	12	806	748	781	
26	उरई ORAI	0%	99%	1%	1%	6	802	751	783	
27	बिकानेर BIKANER	0%	100%	0%	0%	1	799	696	769	
28	भाड़ला BHADLA	0%	100%	0%	0%	1	805	728	768	
29	कोटेश्वर KOTESHWAR	0%	100%	0%	0%	0	801	743	777	
1	पश्चिमी क्षेत्र WR	अकोला AKOLA	0%	100%	0%	0%	0	793	752	776
2		औरंगाबाद AURANGABAD	0%	100%	0%	0%	0	797	746	775
3		भोपाळ (बीडीटीसीएस) BHOPAL (BDTCL)	0%	100%	0%	0%	0	789	749	771
4		बिलासपुर BILASPUR	0%	100%	0%	0%	0	787	756	772
5		बीना BINA	0%	100%	0%	0%	0	799	752	779
6		चापा CHAMPA	0%	99%	1%	1%	6	803	768	786
7		धर्मजयगढ़ DHARAMJAIGARH	0%	100%	0%	0%	0	789	756	774
8		धुले (बीडीटीसीएस) DHULE (BDTCL)	0%	100%	0%	0%	0	797	749	775
9		एतुनी EKTUNI	0%	100%	0%	0%	0	793	750	776
10		ग्वालियर GWALIOR	0%	100%	0%	0%	0	803	747	781
11		इंदौर INDORE	0%	100%	0%	0%	0	789	747	780
12		जबलपुर JABALPUR	0%	99%	1%	1%	4	804	757	781
13		कोरडी KORADI	0%	100%	0%	0%	0	785	749	768
14		पुणे PUNE	0%	100%	0%	0%	0	799	746	777
15		रायगढ़ पुलिंग RAIGARH POOLING	0%	100%	0%	0%	1	801	769	785
16		रायपुर पुलिंग RAIPUR POOLING	0%	100%	0%	0%	0	796	766	785
17		सासन SASAN	0%	100%	0%	0%	0	784	756	770
18		सतना SATNA	0%	100%	0%	0%	0	794	752	775
19		सिवनी SEONI	0%	100%	0%	0%	0	795	752	776
20		सीपत SIPAT	0%	100%	0%	0%	0	786	756	773
21		सोलापूर SOLAPUR	0%	99%	1%	1%	4	805	751	781
22		तामनार TAMNAR	0%	100%	0%	0%	0	800	771	785
23		तिरुचूर TIRUCHUR	0%	100%	0%	0%	0	804	747	783
24		वडोदरा VADODARA	0%	100%	0%	0%	0	795	759	780
25		विंध्याचल पुलिंग VINHYACHAL PS	0%	100%	0%	0%	0	784	756	773
26		वर्धा WARDHA	0%	100%	0%	0%	1	802	756	782
27		भुज BHUJ	0%	100%	0%	0%	0	788	741	770
28		बनसकण्ठ BANASKANTHA	0%	100%	0%	0%	0	791	746	776
29		गदरवाड़ा GADARWARA	0%	100%	0%	0%	1	802	762	782
30		पडघे PADGHE	0%	100%	0%	0%	0	798	750	779
31		परली PARLI	0%	100%	0%	0%	3	803	761	783
32		राजनन्दगाँव RAJNANDGAON	0%	98%	2%	2%	13	803	754	787
33		वरीया WARORA	0%	100%	0%	0%	0	797	761	781
34		खडवा KHANDWA	0%	100%	0%	0%	0	789	754	770
1	दक्षिणी क्षेत्र SR	कूर्नूल KURNOOL	0%	100%	0%	0%	0	800	744	776
2		नेल्लूर पुलिंग NELLORE PS	0%	100%	0%	0%	0	799	743	772
3		रायचूर RAICHUR	0%	100%	0%	0%	1	803	745	777
4		निज़ामाबाद NIZAMABAD	0%	95%	5%	5%	34	810	737	785
5		श्रीकाकुलम SRIKAKULAM	0%	95%	5%	5%	36	809	738	786
6		तिरुवल्लूर THIRUVALLUR	0%	99%	1%	1%	8	808	733	778
7		कुड्डापह Cuddapah	0%	86%	14%	14%	106	816	745	785
8		महेश्वरम MAHESWARAM	0%	99%	1%	1%	6	807	727	775
9		वेमगिरी VEMGIRI	0%	81%	19%	19%	143	814	748	788
10		चिलकालुरिपेटा CHILAKALURIPETA	0%	97%	3%	3%	20	816	729	780
1	पूर्वोत्तर क्षेत्र NER	अज़ारा AZARA (400 kV)	0%	100%	0%	0%	0	411	403	406
2		बालिपारा BALIPARA (400 kV)	0%	100%	0%	0%	0	417	387	405
3		बिस्वनाथ चरिआलि BISWANATH CHARIALI (400 kV)	0%	100%	0%	0%	0	417	386	405
4		बोंगाईगाव BONGAIGAON (400 kV)	0%	100%	0%	0%	0	418	398	410
5		बोंगाईगाव टीपीएस BONGAIGAON TPS (400 kV)	0%	100%	0%	0%	0	419	401	412
6		बर्निहट BYRNHAT (400 kV)	0%	100%	0%	0%	0	411	403	406
7		पालाटाना PALATANA (400 kV)	0%	100%	0%	0%	0	418	406	414
8		रंगानादी RANGANADI (400 kV)	0%	100%	0%	0%	0	420	386	405
9		मैसा MISA (400 kV)	0%	100%	0%	0%	0	416	385	405
10		सिलचर SILCHAR (400 kV)	0%	100%	0%	0%	0	422	396	409
11		इम्फाल IMPHAL (400 kV)	0%	99%	1%	1%	5	429	387	409
12		कामेंग KAMENG (400 kV)	0%	100%	0%	0%	0	419	387	406

All listed stations are 765 kV stations unless otherwise mentioned  
\*Percentage is calculated w.r.t. Time of one month.

Angular Difference of important nodes w.r.t. Agra

BONGA\_PG GJWKA\_PG HISAR\_PG KOLAR\_PG SOLPR\_PG VINDP\_PG

