

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

- 1. Dr. Pramod Deo, Chairperson**
- 2. Shri Bhanu Bhushan, Member**
- 3. Shri R.Krishnamoorthy, Member**
- 4. Shri S.Jayaraman, Member**

**Petition No137/2008
(Suo-motu)**

In the matter of

Maintenance of Grid Discipline – Compliance of provisions of the Indian Electricity Grid Code.

And in the matter of

Shri S. Machendranathan, Chairman,
Tamil Nadu Electricity Board, Chennai

Respondent

ORDER

In exercise of powers conferred under Section 178 of the Electricity Act, 2003 (the Act), the Central Electricity Regulatory Commission (the Commission) has specified Indian Electricity Grid Code (the Grid Code). Paras 5.4.2(a) and 6.4.4 of the Grid Code enjoin upon the State utilities to endeavor to restrict their net drawal from the grid to their respective drawal schedule whenever the system frequency is below 49.5 Hz. Extracts of relevant paras of the Grid Code are reproduced below:

“5.4.2 Manual Demand Disconnection

(a) As mentioned elsewhere, the constituents shall endeavour to restrict their net drawal from the grid to within their respective drawal schedules whenever the system frequency is below 49.5 Hz. When the frequency falls below 49.0 Hz, requisite load shedding (manual) shall be carried out in the concerned State to curtail the over-drawal.”

6.4 Demarcation of responsibilities

- 4. Provided that the States, through their SLDCs, shall always endeavour to restrict their net drawal from the grid to within their respective drawal schedules, whenever the system frequency is below 49.5 Hz. When the frequency falls below 49.0 Hz, requisite load shedding shall be carried out in the concerned State(s) to curtail the over-drawal.”*

2. In keeping with the above noted provisions of the Grid Code, manual load shedding has to be carried out to curtail over-drawal when the grid frequency falls below 49.0 Hz.

3. It has been reported that on 10.10.2008, Tamil Nade Electricity Board, (TNEB, to use the acronym) had over-drawn electricity during a number of time blocks. The necessary details of over-drawal by TNEB on that date are contained in the **Annexure** attached. It is noted that the respondent continued to overdraw at frequency of 49.0 Hz or below (though shown as 49 Hz by the Special Energy Meters since these meters record the frequency as 49.0 Hz even when it is below 49.0 Hz) during the following time blocks on 10.10.2008:

Time Block	System Frequency (Hz.)	TNEB		
		Schedule (MW)	Drawal (Avg. MW)	Over-drawal (MW)
23	49	1643	2712	1069
38	49	1738	2004	266
39	49	1738	1847	109
42	49	1683	1875	192
43	49	1692	1813	121
44	49	1692	1928	236
45	49	1692	1987	295
46	49	1692	1914	222
47	49	1692	1928	236
48	49	1692	1900	208
49	49	1683	1861	178
50	49	1683	1863	180
51	49	1683	1769	86
52	49	1683	1802	119
55	49	1681	1831	150
71	49	1727	1947	220
75	49	2229	2403	174
89	49	2121	2387	266
90	49	2105	2434	329
91	49	2091	2398	307
92	49	2091	2439	348
93	49	1795	2354	559
94	49	1825	2116	291
95	49	1833	2077	244
96	49	1833	2151	318

4. The above acts of TNEB amount to non-compliance of the provisions of the Grid Code.

5. The respondent is hereby directed to show cause, latest by 30.11.2008, as to why as a person responsible to TNEB for conduct of its business should also not be deemed to be guilty of non-compliance of the provisions of the Grid Code along with TNEB, under Section 149 of the Electricity Act, 2003, and not punished accordingly.

6. List this petition for further directions on 4.12.2008.

Sd/-
[S. JAYARAMAN]
MEMBER

Sd/-
[R. KRISHNAMOORTHY]
MEMBER

Sd/-
[BHANU BHUSHAN
MEMBER

Sd/-
[DR. PRAMOD DEO]
CHAIRPERSON

New Delhi, dated 24th November 2008

ANNEXURE

Date:		10.10.2008		
Time Block	System Frequency (Hz)	TNEB		
		Schedule (MW)	Drawal (Avg. MW)	Over-drawl (MW)
1	49.44	1780	2444	663
2	49.28	1754	2271	517
3	49.36	1754	2269	515
4	49.48	1754	2344	590
5	49.64	1754	2374	620
6	49.64	1761	2387	627
7	49.24	1761	2507	746
8	49.04	1761	2594	833
9	49.14	1736	2503	767
10	49.06	1712	2599	887
11	49.04	1688	2651	963
12	49.12	1639	2658	1019
13	49.14	1639	2762	1123
14	49.2	1639	2792	1153
15	49.5	1639	2861	1222
16	49.48	1639	2892	1253
17	49.28	1639	2794	1155
18	49.28	1640	2800	1160
19	49.26	1640	2737	1096
20	49.06	1641	2725	1083
21	49.1	1642	2574	932
22	49.04	1643	2681	1038
23	49	1643	2712	1069
24	49.02	1668	2556	888
25	49.66	1698	1648	-51
26	49.52	1695	1826	131
27	49.16	1696	2003	308
28	49.12	1696	2185	489
29	49.1	1693	2328	635
30	49.08	1693	2372	678
31	49.02	1691	2318	627
32	49.06	1691	2230	539
33	49.14	1691	2282	591
34	49.1	1691	2233	542
35	49.02	1691	2138	447
36	49.06	1694	2129	435
37	49.06	1738	2143	404
38	49	1738	2004	266
39	49	1738	1847	109
40	49.1	1745	1947	202
41	49.12	1727	1589	-138
42	49	1683	1875	192
43	49	1692	1813	121
44	49	1692	1928	236
45	49	1692	1987	295
46	49	1692	1914	222

47	49	1692	1928	236
48	49	1692	1900	208
49	49	1683	1861	178
50	49	1683	1863	180
51	49	1683	1769	86
52	49	1683	1802	119
53	49.02	1679	1918	239
54	49.02	1681	2020	339
55	49	1681	1831	150
56	49.08	1681	1772	91
57	49.24	1681	1404	-277
58	49	1681	1929	248
59	49	1681	1895	215
60	49.16	1675	1759	84
61	49	1685	1899	214
62	49	1685	1866	181
63	49.02	1685	1870	185
64	49.04	1685	1956	271
65	49.08	1685	1953	268
66	49.04	1685	2023	338
67	49.02	1695	1966	271
68	49.02	1703	1943	240
69	49.14	1703	1897	194
70	49.1	1703	1931	228
71	49	1727	1947	220
72	49.02	1756	1978	222
73	49.1	2229	2170	-59
74	49.06	2229	2329	100
75	49	2229	2403	174
76	49.08	2229	2283	54
77	49.1	2259	2382	123
78	49.1	2279	2354	75
79	49.12	2279	2194	-84
80	49.06	2279	2303	24
81	49.24	2279	1990	-289
82	49.14	2279	1932	-347
83	49.2	2280	1970	-309
84	49.12	2280	2103	-177
85	49.06	2280	2339	60
86	49.06	2280	2369	89
87	49.04	2285	2309	24
88	49.12	2285	2352	68
89	49	2121	2387	266
90	49	2105	2434	329
91	49	2091	2398	307
92	49	2091	2439	348
93	49	1795	2354	559
94	49	1825	2116	291
95	49	1833	2077	244
96	49	1833	2151	318