

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No.35/2000

Present:

1. Shri S.L. Rao, Chairman
2. Shri DP. Sinha, Member
3. Shri G.S. Rajamani, Member
4. Shri A.R. Ramanathan, Member In

the matter of

Directions for maintaining the Regional Grid frequency above 48.4 Hz in Southern Region in the presence of Member (GO) Central Electricity Authority, on 26.11.1999.

And

In the matter of:

Tamil Nadu Electricity Board, Chennai

Petitioner

Vs.

1. Power Grid Corporation of India Ltd.
2. Chairman, Karnataka Transmission Corp, Bangalore
3. Chairman, Transmission Corporation of Andhra Pradesh Ltd., Hyderabad.
4. Chairman, Kerala State Electricity Board, Thiruvananthapuram.
5. Superintending Engineer, Electricity Department of Pondichery, Vilignur.

Respondents

The following were present on behalf of the parties:-

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| 1. Shri S. Sowmyanarayanan, Consultant, TNEB | Petitioner |
| 2. Shri R.D. Prabhakar, GM, SRLDC, Powergrid | Respondents |
| 3. Shri K.K. Das, GM(SO), Powergrid | -do- |
| 4. Shri B.S. Sheshadri, SE, LDC, KPTCL | |

**ORDER (DATE OF HEARING :
30.08.2000)**

The petitioner has sought direction to the Powergrid Corporation of India (PGCIL), the respondent No.1 herein, who is stated to be maintaining the Southern Load Despatch Centre (SRLDC) to maintain grid frequency at

48.4 Hz and above and pay compensation at the rate of Rs. 10,000/= for each under frequency tripping and for the islanding of Southern grid at Rs.50,000/-for each occurrence. A further prayer has been made that the provisions of Clause 2.b (2) and (3) of Indian Electricity Grid Code be implemented by SRLDC in letter and spirit.

2. The Petitioner is engaged in generation, transmission and distribution of power within the State of Tamil Nadu, besides purchase of power from Central Generating Stations within Southern region and import of power from other regions. The Power from Central Generating Stations and that imported from outside the Region is transmitted through 400 KV network owned and operated by PGCIL within the region.

3. According to the petitioner, the Regional Load Despatch Centre at Bangalore regulates the power flow in inter-state tie lines and it is the responsibility of PGCIL to maintain a safe operating frequency of regional grid as per the decision of Southern Regional Electricity Board (SREB). It is stated that SREB decided to operate the Southern Regional Grid at a frequency not less than 48.3 Hz. SRLDC is unable to maintain this frequency, causing thereby frequent automatic load shedding by under-frequency relay operation and frequent interruption to the consumers served by TNEB. The islanding scheme whereby Tamilnadu State gets separated from the grid, caused loss of eligible power from Ramagundam Super Thermal Station and power imported from other regions, which further resulted in extensive load shedding in Tamil Nadu.

4. The petitioner is stated to have taken up the issue with Central Electricity Authority who convened a meeting on 26-11-99 of the Chairmen of SEBs of Southern Region under the Chairmanship of Member (Grid & Operation) when it was decided that all the constituents would adhere to grid discipline and maintain frequency at not less than 48.4 Hz. In case of overdrawal at 48.4 Hz and below, SRLDC will advise the SLDCs to take action either to shed load or to increase their own generation, in order to maintain their drawal within the schedule. It was also decided that in case the overdrawal at frequency below the threshold frequency of 48.4 Hz continued and frequency went down to 48.2 Hz, SRLDC, after giving reasonable notice of about 5 minutes, shall resort to opening of the ICT Inter-connecting feeders from Powergrid 400 KV substations to the overdrawing States.

5. It has been alleged by the petitioner that despite the above decisions, the operating frequency continued to be below 48.4 Hz in Southern Region and the under-frequency relays set at 48.00 Hz have operated number of times, besides causing a major-grid disturbance on 19-12-1999.

6. Although the Petitioner is stated to be willing to maintain minimum frequency of 48.5 Hz. and also to improve frequency further to 49 Hz., yet it has not been possible on account of unwillingness on the part of certain constituents of Southern Region to maintain the desired frequency and inability on the part of Powergrid to enforce grid discipline. It has also been

alleged that the respondent No.1 has not implemented IEGC in Southern region, as may be evident from the prevalent grid violations.

7. In the above background the petitioner has prayed for a direction to Powergrid to maintain the Southern Grid frequency at 48.4 Hz and above and to fix its responsibility for maintaining regional grid frequency and pay compensation for each under-frequency tripping or islanding as has been noted above. No specific relief has been sought against SEBs impleaded as respondents.

8. The reply to the petition has been filed by PGCIL, respondent No.1 and the Transmission Corporation of Andhra Pradesh Ltd., respondent No.3. The other respondents have not filed their reply.

9. PGCIL in its reply has denied its responsibility or that of SRLDC for the continuing low-frequency situation in Southern Region. It has also disowned its responsibility for delivery of power from Central Generating Stations within Southern Region or the power imported from outside the Region, to the regional constituents as per their entitlement or for transmitting full power contracted by a constituent. According to PGCIL, SRLDC has no control to regulate physically the power flows and the primary responsibility for regulation of power flows rests with the constituents of the Region. SRLDC only monitors the power flows and advises the constituents to regulate the flows in case a constituent is undesirably deviating from the schedule or the power system has a problem. PGCIL, with reference to para 6.2 (1) of IEGC

has pointed out that a duty has been cast upon the Regional constituents to ensure that the grid frequency always remains within 49.0 - 50.5 Hz band and, therefore, frequency maintenance has been recognised as the collective responsibility of the regional constituents. It has stated that in the past, in view of inadequate response from the constituents of the Southern Region, including the petitioner, to the advice given by SRLDC, the latter on several occasions took the extreme step of opening the infeeds from the ISTS to the constituents so as to curtail overdrawals under low frequency conditions. PGCIL has brought to our notice the instances of overdrawal and deviations from the schedule by the petitioner as also the other constituents. As regards directions for implementation of Clause 2.6 (2) and 2.6(3) of EGC, sought by the petitioner, it has been stated that these pertain to the role of SLDCs, set up by the constituents themselves and accordingly responsibility for implementation of these clauses rests with the constituents.

10. APTRANSCO, in its reply has denied the allegation that because of non-cooperation of the other constituents, the frequency was allowed to fall below 48.4 Hz, which resulted in overdrawal by other states and under-drawal by TNEB. It has alleged that on innumerable occasions the petitioner TNEB overdrew at frequencies below 48.4 Hz, especially during peak load hours, which used to be pointed out to it. In the context of specific instance of grid disturbance on 19-12-1999, it has been stated by APTRANSCO that the petitioner was over-drawing by 209 MWs at that time.

11. We have considered the contentions raised by the parties in their pleadings and also at the time of hearing. At this stage, we do not consider it appropriate to adjudicate upon the allegations and the counter-allegations made by the parties since we do not propose to examine the issues on merits. In accordance with Sub-section (9) of Section 55 of the Electricity (Supply) Act, 1948, all disputes with reference to the operation of the power system, including grid operation are to be decided by CEA. The regulations framed by the Commission provide that it may not generally entertain any application or complaint or hold any proceeding till the decision of CEA on the issues referred to it under Section 55 (a) of the Electricity (Supply) Act or till the expiry of a period of three months after reference is made to CEA, whichever is earlier. Therefore, the petitioner shall make a reference to CEA for its decision. This is essential in view of the importance of issue raised and also keeping in view the technical nature of the issue. In case, any of the parties are not satisfied with the decision of CEA, or the matter is not decided by CEA till the expiry of a period of three months after the reference is made, the petition may be revived before the Commission in accordance with law, for appropriate relief. With these observations, the petition stands disposed of, with no order as to costs.

12. We may add that as per the provisions of IEGC responsibility is assigned to the regional constituents to ensure that the frequency remains within 49.0 - 50.5 Hz band. We call upon all those responsible for maintenance of grid frequency to make all out efforts to avert the situation which may result in serious grid disturbances, particularly of the kind of a

major Grid disturbance that occurred on 19-12-99. We also hope that the enforcement of commercial mechanism in due course of time will go a long way in maintenance of grid discipline.

A copy of this order be sent to CEA.

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(A.R. Ramanathan)
Member

(G.S. Rajamani)
Member



(S.L. Rao)
Member

(S.L.
Rao)
Chairman

New Delhi dated 30th August, 2000

