CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Coram:

- 1. Shri Ashok Basu, Chairman
- 2. Shri G.S. Rajamani, Member

Petition No.107/2002

And In the matter of

Overdrawal from the grid below 49 Hz and non-compliance of directions of WRLDC.

Western Regional Load Despatch Centre Petitioner

Vs

- 1. Madhya Pradesh State Electricity Board, Jabalpur
- 2. Gujarat Electricity Board, Vadodara
- 3. Chhattisgarh State Electricity Board, Raipur
- 4. Maharashtra State Electricity Board, Mumbai
- 5. Goa Electricity Department, Panaji, Goa
- 6. Union Territory of Dadar & Nagar Haveli, Silvassa
- 7. Daman & Diu Administration, Electricity Department, Daman
- 8. National Thermal Power Corporation, New Delhi
- 9. Nuclear Power Corporation Ltd., Mumbai Respondents

Petition No.108/2002

And in the matter of

Security threat to WR Grid and non-compliance of directions of WRLDC.

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Western Regional Load Despatch Centre Petitioner

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- 1. Chhattisgarh State Electricity Board, Raipur
- 2. Gujarat Electricity Board, Vadodara
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- 7. Union Territory of Dadar & Nagar Haveli, Silvassa
- 8. Daman & Diu Administration, Electricity Department, Daman
- 9. Nuclear Power Corporation Ltd., Mumbai Respondents

The following were present

- 1. Shri S. Ganguly, Mgr, WRLDC
- 2. Shri R. Mendiratta, Mgr, WRLDC
- 3. Shri V. Mittal, AGM(SO), PGCIL
- 4. Shri V.K. Dayal, CM (SO), PGCIL
- 5. Shri B.N. Farkade, CE, MSEB
- 6. Shri J.V. Vyas, I/C Chief Engg., GEB
- 7. Shri S.N. Chauhan, SE (Comml.), CSEB
- 8. Shri A. P. Bhairve, Addl. SE (LD), MPSEB
- 9. Shri K.K. Garg, GM(Comml.), NTPC

ORDER (DATE OF HEARING: 27-3-2003)

Under Clause (c) of Section 13 of the Electricity Regulatory Commissions Act 1998, (the Act, for short) the Commission is empowered to regulate inter-State transmission. In exercise of these powers, the Commission had approved Indian Electricity Grid Code. Clause 6.2 of IEGC prescribes, inter alia, that all Regional constituents shall make all possible efforts to ensure that the grid frequency always remains within 49.0-50.5 Hz band. It further lays down that the constituents shall endeavour to restrict their net drawal from the grid 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. Further, in case of certain contingencies and/or threat to system security, the RLDC may direct the SLDC to decrease its drawal by a certain quantum. Such directions shall immediately be acted upon. Each Regional constituent is called upon to make arrangements that will enable manual demand disconnection to take place, as instructed by the SLDC, under normal and/or contingent conditions and the measures taken to reduce the constituents drawal from the grid shall not be withdrawn as long as the frequency/voltage remains at a low level, unless specifically permitted by the RLDC. Para 7.4.4 of IEGC further reiterates 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. SLDCs/STUs are also required to regularly carry out necessary exercises regarding short-term and long-term demand estimation for their respective States, to enable them to plan in advance as to how they would meet their consumers' load without overdrawing from the grid.

- 2. Earlier, in Petition No. 107/2000, the petitioner had brought to the Commission's notice the instances of overdrawals by the constituents of Western Region, violations of provisions of IEGC by them and non-observance of the directions issued by the petitioner. After hearing that petition, the Commission directed MPSEB and GEB to file undertaking on affidavit that they would be abiding by the provisions of IEGC, since these two state utilities were found to be, *prima facie*, responsible for overdrawals. In compliance with the directions of the Commission, the affidavits were filed by the concerned state utilities. The Commission accepted the undertakings given by them and closed the matter with the direction that they would remain bound by their respective affidavit filed before the Commission.
- 3. The Petition No.107/2002 was filed by WRLDC, also the petitioner in Petition No. 107/2000 bringing to the notice of the Commission the instances of overdrawal of power by the different constituents of Western Region during July 2002 and October 2002. The petitioner submitted that on 30th July 2002, there was a grid failure in the Western Region as a consequence to these overdrawals.

4. The petitioner placed on record a large number of messages sent to Respondent No. 1, MPSEB, Respondent No.2, GEB and Respondent No.3, MSEB with a view to persuading them to restrain themselves from overdrawals, in view of the precarious condition of the grid in that date. These persuasive efforts, however, did not yield any fruitful result and the consequence was failure of Western Regional Grid at about 20.00 Hrs on 30.7.2002. An Inquiry Committee under the Chairmanship of Shri R.K. Narayan was constituted by CEA to go into the reasons for grid failure. The Committee found that on 30.7.2002, up to 20.00 Hrs, the extent/quantum of overdrawals by the state utilities out of 80 time blocks of 15 minutes each, was as under:

State	Time Blocks of Over-drawal (up to 2000 hrs.)	Quantum of Over- drawal up to 2000 hrs.
	(No.)	(MU)
Gujarat	69	2.943
Maharashtra	25	0.509
Chhattisgarh	Nil	Nil
Madhya Pradesh	80	5.946

5. The Committee also found that overloading by different states on 30.7.2002 at or about the time of grid disturbance the details of which are given here under:

Name of State	Freq. At - 50 Hz.	Freq. At - 49 Hz.
Gujarat	304 MW	141 MW
Maharashtra	505 MW	225 MW
Chhattisgarh	(-) 108 MW	(-) 192 MW
Madhya Pradesh	774 MW	634 MW

6. In Petition No. 108/2002, the petitioner, WRLDC placed on record different instances of overdrawals by the constituents of Western Region during the month of October 2002. It was stated that on 6.10.2002, system frequency remained below

49.0 Hz for 43.0% of time. It remained at 49.0 Hz continuously for more than 2 hours starting from 0229 hrs due to overdrawals by MPSEB. Again, at 1220 Hrs on that date, the frequency dipped below 49.0 Hz for about half an hour for which GEB was responsible. On 10.10.2002, the system frequency dipped below 49.0 Hz at 0232 Hrs for about half an hour on account of overdrawal by MSEB and at 1233 Hrs on that day. These are some of the instances narrated by us from the petition, which otherwise abounds in similar instances.

- 7. In Petition No. 107/2002, the petitioner had invoked provisions of Section 45 of the Electricity Regulatory Commissions Act, 1998 and sought appropriate penalty to be imposed on MPSEB. On consideration of the facts brought on record the Commission was satisfied that MPSEB, along with GEB and MSEB, was responsible for non-observance of the provisions of Grid Code and the orders of the petitioner an apex body under the law. The Commission had imposed a find of Rs.1 lakh on MPSEB. However, it decided to issue show cause notices to GEB and MSEB directing them to explain why the penalty powers of the Commission should not be invoked for non-compliance of the Commission's Order and provisions of IEGC during July 2002 and October 2002.
- 8. The replies to the show case notice have been filed by both the state utilities. We have heard their representatives also. In their replies, the factum of overdrawal by the concerned state utilities has not been denied. It is explained that at times, these utilities were required to overdraw under the extreme emergency conditions but overdrawals were discontinued on instructions from the petitioner. The concerned utilities submitted that they were resorting to power cuts in order to contain their drawal from the central generating stations within the allocated guota. The

representative of the petitioner has generally supported the stand taken by the concerned state utilities. It has not pressed for any penal action against them. The representative of the petitioner also submitted that the extent of overdrawals by GEB and MSEB is minimal in the present day scenario.

- 9. We have very carefully considered the matter. We express our strong disapproval of conduct of GEB and MSEB of overdrawal of power from the Western Regional Grid on different occasions. Nevertheless, taking cognizance of subsequent cooperation displayed by these utilities in the matter of grid management, as submitted before us by the representative of the petitioner, we refrain from imposing any penalty under Section 45 of the Act. We will, however, continue to monitor the conduct of the utilities including GEB and MSEB on the issue of overdrawals from the grid with a view to ensuring maintenance of proper decorum and discipline in the grid. We, therefore, direct the petitioner to bring to the Commission's notice any instances of violation of IEGC or the directions of the petitioner regarding maintenance of grid discipline or the Commission's own order. The Commission will not hesitate to take appropriate penal action in accordance with law when so warranted based on instances of grid indiscipline coming to its notice.
- 9. With the above observations, the proceeding against GEB and MSEB are dropped and the matter is closed.

Sd/-(G.S. RAJAMANI) MEMBER Sd/-(ASHOK BASU) CHAIRMAN

New Delhi dated 9th April, 2003