CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Coram:

- 1. Shri Ashok Basu, Chairman
- 2. Shri G.S. Rajamani, Member
- 3. Shri K.N. Sinha, 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.

And in the matter of

Western Regional Load Despatch Centre Petitioner

Vs

- 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 R.G. Yadav, ED (SO), PGCII
- 2. Shri V. Mittal, AGM, PGCIL
- 3. Shri V.K. Dayal, Chief Mgr (SO), PGCIL
- 4. Shri A Roy, AGM, WRLDC
- 5. Shri S Gnguly, Manager, WRLDC
- 6. Shri Sunil Agrawal, CM (SO), PGCIL
- 7. Shri K.K. Garg, GM (Comml.), NTPC
- 8. Shri D.K. Dogra, DGM (Comml.), NTPC
- 9. Shri M.K. Jain, CE, MPSEB
- 10. Shri D.G. Joshi, SE(LD), MPSEB
- 11. Shri J. Agasti, AE, MPSEB
- 12. Shri Suryabali, Addl SE, MPSEB
- 13. Shri Satish Agnihotri, Advocate, MPSEB
- 14. Shri Anil K. Pandey, MPSEB
- 15. Shri Rohit K. Singh, Advocate, MPSEB
- 16. Shri A.P. Varma, C.E., MSEB
- 17. Shri M.N. Nagankar, MSEB

ORDER (DATE OF HEARING: 24-1-2003)

There is an old adage that one should cut one's coat according to one's cloth. It appears that the words of wisdom contained in this adage have not percolated amongst the state utilities drawing power from their respective grid. The instances of state utilities connecting more load than power availablity in the grid are not uncommon. In fact, overdrawals by the different constituents of the region has a cascading effect as it encourages competitive overdrawals by the constituents. As a result of this, the grid becomes vulnerable and drawal of power under these circumstances impinges upon grid security. This is the situation we have to grapple with in these petitions and avoid its recurrence in future, by providing minimal deterrence. With these introductory remarks, we proceed to consider these petitions, based on facts brought on record.

Petition No.107/2002

- 2. This petition has been filed by Western Regional Load Despatch Centre (WRLDC) on 26.8.2002 with a specific prayer for action under Sections 44 and 45 of the Electricity Regulatory Commissions Act, 1998 (the Act) against Madhya Pradesh State Electricity Board (MPSEB), for violation of the Commission's order dated 24.8.2001 in Petition No.107/2000.
- 3. It has been stated that because of failure of monsoon, the demand for power during the second week of July 2002 had exceeded its availability. Because of this, the western regional grid had been operating under low frequency conditions and 80% to 90% of the time during this period the grid frequency was less than 49 Hz on most of the days. The petitioner has placed on record the frequency profile of the Region for the month of July 2002, which supports the averment made. It is averred that under these critical operating conditions, MPSEB continued to overdraw by 200 to 500 MW with effect from 12 July, 2002, which became a source of serious threat to the security of the grid. It is stated that initially, MPSEB used to overdraw power during the evening peak hours, but later, the overdrawals became a routine affair as the overdrawals were extended to the whole day. The petitioner is stated to have taken up the matter with MPSEB for containing its overdrawals but without eliciting any favourable response. The quiver of communications sent to different constituents of the Western Region, MPSEB in particular at different hours of the day, calling upon them to stop overdrawl of power has been placed on record by the petitioner establishes the veracity of averments made in the petition. The petitioner is stated to have opened 400 kV Itarsi-Bhopal circuit I & II and Satna-Bina circuit I to contain overdrawal by MPSEB on different days. Even such a drastic action by the petitioner could not deter MPSEB to stop overdrawal. During the second week of July 2002 and

onwards the frequency of the grid was hovering at 48 Hz and at times as low as 47.70 Hz. As a result of overdrawals, the western regional grid failed on 30.7.2002. It is stated that earlier, in its order dated 24.8.2001 in Petition No.107/2000, the Commission took a serious view of overdrawals by MPSEB during October, 2000. However, no action was taken at that time as MPSEB had given an undertaking on oath that it would abide by IEGC and directions of the Commission.

- 4. There are also some other allegations against MPSEB in the petition. However, we are limiting our consideration to above two issues, namely that MPSEB continued to indulge in overdrawal at a frequency below 49.0 Hz and that it did not take any corrective steps despite instructions to that effect by the petitioner.
- 5. The petitioner has invoked provision of Section 45 of the Act, according to which the Commission has power and authority to impose fine in case of non-compliance of its directions.

Petition No.108/2002

6. Petition No.108/2002 has also been filed by Western Regional Load Despatch Centre on 23.10.2002 wherein it has placed on record different instances of overdrawal by the constituents of Western Region during the month of October 2002 urging the Commission to pass such order or orders as may be deemed proper in the facts and circumstances. It is stated that on 6.10.2002 system frequency remained below 49 Hz for 43.02% of time. Specifically, system frequency dipped below 49.0 Hz at 0229 hrs and continued to remain so for more than two hours due to continuous overdrawal of 150-200 MW by MPSEB. It is stated that system frequency again dipped below 49.0 Hz at 1220 hrs and continued to remain so for more than half an

hour due to continuous overdrawal by GEB. The petitioner has further stated that on 10.10.2002, system frequency dipped below 49.0 Hz at 0232 hrs and remained so for half an hour on account of overdrawal by MSEB to the tune of 200 MW and overdrawal by MPSEB by 150-175 MW. Again at 1233 hrs on that day, MSEB was found to be overdrawing power to the extent of 200-300 MW at low frequency conditions. These are specific instances of overdrawal by the constituents, which we have taken notice of.

- 7. Reply to Petition No.107/2002 has been filed by MPSEB. In case of Petition No.108/2002, replies have been filed by MPSEB, GEB and CSEB. MSEB has not filed its reply in this petition. The reply filed by MPSEB is common to both the petitions. The principal defence taken by MPSEB on two issues identified by us is that the report of Narayan Committee constituted by CEA to enquire into the incident of failure of Western regional grid on 30.7.2002, has held that at the time of grid failure, all the constituents were overdrawing and, therefore, MPSEB cannot be singled out. MPSEB has also listed a number of steps it has already taken or it proposes to take in order to restrict overdrawals. For the purposes of the present petition, it is not necessary for us to dilate upon them in any detail.
- 8. At the hearing before us on 24.1.2003, Shri S.K.Agnihotri, Advocate, appearing for MPSEB confined his arguments on the issue of overdrawals and reiterated the stand taken in the reply filed on its behalf. He candidly conceded that MPSEB had been resorting to overdrawals from the regional grid in the dire need. He further pleaded for some more time for corrective action.

- 9. In exercise of its powers under Clause (c) of Section 13 of the Act, to regulate inter-state transmission, the Commission has approved Indian Electricity Grid Code (IEGC). 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 overdrawal. 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.
- 10. It becomes explicit that IEGC enjoins upon the regional constituents to maintain the grid frequency within the band of 49.0 Hz 51.5 Hz. When the frequency

falls below 49.0 Hz all possible measures for restoration of frequency within the permissible frequency band including manual load-shedding are to be expeditiously resorted to and the instructions of RLDC to SLDC/States concerned are binding and have to be complied with.

- 11. According to the petitioner, MPSEB and other regional constituents have not been complying with these provisions of IEGC or petitioner's instructions.
- 12. Earlier, the petitioner in Petition No.107/2000 had brought to the notice of the Commission instances of over-drawal by constituents of Western Region during October 2000 and their non-adherence to the provisions of IEGC. Upon hearing, the Commission was satisfied that MPSEB and GEB were mainly responsible for overdrawals and violations of provisions of IEGC during the period. Therefore, they were directed to file an undertaking on affidavit that they would abide by the provisions of IEGC. MPSEB in its affidavit dated 25.7.2001 gave an undertaking to abide by the regulations mentioned in IEGC and also make all possible efforts to strictly adhere to the drawal schedule finalised by WRLDC at frequency below 49.0 Hz. GEB, in its affidavit dated 24.7.2001 undertook to make all possible efforts to curb over-drawals from central sector so as to bring drawal below or close to the scheduled drawals whenever the frequency was below the lower limit of the frequency band, 49.0-50.5 Hz stipulated in IEGC. In view of the affidavits filed on behalf of MPSEB and GEB, the Commission instead of precipitating penal action by invoking its power of punishment under Section 45 of the Act, directed that authorities concerned would remain bound by the undertakings given by them in the affidavits filed before the Commission.

- 13. During November 2001, one of us (Shri K.N. Sinha, Member) visited Western Region Headquarters to make on the spot assessment of the system frequency in the Region. It was revealed that MPSEB was still overdrawing power at low frequency, violating the conditions prescribed in IEGC, and was not at all heeding to the instructions issued by the petitioner though under the law it was and is so bound. After issue of show cause notice to MPSEB, affidavits were filed on its behalf. However, the Commission in its wisdom decided not to proceed to take any penal action against MPSEB.
- 14. On perusal of facts placed on record in the present petitions and even independent of the allegations contained in the petition, we are constrained to observe that despite the repeated opportunities provided by the Commission to restrain overdrawal of power, the major constituents of Western Region, namely, MPSEB, GEB and MSEB have continued to overdraw and bleed the grid. The failure of grid in Western Region on 30.7.2002 was the effect of these over-drawals. The Narayan Committee in its report has categorically stated that out of the 80 time blocks of 15 minutes each, that is, up to 20.00 hrs, on 30.7.2002, the state of over-drawals by different constituents were 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

15. The Committee has also found that the overloading by different States on 30.7.2002 at or about the time of grid disturbance was as under (as extracted by MPSEB in its reply):-

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

16. On consideration of the details available on record, we are satisfied that MPSEB has violated the provisions of IEGC and the Commission's order dated 24.8.2001 in Petition No.107/2000 with impunity despite the fact that affidavits for adherence to the schedule, compliance of directions of the petitioner and obedience of the Commission's directions were filed on its behalf before the Commission on different occasions. Similarly, MSEB and GEB have also contributed towards grid indiscipline. As the law stands today, we conceive that it is the sacred duty of the Commission to honour its obligation to regulate inter-state transmission and save the situations of grid collapse because of its disdainful effect on the national economy. The persuasive approach adopted by the Commission so far has not yielded the desired results. We feel convinced that time has come when the Commission must enforce the authority at its command to discipline the recalcitrant constituents. Under these circumstances it has become imperative to invoke quasi-penal powers conferred on the Commission under Section 45 of the Act. Accordingly, we direct that MPSEB shall pay a token penalty of Rs.1.00 lakh (Rupees one lakh only) for nonobservance of the provisions of IEGC and non-compliance of directions of the Commission as contained in its order dated 24.8.2001. The penalty shall be deposited in the Commission's office by 15.2.2003 failing which, MPSEB shall make

itself liable for further penalty in accordance with law. We make it clear that imposition of penalty shall not absolve MPSEB of its liability for appropriate action for future violations, if any.

- 17. In Petition No.107/2002 the petitioner had sought penal action under Section 45 against the MPSEB only and the issue has been decided by us above. However, on perusal of material on record, we are *prima facie*, satisfied that GEB and MSEB are also responsible for grid indiscipline, and a case for invoking penal provisions against GEB as also MSEB for their contribution towards grid indiscipline during October 2002, is also made out. However, because of procedural constraints, we do not intend to proceed immediately. We, therefore, direct GEB and MSEB to show cause as to why provisions of Section 45 of the Act should not be invoked for their failure to comply with the Commission's directions and the provisions of IEGC approved by the Commission during July 2002 and October 2002, the subject matter of these two petitions. Their reply should be filed by 28.2.2003, duly supported by affidavit.
- 18. The petitioner has filed affidavits in both these petitions that the dues of MPSEB on account of UI charges for the period ending 29.12.2002 work out to Rs.89.84 crores and the dues continue to accumulate. The utilities like NTPC and GEB entitled to UI charges feel concerned because of their non-realisation. The petitioner through these affidavits has sought direction to MPSEB to pay UI charges promptly as per weekly accounts issued by WREB Secretariat. In our view the direction sought by the petitioner for settlement of UI charges through the affidavits filed cannot be given as it would have the effect of expanding the scope of the original petition. We may nevertheless observe that IEGC already stipulates that weekly bills for UI charges, as per UI settlement system have a higher payment priority and the

concerned constituents are required to pay the billed amounts within 10 days of billing date. In case of delay in payment beyond 10 days, the constituents become liable to pay interest thereon. MPSEB should honour the commitment of UI charges under the ABT scheme as applicable.

19. The matter be listed on 27.3.2002 for further directions.

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

New Delhi dated 28th January, 2003