

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 208/2011 (Suo-motu)

Sub: Implementation of Automatic Demand Management Schemes in compliance of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010.

Date of hearing : 10.1.2012

Coram : Shri S. Jayaraman, Member
Shri V.S.Verma, Member
Shri M.Deena Dayalan, Member

Respondents : E.E. (SLDC-EO), U. P.Power Corporation Ltd.
and Others

Parties present : Shri S.K.Sonee, NLDC
Shri V.K.Agarwal, NRLDC
Shri V.V.Sharma, NRLDC
Shri Rajiv Porwal, NLDC
Shri S.R.Narasimhan, NLDC
Shri S.S.Barpanda, NLDC
Shri G.Mitra, ERLDC
Shri S.Banerjee, ERLDC
Shri V.Suresh, SRLDC
Miss S.Usha, WRLDC
Shri Kharshing, MeECL
Shri B.B.Mehta, SLDC, Gujarat
Shri Rahul Srivastava, Advocate , SLDC, UP
Shri Mukesh Kumar Gupta, UPPTCL
Shri P.A.R. Bende, SLDC, MP
Shri M.L.Batra, PXIL
Shri S.Vallinayagam, Advocate, TAGEDCO
Shri M.K.Adhikary, APDCL
Shri J.K.Baishya, ASGCL
Shri R.B.Sharma, Advocate, BSEB, JSEB & BSES

Record of Proceedings

The representative of the National Load Despatch Centre submitted that the issue of Automatic Demand Management Scheme (hereinafter referred to as 'scheme') was debated in all the Operation Co-ordination Committee meetings of Regional Power Committees (RPCs) and also in the RPC meetings. He submitted that the frequency remained below 49.5 Hz during the month of October, 2011 for 23% of time and during the period from August to November, 2011 the frequency remained below 49.5 Hz for 12.3% of time. Temporary frequency excursions below 49.5 Hz was more 100 times during this period. He submitted that Grid Code stipulate that the utilities should endeavor to control frequency when the frequency comes below 49.7 Hz itself. He further submitted the position of implementation of the scheme as under:

- (a) **Northern Region:** Except SLDC Delhi, none of the SLDCs in region have implemented the scheme. Under SLDC Delhi, NDPL has already implemented the scheme through SCADA system whereas BYPL and BRPL are in the process of implementation of the scheme.
- (b) **Western Region:** None of the States of the Western Region have implemented the scheme.
- (c) **Southern Region:** As per information received from the SRLDC, the State Utilities of Andhra Pradesh, Kerala and Tamil Nadu were in the process of identification of the feeders and grouping up load. No response has been received from the State of Karnataka and Puducherry.
- (d) **Eastern Region:** None of the States of the Eastern Region have implemented the scheme.

- (e) **North Eastern Region:** Electricity Department, Government of Nagaland has confirmed that it has implemented the scheme; a relief of 15.5 MW under peak load condition and 8.7 MW during off-peak condition. The scheme is under observation by NERLDC for the stated quantum of load relief. None of other States of the North Eastern Region have implemented the scheme.

2. The representation of NLDC further submitted that as per the response received, the States are in the process of implementing the scheme. In response to the query of the Commission as to whether the States are implementing the scheme as per the regulations, the representative of NLDC submitted that as the first step, the States have to identify the feeders in four categories as mentioned in the suo-motu Order. The second stage is to implement the trippings of feeders either through Programmable Logic Controller (PLC) or through SCADA. He submitted that the States have not even prepared the road map for implementation of the scheme.

3. The learned counsel for the SLDC, Bhubaneswar submitted that the SLDC has identified all the 132 kV feeders for manual disconnection and the State is in the process of implementing the scheme. The learned counsel submitted that the State of Odisha has four Distribution Companies (DISCOMs) and none of the DISCOMs have this facility and hence, the scheme was being implemented at the State Transmission Network level. The demand regulation is being made from grid substations by isolating 33/11 kV feeders on rotational basis in consultation with the DISCOM(s). If any DISCOM is drawing power more than its schedule, its load would be disconnected first. The learned counsel also submitted that in case of implementation of frequency related automatic demand isolation scheme, there was possibility of reduction of drawal of DISCOM, even though the drawal is within the schedule in case of falling frequency condition.

4. The Commission observed that submission of SLDC, Bhubaneswar pertain to manual demand disconnection and under frequency load shedding schemes at frequency below 48.5 Hz. However, the proceeding relates to the Grid Code provisions on the Automatic

Demand Disconnections in real time operation, when the frequency was below 49.7 Hz in case of over drawal from grid. The Commission enquired whether SLDC, Bhubaneswar has implemented this scheme and if not what is the time schedule for implementation. The representative of SLDC clarified that no such scheme has been implemented by the DISCOMs.

5. The learned counsel for BSES and JSEB submitted the replies on behalf of the respondents have been filed. He further submitted that feeders have been identified for implementation of the scheme.

6. The learned counsel for the TANTRANSCO submitted that the scheme is under process of implementation which would take some more time. He submitted that the identification of feeders for demand disconnection is under process. He submitted that the Special Protection Scheme (SPS) for 400 kV Hosur-Salem transmission line has already been implemented. On the query of the Commission on the implementation schedule, he submitted that the Automatic Load Management Scheme would be implemented within 6 months. The representative of SRLDC submitted that the States of Southern Region including Tamil Nadu, have identified the feeders in four categories as required in the Grid Code. Except Karnataka, all the SLDCs are tripping the feeders through SCADA system manually, which becomes discriminatory in the sense that sometimes they trip the feeders and sometimes they do not. As a result the frequency has fallen below 49.5 Hz on many occasions. Had the automatic scheme been there, the situation would have improved. The representative of NLDC submitted that the scheme for Karcham Wangtoo HEP was implemented within two weeks time. Basically, the logic has to be developed, first whether there is over drawal and second whether the frequency is below 49.7 Hz.

7. The learned counsel for the SLDC, Uttar Pradesh submitted that the present SCADA system does not have the facility for Automatic Demand Management Scheme. He submitted that vide letter dated 23.12.2011, NRLDC was requested to help in developing the scheme by way supplying necessary procedure and circulars for implementation of the scheme. He submitted that 61 feeders have been already been

identified and the rest of the feeders would be identified by January, 2012 and thereafter six months time is required for developing the required infrastructure for implementation of the scheme and by the July 2012 end, the scheme would be operational. The representative of NRLDC submitted that Uttar Pradesh was not following the instructions of NRLDC to shed load when the frequency is below 49.5 Hz.

8. The representative of the SLDC, Delhi submitted that load shedding procedure was developed in the month January, 2010. Delhi has 3 DISCOMs and they are in process of implementation of the scheme.

9. The representative of SLDC, Assam submitted that Automatic Load Management System has not been implemented so far. Necessary pre-requisites for implementation were not yet ready in the State of Assam. The present SCADA was implemented way back in 2002 and even then, not all the important sub-stations are connected on SCADA. In reply to the query of the Commission as to the time line for implementation of the scheme he submitted that the scheme would be implemented by the end of 2012.

10. The representative of the SLDC, Meghalaya submitted that the automatic system has not been implemented in the absence of basic infrastructure for communication and data collection facilities.

11. The representative of the SLDC, Madhya Pradesh submitted that there are 3 DISCOMs and at present the automatic demand management is being done through under frequency relays installed on various 33 kV feeders at EHV sub-stations to obtain required load relief automatically under defined low frequency conditions. The df/dt relays are also installed to get automatically load relief to arrest rapid fall in system frequency. He submitted that the present SCADA system does not have this facility. He submitted that by the end of December, 2012, the scheme would be implemented.

12. The representative of the SLDC, Gujarat submitted that Automatic Load Management Scheme has not been implemented so

far as the there was no deficit power situation in the State. The Commission clarified that the scheme has to be implemented as per Grid Code to control over drawal from the Grid. The representative of Gujarat SLDC submitted that the State Electricity Regulatory Commission has issued directions to establish the demand management cell in all DISCOMs. In compliance, all Distribution Companies have submitted their automatic demand management scheme and SLDC is working on it and will be submitted before the State Commission.

13. The representative of the SLDC, Chhattisgarh submitted that feeders have been identified. Since the schemes have to be implemented by the DISCOMs he could not indicate any time frame for implementation of the scheme.

14. The Commission clarified that under frequency load shedding scheme for contingency constitutions should not be confused with the Automatic demand Management Scheme for demand management and both have to be implemented as per the Grid Code.

15. The Commission directed the respondents to file their replies, if not already done, and their plan for implementation of the scheme.

16. After hearing the representatives of the respondents, the Commission reserved the order.

By order of the Commission

**Sd/-
(T. Rout)
Joint Chief (Law)**