

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No.179/SM/2012

Coram:

Dr. Pramod Deo, Chairperson

Shri S.Jayaraman, Member

Shri V.S.Verma, Member

Shri M.Deena Dayalan, Member

Date of Hearing: 25.09.2012

Date of order :14.03.2013

In the matter of

Non-compliance of Commission`s directions and the provisions of the Electricity Act, 2003 and Central Electricity Regulatory Commission (Indian Grid Code) Regulations, 2010.

And

In the matter of

Shri S.K.Agarwal, Chairman-cum-Managing Director, Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur.

Shri R.P.Barwar, Chief Engineer (LD), State Load Despatch Center, Rajasthan, Jaipur
.....Respondents

Following were present:

1. Shri Pradeep Mishra, Advocate for the respondents
2. Shri R.P.Barwar, SLDC,RRVPNL
3. Shri S.K.Jain, SLDC, RRVPNL
4. Shri V.V.Sharma, NRLDC
5. Ms Joyti Prasad, NRLDC

ORDER

The Commission vide its order dated 17.8.2012 in Petition No. 125/MP/2012 had directed as under:

" 20.We had indicated in our order dated 10.7.2012 that it would be the personal liability of the officers in charge of the STUs and SLDCs to ensure compliance with our directions to curtail overdrawal from the grid and comply with the messages of NRLDC. During the hearing, the officers of UPPTCL, PTCUL, HVPNL, RRVPNL and PSTCL have not denied overdrawal from the grid or non-compliance with the directions of the RLDCs. The officer in charge of PDD, Jammu and Kashmir did not appear despite notice. We deprecate the attitude of the concerned officer towards the order of the



Commission in the serious matter like grid discipline. We are of the view that these officers have not only failed to comply with our directions but have also failed to discharge their responsibility under the Act and the Grid Code. We direct the staff of the Commission to process the case for initiation of action under Section 142 of the Act against the officers in charge of STUs/SLDCs of the States of Uttar Pradesh, Uttarakhand, Haryana, Rajasthan, Punjab and Jammu and Kashmir for imposition of penalty for non-compliance with our directions and the provisions of the Act and the Grid Code."

2. The Commission vide its order dated 7.9.2012 has further directed as under:

"5. We are of the view that SLDC is under a statutory obligation to comply with the Grid Code specified by the Commission and ensure compliance with the directions of NRLDC. Since STU is operating the SLDC in the State, it also becomes the responsibility of the Officer in-charge of the STU to ensure that the SLDC discharges its functions and comply with the orders of NRLDC and the Commission. Therefore, the respondents, who were in charge of STU and SLDC at the time of issue of direction of the Commission have failed to discharge their responsibility under the Electricity Act, 2003 and Grid Code.

6. In view of the above, the respondents are directed to show cause by 17.9.2012, as to why penalty should not be imposed on them under Section 142 of the Electricity Act, 2003 and the penalty amount should not be recovered from their salary for contravention of the provisions of the Act, Grid Code, directions of NRLDC and orders of the Commission."

3. In response to show cause notice dated 7.9.2012, Shri RP Barwar, Chief Engineer (LD), State Load Despatch Centre, Rajasthan has filed a reply vide affidavit dated 15.9.2012 which has been adopted by Shri S.K.Agarwal, Chairman-cum-Managing Director, Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur.

4. The respondents in their reply have submitted as under:

(a) With reference to overdrawal of 734 MUs as against the schedule of 4194 MUs by Rajasthan from 1.3.2012 to 25.3.2012, it has been submitted that the overdrawal was 14.36 MUs above 50.2 Hz, 756 MUs between the operating range of grid frequency of 49.5Hz-50.2 Hz, and only 3.0 MUs below 49.5 Hz in different scattered block.

(b) As regards the messages issued by the NRLDC during the period 1.1.2012 to 25.3.2012 (22 'A' messages, 10 'B' messages and 1 'C' message), the respondents have submitted that in most of the cases the block frequency has been improved after effecting load shedding by the State in compliance with the instructions issued by NRLDC through messages. However, overdrawal was contributed due to forced outage of generating machines and frequent variation in wind generation.

(c) As regards the messages issued by NRLDC from 1.5.2012 to 14.5.2012 (34 'A' messages, 20 'B' messages and 1 'C'), the respondents have submitted that the average frequency during the period has mostly remained within the operating range as per the Grid Code. As regards the overdrawal of 28 MUs on 4.5.2012, it has been submitted that the overdrawal on that day was within the operational range as per the Grid Code i.e. 49.5 Hz.

(d) As regards overdrawal between 1.6.2012 to 30.6.2012 (34 A messages, 20 B messages and 1 C message), the respondents have submitted that the frequency has improved after load shedding was imposed in compliance with the directions of NRLDC. As regards the average overdrawal of 2 MU per day during the period 10.7.2012 to 16.7.2012, the respondents have submitted that during the said period, Rajasthan has underdrawn on some days.

(e) The respondents have further submitted that Rajasthan is a wind generating state with total installed capacity of 2150 MW. There is large fluctuation in wind generation and in a day, it may vary from 1500 MW to 400 MW. Due to such variation, the State has no option but to go for heavy load shedding or overdrawal from the grid. However, to reduce the overdrawal due to wind variation, it takes 15 to 20 minutes and

meanwhile, the overdrawal in the block is recorded even after making efforts by the State.

(f) SLDC is pursuing with the distribution licensees in the State regularly for framing and implementation of state-of-the-art demand management scheme for automatic demand management in consultation with SLDC. A committee has been constituted by the distribution companies in which a representative of SLDC has been nominated and the committee would visit NDPL New Delhi for initiating preparation of the scheme.

(g) Presently the NRLDC is issuing directions to the SLDC and not to the distribution company/generating company from whom compliance is to be ensured. However, the messages received from NRLDC are immediately forwarded to the concerned licensee/generating company and are regularly being pursued by the ensuring the compliance of the directions of the RLDC. SLDC also takes stringent action when the load is not reduced by the distribution companies at low frequency by disconnecting the 132 kV feeders by the respective overdrawing distribution companies. However, for load shedding from the field, a message is given from the RDPPC/LD control room to 220 kV GSS which in turn is further conveyed to 132 kV GSS for disconnecting the load from their GSS keeping the emergency load only in circuit. This process takes about 10 to 15 minutes to obtain relief in the grid.

(h) The distribution companies are responsible for load management in terms of Regulation 5.4.2(b) of the Grid Code. The MDs of the distribution companies in the State have submitted affidavits before the Commission for restricting overdrawal sincerely. The respondents have placed on record the record overdrawal during August 2012 and have submitted that overdrawal has been restricted by the

distribution companies in the State and situation has improved.

5. During the course of hearing, learned counsel for the respondents submitted that corrective actions are being taken to reduce the overdrawal and to comply with the Grid Code. Learned counsel further submitted that during the month of August 2010 and onwards, the overdrawal has been restricted by the distribution companies in the State and position has been improved.

6. We have considered the submissions of the respondents. First of all, the statutory provisions for maintenance of secure operation of the regional grid need to be noticed. Section 29 of the Electricity Act, 2003 provides that the directions of Regional Load Despatch Centre for ensuring stability of the grid operation shall be carried out by all concerned including the State Load Despatch Centre who shall ensure compliance of the directions by the licensees and generating companies within its jurisdiction. Section 29 of the Act provides as under:

"29. Compliance of directions- (1) The Regional Despatch Centre may give such directions and exercise such supervision and control as may be required for ensuring stability of grid operations and achieving the maximum economy and efficiency in the operation of the power system in the region under its control.

(2) Every licensee, generating company, generating station, substation and any other person connected with the operation of the power system shall comply with the direction issued by the Regional Load Despatch Centres under sub-section (1).

(3) All directions issued by the Regional Load Despatch Centres to any transmission licensee of State transmission lines or any other licensee of the State or generating company (other than those connected to inter State transmission system) or sub-station in the State shall be issued through the State Load Despatch Centre and the State Load Despatch Centres shall ensure that such directions are duly complied with the licensee or generating company or sub-station.

....."

Further the Grid Code enjoins the following responsibilities on the State Load

Despatch Centres:

“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 49.2 Hz, requisite load shedding (manual) shall be carried out in the concerned State to curtail the over-drawal.

(b) Further, in case of certain contingencies and/or threat to system security, the RLDC may direct an SLDC to decrease its drawal by a certain quantum. Such directions shall immediately be acted upon.

(c) Each Regional constituent shall make arrangements that will enable manual demand disconnection to take place, as instructed by the RLDC/SLDC, under normal and/or contingent conditions.

(d) 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.”

“6.4.7 . 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 49.2 Hz, requisite load shedding shall be carried out in the concerned State(s) to curtail the over-drawal.”

7. From the above provisions, it is clearly evident that it is the responsibility of the respondents as SLDC to comply with the directions of RLDC and take all measures necessary to maintain grid security. It is noted that the respondents have not denied overdrawal from the regional grid. On the other hand, the respondents have argued that most of the overdrawal had taken place within the operating range of the Grid Code i.e. 49.5 Hz – 50.2 Hz and very minimal overdrawal had taken place when the frequency was below 49.5 Hz. Moreover, the respondents have attributed this overdrawal to the variable nature of wind generation. The respondents have submitted that the distribution companies have started the process of forecasting of wind power; however the variation in wind power has forced the distribution companies to resort to

overdrawal from the grid sometimes.

8. In our order dated 10.7.2012, we had directed that it would be the personal responsibility of the Officers in Charge of the STUs/SLDCs of the concerned State to ensure compliance with para 22 and 23 of the said order. Para 23 of the said order contain a direction for compliance of the following:

(a) Not to overdraw from the grid when the frequency is below 49.5 Hz and to comply with Grid Code.

(b) The directions of NRLDC under section 29 of the Act are complied with and compliance is reported to NRLDC immediately.

(c) Under Frequency Relays are kept in service at all times and feeders for load shedding through UFRs are kept separate from feeders for load shedding through manual disconnection.

(d) Status of compliance of Regulation 5.4.2(d) and 6.4.8 of the Grid Code.

9. First of all we consider the status of overdrawal by Rajasthan after issue of the directions by the Commission vide order dated 10.7.2012. The respondents in their affidavit have given the data for the period 10.7.2012 till 16.7.2012 and for the month of August 2012. It has been noted in our order dated 17.8.2012 that during the period from 10.7.2012 to 16.7.2012, Rajasthan has been issued 9 A messages, 5 B messages and 1 C message. If we consider the data for the period 11.7.2012 to 31.7.2012, it is noticed that Rajasthan has been issued 16 C messages during the period. The maximum overdrawal was 1374 MW on 17.7.2012 when the frequency

was 49.17 Hz. During the period, frequency went down below 49.5 Hz in 465 time blocks in Northern Region and Rajasthan was overdrawing in 412 time blocks. On 20.7.2012, Rajasthan was drawing 3191 MW against its schedule of 1235 MW in the 34th time block, thus resulting in an overdrawal of 1995 MW. Therefore, the claim of Rajasthan that it had restricted its overdrawal consequent to the directions of the Commission is not correct as Rajasthan was drawing more than double its schedule.

10. Next direction was for strict compliance of the directions of NRLDC. We have considered a sample analysis of the behaviour of Rajasthan SLDC after the C message was received on 17.7.2012. When C message was received from NRLDC, Rajasthan was drawing 2800 MW at 66th time block as against the schedule of 1350 MW when the frequency was 49.24 Hz, thus resulting in overdrawal of 1450 MW. Rajasthan reduced overdrawal to 840 MW as against zero overdrawal as required under the Grid Code and the overdrawal remained at about 800 MW in a few time blocks thereafter. It is further noticed that as soon as the frequency improved, the overdrawal of Rajasthan reached 1350 MW i.e. 100% overdrawal. We are of the view that Rajasthan was not serious about containing the overdrawal after receiving the C message from NRLDC and its responses were for short duration only and lacked prudence and responsibility.

11. The respondents have submitted that after getting message, it takes about 10-15 minutes for effecting load-shedding due to various stages involved. In this regard, it must be noted that in accordance with the Grid Code, automatic state of the art demand management scheme is required to be deployed by 1.1.2011. However, in case of Rajasthan it is still in the initial stage and no timeframe has been fixed. We

once again, emphasize that the automatic demand management scheme, as stipulated in the Grid Code needs to be implemented at the earliest and SLDC must be suitably equipped to make the response time lesser so that NRLDC directions could be complied with as soon as received. The various actions initiated by the SLDC are discussed below:

- (a) A communication was sent from Superintending Engineer (SO& LD), RRPVNL to Chief Engineers of all three Discoms giving details of their overdraw below 49.5 Hz from the grid between 16.6.2012-9.7.2012 requesting them not to overdraw below 49.5 Hz and also prepare automatic demand management scheme.
- (b) CMD, RRPVNL wrote to the MDs of all distribution companies on 19.7.2012 conveying directions given by Commission in the order dated 10.7.2012. Chief Engineer (LD) also wrote similar letters to MDs of DISCOMs.
- (c) Director Power Trading has submitted affidavits by CMDs of three the distribution companies in which assurance has been given for restricting overdrawal.
- (d) There is no evidence placed on record to show that the SLDC has been taking necessary actions as per its statutory responsibilities through proper monitoring to ensure safe and secure operation of the grid in accordance with the Grid Code. The actions taken by SLDC are more of administrative nature and the respondents have failed to produce the records of the

messages sent during the real time operations to the distribution companies to curtail overdrawal. There appears to be no sincere effort on the part of the respondents to comply with the directions of the Commission.

12. The respondents and the distribution companies have attributed the overdrawal to the variability and unpredictability of wind generation. This in our view is an internal issue of Rajasthan Control area and needs to be handled in such a manner that it did not impact the operation of the Regional Grid. As the load generation balance is to be maintained by SLDC, variation in wind generation cannot be always blamed for overdrawal as is evident from the overdrawal data of 20.7.2012. On that day, there was overdrawal of 1955 MW against schedule of 1355 which can in no way be totally attributed to variation in wind generation. It appears that the respondents are relying on highly optimistic forecast of wind generation in their load generation balance as a result of which in case of variation in wind generation, they are relying on overdrawal from the grid to meet consumer load.

13. Sub-section (3) of Section 29 of the Act clearly mandates the SLDC to ensure compliance with the directions issued by RLDCs by the licensees and generating stations within its control. SLDC being apex body and responsible for real time operation in the State should have well defined plan to restrict the load in case of low frequency conditions. In the event of non-compliance by the licensees and generating companies, the respondents should have approached the State Commission for appropriate directions. Nothing has been brought to our notice to establish that the respondents sincerely and diligently pursued the remedies provided in the Act and Grid Code to restrict overdrawal from the grid.

14. Considering all relevant factors, we are of the view that though the respondents have initiated some actions to comply with the directions of the Commission and NRLDC, they have not been able to restrict the overdrawal from the grid. Taking a view in totality, we impose a penalty of ₹ 90,000 each on the first and second respondents. The respondents are directed to deposit the penalty within one month from the date of issue of the order.

sd/-
(M.Deena Dayalan)
Member

sd/-
(V.S.Verma)
Member

sd/-
(S.Jayaraman)
Member

sd/-
(Dr. Pramod Deo)
Chairperson