

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Adjudication Case No. 3/2010

**Coram:
Shri M Deena Dayalan, Member and Adjudicating Officer**

Date of hearing: 11.4.2011

Date of Order: 27.9.2011

In the matter of

Maintaining grid security of the entire North East West (NEW) grid by curbing overdrawals and effecting proper load management by Northern Region constituents.

And

In the matter of

Haryana Vidyut Prasaran Nigam Ltd. Panchkula ... **Respondent**
Member Secretary, Northern Regional Power Committee
.. **Proforma Respondent**

The following were present:

1. Shri Vivek Pandey, NRLDC
2. Shri A Mani, NLDC-POSOCO

ORDER

Petition No. 129/2010 was filed by Northern Regional Load Despatch Centre (NRLDC) seeking the following reliefs:

- (a) Direct the Northern Regional SLDCs and State Control Areas in the Northern Region to honour paras 5.4.2, 6.4.7 and 6.4.8 of the

Indian Electricity Grid Code (hereinafter referred to as "IEGC") and curb their overdrawals when the frequency is below 49.20 Hz. so that the NEW grid is secure;

(b) Direct SLDCs and State Control Areas in the Northern Region to honour the directions of RLDC under section 29 (1) of the Electricity Act, 2003 (hereinafter referred to as "the Act"); and

(c) Direct SLDCs and State Control Areas in the Northern Region to take necessary steps for proper load management so as to avoid overdrawal in the ensuing months.

2. According to the petitioner, the frequency profile of the NEW grid had undergone sharp deterioration since the start of the month of April 2010 and the percentage of time during which frequency remained below 49.2 Hz reached up to 80 % on 9th April 2010. The petitioner submitted that the primary reason for the sustained low frequency was overdrawals by the State Control Areas/Regional Entities in Northern Region. As per the details submitted by the petitioner, during 1st to 9th April, 2010 all the State Control Areas with the exception of Delhi, were heavily overdrawing from the grid. Based on SCADA data, it was urged that the maximum overdrawal by Haryana State control area during 1st to 9th April 2010 was up to 447 MW when frequency was below 49.2 Hz. (during the subject

time period the stipulated frequency range as per IEGC was 49.2-50.3 Hz.) and average overdrawal was 3.4 MU per day.

3. The petitioner submitted that in line with the provisions of IEGC, it issued different types of messages to the defaulting State Control Areas/Regional Entities in real-time with regard to overdrawal from the grid during low frequency period. Briefly, the scheme for issue of different types of message is as given below:

Message-Type	Subject Description
Caution message in line with para 6.4.7 of IEGC (Message type A)	Intimation of Low frequency operation and request to restrict the drawal within schedule
Violation of IEGC paras 5.4.2 (a) and 6.4.7 (Message type B)	Intimation regarding violation of paras 5.4.2 (a) and 6.4.7 of the IEGC and directions under paras 5.4.2 (b) of IEGC and sub-sections (2) and (3) of Section 29 of the Electricity Act, 2003 for immediate action for restriction of overdrawal in order to avert threat to system security.
Violation of IEGC para 5.4.2 (b) and sub-sections (2) and (3) of Section 29 of the Electricity Act, 2003 (Message type C)	Intimation of violation of para 5.4.2(b) of IEGC and sub-sections (2) and (3) of Section 29 of the Electricity Act, 2003 and request for immediate action for curtailing the overdrawal, in the interest of grid safety and security.

4. As regards the respondent in the present Adjudication proceedings, it was submitted that during 1st to 9th April, 2010 at least 27 numbers of "Caution messages" (Message type A) and 26 numbers of "Violation

messages" (19 numbers type "B" Message and 7 numbers type "C" messages) were issued to SLDC, Haryana.

5. It was also submitted by the petitioner that some State Control Areas were exporting power in Short-Term Open Access (STOA) and overdrawing from the grid. There was no denial of Open Access for import of power into the Northern Region on account of transmission constraints. The State control area of Haryana was selling power through bilateral arrangements during the subject period and was also overdrawing from the grid. As per data submitted by NRLDC, during 1st to 9th April 2010, Haryana was selling power to the tune of about 3 MU per day under short term open Access.

6. The petition was heard after notice to the parties. Consequent to the hearing in which several utilities of the Region participated, the Commission vide its order dated 4.11.2010 noted that there was indiscriminate overdrawal from the Grid and non-compliance of directions issued by NRLDC under sub-sections (2) and (3) of Section 29 of the Electricity Act, 2003 (hereinafter referred to as 'the Act') by many utilities in Northern Region including the respondent herein viz. Haryana Vidyut Prasaran Nigam Limited (HVPNL). The Commission accordingly, appointed the undersigned as the Adjudicating Officer for conducting

the enquiry against the respondent for non-compliance with the directions of NRLDC under Section 143 of the Act.

7. The undersigned had issued notice under Section 143 of the Act directing the respondent to show cause as to why enquiry for the reported overdrawl should not be held against for non-compliance of the directions of the NRLDC. Thereafter, the undersigned issued notice on 11.2.2011 to the respondent for holding enquiry against it for non-compliance with the direction of NRLDC.

8. The Respondent, neither attended any hearing nor filed any reply or information sought during the course of the adjudication proceedings. Accordingly, the undersigned decided to take a view based on the information available on the record.

Analysis of the actions taken by the Respondent on B and C Messages

9. As mentioned above, there was no response from the respondent and the findings below are on the basis of information submitted by the petitioner i.e. NRLDC.

10. The relevant provisions under para 5.4.2 of IEGC (as was in vogue during April 2010) are reproduced below:

"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."

11. Further, para 6.4.7 of IEGC (as was in vogue during April 2010)

provided as under:

"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."

12. The relevant provisions under Section 29 of the Act are reproduced

below:

"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. "

13. NRLDC submitted copies of 19 numbers of "B" and 7 numbers of "C" messages issued to SLDC, Haryana , during 1st to 9th April 2010.

14. It is noted from the data available that out of the above stated 30 messages, at least on 7 numbers of "B" messages and 1 number of "C" message, the direction of NRLDC was not complied with. This is established from the fact that overdrawal continued even after 15 minutes of the message and still frequency was below 49.2 Hz. In case of other messages either the overdrawal was reduced or the frequency improved and went above 49.2 Hz. it is also significant to mention that the improvement in frequency cannot be attributed exclusively to the respondent; but it could have been due to action by some other utility i.e. reduction of overdrawal or increase of underdrawal or increase in generation.

15. The non-compliance of clear cut instances of 7 numbers "B" messages and 1 number "C" message which were not responded to by the respondent, are discussed below in detail:

(a) Message "B" at 2105 hours on 6.4.2010:

Before issuance of this "B" message on 6.4.2010, the grid frequency was below 49.5 Hz. (hovering around or remaining below 49.2 Hz. most of the time) since 1957 hours, except for few minutes. The respondent was overdrawing about 250-900 MW from the grid. This action of the respondent constitutes violation of para 5.4.2 (b) of IEGC. Message "B" was issued at 2105 hours when frequency was 48.88 Hz. and overdrawal by the respondent was about 920 MW. The frequency continued to be below 49.2 Hz. till 2130 hours and during this period the overdrawal was reduced up to about 400 MW by the respondent. Subsequently, despite slight improvement, frequency remained below 49.5 Hz. till 2147 hours and the overdrawal of about 250 MW was continued by the respondent. In the message "B" issued by NRLDC to SLDC, Haryana, it was clearly directed to restrict drawl within its schedule. The relevant portion of the message "B" issued by NRLDC are as under:

" Further, it is a matter of serious concern that despite the low frequency conditions in the grid, the overdrawal by Haryana State Control Area is continuing. You would agree that operation of grid at present level of frequency is a threat to system security and in order to ensure stability of the Grid, NRLDC is issuing directions under Clause 5.4.2 (b) of IEGC and Section 29(1) of Indian Electricity Act 2003, to increase the generation and / or carry out manual load shedding in Haryana State Control Area in order to restrict its drawl within schedule and also inform the details of the action taken. Please note that the non-compliance of these directions would be construed as violation of IEGC and IE Act 2003 and would be brought to the notice of the Hon'able Central Electricity Regulatory Commission (CERC)."

From above discussions, it is observed that although overdrawal was reduced after issue of the "B" message, overdrawal of more than 240 MW for a substantial period of time i.e. about for 25 minutes when frequency was below 49.2 Hz. and for about 40 minutes when frequency was below 49.5 Hz., was continued, even after direction by NRLDC to restrict drawl within its schedule. Thus, though there was some action by the respondent after getting "B" message, but it was much delayed and in-adequate. Therefore, non-compliance of direction of NRLDC in form of message "B" issued at 2105 hours on 06.04.2010 is established.

(b) Message "B" at 1711 hours on 8.4.2010 :

Before issuance of this "B" message, at 1711 hours on 8.4.2010, the grid frequency was below 49.5 Hz. (remaining below 49.2 Hz. for substantial period of time) since 1605 hours and the respondent was

overdrawing about 100-300 MW from grid. This was against the stipulation in para 5.4.2 (b) of IEGC. Message "B" was issued at 1711 hours when frequency was 49.04 Hz. and overdrawal by the respondent was about 350 MW. Frequency remained below 49.2 Hz. till 1752 hours and overdrawal of about 100-400 MW was continued. After this, frequency improved and the overdrawl was again increased up to 600 MW. Consequently, at 1810 "C" message was issued when frequency was 48.94 and overdrawal was about 600 MW. In the message "B" SLDC, Haryana was clearly directed to restrict drawl within its schedule. But it was continued for a substantial period of time i.e. for about 40 minutes when frequency was below 49.2 Hz. even after direction by NRLDC to restrict drawl within its schedule. Even after "C" message overdrawal of more than 400 MW continued till 1831 and frequency remained below 49.5 Hz. This implies that there was in-adequate action by the respondent on the "B" message, which amounts to non-compliance of directions of NRLDC, in the form of message "B" issued at 1711 hours on 8.4.2010.

(c) "B" Messages at 2122 hours, 2141 and 2215 hours on 8.4.2010:

Before issuance of the "B" message at 2122 hours on 8.4.2010, the grid frequency remained below 49.5 Hz. since 1957 hours (most of

the time remaining below 49.2 Hz.) except improvement for few minutes. The respondent was overdrawing about 150-580 MW from the grid. This amounts to contravention of para 5.4.2 (b) of IEGC. The first message "B" was issued at 2122 hours when frequency was 48.84 Hz. and overdrawal by the respondent was about 470 MW. After this B message frequency remained below 49.2 Hz. except for marginal improvements resulting in maximum frequency of 49.26 Hz., for 3 minutes and overdrawal was increased up to about 540 MW then reduced to about 390 MW but continued for about 20 minutes. Consequently, next "B" message was issued at 2241 hours, when overdrawl was about 390 MW at frequency 48.97 Hz.. Even after second "B" message the overdrawal increased to 620 MW. The overdrawal at the time of second "B" message i.e. at 2141 was about 390 MW and it was increased up to about 620 MW at 2201 and frequency remained most of the time below 49.2 Hz. with slight improvements (maximum 49.26 Hz). Although, overdrawl was reduced subsequently, it continued while frequency remained below 49.2 Hz touching as low as 48.8 Hz.. This resulted in the third "B" message at 2215 hours when overdrawl was about 150 MW at frequency 48.89 Hz. After this massage, although there was a marginal and momentary reduction in overdrawl up to 100 MW at 2225 hours, it again increased up to about 310 MW at 2232 hours,

while frequency remained below 49.2 Hz. (minimum 48.83 Hz.). After this instance, overdrawl was reduced but continued till 2240 hours and frequency remained below 49.2 Hz. Thus in case of all the three "B" messages the overdrawl was reduced for some time but it was again increased though the frequency remained low. In the "B" messages the direction was to reduce overdrawal to zero which was not done in case of first two messages and after third "B" message the overdrawal was reduced to zero after more than 30 minutes from the issuance if the message. But in third case also after "B" message, overdrawal was increased before making it zero. Therefore, it is held that the respondent is guilty of non-compliance of direction of NRLDC, in the form of these three "B" messages issued at 2122 hours, 2141hours and 2215 hours on 8.4.2010.

(d) Message "B" at 0105 hours on 9.4.2010:

Before issuance of this "B" message, the grid frequency was below 49.2 Hz. since 0005 hours on 9.4.2010. The respondent was overdrawing about 100-500 MW from the grid. As this was against the stipulation in para 5.4.2 (b) of IEGC, Message "B" was issued at 0105 hours when frequency was 48.93 Hz. and overdrawal by the respondent was about 480 MW. Frequency remained below 49.2 Hz. till 0149 hours and overdrawal continued by 100-560 MW. During this

period, the overdrawl was increased up to about 560 MW at 0118 hours and then reduced up to about 100 MW at 0128 hours and again increased up to about 290 MW at 0140 hours. After 0149 hours frequency improved slightly but remained below 49.5 Hz. and overdrawal was continued till 0203 hours. In the message "B" SLDC, Haryana was clearly directed to restrict drawl within its schedule, but it continued overdrawal for a substantial period of time i.e. for more than 40 minutes when frequency was below 49.2 Hz. and about 1 hour when frequency was below 49.5 Hz. even after direction by NRLDC to strict drawl within its schedule. Therefore, there was clear non-compliance of direction of NRLDC, in form of message "B" issued at 0105 hours on 09.04.2010.

(e) Message "B" at 0250 hours on 9.4.2010:

Before issuance of this "B" message, the grid frequency was below 49.2 Hz. since 0222 hours on 9.4.2010 and the respondent was overdrawing about 100-250 MW from the grid. This was against the stipulation in para 5.4.2 (b) of IEGC. Therefore, Message "B" was issued at 0250 hours when frequency was 48.89 Hz. and overdrawal by the respondent was about 280 MW. After the message, frequency remained below 49.2 Hz. and overdrawal was increased up to 440 MW at 0303 hours. Subsequently, overdrawl was reduced gradually but continued by more than 100 MW till 0353 and

frequency remained below 49.2 Hz.. After this instance, frequency improved slightly but remained below 49.5 Hz. and overdrawal was again increased up to about 400 MW at 0419 hours before reducing. In the message "B" SLDC, Haryana was clearly directed to restrict drawl within its schedule, but overdrawal was continued for a substantial period of time i.e. for more than 1 hour when frequency was below 49.2 Hz. and for more than 2 hours when frequency was below 49.5 Hz., even after direction by NRLDC to restrict drawl within its schedule. Therefore, there was clear non-compliance of direction of NRLDC, in form of message "B" issued at 0250 hours on 09.04.2010.

(f) Message "C" at 0522 hours on 9.4.2010:

Before issuance of this "C" message, a "B" message was issued at 0444 hours when frequency was 49.06 Hz. and overdrawl was stopped for few minutes around 0500 hours. Frequency slightly improved (maximum 49.29 Hz.) for few minutes at 0504 hours and again went below 49.2 Hz. since 0511 hours and overdrawl was again increased to about 310 MW. At 0522 hours "C" message was issued to the respondent. After "C" message, the overdrawl continued for substantial period of time and it increased up to 400 MW instead of stopping. Frequency remained below 49.2 Hz. till 0600 hours and overdrawl up to 400 MW was continued. After this,

frequency improved slightly for few minutes and again went below 49.2 Hz., but overdrawl of more than 200 MW was continued till 0620 hours. In the message "C" SLDC, Haryana was again directed to curtail overdrawl. But it was continued for a substantial period of time i.e. for more than 40 minutes when frequency was below 49.2 Hz. even after direction by NRLDC for immediate action. This action of the respondent amounts to non-compliance of direction of NRLDC, in form of message "C" issued at 0522 hours on 9.4.2010.

16. From the foregoing, it is observed that on the above mentioned instances of "B" and "C" messages, overdrawal was continued for a substantial period of time. Though overdrawal was marginally and momentarily reduced on some instances, after a short while, it was increased, even when frequency remained low i.e below 49.5 Hz. or 49.2 Hz. This is undoubtedly non-compliance of para 5.4.2 (d) of IEGC also, which stipulates that measures taken to reduce constituents' drawl from grid shall not be withdrawn as long as the frequency remains low. Increasing of overdrawal instead of decreasing it, indicates clear violation of NRLDC messages.

17. As mentioned above, the respondent was selling power under short-term and overdrawing from the grid during the subject period. The selling of power under Short Term Open Access and overdrawing from

grid during low frequency period indicates the utter insensitivity of the respondent towards grid security.

18. Further, I must place on record my anguish and dismay at the conduct of the respondent in not caring to file a reply as also not participating in the proceedings. Lack of response of the respondent to the various notices and orders of the Commission and Adjudicating Officer manifests its disregard for the adjudicating process under the Act and the directions of the Commission.

19. From the details given above, it is established that the respondent did not comply with the directions of NRLDC under section 29 (2) and 29 (3) of the Act, given through above mentioned 7 numbers "B" messages and 1 number "C" message. Therefore, under the provisions of section 29(6) and 143 (2) of the Act, 2003, I impose the penalty of ₹ one lakh on the respondent for each of the aforesaid eight instances of non-compliance of the message by NRLDC. The respondent is directed to deposit the penalty within one month from the date of issue of this order.

Sd/-
[M. Deena Dayalan]
MEMBER
and Adjudicating Officer