

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. SM /009/2014

Coram:

**Shri Gireesh B Pradhan, Chairperson
Shri A.K. Singhal, Member**

Date of Order: 19.6.2014

In the matter of

Investigation of load crash in Northern Region on 30.5.2014.

And

In the matter of

Power Grid Corporation of India Limited

Power System Operation Corporation Limited (NLDC)

..Respondents

ORDER

As per information available on the website of Central Electricity Authority, on 30.5.2014 at 16.00 hrs to 19.00 hrs, Northern Region grid experienced heavy demand crash due to rain, dust storm/thunder storm, mainly in the States of Uttar Pradesh, Haryana, Uttarakhand and Delhi. The demand started reducing at 16.40 hrs and was minimal at around 17.15 hrs. The huge demand reduction resulted in a widespread high voltage throughout the system. The system frequency touched a high of 50.65 Hz at 17.05 hrs. It was also noted that Northern Region demand started declining steadily at a rate of approximately 200 MW/min and reached to 32780 MW at 17.15 hrs, around 8000 MW less than the demand at corresponding time of preceding day, and the power resulted in high frequency and high voltage in the system .

2. It has been noticed that during this period, 68 AC transmission lines along with one HVDC Bi-pole line tripped which led to load crash of about 8000 MW in Northern Region including 3500 MW in Delhi. As per weather forecast of Indian Metrological Department and NOWCAST, all constituents of NR were alerted about the likelihood of the storm. As per the load crash report, the storm caused damage to many towers including 2 towers of 765 kV and one of 400 kV lines and 10 towers on various 220 kV transmission lines in Delhi. Collapse of transmission towers and lines tripping of such a large magnitude is alarming and needs to be investigated in detail.

3. We direct Power Grid Corporation of India Limited to investigate into the incidences of collapse of transmission towers and tripping of transmission lines on 30.5.2014 and submit a report within two weeks from the date of issue of this order. The report shall also include the following:

- (a) Failure of towers in different lines due to storm on 30.5.2014 in different regions in the country; and
- (b) The wind speed which caused damage to towers, wind level for which the towers have been designed and IS design standard under which these tower were designed, year of commissioning of towers, updation on the maintenance activity, checks on strength of towers last done, etc.

4. POSOCO (NLDC) is directed to file on affidavit, by 30.6.2014, the impact of collapse of transmission towers and lines tripping on the system operation and grid security, the action taken by concerned RLDC in this regard and the response of the constituent entities to the direction of RLDC.

**SD/-
(A.K. Singhal)
Member**

**SD/-
(Gireesh B Pradhan)
Chairperson**