



NUCLEAR ENERGY INSTITUTE

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February 2, 2005

Mr. Charles E. Ader  
Director, Division of Risk Analysis and Applications  
Office of Nuclear Regulatory Research  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT:** Peer Review of Draft Report, "Evaluation of Loss of Offsite Power Events at Nuclear Power Plants: 1986 – 2003", NUREG/CR-INEEL/EXT-04-02326, October 2004

**PROJECT NUMBER: 689**

Dear Mr. Ader:

The Nuclear Energy Institute (NEI)<sup>1</sup> submits these comments on the subject document received on December 20, 2004. We appreciate the opportunity to provide comments on this assessment of loss of offsite power events (LOOP). NEI has coordinated an industry effort to review this document and provide comments. We anticipate you will also receive detailed comments from the Electric Power Research Institute (EPRI), Westinghouse Owners Group and several utilities.

NEI submits the following comments:

- The inclusion of the August 14, 2003, blackout event that resulted in loss of offsite power at nine units distorts the conclusions as stated in the report. The inclusion of this event does not only lead to a conclusion the grid has become less reliable during the 1997-2003 time period, but it significantly dominates the seasonal risk evaluation. Of the ten grid-related LOOPS identified during the 1997-2003 period, eight were associated with the August 14 blackout. This suggests the overall LOOP frequency increased from 0.02 per reactor critical year to 0.033. There were multiple causes for

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<sup>1</sup> NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.



this blackout that clearly suggest it was very unique and unusual. Additionally, other plants were affected by this event but did trip. We believe that including this event on an industry-wide basis can be misleading. Separate activities are underway by the various stakeholders, at local, regional and national levels to address the recommendations made by the U.S. Canada Power System Outage Task Force to prevent and mitigate such events in the future. Therefore, we recommend the August 14 event not be considered in this evaluation.

- The rationale for development of five event categories appears to provide valuable insights. However, care must be taken to ensure such information can be used in assessing plant-specific risk assessments. Parsing plant-centered and weather related events into two additional categories adds additional complexity to the overall assessment. It is unclear how this is a significant improvement beyond the current categorization of events as plant-centered, grid disturbance and severe weather.
- The evaluation of events over the period of 1986-2003 needs further consideration. Comparison of LOOP events that occurred since deregulation in the utility industry beginning in the mid-1990s may provide a better understanding of grid reliability. An evaluation of regulated and deregulated states and regions of the country over the past several years may be more representative of the current state of the transmission system.
- Duration of the event needs to be carefully considered since nuclear plant operators do not in all cases immediately restore offsite power when that power is available to the plant switchyard. The report acknowledged that safety bus restoration times were estimated for 73% of the events. U.S. nuclear power plants operators have demonstrated the capability to maintain the plant in a safe shutdown condition given a loss of offsite power event.

Please contact me (202-739-8080; [am@nei.org](mailto:am@nei.org)) or Vince Gilbert (202-739-8138; [jvg@nei.org](mailto:jvg@nei.org)) if you have any questions regarding this letter.

Sincerely,



Alexander Marion

c: John G. Lamb