Regulatory Guide Periodic Review

Regulatory Guide Number: 1.155, Revision 0

Title: Station Blackout

Office/Division/Branch: NRR/DE/EEEB

Technical Lead: Darrell Murdock

Staff Action Decided: Reviewed with no issues identified

1. What are the known technical or regulatory issues with the current version of the Regulatory Guide (RG)?

Regulatory Guide (RG) 1.155, “Station Blackout,” provides guidance for how nuclear power plants can comply with 10 CFR 50.63, the station blackout rule. The main purpose of RG 1.155 is to provide guidance for a plant to withstand and recover from a loss of all alternating-current power for a specified period while maintaining reactor core cooling and appropriate containment integrity.

RG 1.155 provides guidance to licensees on how to evaluate their plant’s ability to cope with a station blackout, including the required coping duration, reliability of the onsite standby emergency AC power sources, availability of offsite power, battery and support-system capability, procedures, training, and any needed equipment modifications. The station blackout coping duration is based on factors such as onsite emergency AC redundancy and reliability, expected loss-of-offsite-power frequency, and time needed to restore power.

Though the reference section of RG 1.155 contain superseded versions of Institute of Electrical and Electronics Engineers (IEEE) Standard 765, “IEEE Standard for Preferred Power Supply (PPS) for Nuclear Power Generating Stations (NPGS),” and IEEE Standard 387, “IEEE Standard Criteria for Diesel-Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations,” the NRC staff finds that RG 1.155 continues to provide adequate guidance to evaluate the plant’s ability to cope with a station blackout, including the required coping duration, reliability of onsite standby emergency AC power sources, availability of offsite power, battery and support-system capability, procedures, training, and any needed equipment modifications.

The NRC staff is in the process of revising RG 1.9, “Application and Testing of Safety-Related Diesel Generators in Nuclear Power Plants,” to endorse, with clarifications, the latest version of IEEE Standard 387, which is the dual logo Standard from the International Electrotechnical Commission and IEEE 63332-387:2024. Thus, given that RG 1.155 continues to provide adequate guidance, and the NRC staff is in the process of revising RG 1.9 to the latest version of IEEE Standard 387, the NRC staff finds that there are no known technical or regulatory issues with the current version of RG 1.155.

2. **What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of anticipated numbers of licensing and inspection activities over the next several years?**

   Giving the staff finding of no known technical or regulatory issues with the current version of RG 1.155, there is no impact on internal and external stakeholders of not updating the RG.

3. **What is an estimate of the level of effort needed to address identified issues in terms of full-time equivalent (FTE) and contractor resources?**

   Since there are no known technical or regulatory issues with the current version of RG 1.155, there is no FTE or contractor resources needed.

4. **Based on the answers to the questions above, what is the staff action for this guide (Reviewed with no issues identified, Reviewed with issues identified for future consideration, Revise, or Withdraw)?**

   Based on the above periodic review, no technical or regulatory issues were identified.

5. **Provide a conceptual plan and timeframe to address the issues identified during the review.**

   Not applicable

NOTE: This review was conducted in June 2026 and reflects the staff's plans as of that date. These plans are tentative and subject to change.