

## RG 1.118 Revision 3 – Periodic Review

**Regulatory Guide Number:** 1.118, Revision 3

**Title:** Periodic Testing of Electric Power and Protection Systems

**Office/division/branch:** RES/DE/ICEEB  
**Technical Lead:** Mauricio Gutierrez

**Staff Action Decided:** Revise

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

RG 1.118 endorses the guidance in the Institute of Electrical and Electronic Engineers (IEEE) Standard (Std.) 338-1987, “Criteria for the Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems” (with some exceptions) as an acceptable method for demonstrating compliance with NRC regulations on periodic testing of safety systems. Endorsement of IEEE Std. 338-1987 was reaffirmed in 1993, RG 1.118 Revision 3. This IEEE standard was revised in 2006, in 2012, and is again under revision as of this writing with an expected completion in late 2023 or early 2024.

The more recent revisions of the IEEE 338 standard include advancements in electric power and protection system systems and components (e.g., online monitoring or self-monitoring technologies) that may be applicable for endorsement.

**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?**

There are no known impacts at this time from continued application of RG 1.118, Revision 3.

**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?**

A revision of RG 1.118 would require 0.25 FTE. Further effort and coordination with NRC program offices would be needed but are not included in this estimate. No contractor support is anticipated.

**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)?**

Revise. The staff believes that it would be beneficial to update the endorsement to the latest version of IEEE Std. 338.

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

Staff will develop a plan for revising RG 1.118 following issuance of the revised IEEE Std. 338 late in 2023 or early 2024. The NRC staff participate in the IEEE standards development working group associated with this standard and are tracking completion.

**NOTE: This review was conducted in April 2023 and reflects the staff's plans as of that date. These plans are tentative and subject to change.**