

## Regulatory Guide Periodic Review

**Regulatory Guide Number:** 1.81, Revision 1

**Title:** Shared Emergency and Shutdown Electric Systems for Multi-Unit Nuclear Power Plants

**Office/division/branch:** RES/DE/ICEEB

**Technical Lead:** Kenn Miller

**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)?**

The subject RG addresses application of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix A, Criterion 5, "Sharing of Structures, Systems and Components," (GDC 5), which states that structures, systems, and components important to safety shall not be shared among nuclear power units (multi-unit nuclear power plant) unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions, including, in the event of an accident in one unit, an orderly shutdown and cooldown of the remaining units. The RG position provides additional detail about its application to multi-unit sites, in that direct current (DC) systems should not be shared and specifying factors to be addressed when sharing onsite alternating current (AC) systems at sites with construction applications issued before June 1, 1973. In addition, the RG position is that AC and DC systems should not be shared at multi-unit sites (which is conservative) with construction licenses issued after June 1, 1973. There were no technical or regulatory issues identified with RG 1.81 Revision 1.

**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?**

Use of the current version of RG 1.81 will have no known impact on internal or external stakeholders as it is consistent with GDC 5.

**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?**

As no technical or regulatory issues were identified, no resources are required.

**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)?**

Reviewed with no issues identified.

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

This is not applicable since no issues were identified during the review.

**NOTE: This review was conducted in December 2018 and reflects the staff's plans as of that date. These plans are tentative and are subject to change.**