

## Regulatory Guide Periodic Review

**Regulatory Guide Number:** 1.61, Revision 1  
**Office/Division/Branch:** RES/DE/SGSEB  
**Title:** DAMPING VALUES FOR SEISMIC DESIGN OF NUCLEAR POWER PLANTS  
**Technical Lead:** Marcos Rolón  
**Recommended Staff Action:** Revise

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

Regulatory Guide (RG) 1.61, "Damping Values for Seismic Design of Nuclear Power Plants," Revision 1, issued in March 2007, specifies the damping values that the NRC staff considers acceptable for complying with the agency's regulations and guidance for seismic analysis.

Staff review has identified the need to update regulatory position C.1.2 for consistency with SRP Section 3.7.2 (Revision 4), subsection II.3.C which includes additional acceptance criteria related to the concrete properties and damping values for use in the development of in-structure response spectra (ISRS). The revision will also consider updates of consensus standards for seismic analysis and design of nuclear power plant structures issued subsequent to Revision 1 of the guide such as ASCE 4-16, published in 2017.

**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 new large power reactor license applications anticipated in the near future (next 3 to 5 years). Thus, there is no immediate need for revising the guide to address their licensing. For small modular reactors the NuScale design certification is under review and it is premature to develop unique guidance to address that design.

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

NRC staff requires approximately 0.3 FTE to complete a full revision of Regulatory Guide 1.61.

**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

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- 5. If a RG should be revised, provide a conceptual plan and timeframe to accomplish this.**

The staff plans to develop a draft guide by end of the fourth quarter of FY 2019, and issue it for public comment in the second quarter of FY 2020.

### **References:**

U.S. Nuclear Regulatory Commission (NRC), NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Section 3.7.2, "SEISMIC SYSTEM ANALYSIS," Washington, DC.

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