



U.S. NUCLEAR REGULATORY COMMISSION  
**STANDARD REVIEW PLAN**

**BRANCH TECHNICAL POSITION (BTP) 8-2**

**USE OF DIESEL-GENERATOR SETS FOR PEAKING**

**REVIEW RESPONSIBILITIES**

**Primary** - Organization responsible for electrical engineering

**Secondary** - None

**A. BACKGROUND**

General Design Criterion 17 requires that provisions be included to minimize the probability of losing electric power from any of the remaining supplies as a result of, or coincident with, loss of the main generator, loss of power from the grid, or loss of standby power supplies. Additionally, IEEE Std. 308, as endorsed by RG 1.32, requires that the preferred (offsite) and standby power supplies should not have a common failure mode. Common failure mode is defined as "a mechanism by which a single design-basis event can cause redundant equipment to be inoperable." Although IEEE Std. 308 does not preclude the use of emergency diesels for nonsafety purposes, the staff concludes that the potential for common failure modes should preclude interconnection of onsite and offsite power sources except for short periods for the purpose of load testing.

Review of the use of emergency diesel-generator sets for peaking service leads to the conclusion that the required frequent interconnection of the preferred and standby power supplies increases the probability of their common failure.

Revision 3 - March 2007

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**USNRC STANDARD REVIEW PLAN**

This Standard Review Plan, NUREG-0800, has been prepared to establish criteria that the U.S. Nuclear Regulatory Commission staff responsible for the review of applications to construct and operate nuclear power plants intends to use in evaluating whether an applicant/licensee meets the NRC's regulations. The Standard Review Plan is not a substitute for the NRC's regulations, and compliance with it is not required. However, an applicant is required to identify differences between the design features, analytical techniques, and procedural measures proposed for its facility and the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP acceptance criteria provide an acceptable method of complying with the NRC regulations.

The standard review plan sections are numbered in accordance with corresponding sections in Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition)." Not all sections of Regulatory Guide 1.70 have a corresponding review plan section. The SRP sections applicable to a combined license application for a new light-water reactor (LWR) are based on Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)."

These documents are made available to the public as part of the NRC's policy to inform the nuclear industry and the general public of regulatory procedures and policies. Individual sections of NUREG-0800 will be revised periodically, as appropriate, to accommodate comments and to reflect new information and experience. Comments may be submitted electronically by email to [NRR\\_SRP@nrc.gov](mailto:NRR_SRP@nrc.gov).

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## **B. BRANCH TECHNICAL POSITION**

The staff's position regarding the use of onsite emergency power diesel-generator sets for purposes other than that of supplying standby power when needed is that such use should be prohibited. In particular, emergency power diesel-generator sets should not be used for peaking service.

## **C. REFERENCES**

1. 10 CFR Part 50, Appendix A, General Design Criterion 17, "Electric Power Systems."
2. Regulatory Guide 1.32, "Criteria for Safety-Related Electric Power Systems for Nuclear Power Plants."
3. IEEE Std. 308-2001, "IEEE Standard Criteria for Class 1E Systems for Nuclear Power Generating Stations."

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### **PAPERWORK REDUCTION ACT STATEMENT**

The information collections contained in the Standard Review Plan are covered by the requirements of 10 CFR Part 50 and 10 CFR Part 52, and were approved by the Office of Management and Budget, approval number 3150-0011 and 3150-0151.

### **PUBLIC PROTECTION NOTIFICATION**

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