

**FINAL SUPPORTING STATEMENT  
FOR  
10 CFR PART 100, REACTOR SITE CRITERIA  
(3150-0093)**

**EXTENSION**

Description of the Information Collection

The U.S. Nuclear Regulatory Commission (NRC) regulations, Title 10 of the *Code of Federal Regulations* (10 CFR), Part 100, "Reactor Site Criteria," establish approval requirements for proposed sites for the purpose of constructing and operating stationary power and testing reactors. Subpart B, "Evaluation Factors for Stationary Power Reactor Site Applications on or After January 10, 1997," requirements apply to applicants who apply for an early site permit (ESP), combined license (COL) or a construction permit (CP) or operating license (OL) on or after January 10, 1997.<sup>1</sup>

The NRC is expecting approximately two COL, one CP, and one OL application over the next 3 years. The applicants must provide information regarding the physical characteristics of the site in addition to the potential for natural phenomena and man-made hazards. This includes information on meteorological hazards (such as hurricanes, tornadoes, snowfall, and extreme temperatures), hydrologic hazards (such as floods, tsunamis, and seiches) geologic hazards (such as faulting, seismic hazards, and the maximum credible earthquake) and factors such as population density, the proximity of man-related hazards, and site hydrological and atmospheric dispersion characteristics.

**A. JUSTIFICATION**

**1. Need for and Practical Utility of the Information Collection**

In support of the agency's mission regarding adequate protection of the health and safety of the public from natural phenomena and man-made hazards, the NRC needs the requested information to assess the adequacy of proposed design bases for natural phenomena and man-made hazards for nuclear power plants. It is submitted to the NRC as part of the application and supporting documentation for a CP, OL, ESP, or COL for a nuclear power plant.

10 CFR 100.21, "Non-seismic siting criteria," set forth the criteria that applicants must demonstrate in the license application for operating commercial power reactors.

- (a) Requires that the site must have an exclusion area and a low population zone.

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<sup>1</sup> Regulation 10 CFR Part 100, Subpart A reflect evaluation factors for site applications before January 10, 1997. Appendix A to 10 CFR Part 100, however, serves as the criteria for the seismic and geologic siting and earthquake engineering for plants licenses or granted their CP before January 10, 1997.

- (b) Requires that the population center distance must be at least one and one-third times the distance from the reactor to the outer boundary of the low population zone.
- (c) Requires site atmospheric dispersion characteristics must be evaluated to demonstrate that radiological effluent releases limits associated with normal operation and radiological dose consequences of postulated accidents can meet regulatory criteria.
- (d) Requires that the physical characteristics of the site, including meteorology, geology, seismology, and hydrology, must be evaluated and site characteristics established.
- (e) Requires that potential hazards associated with nearby transportation routes and industrial and military facilities be evaluated and site characteristics be established.
- (f) Requires site characteristics must be such that adequate security plans and measures that can be developed.
- (g) Requires that Impediments to emergency plans must be identified.
- (h) Indicates that sites should be located away from very densely populated centers.

10 CFR100.23, "Geologic and seismic siting criteria," set forth the principle geologic and seismic considerations that guide the Commission in its evaluation of the suitability of a proposed site and the adequacy of the design bases established in consideration of the geologic and seismic characteristics of the site.

- (a) Requires paragraphs (c) and (d) be applied to applicants for an early site permit or combined license pursuant to 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," or to applicants for a construction permit or operating license pursuant to 10 CFR Part 50, "Domestic Licensing Of Production And Utilization Facilities."
- (b) Requires that the investigations required in paragraph (c) of 10 CFR 100.23 are not considered "construction" as defined in 10 CFR 50.10(a).
- (c) Requires the applicant for early site permit or combined license under 10 CFR Part 52, or construction permit or operating license under 10 CFR Part 50, investigate the geological, seismological, and engineering characteristics of a site and its environs in sufficient scope and detail to permit an adequate evaluation of the proposed site.
- (d) Requires the geologic and seismic siting factors considered for design

must include a determination of the site-specific ground motion response spectrum for the site, the potential for surface tectonic and nontectonic deformations, the design bases for seismically induced floods and water waves, and other design conditions as stated in this section.

2. Agency Use of Information

The NRC reviews the physical characteristics of the site in addition to the potential for natural phenomena and man-made hazards to determine the suitability of the proposed site for a nuclear power plant and the suitability of the plant design bases established on the proposed site. A CP, ESP, COL, or OL cannot be issued until these data have been reviewed and approved by the NRC.

New information regarding the potential for natural phenomena and man-made hazards that becomes known during the operating life of the plant is also evaluated on the basis of these criteria.

3. Reduction of Burden through Information Technology

There are no legal obstacles to reducing the burden associated with this information collection. The NRC encourages respondents to use information technology when it would be beneficial to them.

The NRC has issued [Guidance for Electronic Submissions to the NRC](#) which provides direction for the electronic transmission and submittal of documents to the NRC. Electronic transmission and submittal of documents can be accomplished via the following avenues: the Electronic Information Exchange (EIE) process, which is available from the NRC's "Electronic Submittals" Web page, by Optical Storage Media (OSM) (e.g., CD-ROM, DVD), by facsimile or by e-mail. It is estimated that approximately 100 percent of the potential responses are filed electronically.

4. Effort to Identify Duplication and Use Similar Information

No sources of similar information are available. There is no duplication of requirements.

5. Effort to Reduce Small Business Burden

Not Applicable.

6. Consequences to the Federal Program or Policy Activities if the Collection is Not Conducted or is Conducted Less Frequently

An applicant is only required to report the information if it seeks to obtain approval for a proposed site for the purpose of constructing and operating a stationary power or testing reactor. Lack of collection of information will result in the inability to complete the licensing processes of nuclear power plants.

7. Circumstances Which Justify Variation from the Office of Management and Budget Guidelines

There is no variation from the guidelines.

8. Consultations Outside the NRC

Opportunity for public comment on the information collection requirements for Reactor Site Criteria was published in the *Federal Register* on August 9, 2017 (82 FR 37241). The NRC also contacted three potential respondents via an email to give them the opportunity to provide comments. NuScale LLC and Tennessee Valley Authority declined to comment and Korea Hydro & Nuclear Power did not respond to the comment request.

9. Payment or Gift to Respondents

Not applicable.

10. Confidentiality of the Information

Confidential and proprietary information is protected in accordance with NRC regulations at 10 CFR 9.17(a) and 10 CFR 2.390(b).

11. Justification for Sensitive Questions

Not applicable.

12. Estimate of Industry Burden and Burden Hour Cost

Over the next 3 years, the NRC expects four applications for an average of 1.3 applications per year, which is consistent with the current estimates. This data is based on estimates received from applicants surveyed to determine the forecast of future applications.

For each application, the estimated burden for 10 CFR Section 100.21 (Non-seismic siting criteria) is 22,000 hours and for 10 CFR Section 100.23 (Geologic and seismic siting criteria) is 51,000 hours. Thus, the total burden for collecting and reporting information concerning the potential for natural phenomena and man-made hazards at a proposed nuclear power plant site is estimated at 73,000 hours per application. These estimates assume that 30 percent of the total burden hours are associated with non-seismic siting criteria and 70 percent are associated with geologic and seismic siting criteria.

Annually, the total estimated burden is 94,900 hours (73,000 hours per application x 1.3 applications) and the total estimated cost is \$25,148,500 (94,900 hours x \$265). See Table 1. The \$265 hourly rate used in the burden estimate is based on the Nuclear Regulatory Commission's fee for hourly rates as noted in 10 CFR 170.20 "Average cost per professional staff-hour." For more

information on the basis of this rate, see the *Federal Register* notice at: 81 FR 41186 (June 24, 2016).

13. Estimate of Other Additional Costs

There are no additional costs.

14. Estimated Annual Cost to the Federal Government

Staff review of information concerning potential natural phenomena and man-made hazards for a proposed nuclear power plant site is estimated at approximately 5,000 hours per application, for an estimated annual cost of \$1,722,500 (5,000 hours x 1.3 applications x \$265/hour).

15. Reasons for Change in Burden

The total burden estimate for this information collection has decreased by 73,000 hours from 167,900 to 94,900 hours annually.

This decrease is due to:

- The estimate for the number of hours to complete an application is unchanged at an estimated 73,000 hours per application (is based on estimates from applicants whose estimated burden ranged from 64,000 hours to 90,000 hours), and the anticipated number of applications has decreased from 2.3 to 1.3 annually.
- In addition, there has been a decrease in the overall cost as a result of a decrease in the rate from \$272 per hour to \$265 per hour.

16. Publication for Statistical Use

This information will not be published for statistical use.

17. Reason for Not Displaying the Expiration Date

The recordkeeping and reporting requirements for this information collection are associated with regulations and are not submitted on instruments such as forms or surveys. For this reason, there are no data instruments on which to display an OMB expiration date. Further, amending the regulatory text of the CFR to display information that, in an annual publication, could become obsolete would be unduly burdensome and too difficult to keep current.

18. Exceptions to the Certification Statement

Not applicable.

B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

10 CFR Part 100 allows for the acquisition of statistical data and the use of statistical methods, but does not require them.

**TABLE 1**

**Annualized Reporting Burden**

Section	No. of Respondents	Responses per Respondent	Total No. of Responses	Burden Hours per Response	Total Annual Reporting Burden (Hours)
Non-seismic siting criteria (10 CFR 100.21)	1.3	1	1.3	22,000	28,600
Geologic and seismic siting criteria (10 CFR 100.23)	1.3	1	1.3	51,000	66,300
<b>TOTAL</b>	1.3	1	1.3	73,000	94,900

TOTAL BURDEN HOURS: 94,900 hours  
TOTAL BURDEN HOUR COST: 25,148,500 (73,000 hours per respondent x 1.3 respondents x \$265/hour)  
ANNUAL RESPONDENTS: 1.3 respondents