Congressional Review Act Summary

AGENCY:	U.S. Nuclear Regulatory Commission
TITLE OF ACTION:	Environmental Considerations Associated with Micro-Reactors (COL-ISG-029)
TYPE OF ACTION:	Interim Staff Guidance (ISG)
LEVEL OF SIGNIFICANCE:	Non-Major
AGENCY IDENTIFICATION:	3150
RIN AND/OR DOCKET ID:	NRC-2020-0051
DATE OF ISSUANCE:	August 2020
STATUTORY OR JUDICIAL DEADLINE:	None

DESCRIPTION OF ACTION:

The U.S. Nuclear Regulatory Commission (NRC) staff is preparing for the environmental reviews of prospective design, license, and permit applications for advanced nuclear power reactors (advanced reactors), including micro-reactors. Characteristics shared by designs referred to as micro-reactors include the low potential for transients and accidents, low potential for radioactive releases, low potential consequences from radiological release, small building and site footprints, operating power levels on the order of tens of megawatts-thermal or less, and increased reliance on passive systems and inherent characteristics used to control power and prevent radioactive releases.

The purpose of this interim staff guidance (ISG) is to modify existing guidance and provide supplemental guidance to assist the NRC staff in determining the scope and scale of environmental reviews of micro-reactor applications. The guidance highlights unique considerations for micro-reactors in each resource area typically covered in the staff's environmental review. This document also offers guidance on scaling the analyses.

ANALYSIS:

The NRC considered two options - the no action alternative of not issuing the ISG and the action alternative of issuing the ISG. Both are discussed below.

Option 1—No Action

Under this option, the NRC would not issue the ISG to address how the staff should focus its environmental reviews for micro-reactor applications. This option is considered the "no action" option and serves as the baseline against which the impacts of the other option is measured. Because the "no action" option would not address concerns regarding the lack of micro-reactor guidance, the staff would have to apply the current guidance in NUREG-1555, the Environmental Standard Review Plan, which was written for large light water reactors (LWRs), and tailor the environmental review of a new micro-reactor application on a case-by-case basis. As a result, the staff expects this lack of guidance could contribute to waste and inefficiency, including unnecessary analysis, review costs, and inconsistent breadth and depth of reviews.

Option 2—Issue Interim Staff Guidance for Micro-reactors

Under this option, the NRC would provide guidance to the staff to focus the staff's environmental reviews for micro-reactor applications on those environmental considerations which share the following characteristics: low potential for transients and accidents, low potential for radioactive releases, low potential consequences from radiological releases, small building and site footprints, operating power levels on the order of tens of megawatts thermal or less, and increased reliance on passive systems and inherent characteristics used to control power and prevent radioactive releases.

The staff's expectation is that the guidance contained in the ISG will result in effectively streamlining the staff's environmental reviews by considering impacts in proportion to their significance. Since staff expects the impacts of a micro-reactor to be less than those of an LWR, the environmental reviews will likely be less resource intensive. By focusing the staff's review on impacts of significance, the staff expects to increase the efficiency of the review process and reduce the staff's review time. The staff's environmental reviews for micro-reactor applications are expected to be more focused and result in shorter review documents than those the NRC has issued for other new nuclear power reactors, such as large LWRs.

This analysis assumes that one micro-reactor application will be submitted in calendar year 2020 and that additional micro-reactor applications will be submitted in the subsequent four years, although the timing and number are uncertain. The staff also assumed that the ISG contents would be incorporated into an appendix to NUREG-1555 in the year 2021 without any substantive change in guidance. The staff would use this ISG to determine the appropriate scope, breadth, and depth of the staff's environmental reviews of new micro-reactor applications. As such, and consistent with the guidance in NUREG/BR-0058, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," Rev. 5, the staff estimates a savings of $588,000, assuming a 7 percent discount rate over a five-year analysis horizon, as shown in Table 1.

Table 1 NRC Implementation

Year	Activity	Number of Items	Staff Labor Hours	Weighted Hourly Rate	Undiscounted	7% NPV	3% NPV
2020	Savings resulting from focused environmental review	1	1,044	131	$137,000	$137,000	$137,000
2021	Incorporate ISG into NUREG as an Appendix	1	(93)	131	($12,000)	($11,000)	($12,000)
	Savings resulting from focused environmental review	1	1,044	131	$137,000	$128,000	$133,000
2022	Savings resulting from focused environmental review	1	1,044	131	$137,000	$119,000	$129,000
2023	Savings resulting from focused environmental review	1	1,044	131	$137,000	$112,000	$125,000
2024	Savings resulting from focused environmental review	1	1,044	131	$137,000	$104,000	$121,000
Total NRC Implementation Benefit (Cost)					$671,000	$588,000	$633,000

Based on the information from the above assumptions:

- **Is there an annual effect on the economy of $100 million or more?**

  No, the monetary effect would be a savings of $588,000 over 5 years.

- **Is there a major increase (typically 10% to 20%) in costs for consumers, individual industries, Federal, State, or local government agencies, or to geographical regions?**

  No, there will not be a major increase in costs for consumers, individual industries, Federal, State, or local government agencies, or to geographical regions.

- **Is there a significant adverse effect on competition, employment, investment, productivity, innovation, or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic and export markets?**

  No, there is no significant adverse effect on competition, employment, investment, productivity, innovation, or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic and export markets.

SUMMARY:

The NRC believes that this ISG is not a major rule under the Congressional Review Act. The ISG modifies existing guidance and provides supplemental guidance to assist the NRC staff in determining the scope and scale of environmental reviews of micro-reactor applications. Guidance provided in the ISG is not legally binding, and it will not result in a net economic impact of more than $100 million annually.

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