
Regulatory Analysis for the Final Rule: Categorical Exclusions from Further Environmental Review

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U.S. Nuclear Regulatory Commission

Office of Nuclear Material Safety and Safeguards

Division of Rulemaking, Environmental, and Financial Support

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ABSTRACT

The purpose of this rule is to amend the categorical exclusions in Title 10 of the *Code of Federal Regulations* Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions.” The rule will establish new, and amend existing, categorical exclusions to (1) minimize inefficiencies and address inconsistencies in the application of categorical exclusions across licensing and regulatory programs and (2) eliminate the need to prepare environmental assessments for U.S. Nuclear Regulatory Commission regulatory actions that have no significant effect on the human environment.

This regulatory analysis evaluates the costs and benefits of the rule and implementing guidance relative to the baseline case, a “no action” alternative.

EXECUTIVE SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) is amending the categorical exclusions in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions.” The regulations in 10 CFR Part 51 implement the National Environmental Policy Act of 1969, as amended (NEPA), for domestic licensing and related regulatory functions. Categorical exclusions are addressed in 10 CFR 51.22, “Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring further environmental review.” Categorical exclusions established by the NRC are listed in 10 CFR 51.22(c). For every Federal action, NEPA requires completion of an environmental assessment (EA) or environmental impact statement (EIS) unless a categorical exclusion applies. Except in special circumstances, an EA or EIS is not required for any action within a category included in 10 CFR 51.22(c).

NEPA also established the Council on Environmental Quality (CEQ). In 2010, the CEQ recommended that agencies periodically review categorical exclusions to ensure they are still relevant or determine whether there are additional eligible actions. The NRC last evaluated and updated the agency’s list of categorical exclusions in 2010. This rule will create new or revised categorical exclusions by identifying actions that do not meet the threshold for an EA or EIS, thereby eliminating the preparation of EAs for NRC actions that are minor, administrative, or procedural in nature and reducing the regulatory costs of NEPA reviews.

This regulatory analysis evaluates the costs and benefits of the rule and implementing guidance relative to the baseline case (the “no action” alternative).

The NRC staff has made the following key findings:

- **Rule Analysis:** The rule recommended by the staff will result in additional costs and benefits, as shown in Table ES-1.

Table ES-1: Total Costs and Benefits for Alternative 2

Entity	Total (2024 Dollars) ^a		
	Undiscounted	7% NPV	3% NPV
NRC	\$1,628,600	\$815,600	\$1,198,400
CEQ	\$0	\$0	\$0
Net Benefit (Cost)	\$1,628,600	\$815,600	\$1,198,400

^a Values rounded to the nearest hundred dollars.
NPV: net present value

- **Nonquantified Benefits:** Based upon the assessment of total costs and benefits, the NRC concludes that the rule will increase regulatory clarity for both the NRC and industry. The revised rule will result in a more consistent implementation of the NRC’s regulatory program.
- **Uncertainty Analysis:** The regulatory analysis contains a Monte Carlo simulation analysis that shows that the mean net benefit for this rule is \$816,000 with 90 percent confidence that the final rule is cost beneficial using a 7 percent discount rate. The amount of NRC

time averted to develop EAs is the factor responsible for the largest variation in averted costs.

- Decision Rationale: Relative to the no action alternative (the baseline), the NRC concludes that the rule is justified from a quantitative standpoint because its provisions will result in net averted costs (i.e., net benefits). In addition, the NRC concludes that the rule is also justified when considering nonquantified costs and benefits because the significance of the nonquantified benefits in regulatory clarity, responsiveness to stakeholder feedback, and alignment with CEQ best practices outweighs that of the nonquantified costs.
- Implementation: The NRC expects that the final rule will be effective in 2026. The applicable NRC internal procedures will be revised in 2026.

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ABBREVIATIONS AND ACRONYMS

BLS	Bureau of Labor Statistics (U.S. Department of Labor)
CEQ	Council on Environmental Quality
CFR	<i>Code of Federal Regulations</i>
CPI-U	consumer price index for all urban consumers
EA	environmental assessment
EIS	environmental impact statement
FONSI	finding of no significant impact
FR	<i>Federal Register</i>
NEPA	National Environmental Policy Act
NMSS	Office of Nuclear Material Safety and Safeguards
NPV	net present value
NRC	U.S. Nuclear Regulatory Commission
OMB	U.S. Office of Management and Budget
PERT	program evaluation and review technique
RAI	request for additional information

1 STATEMENT OF PROBLEM AND OBJECTIVE

The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend the categorical exclusions in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions.” The regulations in 10 CFR Part 51 implement the National Environmental Policy Act of 1969, as amended (NEPA),¹ for domestic licensing and related regulatory functions. Categorical exclusions² are addressed in 10 CFR 51.22, “Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring further environmental review.” Categorical exclusions established by the NRC are listed in 10 CFR 51.22(c). For every Federal action, NEPA requires completion of an environmental assessment (EA) or environmental impact statement (EIS) unless a categorical exclusion applies. Except in special circumstances, an EA or EIS is not required for any action within a category included in 10 CFR 51.22(c).

NEPA also established the Council on Environmental Quality (CEQ). In 2010, the CEQ recommended that agencies periodically review categorical exclusions to ensure they are still relevant or determine whether there are additional eligible actions. The NRC last evaluated and updated the agency’s list of categorical exclusions in 2010. In accordance with this recommendation, the NRC conducted a review of the agency’s activities, including findings of no significant impact (FONSIs) in EAs completed during the 15-year period from 2010 to 2024. This review identified actions that resulted in FONSIs and found several recurring categories of regulatory actions that are not addressed in 10 CFR 51.22 and have no significant effect on the human environment, either individually or cumulatively, see 10 CFR 51.14(a), 51.22(a). Additionally, the NRC relied on expert judgment and professional opinion to identify actions that have no significant effect the human environment.

This rule will establish new, and amend existing, categorical exclusions for licensing, regulatory, and administrative actions that do not individually or cumulatively have a significant effect on the human environment. The rule will address inefficiencies and inconsistencies in the application of categorical exclusions across licensing and regulatory programs and reduce regulatory costs by decreasing the number of unnecessary EAs and providing the same level of environmental review across regulatory programs.

This regulatory analysis evaluates the NRC rule and two alternatives: (1) a “no action” alternative, for which the NRC will not conduct rulemaking and continue to apply the existing NRC-approved list of categorical exclusions in 10 CFR 51.22 and corresponding guidance, and (2) a rulemaking alternative, for which the NRC will revise guidance to address inconsistencies in the implementation of existing categorical exclusions. The no action alternative is the baseline to which the final action is compared.

1.1 Description of the Final Action

The final action will establish new, and amend existing, categories of actions identified as having no significant effect on the human environment and allow agency resources to be

¹ NEPA requires Federal agencies to assess the environmental effects of their actions before deciding whether to approve or disapprove them.

² A “categorical exclusion” is a category of actions that normally does not significantly affect the quality of the human environment, as defined by Section 111(1) of NEPA.

directed toward higher priority activities. The final action will remove certain categorical exclusions that are no longer necessary and clarify certain categories of actions to address inconsistencies in their application by various NRC programs and staff.

Specifically, the final action will add new categories of actions that are excluded from the requirement to prepare an EA to improve the clarity and utility of existing categorical exclusions. The staff has identified five new categorical exclusions:

- (1) Actions that are administrative, procedural, or solely financial in nature including exemptions and orders pertaining to these actions. This new categorical exclusion includes a list that consolidates all existing categorical exclusions that fit into the new category, but the list is not exclusive; rather it provides examples of actions that are included in the category for clarity. The NRC has identified the following as two examples of actions that are included in this category that, while not newly excluded actions themselves, will be specifically stated in the rule for the first time:
 - a. termination of licenses that were issued but for which no construction or preconstruction activities have begun or where all decommissioning activities have been completed and approved and license termination is a final administrative step, and
 - b. actions on or changes to requirements for decommissioning funding plans under 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material"; 10 CFR Part 40, "Domestic Licensing of Source Material"; 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities"; 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material"; or 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste."
- (2) Issuance of amendments to 10 CFR 72.214, "List of approved spent fuel storage casks," for new, amended, revised, or renewed certificates of compliance for cask designs used for spent fuel storage.
- (3) Approvals provided for under the requirements of 10 CFR 50.55a, "Codes and standards."
- (4) Certain changes to requirements for fire protection, emergency planning, physical security, cybersecurity, and quality assurance.
- (5) Changes to extend implementation dates by revising categorically exclude actions authorizing licensees to delay implementation of certain new NRC requirements, for example, where the new requirements were previously found to not result in an environmental impact.

The NRC evaluated all existing categorical exclusions and determined that two existing categorical exclusions are no longer necessary because they are obsolete, while the other existing categorical exclusions remain valid. The NRC is removing 10 CFR 51.22(c)(17):

Issuance of an amendment to a permit or license under parts 30, 40, 50, 52, or part 70 of this chapter which deletes any limiting condition of operation or monitoring requirement based on or applicable to any matter subject to the provisions of the Federal Water Pollution Control Act.

The NRC is also removing 10 CFR 51.22(c)(18):

Issuance of amendments or orders authorizing licensees of production or utilization facilities to resume operation, provided the basis for the authorization rests solely on a determination or redetermination by the Commission that applicable emergency planning requirements are met.

The NRC has also reorganized the list of categorical exclusions in 10 CFR 51.22(c) to eliminate redundancy and add clarity. This reorganization eliminates distinctions in categorical exclusions among license amendments, exemptions, rulemakings, and other forms of NRC actions to ensure that categorical exclusions are based on activities that will be authorized rather than the administrative and legal differences among the different forms of NRC approvals. This reorganization removes the overlapping similar actions and consolidates similar actions into one categorical exclusion.

The NRC offices have internal instructions or procedures on how to implement provisions of these regulations. Under the final action, the NRC will review its internal documents to support the rule change. In addition to internal procedures, NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs," issued August 2003 (NRC, 2003), and NUREG-1757, "Consolidated Decommissioning Guidance: Decommissioning Process for Materials Licensees," Volume 1, Revision 2, issued September 2006 (NRC, 2006), will need to be reviewed to support the rule change. However, revisions to NUREG-1748 and NUREG-1757 are comprehensive in scope and not driven by this rulemaking. These revisions began before the development of this rule and therefore are not included in this regulatory analysis. The NRC will publish *Federal Register* (FR) notices announcing the availability of the revised NUREG documents when completed.

1.2 Need for the Final Action

In addition to the final action meeting the intent of the CEQ's recommendations for periodic review and updates to categorical exclusions, the Office of Nuclear Material Safety and Safeguards (NMSS) reviewed its environmental programs and organization to identify potential opportunities to continue to meet its NEPA obligations while saving time in the process, reducing resource use, and implementing other enhancements. One such opportunity was evaluating the possibility of creating new or revised categorical exclusions. By identifying those actions that do not meet the threshold for an EA or EIS, the staff will ensure that it is focused on those actions with possibly new or significant environmental impacts. This rule is a direct result of that review.

After completing numerous EAs that concluded with FONSIs, such as for spent fuel storage cask certificate of compliance renewals and amendments, the NRC has identified recurring actions that may be eligible for categorical exclusion.

In addition, the staff believes that activities with the same environmental impacts, regardless of the regulatory process, should be eligible for the same categorical exclusions. For example, the current categorical exclusions explicitly list license amendments, exceptions, or amendments to regulations. However, if the regulation does not specifically list a licensing action such as an exemption, the action is not eligible for that categorical exclusion, regardless of whether it has environmental impacts similar to those of another action for which a categorical exclusion already exists.

Further, the staff has identified several instances when different staff or program offices have cited different, potentially overlapping, categorical exclusions for similar or even identical actions (e.g., 10 CFR 51.22(c)(9) versus (c)(25)). In other cases, application of some criteria in a categorical exclusion can create unnecessary work, such as having to apply the “no significant hazards considerations” criterion in nonreactor exemption actions (10 CFR 51.22(c)(25)(i)) even though the “no significant hazards considerations” process only applies to reactors.

Revisions to the categorical exclusions will (1) clarify and address inconsistencies in the application of categorical exclusions across licensing and regulatory programs and (2) eliminate the need to prepare EAs for NRC regulatory actions that have no significant effect on the human environment.

1.3 Existing Regulatory Framework

The NRC’s regulations implementing NEPA for domestic licensing and related regulatory functions are contained in 10 CFR Part 51. For every Federal action, the NRC’s regulations require completion of an EA or EIS unless a categorical exclusion applies. An EA documents the NRC’s assessment of whether a proposed action will significantly affect the quality of the human environment. If the EA supports a FONSI, the environmental review process is complete. If the proposed action will significantly affect the quality of the human environment, then an EIS must be prepared to describe the reasonably foreseeable environmental impacts of the proposed action.

Categorical exclusions are addressed at 10 CFR 51.22; those established by the NRC are listed in 10 CFR 51.22(c). Except in special circumstances, an EA or EIS is not required for any action within a category included in 10 CFR 51.22(c).

2 IDENTIFICATION AND PRELIMINARY ANALYSIS OF ALTERNATIVE APPROACHES

The NRC analyzed two alternatives to the rule, as described in this section.

2.1 Alternative 1: No Action Alternative

The no action alternative is to maintain the status quo. Under the no action alternative, the NRC will not pursue a categorical exclusion-specific rulemaking and will rely on the existing NRC-approved list of categorical exclusions in 10 CFR 51.22(c) and corresponding guidance to regulate the identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring further environmental review. This alternative will result in no new direct costs to the NRC or the industry and serves as the baseline for this analysis.

This alternative will not address the staff-identified implementation inconsistencies in applying the categorical exclusion regulations and does not meet the regulatory principle of clarity, which calls for agency positions to be readily understood and easily applied. In addition, this alternative will not ensure that the NRC's categorical exclusions remain current.

2.2 Alternative 2: Rulemaking to Amend Categorical Exclusions from Further Environmental Review

Under this alternative, the NRC staff will issue a rule that will establish new, and amend existing, categories of actions identified in 10 CFR 51.22 as having no significant effect on the human environment. The rule will add new categories of actions that are excluded from the requirement to prepare an EA or EIS and clarify categories of actions to address inconsistencies in the application by various NRC programs and staff. Revisions to the categorical exclusions will increase consistency and provide the same level of environmental review across regulatory programs. The rulemaking will benefit the NRC, applicants, and licensees by reducing the number of EAs performed by the NRC and decreasing the regulatory costs of environmental information requirements from applicants and licensees.

2.3 Alternative 3: Development of Enhanced Regulatory Guidance Without Rulemaking to Clarify Categorical Exclusion Requirements

Under this alternative, the NRC staff will develop new instructions or procedures to provide clarity in the staff's implementation of existing categorical exclusions.

However, this alternative does not meet the regulatory objective because it will not resolve inconsistencies in the application of categorical exclusions across licensing and regulatory programs and will not reduce the number of unnecessary EAs. NRC's NEPA procedures provide that new categorical exclusions are added, and existing categorical exclusions are amended, "by rule or regulation." 10 CFR 51.22(a). For these reasons, this alternative is not considered viable and is not evaluated further.

3 ESTIMATION AND EVALUATION OF COSTS AND BENEFITS

This section examines the costs and benefits expected to result from the NRC's rule. All costs and benefits are monetized when possible. The total costs and benefits are then summed to determine whether the difference between the costs and benefits results in a positive benefit. In some cases, costs and benefits are not monetized because meaningful quantification is not possible.

3.1 Identification of Affected Attributes

This section identifies the components of the public and private sectors, commonly referred to as attributes, that are expected to be affected by Alternative 2, the rulemaking alternative, identified in section 2. Alternative 2 will apply to all NRC applicants and licensees requesting licensing actions that need to be considered for categorical exclusions. The NRC staff developed an inventory of the impacted attributes using the list in NUREG/BR-0058, draft Revision 5, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," issued January 2020 (NRC, 2020).

The rule will affect the following attributes.

3.1.1 *Industry Operation*

This attribute accounts for the projected net economic effect on all affected entities caused by routine and recurring activities required by Alternative 2. These activities include reductions in environmental information required from NRC applicants and licensees and in responses to requests for additional information (RAIs) from the NRC.

3.1.2 *NRC Implementation*

This attribute accounts for the projected net economic effect on the NRC to place the alternative into operation. To implement Alternative 2, the NRC incurs a cost relative to Alternative 1 (i.e., the no action alternative, the current regulatory baseline) to issue a rule. However, for the final rule phase, these costs are considered sunk costs and are not included in this analysis.

3.1.3 *NRC Operation*

This attribute accounts for the projected net economic effect on the NRC caused by the routine and recurring activities required by Alternative 2. The rule may result in reductions in operating costs to the NRC because the new categories of action will reduce the number of EAs performed by the NRC.

3.1.4 *Regulatory Clarity*

This attribute accounts for regulatory clarity resulting from the implementation of Alternative 2 compared to Alternative 1. Alternative 2 will improve regulatory clarity by eliminating redundancy and clarifying which NRC actions are categorically excluded by removing overlapping similar actions and consolidating similar actions into one categorical exclusion.

3.1.5 *Other Government Entities*

The NRC staff consulted with the CEQ during the development of the rule and received a determination that the rule is in conformity with NEPA.

3.1.6 *Environmental Considerations*

This attribute accounts for environmental improvements resulting from the implementation of Alternative 2 compared to Alternative 1. Alternative 2 will eliminate existing categorical exclusions that are no longer necessary or have proven to no longer meet the criteria for a categorical exclusion. The NRC evaluated all existing categorical exclusions and determined that two existing categorical exclusions are no longer necessary because they are obsolete; the other existing categorical exclusions remain valid.

3.1.7 *Attributes with No Effects*

Attributes that are not expected to contribute to the results under any of the alternatives include:

- industry implementation
- public health (accident)
- public health (routine)
- occupational health (accident)
- occupational health (routine)
- offsite property
- onsite property
- general public
- improvements in knowledge
- safeguards and security considerations
- other considerations

3.2 Analytical Methodology

This section describes the process used to evaluate costs and benefits associated with the proposed alternatives. The benefits include any desirable changes in affected attributes (e.g., monetary savings, improved safety, and improved security). The costs include any undesirable changes in affected attributes (e.g., monetary costs, increased exposures).

Of the six affected attributes, the analysis quantitatively evaluates three: NRC implementation, NRC operation, and other government entities. Quantitative analysis requires a baseline characterization of the affected society, including factors such as the number of affected entities, the nature of the activities currently performed, and the types of systems and procedures that applicants and licensees will consider or will no longer implement because of the proposed alternatives. Where possible, the NRC calculated costs for these attributes using distributions to quantify the uncertainty in these estimates. The detailed cost tables used in this regulatory analysis are included in the individual sections for each of the provisions. The NRC evaluated the remaining attribute qualitatively because the benefits relating to regulatory efficiency are not easily quantifiable or because the data necessary to quantify and monetize the impacts of this attribute are not available.

3.2.1 *Regulatory Baseline*

This regulatory analysis provides the incremental impacts of the rule relative to a baseline that reflects anticipated behavior if the NRC does not undertake regulatory or nonregulatory action. Section 3 of this regulatory analysis presents the estimated incremental costs and benefits of the alternatives compared to this baseline. This regulatory baseline is the no action alternative (i.e., Alternative 1).

3.2.2 *Affected Entities*

The NRC estimates that the rule will affect all NRC applicants and licensees requesting licensing actions that need to be considered for categorical exclusions. The final rule will provide time savings to licensees through fewer EAs and RAIs. In addition, the amendments will not impose any new requirements on NRC applicants or licensees but instead will provide for more timely NRC action by reducing the time spent developing EAs or producing RAIs.

3.2.3 *Base Year*

All monetized costs are expressed in 2024 dollars. The NRC's implementation costs to prepare and issue a final rule are expected to be incurred in 2025. Ongoing costs of operation related to Alternative 2 are assumed to begin no earlier than 30 days after publication of the final rule in the FR unless otherwise stated, and they are modeled on an annual cost basis. Estimates are made for recurring annual operating expenses. The values for annual operating expenses are modeled as a constant expense for each year of the 10-year analysis horizon. The staff performed a discounted cash flow calculation to discount these annual expenses to 2024-dollar values.

3.2.4 *Discount Rates*

In accordance with guidance from U.S. Office of Management and Budget (OMB) Circular No. A-4, "Regulatory Analysis," dated September 17, 2003 (OMB 2003), and NUREG/BR-0058, net present value (NPV) calculations are used to determine how much society will need to invest today to ensure that the designated dollar amount is available in a given year in the future. By using NPV calculations, costs and benefits are valued to a reference year for comparison, regardless of when the cost or benefit is incurred in time. Consistent with NRC past practice and guidance, present-worth calculations in this analysis use 3 percent and 7 percent real discount rates. A 3 percent discount rate approximates the real rate of return on long-term government debt, which serves as a proxy for the real rate of return on savings to reflect reliance on a social rate of time preference discounting concept.³ A 7 percent discount rate approximates the marginal pretax real rate of return on an average investment in the private sector, and it is the appropriate discount rate whenever the main effect of a regulation is to displace or alter the use of capital in the private sector. A 7 percent rate is consistent with an opportunity cost⁴ of capital concept to reflect the time value of resources directed to meet regulatory requirements.

³ The "social rate of time preference" discounting concept refers to the rate at which society is willing to postpone a marginal unit of current consumption in exchange for more future consumption.

⁴ "Opportunity cost" represents what is foregone by undertaking a given action. If the licensee personnel were not engaged in revising procedures, they will be performing other work activities. Throughout the analysis, the NRC estimates the opportunity cost of performing these incremental tasks as the industry personnel's pay for the designated unit of time.

3.2.5 Cost-Benefit Inflaters

The staff estimated the analysis inputs from sources as referenced in appendix A, which are provided in prior-year dollars. To evaluate the costs and benefits consistently, these inputs are put into 2024 base-year dollars. The most common inflator is the consumer price index for all urban consumers (CPI-U) developed by the U.S. Department of Labor’s Bureau of Labor Statistics (BLS). Using the CPI-U, the prior-year dollars are converted to 2024 base year dollars. For 2024, the currently reported CPI-U values have been averaged together. The formula to determine the amount in 2024 dollars is as follows:

$$\frac{CPI - U_{2024}}{CPI - U_{2023}} \times Value_{2023} = Value_{2024}$$

Table 1 summarizes the values of CPI-U used in this regulatory analysis.

Table 1: CPI-U Inflator

Year	CPI-U Annual Average ^a
2023	304.70
2024	313.68

^a BLS, 2025.

3.2.6 Labor Rates

For the purposes of this regulatory analysis, the NRC applied incremental cost principles to develop labor rates that include only labor and material costs directly related to the implementation and operation and maintenance of the rule requirements. This approach is consistent with the guidance in NUREG/CR-3568, “A Handbook for Value-Impact Assessment,” issued December 1983 (NRC, 1983), and general cost-benefit methodology. The NRC incremental labor rate is \$158 per hour for fiscal year 2025.⁵

3.2.7 Sign Conventions

The sign conventions used in this analysis are that all favorable consequences for the Alternative 2 are positive and all adverse consequences are negative. Negative values are shown using parentheses (e.g., negative \$500 is displayed as (\$500)).

3.2.8 Analysis Horizon

The analysis horizon is 10 years based on the CEQ recommendation that agencies review their categorical exclusions at least every 7 years, plus 3 years to complete the rulemaking.

⁵ The NRC labor rates presented herein differ from those developed under the NRC’s license fee recovery program (10 CFR Part 170, “Fees for Facilities, Materials, Import and Export Licenses, and Other Regulatory Services Under the Atomic Energy Act of 1954, as Amended”). NRC labor rates for fee recovery purposes are appropriately designed for full-cost recovery of the services rendered and as such include nonincremental costs (e.g., overhead, administrative, and logistical support costs).

3.3 Industry Operations

While the rule will apply to all NRC regulatory actions, the regulatory changes to 10 CFR 51.22(c) will not impose any new requirements on NRC applicants or licensees and therefore should not increase costs to industry. The benefits of this action include a reduction in environmental information requirements from NRC applicants and licensees and a reduction in responses to RAIs from the NRC.

3.4 NRC Implementation

Costs already incurred, including those activities performed by the NRC in making the regulatory decision (e.g., development of the final rule and internal procedures), are viewed as “sunk” costs and are excluded from this analysis.

3.5 NRC Operation

The NRC will receive averted costs (benefit) resulting from a reduction in the development of EAs and a decrease in the number of RAIs during environmental reviews. Based on historical data, the NRC expends a total of 1,030 hours per year to complete EAs and RAIs (1,027 hours per year for EAs and 3 hours per year for RAIs), for the six categorical exclusion categories. The NRC estimates time saved from the reduction in the development of 20 EAs per year and 1 RAI per year over the next 10 years. The potential incremental savings are calculated in Table 2.

Table 2: NRC Operations Costs

Year	Activity	No. of RAI Hours Saved/Year	No. of EA Hours Saved/Year	Labor Rate	Total (2022 dollars) ^a		
					Undiscounted	7% NPV	3% NPV
2026–2035	NRC time saved in development of EAs/RAIs	3	1,027	\$158	\$1,628,600	\$815,600	\$1,198,400
NRC EA Development Incremental Benefit (Cost)					\$1,628,600	\$815,600	\$1,198,400

^a Values rounded to the nearest hundred dollars.

3.6 Regulatory Clarity

Alternative 2 will clarify the scope of existing categories of categorical exclusions and eliminate distinctions in categorical exclusions among license amendments, exemptions, rulemaking, and other forms of NRC actions to ensure that categorical exclusions are based on the activities that will be authorized rather than the administrative and legal differences among the different forms of NRC approvals. Broadening these categorical exclusions increases the applicability of the categorical exclusion to other means for conveying NRC decisions. The reorganized regulations also remove overlapping similar actions and consolidate similar actions into a single categorical exclusion.

The rule will remove the “no significant hazards consideration” determination in 10 CFR 51.22(c)(9)(i), (c)(25)(i), and (c)(25)(v). Only two of the three criteria for determining whether an amendment involves a no significant hazards consideration have a nexus to environmental effects. The rule will merge the categorical exclusion in existing

10 CFR 51.22(c)(9)) and (c)(25) into the new 10 CFR 51.22(d). The criterion in the current 10 CFR 51.22(c)(25) will be retained, including the two criteria that overlap with in the no significant hazards considerations related to potential effects on the environment. Therefore, removing the no significant hazards considerations criterion clarifies the categorical exclusions without changing the potential for environmental effects of the actions that are categorically excluded.

The rule will also revise the “no significant construction impact” criterion in 10 CFR 51.22(c)(6), (c)(11), (c)(12), and (c)(25)(iv) to state, “provided that any ground disturbance is limited to previously disturbed areas” and will define “previously disturbed areas” as “areas that have been changed by development of the facility and remain altered by human activity such that they do not provide habitat for wildlife or native vegetation, including ecologically important species such as pollinators, and no longer have the potential to yield historic and cultural resources. This includes the lateral and vertical extent of alteration from natural cover to a managed state.” Based on NRC experience, this change offers clarification by explicitly stating the relevant consideration in the regulations. The revised regulations should result in improved regulatory clarity.

3.7 Other Government Entities

The NRC consulted with CEQ on its final rule pursuant to NEPA § 102(2)(B). The CEQ incurred costs to complete its 30-day review of the final rule and provided the NRC with a written statement that the categorical exclusions in the rule were developed in conformity with NEPA and CEQ regulations. These are sunk costs for the final rule and are not included in the analysis.

3.8 Environmental Considerations

Alternative 2 will eliminate existing categorical exclusions that are no longer necessary or have proven to no longer meet the criteria for a categorical exclusion. The NRC evaluated all existing categorical exclusions and determined that two existing categorical exclusions are no longer necessary because they are obsolete. The NRC does not anticipate any incremental environmental impacts as a result of this rule. The remaining existing categorical exclusions continue to be valid. The NRC has concluded its activity to amend applicable agency licenses and permits to delete limiting conditions of operation or monitoring requirements pertaining to nonradiological discharge pollutants of the Federal Water Pollution Control Act and no longer includes limiting conditions subject to the provisions of that act in NRC permits and licenses. The NRC has determined that this categorical exclusion is no longer necessary; therefore, the rule will remove 10 CFR 51.22(c)(17):

Issuance of an amendment to a permit or license under parts 30, 40, 50, 52, or part 70 of this chapter which deletes any limiting condition of operation or monitoring requirement based on or applicable to any matter subject to the provisions of the Federal Water Pollution Control Act.

The rule will also remove 10 CFR 51.22(c)(18):

Issuance of amendments or orders authorizing licensees of production or utilization facilities to resume operation, provided the basis for the authorization

rests solely on a determination or redetermination by the Commission that applicable emergency planning requirements are met.

This categorical exclusion was established in the NRC's 1984 NEPA implementing regulations to support the execution of a 1980 emergency planning rule. That emergency planning rule has been fully performed; therefore, the NRC has determined that this categorical exclusion is no longer applicable.

Eliminating these two existing categorical exclusions will not result in any incremental costs to industry or the NRC because these activities have already been completed or are no longer included in EAs, and therefore no further action should occur.

4 SUMMARY OF THE RESULTS

4.1 Summary

This regulatory analysis identifies both quantifiable and nonquantifiable costs and benefits that will result from Alternative 2 (rulemaking). Although quantifiable costs and benefits appear to be more tangible, decision-makers should not discount costs and benefits that cannot be quantified. Such benefits or costs can be as important as or even more important than benefits or costs that can be quantified and monetized. These qualitative impacts, while not monetized, could be substantial—potentially comparable to or exceeding the magnitude of some quantified benefits, depending on stakeholder values and implementation outcomes. For example, increased regulatory clarity in licensing activities could have long-term economic and operational implications.

4.1.1 *Quantified Net Benefits*

Table 3 summarizes the estimated quantified benefits and costs for Alternative 2, compared to the regulatory baseline (Alternative 1).

4.1.2 *Nonquantified Benefits*

In addition to the quantified costs, the NRC has analyzed numerous benefits and costs that could not be monetized but will affect the general public, industry, and the agency. These benefits are summarized in **Error! Reference source not found.**, which provides the quantified and qualified costs and benefits for Alternative 2. The quantitative analysis used best estimate values.

Table 3: Summary of Totals

Net Monetary Savings or (Costs)	Nonquantified Benefits or (Costs)
Alternative 1: No Action \$0	None
Alternative 2: NRC: (all provisions) \$815,600 using a 7% discount rate \$1,198,400 using a 3% discount rate CEQ: (all provisions) \$0 using a 7% discount rate \$0 using a 3% discount rate Net Benefit (Cost): (all provisions) \$815,600 using a 7% discount rate \$1,198,400 using a 3% discount rate	<u>Benefits:</u> <ul style="list-style-type: none"> • Regulatory Clarity: Alternative 2 will clarify the scope of existing categorical exclusions and eliminate distinctions in certain categorical exclusions to ensure that all are based on the activities that will be authorized rather than the administrative and legal differences among the different forms of NRC approvals. Broadening these categorical exclusions increases their applicability to other means for conveying NRC decisions. • Environmental Considerations: Alternative 2 will eliminate existing categorical exclusions that are no longer necessary or no longer meet the defining criteria. The NRC determined that two existing categorical exclusions are no longer necessary because they are obsolete. The remaining existing categorical exclusions continue to be valid.

Net Monetary Savings or (Costs)	Nonquantified Benefits or (Costs)
	<ul style="list-style-type: none"> <li data-bbox="716 233 1276 289">• Responsive to Stakeholder Feedback on Categorical Exclusion Regulations <p data-bbox="716 411 797 436"><u>Costs:</u></p> <ul style="list-style-type: none"> <li data-bbox="716 443 1219 468">• No nonquantified costs were identified.

4.2 Uncertainty Analysis

The NRC completed a Monte Carlo sensitivity analysis for this regulatory analysis using the specialty software @Risk. The Monte Carlo approach answers the question, “What distribution of net costs and benefits results from multiple draws of the probability distribution assigned to key variables?”

4.2.1 *Uncertainty Analysis Assumptions*

The NRC provides the following analysis of the variables with the greatest uncertainty on estimates of values. As noted above, the NRC performed this analysis with a Monte Carlo simulation analysis using the @Risk software program. Monte Carlo simulations involve introducing uncertainty into the analysis by replacing the point estimates of the variables used to estimate base case costs and benefits with probability distributions. By defining input variables as probability distributions instead of point estimates, the influence of uncertainty on the results of the analysis (i.e., the net benefits) can be modeled effectively.

The probability distributions chosen to represent the different variables in the analysis were bounded by the range-referenced input and the NRC staff’s professional judgment. When defining the probability distributions for use in a Monte Carlo simulation, summary statistics are needed to characterize the distributions. These summary statistics include (1) the minimum, most likely, and maximum values of a program evaluation and review technique (PERT) distribution,⁶ (2) the minimum and maximum values of a uniform distribution, and (3) the specified integer values of a discrete population. The NRC selected these summary statistics based on the nature of the input data and the modeling needs. For uncertain parameters where expert judgment provided a range and a most likely value, the PERT distribution was used because it captures skewness and central tendency defined by three estimates effectively. For parameters with only a known range and no clear mode, a uniform distribution was selected to reflect equal likelihood across the range. For categorical or count-based inputs, discrete values were used to represent the actual observed or assumed population. These choices ensure that the statistical representation aligns with the available data and the intended use in probabilistic modeling.

⁶ A PERT distribution is a special form of the beta distribution with specified minimum and maximum values. The shape parameter is calculated from the defined “most likely” value. The PERT distribution is similar to a triangular distribution in that it has the same set of three parameters. Technically, it is a special case of a scaled beta (or beta general) distribution. The PERT distribution is generally considered superior to the triangular distribution when the parameters result in a skewed distribution because the smooth shape of the curve places less emphasis in the direction of skew. Similar to the triangular distribution, the PERT distribution is bounded on both sides, and therefore may not be adequate for some modeling purposes if the capture of tail or extreme events is desired.

Appendix A identifies the data elements, the distribution and summary statistic, and the mean value of the distribution used in the uncertainty analysis.

4.2.2 Uncertainty Analysis Results

The NRC performed the Monte Carlo simulation by repeatedly recalculating the results (i.e. the quantified net benefit of the rule), which are calculated by tabulating the quantified attributes through each specified distribution, 10,000 times. For each iteration, the values identified in appendix A were chosen randomly from the probability distributions that define the input variables. The values of the output variables were recorded for each iteration and used to define the resultant probability distribution.

For the analysis shown in each figure below, the NRC ran 10,000 simulations in which it changed the key variables to assess the resulting effect on costs and benefits. Figures 1 and 2 display the probability density of the incremental costs and benefits from the regulatory baseline (Alternative 1) for each affected entity and the total net benefit of the rule. The analysis shows that the NRC has a 99 percent likelihood of incurring benefits that exceed the costs.

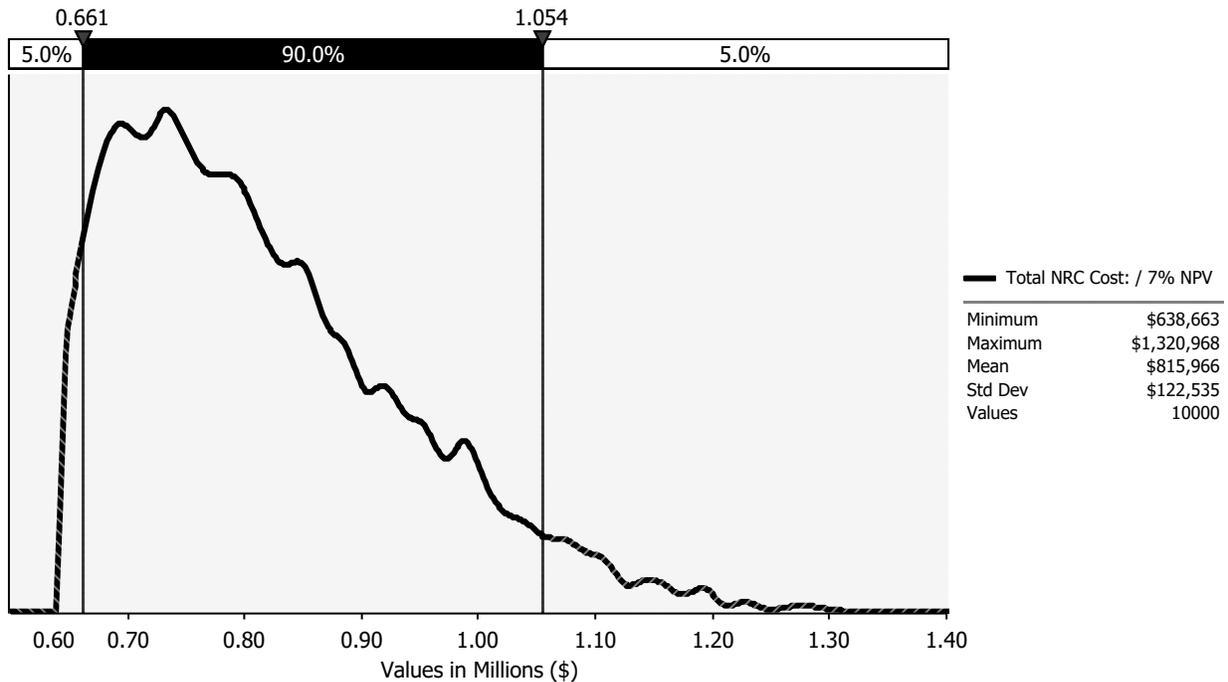


Figure 1: Total NRC Net Benefits (Costs) (7 percent NPV) - Alternative 2

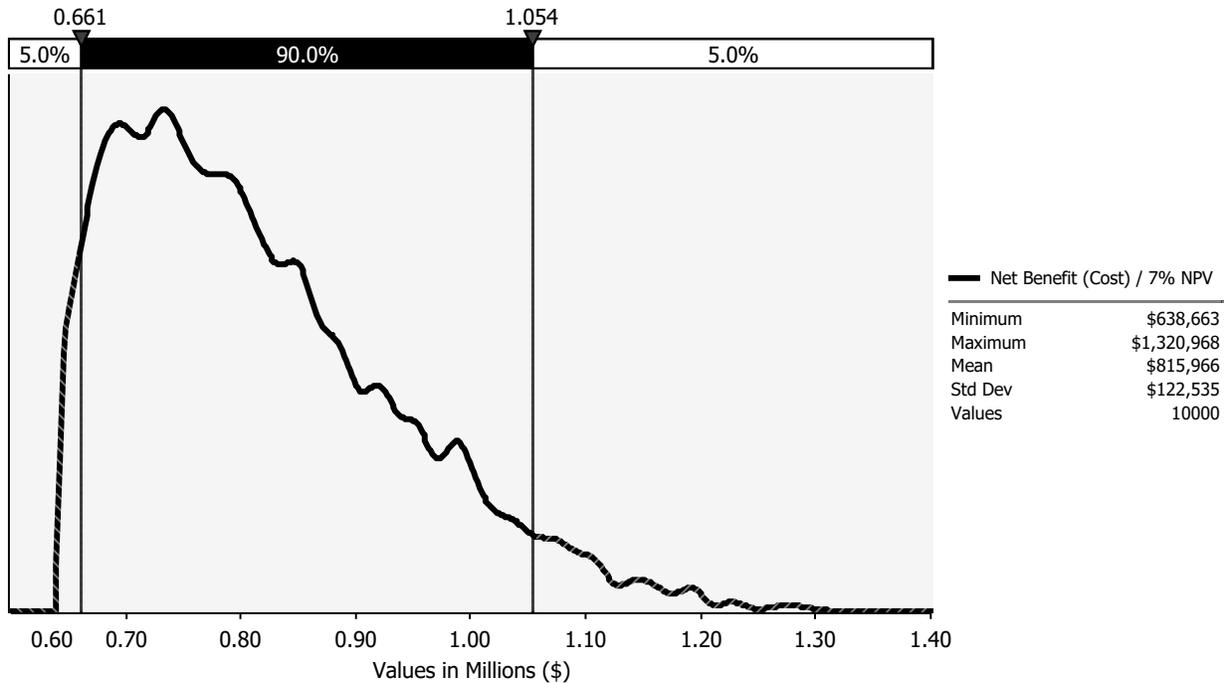


Figure 2: Total Net Benefits (Costs) (7 percent NPV) - Alternative 2

Table 4 presents descriptive statistics on the uncertainty analysis.

Table 4: Descriptive Statistics for Uncertainty Results (7 Percent NPV)

Uncertainty Result	Incremental Cost-Benefit (2024 Thousand Dollars)				
	Min	Mean	Max	5%	95%
Net NRC Benefit (Cost)	(\$639)	\$816	\$1,321	(\$661)	\$1,054
Total Net Benefit (Cost)	(\$639)	\$816	\$1,321	(\$661)	\$1,054

This table displays the key statistical results, including the 90 percent confidence interval for the quantified net benefits will fall between the 5 percent and 95 percent values. This confidence interval does not account for unquantified net benefits, which may include important but non-monetized effects such as environmental, social, or health-related outcomes. As a result, the total net benefits may be understated, and the confidence interval should be interpreted as applying only to the portion of benefits and costs that could be quantified. Decision-makers should consider both the quantified results and the potential magnitude and direction of unquantified effects when evaluating the overall impact.

Figure 3 shows a tornado diagram that identifies the cost drivers for this rule. This figure ranks the variables based on their contribution to the uncertainty in cost. The largest cost driver is the amount of NRC time averted to develop EAs followed by the amount of NRC time averted to develop RAs. These two variables are the largest cost drivers and generate the largest variations in the total net benefit due to uncertainty. The remaining cost drivers show diminishing variation on the total net benefit.

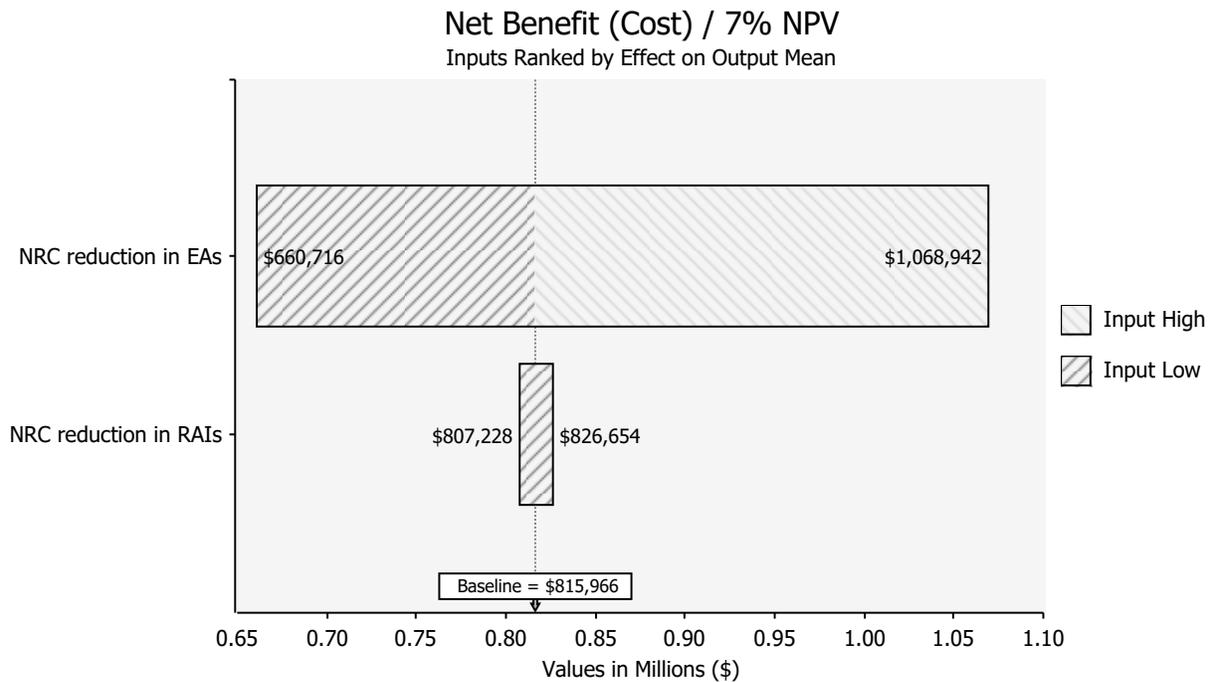


Figure 3: Top Cost Drivers for which Uncertainty Impacts the Total Net Costs (7 percent NPV) - Alternative 2

4.2.3 Summary of Uncertainty Analysis

The simulation analysis shows that the estimated mean benefit (i.e., positive averted costs or savings) for this rule is \$816,000, with 90 percent confidence that the net benefit is between \$661,000 and \$1,054,000 using a 7 percent discount rate. The NRC’s quantitative estimates show that the rule alternative is only cost beneficial for the agency.

4.3 Disaggregation

To comply with the guidance in NUREG/BR-0058, Section 4.3.2, “Criteria for the Treatment of Individual Requirements,” the NRC performed a screening review to determine whether the final rule will be unnecessary to achieve the objectives of the rulemaking. The staff did not identify any unnecessary or unrelated provisions; therefore, it did not perform a disaggregation for this regulatory analysis.

5 DECISION RATIONALE AND IMPLEMENTATION

The assessment of total costs and benefits discussed previously leads the NRC to conclude that, if implemented, the rule will maintain protection of the environment, improve regulatory clarity in the environmental review process for both the agency and industry, and increase the consistency and reduce the regulatory burden for the Commission. Based solely on quantified costs and benefits, the regulatory analysis shows that the rulemaking is justified because the total quantified benefits of the regulatory action will exceed the costs of the final action, for all discount rates up to 7 percent. Considering nonquantified costs and benefits, the regulatory analysis shows that the rulemaking is justified because the number and significance of the nonquantified benefits outweigh the nonquantified costs. Therefore, integrating both quantified and nonquantified costs and benefits indicates that the benefits of the rule outweigh the identified quantitative and qualitative impacts attributable to the rule.

The NRC estimates that the effective date of the rule will be in 2026. The applicable internal procedures will be revised in 2025 and 2026.

6 REFERENCES

U.S. Code of Federal Regulations, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions,” Part 51, Chapter I, Title 10, “Energy.”

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U.S. Department of Labor, Bureau of Labor Statistics (BLS), “Consumer Price Index for All Urban Consumers (CPI-U): U.S. City Average, All Items,” Historical CPI-U, January 2025, Archived Consumer Price Index Supplement Files, U.S. Department of Labor, available at <https://www.bls.gov/cpi/tables/supplemental-files/home.htm>, accessed January 3, 2025.

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NRC, “Environmental Review Guidance for Licensing Actions Associated with NMSS Programs,” NUREG-1748, August 2003 (ML032450279).

NRC, “Consolidated Decommissioning Guidance: Decommissioning Process for Materials Licensees,” NUREG-1757, Vol. 1, Rev. 2, September 2006 (ML063000243).

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APPENDIX A MAJOR ASSUMPTIONS AND INPUT DATA

Description	Mean Estimate	Distribution	Low Estimate	Most Likely Estimate	High Estimate	Source or Basis of Estimate
General Input						
Analysis base year	2024					NRC assumption
Year NRC rule is effective	2026					NRC assumption
Timeframe of analysis (years)	10					Timeframe is consistent with CEQ and 3 years for rulemaking
Alternative discount factor	3%					NUREG/BR-0058, OMB guidance
Principal discount factor	7%					NUREG/BR-0058, OMB guidance
NRC staff hourly labor rate	\$158					NRC calculation
Number of EAs and FONSI's from 2010 to 2024	299					NRC estimate
CEQ weighted hourly rate	\$146.96	PERT	\$124.53	\$146.83	\$169.94	BLS tables: Hourly rate was inflated to 2024 dollars using values of CPI-U. The NRC then applied a multiplier of 2.4, which included fringe and indirect management costs, resulting in the displayed labor rate.
Alternative 1 Input Data for Alternative 2 Averted Costs						
NRC Inputs						
Number of EAs avoided per year	20					NRC estimate; assume the same distribution of EAs over the last 15 years to occur over the next 10 years
Number of RAIs avoided per year	1					NRC estimate; assume 5 percent of EAs have an RAI
Alternative 2 Input Data						
NRC Implementation—Finalize Internal Procedures						
Hours to develop internal procedures	863	PERT	675	750	1,500	NRC estimate
Number of years	1					NRC estimate
NRC Implementation—Develop and Issue the Final Rule						
Hourly rate for NRC	\$158					NRC calculation

Description	Mean Estimate	Distribution	Low Estimate	Most Likely Estimate	High Estimate	Source or Basis of Estimate
Hours to develop and issue final rule	3,048	PERT	2,743	3,048	3,353	NRC estimate
Number of years	1					NRC estimate
NRC Operation—Environmental Assessment Development and Reviews						
Hourly rate for NRC	\$158					NRC calculation
Reduction in EAs developed (hours)	1,027	PERT	804	893	1,787	NRC estimate Assume 25 hours to develop a simple EA and 100 hours to develop a moderate EA
Number of years	1					NRC estimate
NRC Operation—Request for Information						
Hourly rate for NRC	\$158					NRC calculation
Reduction in RAI development and review (hours)	3	PERT	3	3	6	NRC estimate. Assume 3 hours to develop and review an environmental RAI
Number of years	1					NRC estimate
CEQ Inputs						
CEQ review and conformity determination on final rule (hours)	92	PERT	72	80	160	NRC estimate

Note: BLS = U.S. Bureau of Labor Statistics; CEQ = Council on Environmental Quality; CPI-U = consumer price index for all urban consumers; EA = environmental assessment; FONSI = finding of no significant impact; NRC = U.S. Nuclear Regulatory Commission; OMB = Office of Management and Budget; PERT = program evaluation and review technique; RAI = request for additional information.