Regulatory Analysis for the 10 CFR Part 51, Generic Environmental Impact Statement for Licensing of New Nuclear Reactors

NRC-2020-0101; RIN 3150-AK55

U.S. Nuclear Regulatory Commission
Office of Nuclear Material Safety and Safeguards
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ABSTRACT

The U.S. Nuclear Regulatory Commission (NRC or the Commission) is proposing to amend the requirements in Part 51 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," to include the results of the Generic Environmental Impact Statement for Licensing of New Nuclear Reactors (NR GEIS). This document presents a draft regulatory analysis of the benefits and costs of the proposed rule requirements, the NR GEIS, Regulatory Guide 4.2, "Preparation of Environmental Reports for Nuclear Power Stations," and COL-ISG-030 "Environmental Considerations for Advanced Nuclear Reactor Applications that Reference the Generic Environmental Impact Statement," relative to the baseline case (i.e., the No-Action alternative).

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ABBREVIATIONS AND ACRONYMS

ac	acre(s)
BLS	Bureau of Labor Statistics
CFR	*Code of Federal Regulations*
COL	combined license
CP	construction permits
EIS	environmental impact statement
ER	Environmental Report
ESP	early site permit
FRN	*Federal Register* notice
GEIS	generic environmental impact statement
LWR	light-water reactor
N/A	not applicable
NEIMA	Nuclear Energy Innovation and Modernization Act of 2019
NEPA	National Environmental Policy Act of 1969, as amended
NPV	net present value
NRC	U.S. Nuclear Regulatory Commission
OFR	Office of the Federal Register
OL	operating license
OMB	Office of Management and Budget
PPE	plant parameter envelope
RG	regulatory guide
ROW	right-of-way
SEIS	supplemental environmental impact statement
SME	subject matter expert
SPE	site parameter envelope
SRM	staff requirements memorandum

EXECUTIVE SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend its regulations that govern the NRC's National Environmental Policy Act (NEPA) reviews. The rulemaking would codify the generic findings of the Generic Environmental Impact Statement for Licensing of New Nuclear Reactors (NR GEIS). The NR GEIS would use a technology-neutral regulatory framework and performance-based assumptions to determine generic environmental impacts of new nuclear reactors. The NR GEIS would streamline the NEPA reviews for future new nuclear reactor applicants. The proposed rule would codify these generic findings into the NRC's regulations in Part 51 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," thus making the NRC's licensing process more efficient. Specifically, these findings would be codified into Subpart A of 10 CFR Part 51, which sets forth the NRC's regulations to implement its obligations under NEPA. Major provisions of this proposed rule and guidance would include:

- Addition of a new Appendix C to Subpart A of 10 CFR 51 to document the generic findings in the NR GEIS and state that, on a 10-year cycle, the Commission intends to review the material in this appendix and update if necessary.
- Changes to the regulations for the preparation of environmental reports for new nuclear reactors (e.g., 10 CFR 51.50, "Environmental report—construction permit, early site permit, or combined license") to provide the applicant with the option to use the NR GEIS.
- Changes to the regulations for the preparation of draft environmental impact statements (EISs) for new nuclear reactors (e.g., 10 CFR 51.75, "Draft environmental impact statement—construction permit, early site permit, or combined license") to require the NRC staff to use the NR GEIS in preparing its draft EIS if an applicant for a new nuclear reactor referenced the NR GEIS in its application.
- Addition of a new section (10 CFR 51.96, "Final supplemental environmental impact statement relying on Appendix C to Subpart A") to provide the NRC staff with directions on the preparation of final EISs that reference the NR GEIS.
- Draft revisions to Regulatory Guide (RG) 4.2, "Preparation of Environmental Reports for Nuclear Power Stations," to provide guidance to applicants regarding the use of the NR GEIS. In addition, the NRC staff has prepared a draft interim staff guidance document, COL-ISG-030, "Environmental Considerations for New Nuclear Reactor Applications that Reference the Generic Environmental Impact Statement," to provide guidance to the staff regarding the use of the NR GEIS.

This regulatory analysis discusses two alternatives – Alternative 1, the no-action or status quo alternative, and Alternative 2, pursuance of the proposed rule. For Alternative 2, the regulatory analysis evaluates the costs and benefits of the proposed rule requirements and development of the NR GEIS and associated guidance documents. It derives the key findings summarized in Table ES-1.

Table ES-1 Total Costs and Benefits of Alternative 2

Description	Undiscounted	7% Net Present Value (NPV)	3% NPV
Industry	$17,572,261	$13,186,588	$15,486,320
NRC	$25,022,400	$7,548,904	$21,409,786
Total Benefit	**$42,594,661**	**$30,735,492**	**$36,896,107**
Industry Cost	($600,000)	($506,921)	($557,321)
NRC Cost	($1,911,580)	($1,366,698)	($1,633,096)
Total Cost	**($2,511,580)**	**($1,873,619)**	**($2,190,418)**
Net Benefits	**$40,083,081**	**$28,861,873**	**$34,705,689**

According to Executive Order 14094, an economically significant regulatory action is one that would have an annual effect on the economy of $200 million or more. This proposed rulemaking does not reach this threshold.

1.0 INTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC or the Commission) is proposing to amend the requirements in Part 51 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions" (10 CFR Part 51-TN250), to include the results of the New Nuclear Reactor Generic Environmental Impact Statement (NR GEIS). The NRC is adding these new regulations to its existing environmental regulatory framework by incorporating the findings from NUREG–2249 ("Generic Environmental Impact Statement for Licensing of New Nuclear Reactors" [NR GEIS]) through the rulemaking process. The NR GEIS rule will define the number and scope of the environmental impact issues that must be addressed by the NRC during new nuclear reactor environmental reviews. As part of this rulemaking, the results of the NR GEIS will be used to revise and update guidance to new nuclear reactor applicants in Regulatory Guide (RG) 4.2, "Preparation of Environmental Reports for Nuclear Power Stations" (NRC 2018-TN6006). Guidance is also being prepared to describe how NRC staff should review information submitted by a new nuclear reactor applicant in its environmental report (ER) and how to prepare the resulting environmental impact statement (EIS). This guidance will be documented in COL-ISG-030, "Environmental Considerations for New Nuclear Reactor Applications that Reference the Generic Environmental Impact Statement," and formalized into more durable guidance in NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants."

This document presents the regulatory analysis of the NRC's proposed new environmental protection regulations from the NR GEIS as they relate to the issuance of early site permits (ESPs), construction permits (CPs), operating license (OL), and combined licenses (COLs) for new nuclear reactors. These new regulations will be presented in Table C-1, "Summary of Findings on NEPA Issues for New Nuclear Power Plants," in Appendix C to Subpart A, "Environmental Effect of Issuing a License or Permit for a New Nuclear Power Plant," of 10 CFR Part 51. (Hereafter, this table is referred to as "Table C-1" in this document.) This regulatory analysis includes the development of the rulemaking package, including the guidance to applicants and NRC staff described above.

This introduction is divided into three sections. Section 1.1 states the problem and the objective of the rulemaking, Section 1.2 provides background information about the pertinent regulatory requirements in 10 CFR Part 51, and Section 1.3 describes the methodology used in the NR GEIS.

1.1 Statement of the Problem and Objective of the Rulemaking

Under the NRC's environmental protection regulations in 10 CFR Part 51, which implement Section 102(2) of the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. §§ 4321 et seq.; TN661), licensing of a new nuclear power plant requires the preparation of an EIS. On September 21, 2020, the Commission issued Staff Requirements Memorandum (SRM)-20-0020, "Results of Exploratory Process for Developing a Generic Environmental Impact Statement for the Construction and Operation of Advanced Nuclear Reactors," (NRC 2020-TN6492), which directed the NRC staff to develop a GEIS for the construction and operation of advanced nuclear reactors using a technology-neutral, plant parameter envelope (PPE) approach and codify the GEIS's findings in the *Code of Federal Regulations.* In SRM-SECY-21-0098, "Proposed Rule: Advanced Nuclear Reactor Generic Environmental Impact Statement (RIN 3150-AK55; NRC-2020-0101)," dated April 17, 2024, the Commission directed the staff to change the limited applicability of this GEIS from solely "advanced nuclear reactors" to any new

nuclear reactor application, provided the application meets the values and the assumptions of the PPEs and the site parameter envelopes (SPEs) used to develop the GEIS.

The purpose of the NR GEIS, upon which the rulemaking is based, is to present impact analyses for environmental issues common to many new nuclear reactors that can be addressed generically, thereby eliminating the need to repeatedly reproduce the same analyses each time a licensing application is submitted and allowing applicants and NRC staff to focus future environmental review efforts on issues that can only be resolved once a site is identified. These generic impact analyses are documented and described in the NR GEIS. This GEIS is intended to improve the efficiency of licensing new nuclear reactors by (1) identifying the types of potential environmental impacts[1] of constructing and operating a nuclear reactor, (2) assessing impacts that are expected to be generic (the same or similar) for many new nuclear reactors, and (3) defining the environmental issues that will need to be addressed in project-specific supplemental EISs (SEISs) addressing specific projects.

The objective of the rulemaking is to codify the environmental findings from the NR GEIS in Table C-1 and amend the regulations in 10 CFR Part 51 for new nuclear reactor construction and operation, based on the technical findings in the NR GEIS.

1.2 Background

On June 25, 2019, Senators Barrasso and Braun, from the U.S. Senate Committee on Environmental and Public Works, sent a letter to NRC Chair Svinicki requesting that the NRC "initiate a process to develop a Generic Environmental Impact Statement (GEIS) for the construction and operation of advanced reactors" (Barrasso and Braun 2019-TN6465). On July 29, 2019, Chair Svinicki responded that NRC staff would prepare for the environmental review of applications for advanced reactors by conducting an exploratory process to determine "whether the development of a GEIS for advanced reactors would provide an adequate environmental review and yield sufficient benefit to support taking this approach"(NRC 2019-TN6467). Upon review, the staff determined that using a GEIS could accelerate and streamline the environmental review process of advanced reactors and began to plan the timing and approach of the exploratory analysis required by the Commission.

On November 15, 2019, the NRC issued a *Federal Register* notice (84 FR 62559-TN6470) announcing an exploratory process and soliciting comments to determine the possible utility of developing a GEIS for licensing advanced nuclear reactors. The exploratory process included two public meetings, a comprehensive public workshop attended by multiple stakeholders, and a site visit to the Idaho National Laboratory, one location that is being contemplated for some new nuclear reactors. As part of the exploratory process, the NRC staff considered its experience with previous NRC GEIS documents that support power reactor license renewals, in situ uranium recovery facilities, and decommissioning. The staff gathered information to determine whether a GEIS for construction and operation of advanced nuclear reactors might be viable.

On February 28, 2020, the NRC issued SECY-20-0020 (NRC 2020-TN6493) detailing the results of the exploratory process whereby the NRC staff determined that development of a GEIS for advanced nuclear reactors would be beneficial because it would generically resolve many environmental issues, saving resources and providing predictability for potential

[1] This GEIS documents the potential impacts of construction, operation, and decommissioning of new nuclear reactors and henceforth when discussing impacts, they are potential impacts.

applicants. On April 30, 2020, the NRC issued a *Federal Register* notice (85 FR 24040-TN6458) informing the public of its intent to develop an advanced nuclear reactor GEIS and to conduct a scoping process to gather information necessary to prepare a GEIS for advanced nuclear reactors. The NRC held a webinar on May 28, 2020, to receive comments from the public about the scope of the GEIS (NRC 2020-TN6459). Based on comments received during the scoping period, the NRC staff determined that by using a technology-neutral, performance-based approach to develop the NR GEIS, it would be inclusive of as many advanced reactor technologies as possible and would, where possible, decouple resource areas from reactor power level.

In response to the NRC staff's exploratory and scoping process, and as described in Section 1.1 above, the Commission issued SRM-20-0020 (NRC 2020-TN6492) dated September 21, 2020, which approved the development of a GEIS for the construction and operation of advanced nuclear reactors using a technology-neutral, PPE approach and directed staff to codify the GEIS's findings in the *Code of Federal Regulations.*

The staff initially developed the GEIS as a document that would be applicable to only advanced nuclear reactors. See SECY-21-0098 (NRC 2021-TN10127), *Proposed Rule: Advanced Nuclear Reactor Generic Environmental Impact Statement*, dated November 29, 2021. However, in SRM SECY-21-0098, dated April 17, 2024 (NRC 2024-TN10164), the Commission directed the staff to change the limited applicability of this GEIS from solely "advanced nuclear reactors" to any new nuclear reactor application, provided the application meets the values and the assumptions of the PPEs and the site parameter envelopes used to develop the GEIS.

1.3 NR GEIS Methodology

In preparing the NR GEIS, the NRC staff determined that certain environmental impacts associated with licensing a new nuclear power plant were the same or similar for all commercial nuclear power plants and as such, could be treated generically. In this way, repetitive reviews of these environmental impacts could be avoided.

Because neither the new reactor technology nor the site is known, the NRC staff performed its generic analyses based on a hypothetical reactor meeting a series of performance-based assumptions termed the PPE and situated on a hypothetical site meeting a series of performance-based assumptions termed the SPE (NRIC 2021-TN6940).

The analysis began by identifying specific types of impacts relevant to each of the 16 environmental resource areas identified by the NRC staff. Each type of impact is termed an issue. Each issue corresponds to a type of environmental impact that could potentially result from new nuclear reactor construction, operation, or decommissioning. The analysis identifies 122 specific issues. Each issue is analyzed to determine whether it is possible to identify values and assumptions in the PPE and SPE that could effectively bound a meaningful generic analysis. These issues were then assigned a significance level. The significance levels follow the definitions presented in the footnotes in Table B-1 in Appendix B of Subpart A of 10 CFR Part 51 (TN250). They are the same environmental significance levels and definitions used in the License Renewal GEIS (NRC 2013-TN2654) and in recent EISs prepared by the NRC staff for COLs and ESPs for new light-water reactors (LWRs). However, the NR GEIS categorizes resource area issues into categories in a manner that is different from previous GEIS documents developed and used by the NRC.

For the NR GEIS, the values and assumptions were set such that the subject matter experts (SMEs) could reach a generic conclusion of SMALL adverse impacts, which are designated as Category 1 issues (i.e., issues for which a generic analysis was possible). Issues for which the impacts are beneficial are also designated as Category 1.

After considering potential values and assumptions for the PPE and SPE for some environmental impact issues, the NRC staff could not reach a generic conclusion. In some cases, this was due to requirements of other statutes, such as the National Historic Preservation Act (54 U.S.C. §§ 300101 et seq.; TN4157) and the Endangered Species Act (16 U.S.C. §§ 1531 et seq.; TN1010). In other cases, the wide range of potential reactor designs and potential site locations made it impossible for the staff to reach a generic conclusion in the NR GEIS. These issues are designated as Category 2 issues, which would require a project-specific analysis in an NRC EIS. In addition, there are two issues for which the state of the science is currently inadequate, and no generic conclusion on impacts is possible. These are designated as N/A (i.e., impacts are uncertain), which are nether Category 1 nor 2.

An applicant addressing a Category 1 issue in its ER may refer to the generic analysis in the NR GEIS for that issue without further analysis, provided that it demonstrates that the relevant values and assumptions of the PPE and SPE used in the resource analysis are met or bounded and there is no new and significant information that would require project-specific analysis[2]. The applicant will have to document how the values and assumptions are met in the application package. The extent of the information necessary to demonstrate that a value or assumption is met will vary. In some cases, the demonstration may only require showing that the project design or site is bounded by a parameter value or assumption (e.g., building height). But in other cases, analysis may be required to demonstrate that a value or assumption has been met (e.g., noise levels).

If the relevant values and assumptions for a Category 1 issue are not met, the applicant would have to supply the requisite information necessary for the NRC staff to perform a project-specific analysis. One source of guidance for applicants providing information to the staff in an ER is the latest version of RG 4.2 (NRC 2018-TN6006). The applicant may, however, be able to incorporate by reference all or part of the generic analysis provided in the NR GEIS and focus on providing the additional project-specific information needed. Applicants addressing Category 2 issues in an ER would have to provide all the information typically needed by the staff to perform a project-specific analysis and may rely on guidance available in RG 4.2. The staff expects that applicants would rely on the generic conclusions for Category 1 issues to the extent that the conclusions can be technically supported. A variety of potential scenarios were evaluated based on combinations of resource areas for which the Category 1 issues might apply/not apply based on the type of site and design that is selected. These scenarios are presented in Table 4.3, “Relative Expected Effort of Alternative NRC New Nuclear Reactor NEPA Review Cases.”

After accepting the license application and ER, the NRC prepares a Supplemental EIS (SEIS) to the NR GEIS that evaluates the environmental impact of project-specific (Category 2) issues and considers any new and significant information for Category 1 and/or any other newly identified issues. The draft SEIS is made available for public comment. After considering public comments, the NRC prepares and issues a final SEIS in accordance with 10 CFR 51.91, “Final

[2] As used in this document, when the NRC staff states that the project meets a value or assumption of the PPE or SPE, it should be read as to mean that the project meets or is bounded by the value or assumption.

environmental impact statement—contents," and 51.93, "Distribution of final environmental impact statement and supplement to final environmental impact statement; news releases" (10 CFR Part 51-TN250). Together, the final SEIS and the GEIS serve as the requisite NEPA analysis for the new nuclear reactor license environmental reviews.

When addressing Category 1 issues in SEISs, the NRC staff may likewise refer to the generic analysis in the NR GEIS for a given issue without further analysis, provided that the relevant values and assumptions in the PPE and SPE are met and there is no new and significant information that changes the conclusions in the GEIS. The NRC staff may also have to briefly document how the values and assumptions are met. If the relevant values and assumptions are not met, staff would have to complete a project-specific analysis in accordance with the latest version of the Environmental Standard Review Plan or related guidance (such as any relevant interim staff guidance). The NRC staff may however be able to streamline the effort by incorporating all or a portion of the generic analysis in the NR GEIS and expanding it to account for project-specific information.

2.0 IDENTIFICATION AND PRELIMINARY ANALYSIS OF ALTERNATIVE APPROACHES

The analysis considers two alternatives. The following sections describe each alternative.

2.1 Alternative 1: No-Action

Under Alternative 1, the No-Action alternative, the NRC would not issue an NR GEIS and codify its results in 10 CFR Part 51 (TN250). The NRC would evaluate all environmental impacts in a project-specific EIS. Applicants for a new reactor license would continue to comply with the existing provisions of 10 CFR Part 51 and submit ERs that evaluated all environmental impacts on a case-by-case basis.

2.2 Alternative 2: Issue NR GEIS and Codify Findings in 10 CFR Part 51

Under Alternative 2, the NRC would issue the NR GEIS and would amend certain provisions of 10 CFR Part 51 related to the environmental review for new nuclear power plant licenses and add Table C-1. The NRC would also issue two revised guidance documents on applying the NR GEIS findings for both applicants and the NRC staff, as discussed in Section 1.0 above.

This ability to rely on these generically determined Category 1 issues will result in a time and cost savings for both the applicant and the NRC as the EIS for an application is developed. An evaluation of the estimated benefit of reliance on Category 1 issues in the GEIS is discussed in Section 3.0.

Table C-1 of Appendix C to Subpart A of 10 CFR Part 51 would summarize the findings of the NR GEIS, for which 122 environmental issues were analyzed. The table would identify issues as Category 1, Category 2, or Uncategorized issues, most of the which would be considered Category 1 issues. This means they are issues for which a generic analysis of environmental impacts is possible, provided that relevant values and assumptions in the PPE and SPE are met. The table would also identify mitigation measures and parameters and values that apply to each issue.

3.0 EVALUATION OF BENEFITS AND COSTS

This section describes the analysis conducted to identify and evaluate the benefits and costs expected from utilization of the results of the NR GEIS, which will be codified in the final revisions of Appendix C to Subpart A of 10 CFR Part 51 (TN250). Section 3.1 identifies the attributes that Alternative 2 is expected to affect. Section 3.2 describes the methodology used to analyze the benefits and costs associated with expected changes to the affected attributes. Section 3.3 analyzes the implementation of Alternative 2, which will involve implementation and operational costs for industry and the NRC.

3.1 Attributes Affected by the Rulemaking

This section identifies the factors within the public and private sectors that the rulemaking is expected to affect. These factors are classified as "attributes" using the list of potential attributes provided in Chapter 5 of the NRC's "Regulatory Analysis Technical Evaluation Handbook" (NRC 2020-TN6806). Affected attributes include the following:

- *Industry Implementation*. This attribute accounts for the projected net economic effect on the industry of activities directly resulting from implementing the regulatory action for all affected licensees. Industry applicants will incur costs associated with reviewing the proposed rule and implementing the final rule. Potential applicants will review and likely develop comments to submit as part of the rulemaking process. This requires industry staff time and resources for reading, assessing, and developing comments. In addition, potential applicants will incur costs as they evaluate how to implement the GEIS in generating a new nuclear reactor application using the provisions of the proposed rule and the eventual final rule. Such internal procedures include prescribing how determinations for Category 1 versus Category 2 designations will be made and how the assessment process will be documented in the application.
- *Industry Operation*. This attribute accounts for the projected net economic effect caused by routine and recurring activities required by the alternative on all affected entities. As a result of the generic analysis of environmental issues, applicants will recognize a savings to prepare the ER by relying on the analysis in the NR GEIS for Category 1 issues and the ability to incorporate by reference the findings in the GEIS, rather than analyzing the impacts in their ER. Applicants will incur costs for Category 1 issues associated with demonstrating their project is bounded by the analysis in the GEIS. However, these costs are assumed to be required as part of the characterization of the affected environment under existing NEPA guidance and approaches for COL and ESP reviews. No incremental costs would be incurred by addressing Category 2 issues in project-specific analyses and presenting the information in the ER because these costs would be incurred if an applicant submitted an ER with or without relying on the GEIS.
- *NRC Implementation.* This attribute accounts for the projected net economic effect on the NRC to place the alternative into operation. The NRC will incur costs related to implementing the provisions of the proposed rule. Some of these costs have already occurred and do not factor into this regulatory analysis; for example, the costs to develop the NR GEIS methodology and this proposed rule are both sunk costs. Future costs of implementation include completion and publication of the Draft NR GEIS, resolving public comments on the GEIS, completion and publication of this regulatory analysis and the rulemaking package for public review, and review by the Office of Management and Budget (OMB) and Office of the Federal Register (OFR), including the processing of formal review

comments. Future implementation costs also include those associated with completion and publication of the final rule and supporting documents.

- *NRC Operations*. This attribute accounts for the projected net economic effect on the NRC caused by routine and recurring activities required by the alternative after implementation of the final rule. Similar to the industry operation, the NRC will recognize cost savings by relying on the generic analysis of Category 1 issues. As part of the characterization of the affected environment, the NRC will need to verify that the project is bounded by the NR GEIS. Category 2 issues will need to be analyzed in the SEIS. However, the project-specific analysis of Category 1 issues for the SEIS referencing the GEIS will cost less than the analysis for an EIS that does not reference the GEIS.
- *Improvements in Process*. Category 1 and 2 issues have been added to Table C-1 of 10 CFR Part 51, which will improve the quality of the information provided to the NRC by focusing on issues most relevant to specific applications and facilitate new nuclear reactor environmental reviews. This information is necessary for the NRC to ensure compliance with Federal environmental statutes and regulations and to evaluate the potential environmental effects of continued nuclear power plant operations. Additionally, the applicant's research for new and significant information pertaining to Category 1 issues will improve the knowledge base for these issues.
- *Improvements in Efficiency for the Applicant and Improvements in Efficiency for the NRC.* The NR GEIS and the issues and findings in Table C-1 will improve the efficiency of the environmental review. Improving the clarity and efficiency of the regulatory provisions reduces the cost to industry to prepare environmental reports for new nuclear reactor applications and permits the NRC to focus resources on project-specific issues of importance (i.e., project-specific analyses), which also reduces the cost to the NRC.

3.2 Analytical Methodology

This section describes the methodology used to analyze the incremental benefits and costs associated with Alternative 2. The benefits of Alternative 2 include any desirable changes in affected attributes (e.g., savings) while the costs include any adverse changes in affected attributes (e.g., costs).

The analysis evaluates the following attributes affected by Alternative 2 on a quantitative basis:

- industry implementation
- industry operation
- NRC implementation
- NRC operation.

The analysis evaluates improvements in process affected by Alternative 2 on a qualitative basis due to the difficulty and uncertainty involved in quantifying the benefits and impacts to this attribute.

3.2.1 Baseline for the Analysis

The analysis measures the incremental impacts of Alternative 2 relative to a baseline (Alternative 1, the No-Action alternative).

3.2.2 Affected Applicants

New nuclear reactor applicants for an NRC license can refer to Table C-1 in 10 CFR Part 51 and the NR GEIS to streamline the preparation of their ER. The NRC estimates that approximately 20 new nuclear reactor applications will be received over the 10-year period before the NR GEIS will be updated. This estimate is based on letters of intent received from potential applicants. Consideration of the potential new nuclear reactor applications under the proposed rule is discussed in Sections 3.3.2 and 3.3.4.

The analysis period for this regulatory analysis covers that period between 2026 and 2036 for the benefits and the costs of implementation. Thus the costs and benefits are analyzed for that period based on the guidance provided in NUREG-0058 (NRC 2020-TN6806). Results are presented in undiscounted terms and using financial discounting with discount rates of 3 and 7 percent to reflect the time value of money. All dollar amounts are presented in 2023 constant dollars.

3.3 Analysis of Alternative 2 Implementation

The NRC evaluated each provision contained in Alternative 2 relative to the applicable baseline (Alternative 1, the No-Action alternative). Based on this analysis, the NRC developed equations to estimate the benefits and costs using available data, augmented by assumptions when necessary, and guidance contained in NUREG-0058 (NRC 2020-TN6806).

The NRC labor rate is the weighted average of the NRC staff labor rate and the NRC contractor labor rate. NRC contractors may perform a significant portion of the analyses addressed by the proposed rule. For the regulatory analysis, data about the relative effort expended on previous COL and ESP reviews by NRC staff and NRC contractors were collected and summarized in terms of costs and hours. The NRC staff labor rate was given as $152 per hour per internal agency guidance. The NRC contractor labor rate was estimated based on recent review costs billed to NRC divided by the hours billed and equates to approximately $225 per hour inclusive of all labor costs. The weighted average of these two rates was estimated based on the relative number of hours per most typical review experience. This rate equates to $195 per hour and represents the NRC average labor rate used in the analysis.

General Assumptions

- Effective year of proposed rule = 2026
- NRC Composite rate (weighted) = $195.00
  - NRC staff rate = $152.00/hour
  - NRC contractor staff rate = $225.00/hour
- Industry staff rate = $134.18/hour
- The analysis presents all benefits and costs in constant 2023 dollars. For net present value calculations, the analysis discounts to the first year of incurred costs or savings (i.e., 2023).

The industry rate is a blended and weighted labor rate of multiple occupational series taken from 2023 BLS labor data.

The following sections address the implementation and operational costs to industry and the NRC associated with issuing the NR GEIS and codifying the findings in 10 CFR Part 51 to accelerate and streamline the process of conducting environmental reviews related to the licensing of new nuclear reactors.

3.3.1 Industry Implementation

Under Alternative 2, industry applicants would be expected to review and comment on the proposed rule and take actions to implement the provisions of the rule for environmental reviews triggered by the expected applications under this rule. The NRC staff assumed that these implementation activities would apply to the 20 applications expected to be submitted under this rule during the first 10 years after the rule is issued, 2026–2036 period, which is used as the operational period of the rule in this regulatory analysis. Further, the staff assumed each CP and COL applicant (a total of 12) would devote $50,000 to these preparatory activities, allocated somewhat evenly between rule reviewing and commenting on the proposed rule and implementing the provisions of the eventual final rule. The annual costs are summarized in Table 3.1. As shown in the table, it is assumed that preparatory activities for the 12 applicants are split evenly between 2025 and 2026.

Table 3.1 Annual Industry Implementation Costs (2023 Constant Dollars)

Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2025	($300,000)	($262,032)	($282,779)
2026	($300,000)	($244,889)	($274,542)
2027	$0	$0	$0
2028	$0	$0	$0
2029	$0	$0	$0
2030	$0	$0	$0
2031	$0	$0	$0
2032	$0	$0	$0
2033	$0	$0	$0
2034	$0	$0	$0
2035	$0	$0	$0
2036	$0	$0	$0
2037	$0	$0	$0
Total Costs	($600,000)	($506,921)	($557,321)

3.3.2 Industry Operations

Alternative 2 evaluates issues that each applicant must assess and include in their application to the NRC, which will be documented in Table C-1. The analysis specifies each issue that is evaluated quantitatively. For each Table C-1 issue, the regulatory analysis lists the assumption(s) and equation(s) used to estimate the benefits and/or costs to industry.

General assumptions are listed below (each Table C-1 benefit and cost described below applies to all applicants except where noted):

- Any applicant submitting a new nuclear reactor application before the final rule is implemented is not affected by the rule and therefore not included in this regulatory analysis.
- The list of expected applications submitted in the 10 years following the issuance of the rule (through 2036) is based on the updated, proprietary information of expected applicants provided to the NRC. The tables in Appendix A show the expected number of applications per year.

- Applicant labor savings are assumed to scale based on the recent COL and ESP review experience of NRC staff and contractors, and equate to 1.75 times the labor hours required by NRC contractor staff who are reviewing and confirming the original analysis done by the applicant. The 1.75 factor is assumed to represent the additional effort on the part of the applicant to prepare the application from scratch. This factor is assumed to apply regardless of the complexity of the application.
- Savings enabled by the proposed rule occur when a generic impact analysis is determined to be an adequate analysis approach compared to standard impact analysis practices that are required by current guidance for new nuclear reactor reviews. The reduced labor effort required with generic analysis compared to previous (baseline) approaches is the savings.
- Savings estimates are analyzed for environmental reviews that would be considering new nuclear reactor applications focused on facilities incorporating designs where multiple nuclear units would be installed in a single facility. These types of facilities most closely align with the previous review experience of the NRC and reflect the most recent review experience associated with the Clinch River ESP review. Thus, the savings reported for the most likely review experience are likely to be upper bound estimates for the potential range of applications that may be expected.
- Many potential new nuclear reactor applications may use innovative technology, a smaller reactor size, or a single small unit. In these cases, several environmental resources may not be affected, and the resulting savings would not be realized, because unaffected resources would not be part of the savings baseline.
- A Category 1 issue is assumed to be analyzed based on the generic analysis provided in the NR GEIS and would not require analytical effort apart from making the determination that generic analysis applies. It is assumed that the applicant will assess new and significant information for the determination of Category 1 applicability as part of the typical characterization of the affected environment in the ER; therefore, no additional costs are incurred to make this determination.
- A Category 2 issue is assumed to require a level of effort similar to that required without a GEIS, and thus, would not result in savings or added costs for applicant staff.

Table 3.2 presents the issue-by-issue cost savings impact attributable to the rule, which are enabled by using the NR GEIS to provide the generic impact conclusions for the Category 1 issues, thereby avoiding the cost to industry of in-depth assessment for those issues. Table A-1, “Summary of Proposed Rule Savings Benefits to Industry by Category 1 Issue (2023 Constant Dollars),” in Appendix A, “Summary of Rule Savings Results–Alternative 2,” provides the detailed financial results that feed into this summary.

Table 3.2 Financial Impact of Industry Operations under the Proposed Rule by Issue, 2026–2036 (2023 Constant Dollars)

Applicant Issue Numbers	Table 4-1 Issue Descriptions	Industry Operations Net Savings (Costs) per Application Labor Rate	Industry Operations Net Savings (Costs) per Application Hours per Application	Industry Operations Net Savings (Costs) per Application Total per Application	Industry Operations Total Net Savings (Costs) – Rule Undiscounted Total	Industry Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	Industry Operations Total Net Savings (Costs) – Rule 3% NPV
1	Category 1 Construction—Onsite Land Use	$134	26	$3,489	$69,774	$52,360	$61,491
2	Category 1 Construction—Offsite Land NRC Construction	$134	184	$24,689	$493,784	$370,546	$435,168
3	Category 1 Construction—Impacts on Prime and Unique Farmland	$134	25	$3,355	$67,090	$50,346	$59,126
4	Category 1 Construction—Coastal Zone and Compliance with The Coastal Zone Management Act for Facilities Located with a Designated Coastal Zone	$134	14	$1,879	$37,571	$28,194	$33,111
5	Category 1 Operations—Onsite Land Use	$134	3	$403	$8,051	$6,042	$7,095
6	Category 1 Operations—Offsite Land Use NRC	$134	25	$3,355	$67,090	$50,346	$59,126
7	Category 1 Construction—Visual Impacts in Site and Vicinity	$134	11	$1,476	$29,520	$22,152	$26,016
8	Category 1 Construction—Visual Impacts from Transmission Lines	$134	11	$1,476	$29,520	$22,152	$26,016
9	Category 1 Operations—Visual Impacts in Site and Vicinity	$134	23	$3,086	$61,723	$46,318	$54,396
10	Category 1 Construction—Emissions of Criteria Pollutants and Dust During Construction	$134	33	$4,428	$88,559	$66,457	$78,047
11	Category 1 Construction—Greenhouse Gas Emissions During Construction	$134	76	$10,198	$203,954	$153,051	$179,743

Applicant Issue Numbers	Table 4-1 Issue Descriptions	Industry Operations Net Savings (Costs) per Application Labor Rate	Industry Operations Net Savings (Costs) per Application Hours per Application	Industry Operations Net Savings (Costs) per Application Total per Application	Industry Operations Total Net Savings (Costs) – Rule Undiscounted Total	Industry Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	Industry Operations Total Net Savings (Costs) – Rule 3% NPV
12	Category 1 Operations—Emissions of Criteria Pollutants During Operation	$134	50	$6,709	$134,180	$100,692	$118,252
13	Category 1 Operations—Greenhouse Gas Emissions During Operation	$134	48	$6,441	$128,813	$96,664	$113,522
14	Category 1 Operations—Cooling System Emissions	$134	11	$1,476	$29,520	$22,152	$26,016
15	Category 1 Operations—Emissions of Ozone and NOX During Transmission Line Operation	$134	6	$805	$16,102	$12,083	$14,190
16	Category 1 Construction—Surface Water Use Conflicts During Construction	$134	17	$2,281	$45,621	$34,235	$40,206
17	Category 1 Construction—Groundwater Use Conflicts Due to Excavation Dewatering	$134	117	$15,699	$313,982	$235,619	$276,710
18	Category 1 Construction—Groundwater Use Conflicts Due to Construction-Related Groundwater Withdrawals	$134	97	$13,015	$260,310	$195,342	$229,409
19	Category 1 Construction—Water Quality Degradation Due to Construction-Related Discharges	$134	17	$2,281	$45,621	$34,235	$40,206
20	Category 1 Construction—Water Quality Degradation Due to Inadvertent Spills During Construction	$134	17	$2,281	$45,621	$34,235	$40,206

Applicant Issue Numbers	Table 4-1 Issue Descriptions	Industry Operations Net Savings (Costs) per Application Labor Rate	Industry Operations Net Savings (Costs) per Application Hours per Application	Industry Operations Net Savings (Costs) per Application Total per Application	Industry Operations Total Net Savings (Costs) – Rule Undiscounted Total	Industry Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	Industry Operations Total Net Savings (Costs) – Rule 3% NPV
21	Category 1 Construction—Water Quality Degradation Due to Groundwater Withdrawal	$134	39	$5,233	$104,661	$78,540	$92,237
22	Category 1 Construction—Water Quality Degradation Due to Offshore or In-Water Construction Activities	$134	67	$8,990	$179,802	$134,927	$158,458
23	Category 1 Construction—Water Use Conflict Due to Plant Municipal Water Demand	$134	67	$8,990	$179,802	$134,927	$158,458
24	Category 1 Construction—Degradation of Water Quality from Plant Effluent Discharges to Municipal Systems	$134	150	$20,127	$402,541	$302,075	$354,757
25	Category 1 Operations—Surface Water Use Conflicts During Operation Due to Water Withdrawal from Flowing Waterbodies	$134	109	$14,626	$292,513	$219,508	$257,790
26	Category 1 Operations—Surface Water Use Conflicts During Operation Due to Water Withdrawal from Non-Flowing Waterbodies	$134	39	$5,233	$104,661	$78,540	$92,237
27	Category 1 Operations—Groundwater Use Conflicts Due to Building Foundation Dewatering	$134	29	$3,891	$77,825	$58,401	$68,586
28	Category 1 Operations—Groundwater Use Conflicts Due to Groundwater Withdrawals for Plant Uses	$134	57	$7,648	$152,966	$114,789	$134,808

Applicant Issue Numbers	Table 4-1 Issue Descriptions	Industry Operations Net Savings (Costs) per Application Labor Rate	Industry Operations Net Savings (Costs) per Application Hours per Application	Industry Operations Net Savings (Costs) per Application Total per Application	Industry Operations Total Net Savings (Costs) – Rule Undiscounted Total	Industry Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	Industry Operations Total Net Savings (Costs) – Rule 3% NPV
29	Category 1 Operations—Surface Water Quality Degradation Due to Physical Effects from Operation of Intake and Discharge Structures	$134	117	$15,699	$313,982	$235,619	$276,710
30	Category 1 Operations—Surface Water Quality Degradation Due to Changes in Salinity Gradients Resulting from Withdrawals	$134	194	$26,031	$520,620	$390,684	$458,819
31	Category 1 Operations—Groundwater Quality Degradation Due to Plant Discharges	$134	57	$7,648	$152,966	$114,789	$134,808
32	Category 1 Operations—Water Quality Degradation Due to Inadvertent Spills and Leaks During Operation	$134	16	$2,147	$42,938	$32,221	$37,841
33	Category 1 Operations—Water Quality Degradation Due to Groundwater Withdrawals	$134	43	$5,770	$115,395	$86,595	$101,697
34	Category 1 Operations—Water Use Conflict from Plant Municipal Water Demand	$134	16	$2,147	$42,938	$32,221	$37,841
35	Category 1 Operations—Degradation of Water Quality from Plant Effluent Discharges to Municipal Systems	$134	16	$2,147	$42,938	$32,221	$37,841
36	Category 1 Construction—Permanent and Temporary Loss, Conversion, Fragmentation, and Degradation of Habitats	$134	168	$22,542	$450,846	$338,324	$397,328

Applicant Issue Numbers	Table 4-1 Issue Descriptions	Industry Operations Net Savings (Costs) per Application Labor Rate	Industry Operations Net Savings (Costs) per Application Hours per Application	Industry Operations Net Savings (Costs) per Application Total per Application	Industry Operations Total Net Savings (Costs) – Rule Undiscounted Total	Industry Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	Industry Operations Total Net Savings (Costs) – Rule 3% NPV
37	Category 1 Construction—Permanent and Temporary Loss and Degradation of Wetlands	$134	168	$22,542	$450,846	$338,324	$397,328
38	Category 1 Construction—Effects of Construction Noise on Wildlife	$134	60	$8,051	$161,016	$120,830	$141,903
39	Category 1 Construction—Effects of Vehicular Collisions on Wildlife	$134	50	$6,709	$134,180	$100,692	$118,252
40	Category 1 Construction—Bird Collisions and Injury from Structures and Transmission Lines	$134	60	$8,051	$161,016	$120,830	$141,903
41	Category 1 Construction—Important Species and Habitats—Other Important Species and Habitats	$134	84	$11,271	$225,423	$169,162	$198,664
42	Category 1 Operations—Permanent and Temporary Loss or Disturbance of Habitats	$134	19	$2,549	$50,989	$38,263	$44,936
43	Category 1 Operations—Effects of Operational Noise on Wildlife	$134	11	$1,476	$29,520	$22,152	$26,016
44	Category 1 Operations—Effects of Vehicular Collisions on Wildlife	$134	9	$1,208	$24,152	$18,125	$21,285
45	Category 1 Construction—Exposure of Terrestrial Organisms to Radionuclides	$134	38	$5,099	$101,977	$76,526	$89,872
46	Category 1 Operations—Cooling Tower Operational Impacts on Vegetation	$134	37	$4,965	$99,293	$74,512	$87,507
47	Category 1 Operations—Bird Collisions and Injury from Structures and Transmission Lines	$134	19	$2,549	$50,989	$38,263	$44,936

Applicant Issue Numbers	Table 4-1 Issue Descriptions	Industry Operations Net Savings (Costs) per Application Labor Rate	Industry Operations Net Savings (Costs) per Application Hours per Application	Industry Operations Net Savings (Costs) per Application Total per Application	Industry Operations Total Net Savings (Costs) – Rule Undiscounted Total	Industry Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	Industry Operations Total Net Savings (Costs) – Rule 3% NPV
48	Category 1 Operations—Bird Electrocutions from Transmission Lines	$134	19	$2,549	$50,989	$38,263	$44,936
49	Category 1 Operations—Water Use Conflicts with Terrestrial Resources	$134	83	$11,137	$222,739	$167,148	$196,299
50	Category 1 Operations—Effects of Transmission Line Row Management on Terrestrial Resources	$134	23	$3,086	$61,723	$46,318	$54,396
51	Category 1 Operations—Effects of Electromagnetic Fields on Flora and Fauna	$134	4	$537	$10,734	$8,055	$9,460
52	Category 1 Operations—Important Species and Habitats—Other Important Species and Habitats	$134	37	$4,965	$99,293	$74,512	$87,507
53	Category 1 Construction—Runoff and Sedimentation from Construction Areas	$134	128	$17,175	$343,502	$257,771	$302,726
54	Category 1 Construction—Dredging and Filling Aquatic Habitats to Build Intake and Discharge Structures	$134	128	$17,175	$343,502	$257,771	$302,726
55	Category 1 Construction—Building Transmission Lines, Pipelines, and Access Roads Across Surface Waterbodies	$134	128	$17,175	$343,502	$257,771	$302,726
56	Category 1 Operations—Important Species and Habitats—Other Important Species and Habitats	$134	128	$17,175	$343,502	$257,771	$302,726
57	Category 1 Operations—Stormwater Runoff	$134	20	$2,684	$53,672	$40,277	$47,301

Applicant Issue Numbers	Table 4-1 Issue Descriptions	Industry Operations Net Savings (Costs) per Application Labor Rate	Industry Operations Net Savings (Costs) per Application Hours per Application	Industry Operations Net Savings (Costs) per Application Total per Application	Industry Operations Total Net Savings (Costs) – Rule Undiscounted Total	Industry Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	Industry Operations Total Net Savings (Costs) – Rule 3% NPV
58	Category 1 Operations—Exposure of Aquatic Organisms to Radionuclides	$134	38	$5,099	$101,977	$76,526	$89,872
59	Category 1 Operations— Effects of Refurbishment on Aquatic Biota	$134	20	$2,684	$53,672	$40,277	$47,301
60	Category 1 Operations—Effects of Maintenance Dredging on Aquatic Biota	$134	97	$13,015	$260,310	$195,342	$229,409
61	Category 1 Operations—Impacts of Transmission Line Row Management on Aquatic Resources	$134	48	$6,441	$128,813	$96,664	$113,522
62	Category 1 Operations—Impingement and Entrainment of Aquatic Organisms	$134	145	$19,456	$389,123	$292,006	$342,932
63	Category 1 Operations—Water Use Conflicts with Aquatic Resources	$134	48	$6,441	$128,813	$96,664	$113,522
64	Category 1 Operations—Important Species and Habitats—Other Important Species and Habitats	$134	145	$19,456	$389,123	$292,006	$342,932
65	Category 1 Construction—Radiological Dose to Construction Workers	$134	117	$15,699	$313,982	$235,619	$276,710
66	Category 1 Operations—Occupational Doses to Workers	$134	38	$5,099	$101,977	$76,526	$89,872
67	Category 1 Operations—Maximally Exposed Individual Annual Doses	$134	38	$5,099	$101,977	$76,526	$89,872
68	Category 1 Operations—Total Population Annual Doses	$134	42	$5,636	$112,712	$84,581	$99,332

Applicant Issue Numbers	Table 4-1 Issue Descriptions	Industry Operations Net Savings (Costs) per Application Labor Rate	Industry Operations Net Savings (Costs) per Application Hours per Application	Industry Operations Net Savings (Costs) per Application Total per Application	Industry Operations Total Net Savings (Costs) – Rule Undiscounted Total	Industry Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	Industry Operations Total Net Savings (Costs) – Rule 3% NPV
69	Category 1 Operations—Nonhuman Biota Doses	$134	42	$5,636	$112,712	$84,581	$99,332
70	Category 1 Construction—Building Impacts of Chemical, Biological, and Physical Nonradiological Hazards	$134	52	$6,977	$139,548	$104,719	$122,982
71	Category 1 Operations—Operation Impacts of Chemical, Biological, and Physical Nonradiological Hazards	$134	35	$4,696	$93,926	$70,484	$82,777
72	Category 1 Construction—Construction-Related Noise	$134	23	$3,086	$61,723	$46,318	$54,396
73	Category 1 Operations—Operation-Related Noise	$134	14	$1,879	$37,571	$28,194	$33,111
74	Category 1 Operations—Low-Level Radioactive Waste	$134	232	$31,130	$622,597	$467,210	$548,691
75	Category 1 Operations—Onsite Spent Nuclear Fuel Management	$134	232	$31,130	$622,597	$467,210	$548,691
76	Category 1 Operations—Mixed Waste	$134	232	$31,130	$622,597	$467,210	$548,691
77	Category 1 Construction—Construction Nonradiological Waste	$134	38	$5,099	$101,977	$76,526	$89,872
78	Category 1 Operations—Operation Nonradiological Waste	$134	25	$3,355	$67,090	$50,346	$59,126
79	Category 1 Operations—Design Basis Accidents Involving Radiological Releases	$134	172	$23,079	$461,580	$346,380	$406,788
80	Category 1 Operations—Accidents Involving Releases of Hazardous Chemicals	$134	103	$13,821	$276,412	$207,425	$243,600

Applicant Issue Numbers	Table 4-1 Issue Descriptions	Industry Operations Net Savings (Costs) per Application Labor Rate	Industry Operations Net Savings (Costs) per Application Hours per Application	Industry Operations Net Savings (Costs) per Application Total per Application	Industry Operations Total Net Savings (Costs) – Rule Undiscounted Total	Industry Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	Industry Operations Total Net Savings (Costs) – Rule 3% NPV
81	Category 1 Operations—Severe Accident Mitigation Alternatives	$134	69	$9,258	$185,169	$138,955	$163,188
82	Category 1 Operations—Acts of Terrorism	$134	69	$9,258	$185,169	$138,955	$163,188
83	Category 1 Construction—Community Services and Infrastructure	$134	74	$9,929	$198,587	$149,024	$175,013
84	Category 1 Construction—Transportation Systems and Traffic	$134	147	$19,725	$394,490	$296,034	$347,662
85	Category 1 Construction—Economic Impacts	$134	74	$9,929	$198,587	$149,024	$175,013
86	Category 1 Construction—Tax Revenue Impacts	$134	42	$5,636	$112,712	$84,581	$99,332
87	Category 1 Operations—Community Services and Infrastructure	$134	50	$6,709	$134,180	$100,692	$118,252
88	Category 1 Operations—Transportation Systems and Traffic	$134	25	$3,355	$67,090	$50,346	$59,126
89	Category 1 Operations—Economic Impacts	$134	50	$6,709	$134,180	$100,692	$118,252
90	Category 1 Operations—Tax Revenue Impacts	$134	98	$13,150	$262,994	$197,356	$231,774
91	Category 1 Operations—Uranium Recovery	$134	39	$5,233	$104,661	$78,540	$92,237
92	Category 1 Operations—Uranium Conversion	$134	39	$5,233	$104,661	$78,540	$92,237
93	Category 1 Operations—Uranium Enrichment	$134	39	$5,233	$104,661	$78,540	$92,237

Applicant Issue Numbers	Table 4-1 Issue Descriptions	Industry Operations Net Savings (Costs) per Application Labor Rate	Industry Operations Net Savings (Costs) per Application Hours per Application	Industry Operations Net Savings (Costs) per Application Total per Application	Industry Operations Total Net Savings (Costs) – Rule Undiscounted Total	Industry Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	Industry Operations Total Net Savings (Costs) – Rule 3% NPV
94	Category 1 Operations—Fuel Fabrication(a)	$134	39	$5,233	$104,661	$78,540	$92,237
95	Category 1 Operations—Reprocessing	$134	39	$5,233	$104,661	$78,540	$92,237
96	Category 1 Operations—Storage and Disposal of Radiological Wastes	$134	39	$5,233	$104,661	$78,540	$92,237
97	Category 1 Operations—Transportation of Unirradiated Fuel	$134	78	$10,466	$209,321	$157,079	$184,474
98	Category 1 Operations—Transportation of Radioactive Waste	$134	78	$10,466	$209,321	$157,079	$184,474
99	Category 1 Operations—Transportation of Spent Nuclear Fuel	$134	155	$20,798	$415,959	$312,144	$366,582
100	Decommissioning	$134	81	$10,869	$217,372	$163,121	$191,569
	Totals		**6,548**	$878,613	$17,572,261	$13,186,588	$15,486,320

(a) Fuel fabrication impacts for metal fuel and liquid fueled molten salt are not included in the staff's generic analysis.

3.3.3 NRC Implementation

The NRC will incur costs to develop the NR GEIS and all associated regulatory guidance for NRC staff and applicants. The NRC recorded actual and planned costs required to bring the proposed rule to fruition, including the cost of the following:

- NR GEIS
- Generation of the Final Rule Package (NR GEIS, *FRN*, Regulatory Analysis, OMB Supporting Statement, revision of RG 4.2, new COL-ISG-030) and its submittal to the Commission.
- Processing and addressing OMB and OFR formal review comments.
- Consolidation of the new GEIS-related Staff Guidance, COL-ISG-030 "Environmental Considerations for New Nuclear Reactor Applications that Reference the Generic Environmental Impact Statement (NUREG-2249)" into more durable guidance in NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants."
- A 10-year review of the GEIS issues, internal communications with the Commission, and scoping FRN (beginning in 2034).

Table 3.3 lists the NRC costs of rule implementation.

Table 3.3 NRC Costs of Rule Implementation (2023 Constant Dollars)

Year	Undiscounted	7 Percent Discounting	3 Percent Discounting
2025	($951,000)	($830,640)	($896,409)
2026	($255,300)	($208,401)	($233,636)
2027	($44,080)	($33,628)	($39,165)
2028	$0	$0	$0
2029	$0	$0	$0
2030	$0	$0	$0
2031	$0	$0	$0
2032	$0	$0	$0
2033	$0	$0	$0
2034	($220,400)	($104,710)	($159,222)
2035	($220,400)	($97,860)	($154,584)
2036	($220,400)	($91,458)	($150,082)
2037	$0	$0	$0
Total	($1,911,580)	($1,366,698)	($1,633,096)

3.3.4 NRC Operations

Alternative 2 activities affect the environmental review time for each new nuclear reactor licensing application. The Alternative 2 analysis included each environmental issue presented in Table C-1 of Appendix C to Subpart A of 10 CFR Part 51. For each of these environmental issues, the analysis lists the assumption(s) and equation(s) used to estimate the value (benefit/saving) and/or impact (cost) to the NRC. Each of these issues was evaluated quantitatively, and results are presented in Table 3.4 below. General assumptions are as follows:

- The NRC will recognize the savings resulting from the proposed rule changes in the 24 months after the NRC receives each application. The NRC is assumed to recognize approximately half of the savings in the same year as the application submittal and the other half in the year following the application submittal.
- Each cost and saving assumption associated with the proposed rule changes is based on extensive NRC staff experience in the review of COL and ESP applications.
- Savings estimates are analyzed for environmental reviews that would be considering new nuclear reactor applications focused on facilities incorporating designs where multiple nuclear units would be installed in a single facility. Thus, the savings reported are upper bound estimates. For many potential new nuclear reactor applications, the reactor size may be somewhat smaller or may use only a single small unit. In these cases, several environmental resources may not be affected, and the resulting savings would not be realized, because unaffected resources would not be part of the savings baseline.
- A Category 1 issue is assumed to be analyzed based on the generic analysis provided in the NR GEIS and would not require analytical effort apart from making the determination that generic analysis applies. It is assumed that NRC staff will assess new and significant information for the determination of Category 1 applicability as part of the typical characterization of the affected environment of the EIS.
- A typical Category 2 issue is assumed to require a level of effort similar to the level of effort required without the NR GEIS, and thus, would not result in savings or added costs for applicant staff.

Table 3.4 presents the issue-by-issue cost savings impact attributable to the rule, which are enabled by using the NR GEIS to provide the generic impact conclusions for the Category 1 issues, thereby avoiding the cost to the NRC of in-depth review for those issues. Table A.1 in Appendix A provides the detailed financial results that feed into this summary.

Table 3.4 Financial Impact of NRC Operation under the Proposed Rule by Issue, 2026–2036 (2023 Constant Dollars)

NRC Issue Number	Table 4-1 Issue Descriptions	NRC Operations Net Savings (Costs) per Application Labor Rate	NRC Operations Net Savings (Costs) per Application Hours per Application	NRC Operations Net Savings (Costs) per Application Total per Application	NRC Operations Total Net Savings (Costs) – Rule Undiscounted Total	NRC Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	NRC Operations Total Net Savings (Costs) – Rule 3% NPV
1	Category 1 Construction—Onsite Land Use	$195	82	$15,990	$319,800	$224,285	$273,629
2	Category 1 Construction—Offsite Land NRC Construction	$195	135	$26,325	$526,500	$369,249	$450,486
3	Category 1 Construction—Impacts on Prime and Unique Farmland	$195	23	$4,485	$89,700	$62,909	$76,750
4	Category 1 Construction—Coastal Zone and Compliance with The Coastal Zone Management Act for Facilities Located with a Designated Coastal Zone	$195	9	$1,755	$35,100	$24,617	$30,032
5	Category 1 Operations—Onsite Land Use	$195	24	$4,680	$93,600	$65,644	$80,086
6	Category 1 Operations—Offsite Land Use NRC	$195	28	$5,460	$109,200	$76,585	$93,434
7	Category 1 Construction—Visual Impacts in Site and Vicinity	$195	27	$5,265	$105,300	$73,850	$90,097
8	Category 1 Construction—Visual Impacts from Transmission Lines	$195	9	$1,755	$35,100	$24,617	$30,032
9	Category 1 Operations—Visual Impacts in Site and Vicinity	$195	20	$3,900	$78,000	$54,704	$66,739
10	Category 1 Construction—Emissions of Criteria Pollutants and Dust During Construction	$195	154	$30,030	$600,600	$421,217	$513,888

NRC Issue Number	Table 4-1 Issue Descriptions	NRC Operations Net Savings (Costs) per Application Labor Rate	NRC Operations Net Savings (Costs) per Application Hours per Application	NRC Operations Net Savings (Costs) per Application Total per Application	NRC Operations Total Net Savings (Costs) – Rule Undiscounted Total	NRC Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	NRC Operations Total Net Savings (Costs) – Rule 3% NPV
11	Category 1 Construction—Greenhouse Gas Emissions During Construction	$195	134	$26,130	$522,600	$366,514	$447,150
12	Category 1 Operations—Emissions of Criteria Pollutants During Operation	$195	163	$31,785	$635,700	$445,834	$543,921
13	Category 1 Operations—Greenhouse Gas Emissions During Operation	$195	88	$17,160	$343,200	$240,696	$293,650
14	Category 1 Operations—Cooling System Emissions	$195	18	$3,510	$70,200	$49,233	$60,065
15	Category 1 Operations—Emissions of Ozone and NOX During Transmission Line Operation	$195	15	$2,925	$58,500	$41,028	$50,054
16	Category 1 Construction—Surface Water Use Conflicts During Construction	$195	60	$11,700	$234,000	$164,111	$200,216
17	Category 1 Construction—Groundwater Use Conflicts Due to Excavation Dewatering	$195	123	$23,985	$479,700	$336,427	$410,443
18	Category 1 Construction—Groundwater Use Conflicts Due to Construction-Related Groundwater Withdrawals	$195	115	$22,425	$448,500	$314,546	$383,748
19	Category 1 Construction—Water Quality Degradation Due to Construction-Related Discharges	$195	62	$12,090	$241,800	$169,581	$206,890
20	Category 1 Construction—Water Quality Degradation Due to	$195	24	$4,680	$93,600	$65,644	$80,086

NRC Issue Number	Table 4-1 Issue Descriptions	NRC Operations Net Savings (Costs) per Application Labor Rate	NRC Operations Net Savings (Costs) per Application Hours per Application	NRC Operations Net Savings (Costs) per Application Total per Application	NRC Operations Total Net Savings (Costs) – Rule Undiscounted Total	NRC Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	NRC Operations Total Net Savings (Costs) – Rule 3% NPV
	Inadvertent Spills During Construction						
21	Category 1 Construction—Water Quality Degradation Due to Groundwater Withdrawal	$195	73	$14,235	$284,700	$199,668	$243,596
22	Category 1 Construction—Water Quality Degradation Due to Offshore or In-Water Construction Activities	$195	56	$10,920	$218,400	$153,170	$186,868
23	Category 1 Construction—Water Use Conflict Due to Plant Municipal Water Demand	$195	49	$9,555	$191,100	$134,024	$163,510
24	Category 1 Construction—Degradation of Water Quality from Plant Effluent Discharges to Municipal Systems	$195	97	$18,915	$378,300	$265,312	$323,683
25	Category 1 Operations—Surface Water Use Conflicts During Operation Due to Water Withdrawal from Flowing Waterbodies	$195	152	$29,640	$592,800	$415,747	$507,214
26	Category 1 Operations—Surface Water Use Conflicts During Operation Due to Water Withdrawal from Non-Flowing Waterbodies	$195	113	$22,035	$440,700	$309,075	$377,074
27	Category 1 Operations—Groundwater Use Conflicts Due to Building Foundation Dewatering	$195	57	$11,115	$222,300	$155,905	$190,205
28	Category 1 Operations—Groundwater Use Conflicts Due to	$195	124	$24,180	$483,600	$339,162	$413,780

NRC Issue Number	Table 4-1 Issue Descriptions	NRC Operations Net Savings (Costs) per Application Labor Rate	NRC Operations Net Savings (Costs) per Application Hours per Application	NRC Operations Net Savings (Costs) per Application Total per Application	NRC Operations Total Net Savings (Costs) – Rule Undiscounted Total	NRC Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	NRC Operations Total Net Savings (Costs) – Rule 3% NPV
	Groundwater Withdrawals for Plant Uses						
29	Category 1 Operations—Surface Water Quality Degradation Due to Physical Effects from Operation of Intake and Discharge Structures	$195	95	$18,525	$370,500	$259,842	$317,009
30	Category 1 Operations—Surface Water Quality Degradation Due to Changes in Salinity Gradients Resulting from Withdrawals	$195	158	$30,810	$616,200	$432,158	$527,236
31	Category 1 Operations—Groundwater Quality Degradation Due to Plant Discharges	$195	97	$18,915	$378,300	$265,312	$323,683
32	Category 1 Operations—Water Quality Degradation Due to Inadvertent Spills and Leaks During Operation	$195	22	$4,290	$85,800	$60,174	$73,413
33	Category 1 Operations—Water Quality Degradation Due to Groundwater Withdrawals	$195	116	$22,620	$452,400	$317,281	$387,085
34	Category 1 Operations - Water Use Conflict from Plant Municipal Water Demand	$195	26	$5,070	$101,400	$71,115	$86,760
35	Category 1 Operations—Degradation of Water Quality from Plant Effluent Discharges to Municipal Systems	$195	26	$5,070	$101,400	$71,115	$86,760

NRC Issue Number	Table 4-1 Issue Descriptions	NRC Operations Net Savings (Costs) per Application Labor Rate	NRC Operations Net Savings (Costs) per Application Hours per Application	NRC Operations Net Savings (Costs) per Application Total per Application	NRC Operations Total Net Savings (Costs) – Rule Undiscounted Total	NRC Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	NRC Operations Total Net Savings (Costs) – Rule 3% NPV
36	Category 1 Construction—Permanent and Temporary Loss, Conversion, Fragmentation, and Degradation of Habitats	$195	133	$25,935	$518,700	$363,779	$443,813
37	Category 1 Construction—Permanent and Temporary Loss and Degradation of Wetlands	$195	133	$25,935	$518,700	$363,779	$443,813
38	Category 1 Construction—Effects of Construction Noise on Wildlife	$195	41	$7,995	$159,900	$112,142	$136,814
39	Category 1 Construction—Effects of Vehicular Collisions on Wildlife	$195	36	$7,020	$140,400	$98,466	$120,130
40	Category 1 Construction—Bird Collisions and Injury from Structures and Transmission Lines	$195	40	$7,800	$156,000	$109,407	$133,477
41	Category 1 Construction—Important Species and Habitats—Other Important Species and Habitats	$195	70	$13,650	$273,000	$191,462	$233,586
42	Category 1 Operations—Permanent and Temporary Loss or Disturbance of Habitats	$195	13	$2,535	$50,700	$35,557	$43,380
43	Category 1 Operations—Effects of Operational Noise on Wildlife	$195	8	$1,560	$31,200	$21,881	$26,695
44	Category 1 Operations—Effects of Vehicular Collisions on Wildlife	$195	7	$1,365	$27,300	$19,146	$23,359
45	Category 1 Construction—Exposure of Terrestrial Organisms to Radionuclides	$195	28	$5,460	$109,200	$76,585	$93,434

NRC Issue Number	Table 4-1 Issue Descriptions	NRC Operations Net Savings (Costs) per Application Labor Rate	NRC Operations Net Savings (Costs) per Application Hours per Application	NRC Operations Net Savings (Costs) per Application Total per Application	NRC Operations Total Net Savings (Costs) – Rule Undiscounted Total	NRC Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	NRC Operations Total Net Savings (Costs) – Rule 3% NPV
46	Category 1 Operations—Cooling Tower Operational Impacts on Vegetation	$195	30	$5,850	$117,000	$82,055	$100,108
47	Category 1 Operations—Bird Collisions and Injury from Structures and Transmission Lines	$195	13	$2,535	$50,700	$35,557	$43,380
48	Category 1 Operations—Bird Electrocutions from Transmission Lines	$195	13	$2,535	$50,700	$35,557	$43,380
49	Category 1 Operations—Water Use Conflicts with Terrestrial Resources	$195	50	$9,750	$195,000	$136,759	$166,847
50	Category 1 Operations—Effects of Transmission Line Row Management on Terrestrial Resources	$195	18	$3,510	$70,200	$49,233	$60,065
51	Category 1 Operations—Effects of Electromagnetic Fields on Flora and Fauna	$195	5	$975	$19,500	$13,676	$16,685
52	Category 1 Operations—Important Species and Habitats—Other Important Species and Habitats	$195	30	$5,850	$117,000	$82,055	$100,108
53	Category 1 Construction—Runoff and Sedimentation from Construction Areas	$195	124	$24,180	$483,600	$339,162	$413,780
54	Category 1 Construction—Dredging and Filling Aquatic Habitats to Build Intake and Discharge Structures	$195	123	$23,985	$479,700	$336,427	$410,443

NRC Issue Number	Table 4-1 Issue Descriptions	NRC Operations Net Savings (Costs) per Application Labor Rate	NRC Operations Net Savings (Costs) per Application Hours per Application	NRC Operations Net Savings (Costs) per Application Total per Application	NRC Operations Total Net Savings (Costs) – Rule Undiscounted Total	NRC Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	NRC Operations Total Net Savings (Costs) – Rule 3% NPV
55	Category 1 Construction—Building Transmission Lines, Pipelines, and Access Roads Across Surface Waterbodies	$195	105	$20,475	$409,500	$287,194	$350,378
56	Category 1 Operations—Important Species and Habitats – Other Important Species and Habitats	$195	172	$33,540	$670,800	$470,451	$573,953
57	Category 1 Operations—Stormwater Runoff	$195	28	$5,460	$109,200	$76,585	$93,434
58	Category 1 Operations—Exposure of Aquatic Organisms to Radionuclides	$195	28	$5,460	$109,200	$76,585	$93,434
59	Category 1 Operations—Effects of Refurbishment on Aquatic Biota	$195	28	$5,460	$109,200	$76,585	$93,434
60	Category 1 Operations—Effects of Maintenance Dredging on Aquatic Biota	$195	72	$14,040	$280,800	$196,933	$240,259
61	Category 1 Operations—Impacts of Transmission Line Row Management on Aquatic Resources	$195	44	$8,580	$171,600	$120,348	$146,825
62	Category 1 Operations—Impingement and Entrainment of Aquatic Organisms	$195	115	$22,425	$448,500	$314,546	$383,748
63	Category 1 Operations—Water Use Conflicts with Aquatic Resources	$195	58	$11,310	$226,200	$158,640	$193,542
64	Category 1 Operations—Important Species and Habitats—Other Important Species and Habitats	$195	142	$27,690	$553,800	$388,395	$473,845

NRC Issue Number	Table 4-1 Issue Descriptions	NRC Operations Net Savings (Costs) per Application Labor Rate	NRC Operations Net Savings (Costs) per Application Hours per Application	NRC Operations Net Savings (Costs) per Application Total per Application	NRC Operations Total Net Savings (Costs) – Rule Undiscounted Total	NRC Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	NRC Operations Total Net Savings (Costs) – Rule 3% NPV
65	Category 1 Construction—Radiological Dose to Construction Workers	$195	97	$18,915	$378,300	$265,312	$323,683
66	Category 1 Operations—Occupational Doses to Workers	$195	62	$12,090	$241,800	$169,581	$206,890
67	Category 1 Operations—Maximally Exposed Individual Annual Doses	$195	53	$10,335	$206,700	$144,964	$176,858
68	Category 1 Operations—Total Population Annual Doses	$195	64	$12,480	$249,600	$175,051	$213,564
69	Category 1 Operations—Nonhuman Biota Doses	$195	36	$7,020	$140,400	$98,466	$120,130
70	Category 1 Construction—Building Impacts of Chemical, Biological, and Physical Nonradiological Hazards	$195	44	$8,580	$171,600	$120,348	$146,825
71	Category 1 Operations—Operation Impacts of Chemical, Biological, and Physical Nonradiological Hazards	$195	23	$4,485	$89,700	$62,909	$76,750
72	Category 1 Construction—Construction-Related Noise	$195	17	$3,315	$66,300	$46,498	$56,728
73	Category 1 Operations—Operation-Related Noise	$195	10	$1,950	$39,000	$27,352	$33,369
74	Category 1 Operations—Low-Level Radioactive Waste	$195	145	$28,275	$565,500	$396,601	$483,856
75	Category 1 Operations—Onsite Spent Nuclear Fuel Management	$195	176	$34,320	$686,400	$481,391	$587,301
76	Category 1 Operations—Mixed Waste	$195	136	$26,520	$530,400	$371,984	$453,823

NRC Issue Number	Table 4-1 Issue Descriptions	NRC Operations Net Savings (Costs) per Application Labor Rate	NRC Operations Net Savings (Costs) per Application Hours per Application	NRC Operations Net Savings (Costs) per Application Total per Application	NRC Operations Total Net Savings (Costs) – Rule Undiscounted Total	NRC Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	NRC Operations Total Net Savings (Costs) – Rule 3% NPV
77	Category 1 Construction—Construction Nonradiological Waste	$195	34	$6,630	$132,600	$92,996	$113,456
78	Category 1 Operations—Operation Nonradiological Waste	$195	17	$3,315	$66,300	$46,498	$56,728
79	Category 1 Operations—Design Basis Accidents Involving Radiological Releases	$195	120	$23,400	$468,000	$328,221	$400,432
80	Category 1 Operations—Accidents Involving Releases of Hazardous Chemicals	$195	77	$15,015	$300,300	$210,609	$256,944
81	Category 1 Operations—Severe Accident Mitigation Alternatives	$195	61	$11,895	$237,900	$166,846	$203,553
82	Category 1 Operations—Acts of Terrorism	$195	57	$11,115	$222,300	$155,905	$190,205
83	Category 1 Construction—Community Services and Infrastructure	$195	44	$8,580	$171,600	$120,348	$146,825
84	Category 1 Construction—Transportation Systems and Traffic	$195	89	$17,355	$347,100	$243,431	$296,987
85	Category 1 Construction—Economic Impacts	$195	43	$8,385	$167,700	$117,613	$143,488
86	Category 1 Construction—Tax Revenue Impacts	$195	25	$4,875	$97,500	$68,379	$83,423
87	Category 1 Operations—Community Services and Infrastructure	$195	29	$5,655	$113,100	$79,320	$96,771
88	Category 1 Operations—Transportation Systems and Traffic	$195	15	$2,925	$58,500	$41,028	$50,054

NRC Issue Number	Table 4-1 Issue Descriptions	NRC Operations Net Savings (Costs) per Application Labor Rate	NRC Operations Net Savings (Costs) per Application Hours per Application	NRC Operations Net Savings (Costs) per Application Total per Application	NRC Operations Total Net Savings (Costs) – Rule Undiscounted Total	NRC Operations Total Net Savings (Costs) – Rule 7% Net Present Value (NPV)	NRC Operations Total Net Savings (Costs) – Rule 3% NPV
89	Category 1 Operations—Economic Impacts	$195	29	$5,655	$113,100	$79,320	$96,771
90	Category 1 Operations—Tax Revenue Impacts	$195	57	$11,115	$222,300	$155,905	$190,205
91	Category 1 Operations—Uranium Recovery	$195	26	$5,070	$101,400	$71,115	$86,760
92	Category 1 Operations—Uranium Conversion	$195	26	$5,070	$101,400	$71,115	$86,760
93	Category 1 Operations—Uranium Enrichment	$195	32	$6,240	$124,800	$87,526	$106,782
94	Category 1 Operations—Fuel Fabrication(a)	$195	37	$7,215	$144,300	$101,202	$123,467
95	Category 1 Operations—Reprocessing	$195	27	$5,265	$105,300	$73,850	$90,097
96	Category 1 Operations—Storage and Disposal of Radiological Wastes	$195	37	$7,215	$144,300	$101,202	$123,467
97	Category 1 Operations—Transportation of Unirradiated Fuel	$195	57	$11,115	$222,300	$155,905	$190,205
98	Category 1 Operations—Transportation of Radioactive Waste	$195	57	$11,115	$222,300	$155,905	$190,205
99	Category 1 Operations—Transportation of Spent Nuclear Fuel	$195	181	$35,295	$705,900	$495,067	$603,986
100	Decommissioning	$195	95	$18,525	$370,500	$259,842	$317,009
-	**Totals**	-	**6,416**	$1,251,120	$25,022,400	$17,548,904	$21,409,786

(a) Fuel fabrication impacts for metal fuel and liquid fueled molten salt are not included in the NRC staff's generic analysis.

4.0 RESULTS

This section presents the analytical results and is organized into four sections. Section 4.1 presents findings related to the benefits and costs of the regulatory analysis. Section 4.2 discusses the backfitting and issue finality analysis, Section 4.3 discusses disaggregation of the analytical results, and Section 4.4 examines uncertainties associated with the analytical assumptions and input data.

4.1 Benefits and Costs

4.1.1 Quantitative Results

For Alternative 2, four attributes have been analyzed quantitatively (Industry Implementation, Industry Operations, NRC Implementation, and NRC Operations). The net benefits and costs calculated for Alternatives 1 and 2 are presented below. Relative to the Alternative 1 (No-Action alternative), Alternative 2 would result in estimated net one-time quantitative benefits:

- Industry benefits of $13.2 million net present value, assuming a 7-percent discount rate, or $15.5 million assuming a 3-percent discount rate.
- Industry costs of ($0.51 million) net present value, assuming a 7-percent discount rate, or ($0.56 million) assuming a 3-percent discount rate. Costs are discussed in Section 3.3.1.
- NRC benefits of $17.5 million net present value, assuming a 7-percent discount rate, or $21.4 million assuming a 3-percent discount rate.
- NRC costs of ($1.37 million) net present value, assuming a 7-percent discount rate, or ($1.63 million) assuming a 3-percent discount rate. Costs are discussed in Section 3.3.3.

Table 4.1 presents the quantitative results for Alternative 2 using a 7-percent discount rate and a 3-percent discount rate. Several cases were developed to reflect situations where only some Category 1 issues would be identified and used as part of an application. Section 4.4.3 provides a detailed discussion of the “50 percent case” and the “75 percent case,” which are presented as sensitivity cases in Section 4.4.3.

Table 4.1 Net Benefits (Costs) of Alternative 2 Implementation and Operations

Case	Undiscounted	7% Net Present Value (NPV)	3% NPV
Industry	$17,572,261	$13,186,588	$15,486,320
NRC	$25,022,400	$17,548,904	$21,409,786
Total Benefit	$42,594,661	$30,735,492	$36,896,107
Industry Cost	($600,000)	($506,921)	($557,321)
NRC Cost	($1,911,580)	($1,366,698)	($1,633,096)
Total Cost	($2,511,580)	($1,873,619)	($2,190,418)
Net Benefits	$40,083,081	$28,861,873	$34,705,689

4.1.2 Qualitative Results

For Alternative 2, two attributes have been analyzed on a qualitative basis (Improvements in Knowledge; Improvements in Clarity and Efficiency). In addition, one aspect of the Industry Implementation and NRC Implementation attributes pertaining to issues associated with transmission line rights-of-way (ROWs) also was evaluated on a qualitative basis. Table 4.2 presents a summary of both the qualitative and quantitative benefits and costs for Alternative 2.

Table 4.2 Summary of Results for Alternative 2 (Update and Amend 10 CFR Part 51)

Entity	Net Benefits/Savings Average Hours per Application	Net Benefits/Savings Dollars (7% Discount Rate)	Net Benefits/Savings Dollars (3% Discount Rate)
Industry	6,548	$12.7 million	$14.9 million
NRC	6,416	$16.2 million	$19.8 million
Total	12,964	$28.9 million	$34.7 million
	Non-Monetary Benefits and Costs (Qualitative)		
Benefit: Improvements in Process	The identification of Category 1 issues will improve the efficiency of licensing new nuclear reactors by (1) identifying the possible types of environmental impacts of constructing, operating, and decommissioning a new nuclear reactor, (2) assessing impacts that are expected to be generic (the same or similar) for many new nuclear reactors, and (3) defining the environmental issues that will need to be addressed in project-specific Supplemental EISs (SEISs) addressing specific projects.		
Costs:	Savings are dependent on the number of applicants, the timing of their submissions, and the applicability of the NR GEIS for their proposed sites. If there are fewer applicants or if the GEIS is not as useful as modeled, then net costs would increase.		

4.2 Backfitting and Issue Finality Analysis

The proposed rule would codify in 10 CFR Part 51 certain environmental issues identified in the NR GEIS. The proposed rule also revises 10 CFR Part 51 to permit an applicant for a new nuclear reactor CP or OL under 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities,” or a new nuclear reactor ESP or COL under 10 CFR Part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants,” to use the NR GEIS in preparing its ER. The proposed rule would require the NRC staff to prepare a site-specific draft SEIS and final SEIS for each application that references the NR GEIS. The NRC has determined that the backfitting rule in § 50.109 and the issue finality provisions in 10 CFR Part 52 do not apply to this proposed rule because this amendment does not involve any provision that would either constitute backfitting as that term is defined in 10 CFR Chapter I or affect the issue finality of any approval issued under 10 CFR Part 52.

The proposed rule would not constitute backfitting for applicants for CPs or OLs under 10 CFR Part 50 and would not affect the issue finality of applicants for ESPs or COLs under 10 CFR Part 52. These applicants are not, with certain exceptions not applicable here, within the scope of the backfitting or issue finality provisions. The backfitting and issue finality regulations include language delineating when the backfitting and issue finality provisions begin; in general, they begin after the issuance of a license, permit, or other approval (e.g., §§ 50.109(a)(1)(iii) and 52.98(a)). Furthermore, neither the backfitting provisions nor the issue finality provisions, with certain exceptions not applicable here, are intended to apply to NRC actions that substantially

change the expectations of current and future applicants. Applicants cannot reasonably expect that future requirements will not change.

The exceptions to the general principle are applicable when an applicant references a 10 CFR Part 52 approval (e.g., an ESP or design certification rule) with specified issue finality provisions or a CP under 10 CFR Part 50. However, this proposed rule would have no effect on a CP held by an applicant for a 10 CFR Part 50 OL or an ESP referenced by an applicant for a 10 CFR Part 52 combined license. Therefore, for purposes of this proposed rule, the exceptions to the general principle do not apply.

4.3 Disaggregation

To comply with guidance provided in Section 4.3.2 ("Criteria for the Treatment of Individual Requirements") of the Regulatory Analysis Guidelines (NRC 2020-TN6806), the NRC conducted a screening review to ensure that the aggregate analysis did not mask the inclusion of individual rule provisions that would not be cost-beneficial when considered individually and are not necessary to meet the goals of the rule revisions.

Consistent with the Regulatory Analysis Guidelines, the NRC evaluated, on a disaggregated basis, each new regulatory provision expected to result in an incremental cost. Appendix A of this regulatory analysis presents savings estimated to result from each issue addressed by the proposed rule. Each change is necessary to comply with Federal environmental regulations and is not considered a voluntary alternative. Operation costs for industry and the NRC are not issue-specific and will apply regardless of the issues considered.

4.4 Uncertainty Analysis

To determine the robustness of the costs and net benefits of the proposed rule, the NRC examined how anticipated savings change due to uncertainties associated with the NRC's analytical assumptions and input data. As mentioned in Section 3.1, the NRC used Monte Carlo simulations to examine the impact of uncertainty on the estimated net benefits of the proposed rule. These Monte Carlo simulations were performed using Visual Basic for Applications within Microsoft Excel.

Monte Carlo simulations involve introducing uncertainty into the analysis by replacing the point estimates of the variables used to estimate costs and benefits with probability distributions. By defining input variables as probability distributions as opposed to point estimates, the effect of uncertainty on the results of the analysis (i.e., the net benefits) can be effectively modeled.

The Monte Carlo simulations were performed by repeatedly running the analysis, up to 10,000 times. For each iteration of the analysis, a value was chosen randomly from the probability distributions that define the input variables. The value of the output variable (the net benefits) was recorded for each iteration, and all of the resulting values for the output variable were used to define a distribution for the results.

4.4.1 Uncertainty Model Inputs

In this analysis, the NRC assigned probability distributions to uncertain variables including the number of Category 1 issues that might be triggered by a NEW NUCLEAR REACTOR application, the relative complexity of any one application, and the mix of applications expected during the analysis period, and the NRC assigned triangular probability distributions to these inputs.

As an example of the variables and distributions used in the Monte Carlo simulations, a variety of potential scenarios were evaluated based on combinations of resource areas for which the Category 1 issues might apply/not apply based on the type of site and design that is selected. These combinations reflect the input of NRC SMEs about the potential mix of issues that may apply to applications expected during the analysis period of the proposed rule, and included the following potential application cases:

- Case 1: All Category 1 issues applicable.
- Case 2: Brownfield site without terrestrial ecology concerns nor transmission lines.
- Case 3: Brownfield site without groundwater use, transmission lines, or terrestrial ecology resources.
- Case 4: Small brownfield site without water use.
- Case 5: Small brownfield site without ecological concerns, transmission lines, or surface water use.
- Case 6: Large greenfield site with transmission lines.
- Case 7: Greenfield site without groundwater resources.
- Case 8: Greenfield site with no water use, aquatic ecology resources, or transmission lines.
- Case 9: Greenfield site with no surface water or aquatic ecology resources, with transmission lines.

For each of these cases, the NRC determined which set of Category 1 issues likely would apply and estimated the net savings that would be attributable for each case. The number of applicable Category 1 issues for any review is linked to the SME-determined effort per issue used to derive the per issue savings from conducting generic analysis. Also, NRC modeled the effort of the “least complex” review scenario in addition to the “most typical” review experience. The sensitivity of the results to variations in the scope of the ER are presented in Table 4.3. In the case of lower review complexity, many Category 1 issues may not be of any concern, or the affected resource areas may not be present at the anticipated application site. In these cases, no savings would result if the Category 1 issue identified in the NR GEIS is not present for a given application. Thus, Table 4.3 presents what reduced savings would be available in such cases.

Table 4.3 Relative Expected Effort of Alternative NRC New Nuclear Reactor National Environmental Policy Act Review Cases

Metric	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Category 1 issues in play	100	80	73	51	59	100	93	66	78
Fraction of "most typical" effort	100%	89%	78%	48%	60%	100%	89%	58%	71%
Fraction of "most typical" effort (Least complex review effort)	67%	62%	55%	41%	48%	67%	60%	45%	53%

These results suggest that for the most typical review approximately 50 percent, 75 percent, or 100 percent of the Category 1 issues would be used. As a result, these percentages of Category 1 resource utilization were used to understand how cost might reasonably vary based on the utilization of Category 1 issues in the applications that are received. The NRC acknowledges that some anticipated applications may be for relatively small projects, compared to the COL and ESP projects upon which these estimates are based. The least complex review effort may be more indicative of the expected effort for such applications. However, the NRC assumes that the most typical application will be for larger projects, similar to the Clinch River ESP application, in which an array design was proposed as part of a relatively large facility and site development involving all or most Category 1 issues.

Table 4.4 provides the parameters used in the uncertainty analysis. These parameters were assigned probability distributions and used values selected from that distribution with each iteration of the Monte Carlo simulation. For each variable in Table 4.4, the characteristics of the distribution used in the simulation are provided. Review complexity was derived by collecting data about recent NRC environmental reviews of new nuclear reactor applications, including an ESP application for a facility at the Clinch River site in Tennessee, in addition to two large LWR applications. NRC environmental reviews range in complexity based on several factors that vary from site to site and application to application. Experienced environmental SMEs were asked to indicate which reviews reflected the most typical, least complex, and most complex for their specific resource area (ecology, human health, socioeconomics, water resources, etc.). The Category 1 issues analyzed in this proposed rule are each assigned to a specific resource area for impact analysis for each application (COL, ESP licensing actions). For each Category 1 issue, the relevant SME made a determination of which application represented the most typical review experience, the least complex, and the most complex for their resource area. This information was used to allocate NRC cost data for each issue for each classification (least complex, most typical, most complex). Scalars were calculated representing the relative effort for any single Category 1 issue between least complex and most typical and between most complex and most typical. These values are reflected in Table 4.4.

The information presented in Table 4.3 above provides the basis for varying the number of Category 1 issues for any single application. The parameters of this distribution are shown in Table 4.4 and vary from 50 to 100 issues. This variable can be influenced by or be a function of review complexity but has a distinct influence on the potential savings. This is because it is quite possible to have relatively few Category 1 issues at play in a specific application review, but some of the issues may be relatively complex. Thus, this variable also was modeled in the Monte Carlo analysis.

Finally, the mix of reviews undertaken during the analysis period of the proposed rule also is subject to some level of uncertainty. This is reflected in the total number of Category 1 issues that would arise from the eight applications expected in the 2026–2036 period. If each

application used the GEIS analysis for all 100 Category 1 issues, then 800 such issues would be triggered in the 2026–2036 period and savings would be maximized. However, as few as 400 issues may be triggered based on the information derived from Table 4.3 above. The Monte Carlo analysis models this uncertainty using the parameters shown in Table 4.4.

Table 4.4 Example Variables and Distributions Used in the Monte Carlo Analysis

Variable	Description	Distribution	Mode	Minimum	Maximum
Review complexity – Industry	Scalar on the "most typical" review experience	Triangular	1	0.57	2.47
Review complexity – NRC	Scalar on the "most typical" review experience	Triangular	1	0.67	1.91
Category 1 Issues	Number of issues per review	Triangular	100	50	100
Mix of reviews – Industry	Sum of all Category 1 issues under review 2026–2036	Triangular	2,000	1,000	2,000
Mix of reviews – NRC	Sum of all Category 1 issues under review 2026–2036	Triangular	2,000	1,000	2,000

4.4.2 Uncertainty Model Results

Table 4.1 displays the results of the uncertainty analysis for the net benefits (benefits minus costs) of the proposed rule. By allowing uncertain assumptions and inputs to range across a distribution, the results are no longer static and instead spread across a range with varying degrees of certainty.

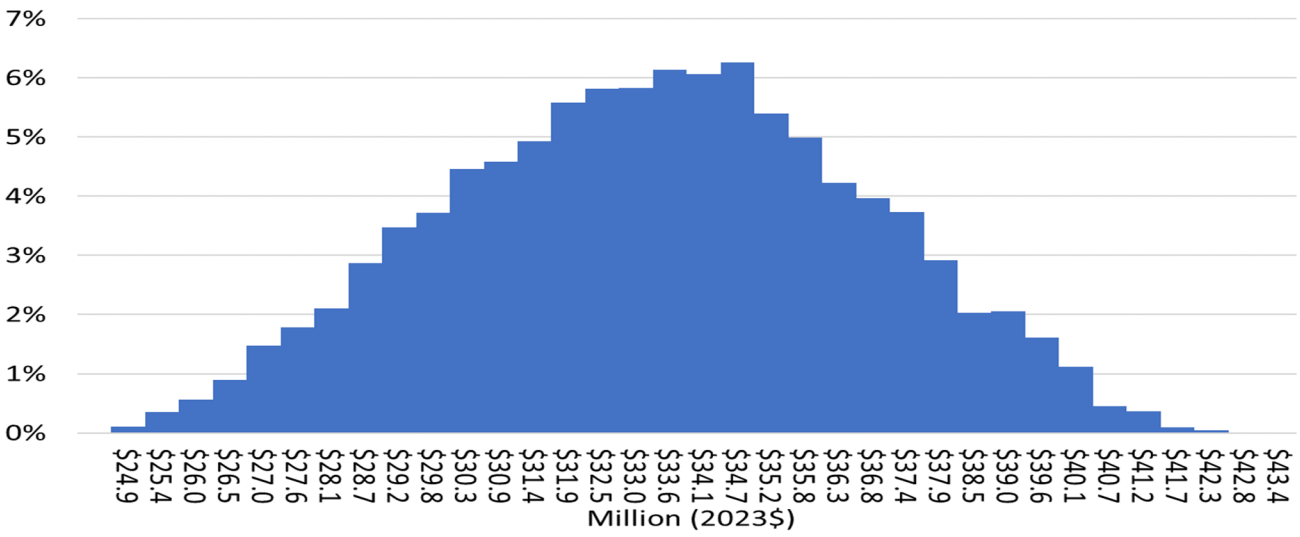
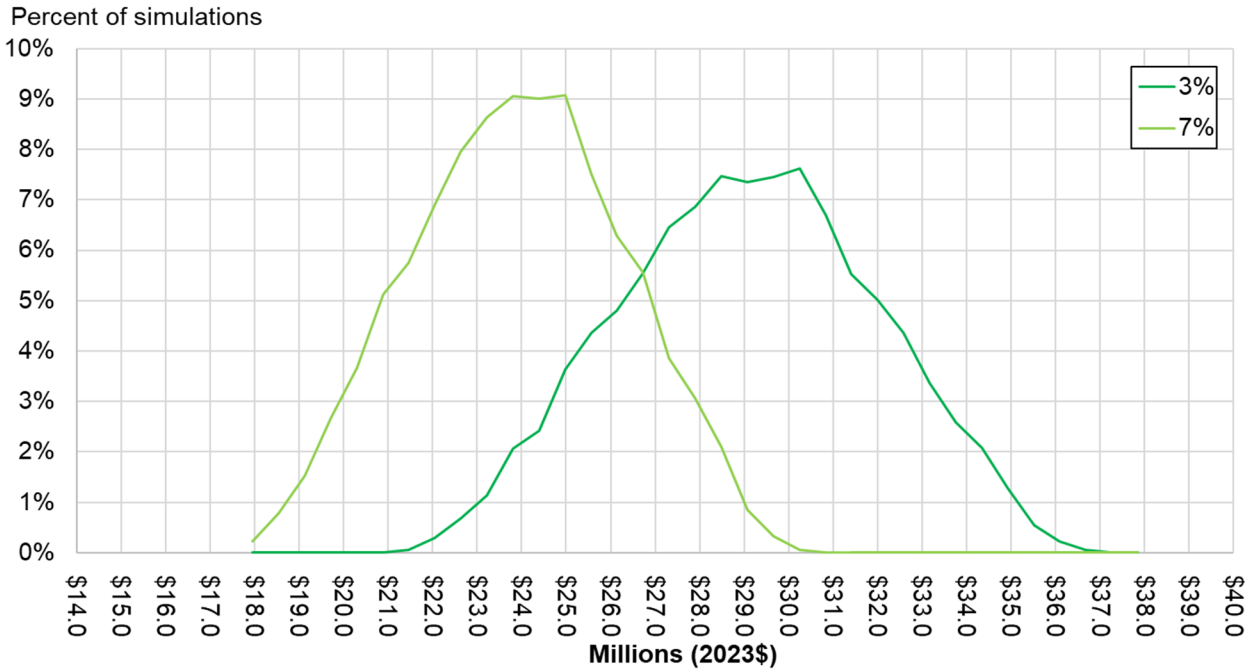


Figure 4.1 Relative Frequency of the Undiscounted Net Benefits of the Proposed Rule (2023 Dollars)

Similarly, the net benefits with 7 percent and 3 percent discounting can be seen in Figure 4.2.



NOTE: As the discount rate increases in the above exhibit, the distributions become narrower. This narrowing is a result of the decreasing value of net benefits in future years as discount rates increase. Larger discount rates result in smaller cost and benefit values in future years in the analysis period, resulting in a smaller range and a narrower distribution.

Figure 4.2 Relative Frequency of the Net Benefits of the Proposed Rule at 7 Percent and 3 Percent Discounting (2023 Dollars)

Examining the range of the resulting distributions of net benefits, it is possible to discuss the potential costs and benefits of the proposed rule with more confidence. Table 4.5 displays a 90 percent confidence interval, meaning that the net benefits will fall between the ranges indicated for 90 percent of all the iterations run as part of the Monte Carlo simulations. In all cases, regardless of the discount rate used, the benefits of the proposed rule (in terms of averted costs) will outweigh the implementation costs of the proposed rule that will be incurred by industry applicants and the NRC. This result is demonstrated by the fact that the resulting distributions of net benefits, whether undiscounted or at 3 or 7 percent discount rates, are always greater than zero.

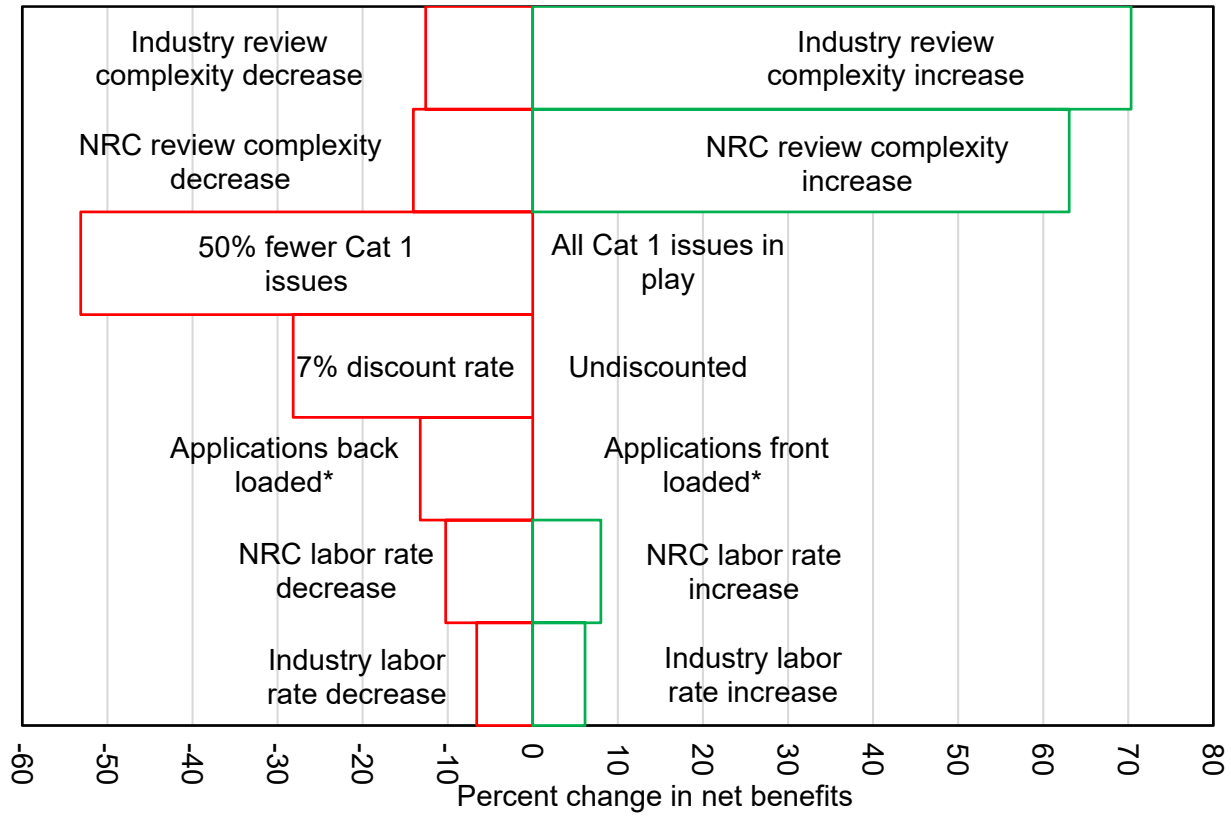
Table 4.5 Confidence Intervals for Alternative 2 Benefits and Costs of the Proposed Rule at 7 Percent and 3 Percent Discounting (in 2023 Dollars)

Metric	90-Percent Confidence Intervals 7% Net Present Value (NPV)	90-Percent Confidence Intervals 7% NPV	90-Percent Confidence Intervals 3% NPV	90-Percent Confidence Intervals 3% NPV
Total Benefits	$29,017,750	$32,453,234	$34,822,756	$38,969,458
Total Costs	($2,001,669)	($1,745,569)	($2,340,119)	($2,040,717)
Net Benefits	$27,016,081	$30,707,665	$32,482,637	$36,928,741

4.4.3 Sensitivity Analysis

In addition to estimating the probability distributions for the net benefits of the proposed rule, Monte Carlo simulation was used to conduct a sensitivity analysis to determine the variables that have greatest impact on the resulting net benefits. Variables shown to have a large effect on the resulting net benefits may deserve more attention and scrutiny than variables shown to have a small or minimal effect.

To estimate the effect of each variable on the net benefits, key inputs were adjusted by applying the endpoints of the modeled distributions in each case, in isolation from any other changes, to observe the individual impact of the change on the benefits of the rule. The results are compiled into a "tornado diagram," which presents in vertical order the variables that have the greatest influence on net benefits. Figure 4.3 presents the tornado diagram for the net benefits of the proposed rule. The costs of the rule are not subject to variability other than the effect of financial discounting, because some costs have already been incurred and are not included in the analysis, and the balance of rule-related costs are subject to budget constraints or contracts already in place, which remove much of the uncertainty.



NOTE: Bars indicated with an asterisk (*) denote that the results are discounted using the 7-percent discount rate. Due to the high number of applications in the early years after rule issuance, in the base case, a sensitivity case with applications further front loaded was not conducted.

Figure 4.3 Tornado Diagram for the Net Benefits of the Proposed Rule (2023 Dollars)

The horizontal axis in Figure 4.3 is displayed as the net effect on the net benefits of the rule from an adjustment of the key inputs to the benefits estimation based on the endpoints of each distribution used in the Monte Carlo analysis.

Examining the tornado diagrams provides insight into which of the key variables have the largest impacts on the results of this analysis. From Figure 4.3, the parameters having the greatest influence on the total benefits of the final rule are the variables related to the complexity of the expected applications developed by industry applicants followed by the related effects on complexity encountered during NRC environmental reviews. The spread in simulation results reflects the NRC experience with wide-ranging issues, which can complicate individual applications as reflected in Table 4.4 above. Fifty-percent adjustments (reductions) in the number of Category 1 issues can reduce the net benefits by over 50 percent. Imposing a 7-percent discount rate on the net benefits results in an approximately 30-percent decline in net benefits compared to undiscounted estimates. Adjusting the industry labor rate and the NRC labor rate each by +/- 25-percent have equal influence on the benefits expected from the rule and equate to an approximately +/- 10-percent impact on the undiscounted net benefits. All other variables, taken individually, have lesser impacts on the financial net benefits of the rule.

Table 4.3 also illustrates the effect of back-loading the 20 planned new nuclear reactor applications, as opposed to the assumed even distribution of applications modeled as the most likely case (front-loading was not analyzed due to the front-loaded nature of expected applications in the base case). These bars are indicated with an asterisk (*) to denote that the results are discounted using the 7-percent discount rate. The timing of the 20 applications only matters in financial terms when compared to other discounted values. Delaying submission of applications to correspond to a delayed final rule and slower application frequency over time decreases discounted net benefits by about 15 percent.

Figure 4.4 and Figure 4.5 provide insight into the most sensitive variables in the analysis, including the NEPA review complexity and the variability in the number of Category 1 issues applicable to any one NEPA review. The parameters for the review complexity distribution reflected in Figure 4.4 were developed from previous NRC NEPA review experience and reflect SME attribution of the proportion of billed effort to each individual Category 1 issue. SME attribution of effort proportions was multiplied by the portion of past NEPA review costs for COL and ESP actions attributed to impact assessments. The range of applications and sites resulted in scalars that have been applied to what the SMEs judged to be the most and least complex NEPA reviews.

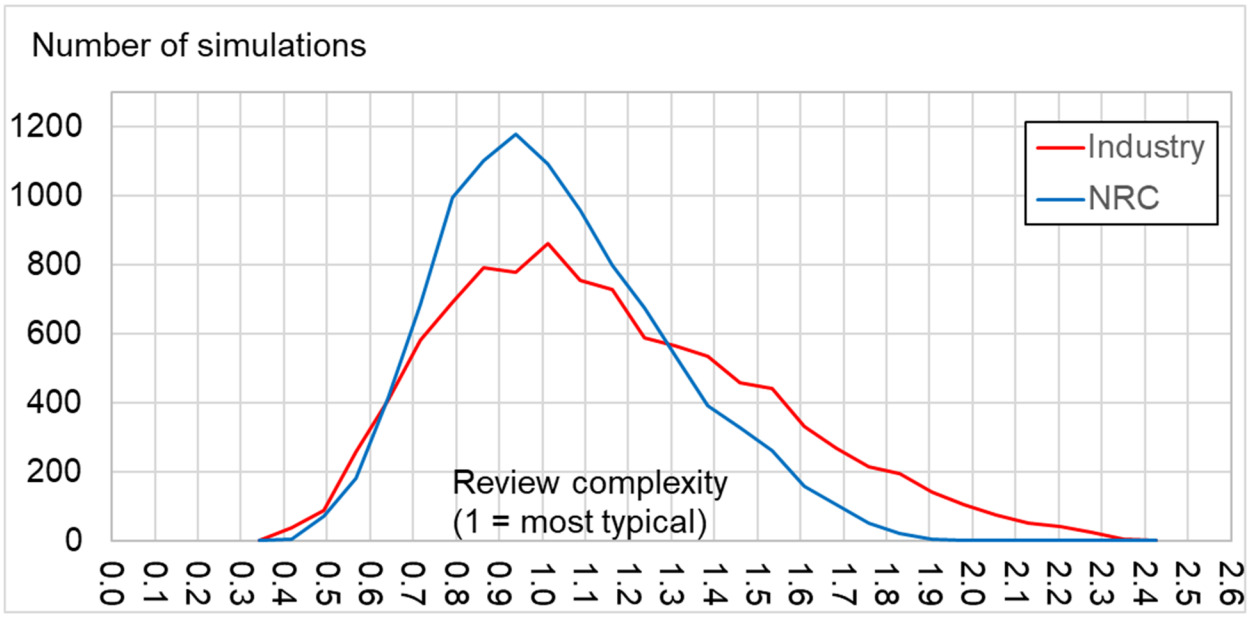


Figure 4.4 Distribution of National Environmental Policy Act Review Complexity used in Monte Carlo Analysis

Figure 4.5 reflects the uncertain nature of future new nuclear reactor applications. Some applications may be for large projects where all 100 Category 1 issues may be subject to generic analysis, and others may be for smaller projects where only a subset of the Category 1 issue may apply. Thus, the distribution illustrates the total number of Category 1 issues expected to be relevant during the proposed rule's analysis period of 2026–2036.

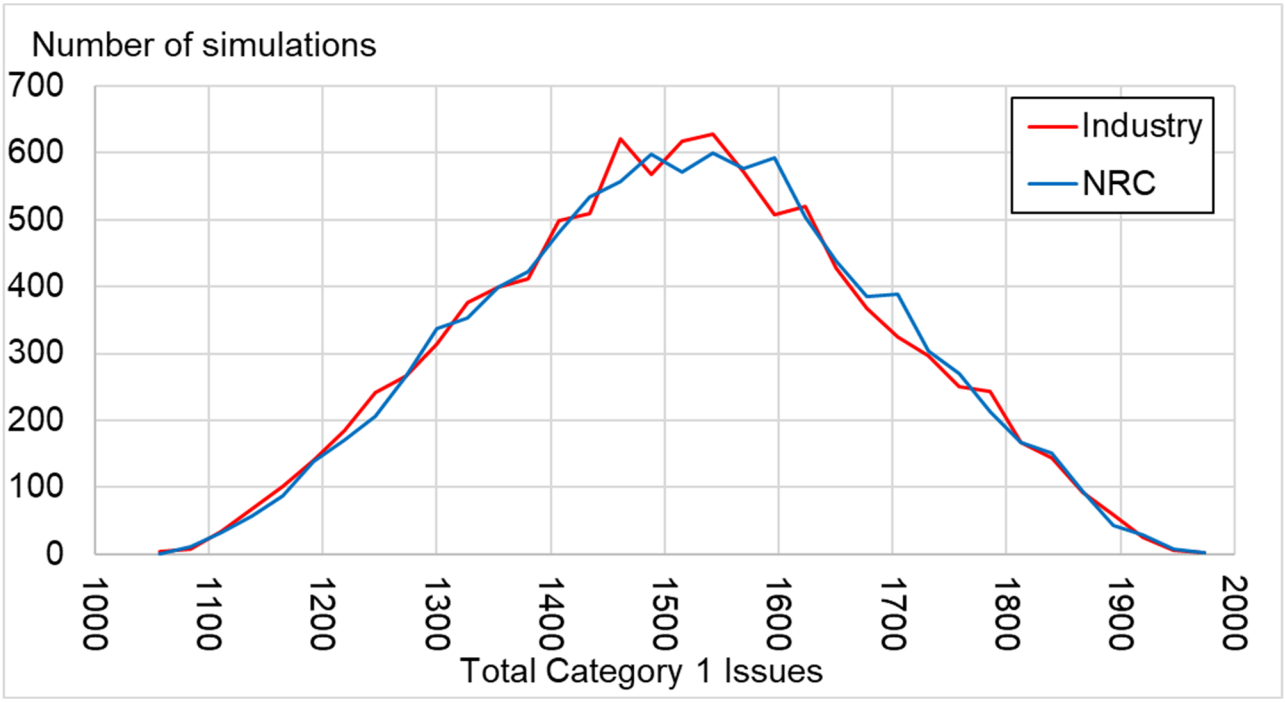


Figure 4.5 Distribution of Total Category 1 Issues Analyzed during the Proposed Rule, 2026–2036

The NRC also considered the case where potential applicants may quickly take advantage of the proposed rule and may be preparing now for it to be implemented. This might enable some applicants to submit a new nuclear reactor application soon after the final rule becomes effective. If this occurs, the savings benefits would happen sooner and would increase the total net benefits of the rule.

5.0 DECISION RATIONALE

Relative to the No-Action alternative, Alternative 2 results in a net benefit of approximately $28.9 million (total present value) using a 7-percent discount rate or $34.7 million using a 3-percent discount rate. Additionally, the NRC has concluded that proceeding with Alternative 2 is justified for the following reasons:

1. Alternative 2 incorporates revisions to 10 CFR Part 51, including Table C-1, which reflect the findings described in the NR GEIS.
2. Alternative 2 incorporates text to improve the effectiveness and efficiency of the environmental review for new nuclear reactor applications by codifying the NR GEIS findings in Table C-1. Improving the effectiveness and efficiency of the new nuclear reactor environmental reviews will reduce the cost to industry of preparing environmental reports for new nuclear reactor applications and focuses resources on project-specific analyses. The NRC also will recognize similar reductions in cost and be better able to focus its resources on the important project-specific issues during new nuclear reactor licensing environmental reviews.

6.0 IMPLEMENTATION

This section identifies how and when the proposed action will be implemented and the impact on other requirements.

6.1 Schedule

The NRC assumes that the proposed rule would become effective 30 days after its publication in the *Federal Register* in 2026

6.2 Impact on Other Requirements

None.

7.0 REFERENCES

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NRC (U.S. Nuclear Regulatory Commission). 2024. Memorandum from C.M. Safford, Secretary, to R.V. Furstenau, Acting Director for Operations, dated April 17, 2024, regarding "Staff Requirements – SECY-21-0098 – Proposed Rule: Advanced Nuclear Reactor Generic Environmental Impact Statement (RIN 3150-AK55; NRC 2020 0101)." Washington, D.C. ADAMS Accession No. ML24108A199. TN10164.

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APPENDIX A

SUMMARY OF RULE SAVINGS RESULTS – ALTERNATIVE 2

This appendix presents the detailed financial cost savings impacts of the proposed rule for each Category 1 issue, both for industry and the U.S. Nuclear Regulatory Commission (NRC). The substantial majority of impacts attributable to the proposed rule derive from the reduction in industry and NRC environmental review effort required to satisfy National Environmental Policy Act (NEPA) reporting requirements for new nuclear reactor licensing actions. This reduction in effort enabled by use of the Generic Environmental Impact Statement (GEIS) to provide generic impact estimates across 100 Category 1 issues leads to substantial savings over current practice and represents a quantifiable national benefit.

The analysis of savings relies upon several assumptions about how the proposed rule will be utilized by industry including the number and timing of applications expected to be submitted to NRC under the rule during the first 10 years after the rule is finalized (i.e., the operational period of the proposed rule regulatory analysis, 2026–2036. The NRC assumes that 20 applications will be submitted for new nuclear reactor projects with multiple applications submitted soon after the implementation of the final rule. These assumptions are judged to form the most likely evolution of impacts of the proposed rule and the detailed results presented in this appendix reflect that assumption. However, it is plausible that at least one application may be submitted relatively soon after the implementation date of the final rule. The effect of this potential is presented as part of the uncertainty analysis in Section 4.3. The sooner in the operational period of the proposed rule that industry utilizes its provisions and submits a new nuclear reactor licensing application, the larger the financial effects (net benefits) would be.

The proposed rule creates 100 Category 1 issues for which generic impact analysis can be utilized by industry and NRC staff. Table A.1 provides the annual and total savings estimated to result for each Category 1 issue used by industry. As the size and complexity of the expected new nuclear reactor applications are not known at the time of this analysis, the NRC staff assumes that the most likely case would be for applications taking full advantage of the proposed rule and invoking a generic analysis for all 100 Category 1 issues. Section 4.3 illustrates potential results if a distribution of applications using various numbers of Category 1 issues might occur.

The results presented in Table A.1 reflect the following input variables (Section 3.3 provides more detailed discussion):

- Labor Rate: The NRC labor rate was assumed to be the average between the NRC labor rate of $152/hour and the NRC contractor labor rate of $225/hour, which equates to $195/hour. The industry labor rate is a blended rate of several weighted occupational series labor rates from 2023 U.S. Bureau of Labor Statistics data.
- Hours per Application: For each Category 1 issue, the NRC staff estimated the hours saved by utilizing the generic impact analysis findings in the new reactor generic environmental impact statement (NR GEIS). These impacts are a one-time realization of review effort savings per application realized when the application is accepted by NRC and a formal environmental review commences.
- Applications per Year: As discussed above and in Section 3.3, this represents the NRC's assumed number of new nuclear reactor applications utilizing the provisions of the proposed rule.

The values reported in Table A.1 expand on the totals presented in Table 3.2.

Table A.1 Summary of Proposed Rule Savings Benefits to Industry by Category 1 Issue (2023 Constant Dollars)

Issue 1:	Category 1 Construction—Onsite Land Use					
Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	26	8	$27,910	$22,782	$25,541
2027	$134	26	2	$6,977	$5,323	$6,199
2028	$134	26	8	$27,910	$19,899	$24,075
2029	$134	26	1	$3,489	$2,325	$2,922
2030	$134	26	0	$0	$0	$0
2031	$134	26	1	$3,489	$2,030	$2,754
2032	$134	26	0	$0	$0	$0
2033	$134	26	0	$0	$0	$0
2034	$134	26	0	$0	$0	$0
2035	$134	26	0	$0	$0	$0
2036	$134	26	0	$0	$0	$0
-	-	-	20	$69,774	$52,360	$61,491
Issue 2:	**Category 1 Construction—Offsite Land Use**					
Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	184	8	$197,513	$161,230	$180,753
2027	$134	184	2	$49,378	$37,671	$43,872
2028	$134	184	8	$197,513	$140,824	$170,377
2029	$134	184	1	$24,689	$16,451	$20,677
2030	$134	184	0	$0	$0	$0
2031	$134	184	1	$24,689	$14,369	$19,490
2032	$134	184	0	$0	$0	$0
2033	$134	184	0	$0	$0	$0
2034	$134	184	0	$0	$0	$0
2035	$134	184	0	$0	$0	$0
2036	$134	184	0	$0	$0	$0
-	-	-	20	$493,784	$370,546	$435,168
Issue 3:	**Category 1 Construction—Impacts on Prime and Unique Farmland**					
Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	25	8	$26,836	$21,906	$24,559
2027	$134	25	2	$6,709	$5,118	$5,961
2028	$134	25	8	$26,836	$19,134	$23,149
2029	$134	25	1	$3,355	$2,235	$2,809
2030	$134	25	0	$0	$0	$0

2031	$134	25	1	$3,355	$1,952	$2,648
2032	$134	25	0	$0	$0	$0
2033	$134	25	0	$0	$0	$0
2034	$134	25	0	$0	$0	$0
2035	$134	25	0	$0	$0	$0
2036	$134	25	0	$0	$0	$0
-	-	-	20	$67,090	$50,346	$59,126

Issue 4: Category 1 Construction—Coastal Zone and Compliance with The Coastal Zone Management Act

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	14	8	$15,028	$12,267	$13,753
2027	$134	14	2	$3,757	$2,866	$3,338
2028	$134	14	8	$15,028	$10,715	$12,963
2029	$134	14	1	$1,879	$1,252	$1,573
2030	$134	14	0	$0	$0	$0
2031	$134	14	1	$1,879	$1,093	$1,483
2032	$134	14	0	$0	$0	$0
2033	$134	14	0	$0	$0	$0
2034	$134	14	0	$0	$0	$0
2035	$134	14	0	$0	$0	$0
2036	$134	14	0	$0	$0	$0
-	-	-	20	$37,571	$28,194	$33,111

Issue 5: Category 1 Operations—Onsite Land Use

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	3	8	$3,220	$2,629	$2,947
2027	$134	3	2	$805	$614	$715
2028	$134	3	8	$3,220	$2,296	$2,778
2029	$134	3	1	$403	$268	$337
2030	$134	3	0	$0	$0	$0
2031	$134	3	1	$403	$234	$318
2032	$134	3	0	$0	$0	$0
2033	$134	3	0	$0	$0	$0
2034	$134	3	0	$0	$0	$0
2035	$134	3	0	$0	$0	$0
2036	$134	3	0	$0	$0	$0
-	-	-	20	$8,051	$6,042	$7,095

Issue 6: Category 1 Operations—Offsite Land Use

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	25	8	$26,836	$21,906	$24,559

2027	$134	25	2	$6,709	$5,118	$5,961
2028	$134	25	8	$26,836	$19,134	$23,149
2029	$134	25	1	$3,355	$2,235	$2,809
2030	$134	25	0	$0	$0	$0
2031	$134	25	1	$3,355	$1,952	$2,648
2032	$134	25	0	$0	$0	$0
2033	$134	25	0	$0	$0	$0
2034	$134	25	0	$0	$0	$0
2035	$134	25	0	$0	$0	$0
2036	$134	25	0	$0	$0	$0
-	-	-	20	$67,090	$50,346	$59,126

Issue 7: Category 1 Construction—Visual Impacts in Site and Vicinity

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	11	8	$11,808	$9,639	$10,806
2027	$134	11	2	$2,952	$2,252	$2,623
2028	$134	11	8	$11,808	$8,419	$10,186
2029	$134	11	1	$1,476	$984	$1,236
2030	$134	11	0	$0	$0	$0
2031	$134	11	1	$1,476	$859	$1,165
2032	$134	11	0	$0	$0	$0
2033	$134	11	0	$0	$0	$0
2034	$134	11	0	$0	$0	$0
2035	$134	11	0	$0	$0	$0
2036	$134	11	0	$0	$0	$0
-	-	-	20	$29,520	$22,152	$26,016

Issue 8: Category 1 Construction—Visual Impacts from Transmission Lines

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	11	8	$11,808	$9,639	$10,806
2027	$134	11	2	$2,952	$2,252	$2,623
2028	$134	11	8	$11,808	$8,419	$10,186
2029	$134	11	1	$1,476	$984	$1,236
2030	$134	11	0	$0	$0	$0
2031	$134	11	1	$1,476	$859	$1,165
2032	$134	11	0	$0	$0	$0
2033	$134	11	0	$0	$0	$0
2034	$134	11	0	$0	$0	$0
2035	$134	11	0	$0	$0	$0
2036	$134	11	0	$0	$0	$0
-	-	-	20	$29,520	$22,152	$26,016

Issue 9: Category 1 Operations—Visual Impacts During Operations

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present	3% NPV

					Value (NPV)	
2026	$134	23	8	$24,689	$20,154	$22,594
2027	$134	23	2	$6,172	$4,709	$5,484
2028	$134	23	8	$24,689	$17,603	$21,297
2029	$134	23	1	$3,086	$2,056	$2,585
2030	$134	23	0	$0	$0	$0
2031	$134	23	1	$3,086	$1,796	$2,436
2032	$134	23	0	$0	$0	$0
2033	$134	23	0	$0	$0	$0
2034	$134	23	0	$0	$0	$0
2035	$134	23	0	$0	$0	$0
2036	$134	23	0	$0	$0	$0
-	-	-	20	$61,723	$46,318	$54,396

Issue 10: Category 1 Construction—Emissions of Criteria Pollutants and Dust During Construction

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	33	8	$35,424	$28,916	$32,418
2027	$134	33	2	$8,856	$6,756	$7,868
2028	$134	33	8	$35,424	$25,257	$30,557
2029	$134	33	1	$4,428	$2,951	$3,708
2030	$134	33	0	$0	$0	$0
2031	$134	33	1	$4,428	$2,577	$3,495
2032	$134	33	0	$0	$0	$0
2033	$134	33	0	$0	$0	$0
2034	$134	33	0	$0	$0	$0
2035	$134	33	0	$0	$0	$0
2036	$134	33	0	$0	$0	$0
-	-	-	20	$88,559	$66,457	$78,047

Issue 11: Category 1 Construction—Greenhouse Gas Emissions During Construction

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	76	8	$81,582	$66,595	$74,659
2027	$134	76	2	$20,395	$15,560	$18,121
2028	$134	76	8	$81,582	$58,167	$70,373
2029	$134	76	1	$10,198	$6,795	$8,540
2030	$134	76	0	$0	$0	$0
2031	$134	76	1	$10,198	$5,935	$8,050
2032	$134	76	0	$0	$0	$0
2033	$134	76	0	$0	$0	$0
2034	$134	76	0	$0	$0	$0
2035	$134	76	0	$0	$0	$0
2036	$134	76	0	$0	$0	$0

-	-	-	20	$203,954	$153,051	$179,743

Issue 12: Category 1 Operations—Emissions of Criteria and Hazardous Air Pollutants During Operation

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	50	8	$53,672	$43,812	$49,118
2027	$134	50	2	$13,418	$10,237	$11,922
2028	$134	50	8	$53,672	$38,267	$46,298
2029	$134	50	1	$6,709	$4,471	$5,619
2030	$134	50	0	$0	$0	$0
2031	$134	50	1	$6,709	$3,905	$5,296
2032	$134	50	0	$0	$0	$0
2033	$134	50	0	$0	$0	$0
2034	$134	50	0	$0	$0	$0
2035	$134	50	0	$0	$0	$0
2036	$134	50	0	$0	$0	$0
-	-	-	20	$134,180	$100,692	$118,252

Issue 13: Category 1 Operations—Greenhouse Gas Emissions During Operation

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	48	8	$51,525	$42,060	$47,153
2027	$134	48	2	$12,881	$9,827	$11,445
2028	$134	48	8	$51,525	$36,737	$44,446
2029	$134	48	1	$6,441	$4,292	$5,394
2030	$134	48	0	$0	$0	$0
2031	$134	48	1	$6,441	$3,749	$5,084
2032	$134	48	0	$0	$0	$0
2033	$134	48	0	$0	$0	$0
2034	$134	48	0	$0	$0	$0
2035	$134	48	0	$0	$0	$0
2036	$134	48	0	$0	$0	$0
-	-	-	20	$128,813	$96,664	$113,522

Issue 14: Category 1 Operations—Cooling System Emissions

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	11	8	$11,808	$9,639	$10,806
2027	$134	11	2	$2,952	$2,252	$2,623
2028	$134	11	8	$11,808	$8,419	$10,186
2029	$134	11	1	$1,476	$984	$1,236
2030	$134	11	0	$0	$0	$0
2031	$134	11	1	$1,476	$859	$1,165
2032	$134	11	0	$0	$0	$0

2033	$134	11	0	$0	$0	$0
2034	$134	11	0	$0	$0	$0
2035	$134	11	0	$0	$0	$0
2036	$134	11	0	$0	$0	$0
-	-	-	20	$29,520	$22,152	$26,016

Issue 15: Category 1 Operations—Emissions of Ozone and Nitrogen Oxides During Transmission Line Operation

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	6	8	$6,441	$5,257	$5,894
2027	$134	6	2	$1,610	$1,228	$1,431
2028	$134	6	8	$6,441	$4,592	$5,556
2029	$134	6	1	$805	$536	$674
2030	$134	6	0	$0	$0	$0
2031	$134	6	1	$805	$469	$636
2032	$134	6	0	$0	$0	$0
2033	$134	6	0	$0	$0	$0
2034	$134	6	0	$0	$0	$0
2035	$134	6	0	$0	$0	$0
2036	$134	6	0	$0	$0	$0
-	-	-	20	$16,102	$12,083	$14,190

Issue 16: Category 1 Construction—Surface Water Use Conflicts During Construction

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	17	8	$18,249	$14,896	$16,700
2027	$134	17	2	$4,562	$3,480	$4,053
2028	$134	17	8	$18,249	$13,011	$15,741
2029	$134	17	1	$2,281	$1,520	$1,910
2030	$134	17	0	$0	$0	$0
2031	$134	17	1	$2,281	$1,328	$1,801
2032	$134	17	0	$0	$0	$0
2033	$134	17	0	$0	$0	$0
2034	$134	17	0	$0	$0	$0
2035	$134	17	0	$0	$0	$0
2036	$134	17	0	$0	$0	$0
-	-	-	20	$45,621	$34,235	$40,206

Issue 17: Category 1 Construction—Groundwater Use Conflicts Due to Excavation Dewatering

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	117	8	$125,593	$102,521	$114,935
2027	$134	117	2	$31,398	$23,954	$27,897

2028	$134	117	8	$125,593	$89,546	$108,337
2029	$134	117	1	$15,699	$10,461	$13,148
2030	$134	117	0	$0	$0	$0
2031	$134	117	1	$15,699	$9,137	$12,393
2032	$134	117	0	$0	$0	$0
2033	$134	117	0	$0	$0	$0
2034	$134	117	0	$0	$0	$0
2035	$134	117	0	$0	$0	$0
2036	$134	117	0	$0	$0	$0
-	-	-	20	$313,982	$235,619	$276,710

Issue 18: Category 1 Construction—Groundwater Use Conflicts Due to Construction-Related Groundwater Withdrawals

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	97	8	$104,124	$84,996	$95,288
2027	$134	97	2	$26,031	$19,859	$23,128
2028	$134	97	8	$104,124	$74,239	$89,818
2029	$134	97	1	$13,015	$8,673	$10,900
2030	$134	97	0	$0	$0	$0
2031	$134	97	1	$13,015	$7,575	$10,275
2032	$134	97	0	$0	$0	$0
2033	$134	97	0	$0	$0	$0
2034	$134	97	0	$0	$0	$0
2035	$134	97	0	$0	$0	$0
2036	$134	97	0	$0	$0	$0
-	-	-	20	$260,310	$195,342	$229,409

Issue 19: Category 1 Construction—Water Quality Degradation Due to Construction-Related Discharges

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	17	8	$18,249	$14,896	$16,700
2027	$134	17	2	$4,562	$3,480	$4,053
2028	$134	17	8	$18,249	$13,011	$15,741
2029	$134	17	1	$2,281	$1,520	$1,910
2030	$134	17	0	$0	$0	$0
2031	$134	17	1	$2,281	$1,328	$1,801
2032	$134	17	0	$0	$0	$0
2033	$134	17	0	$0	$0	$0
2034	$134	17	0	$0	$0	$0
2035	$134	17	0	$0	$0	$0
2036	$134	17	0	$0	$0	$0
-	-	-	20	$45,621	$34,235	$40,206

Issue 20: Category 1 Construction—Water Quality Degradation Due to Inadvertent Spills During Construction

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	17	8	$18,249	$14,896	$16,700
2027	$134	17	2	$4,562	$3,480	$4,053
2028	$134	17	8	$18,249	$13,011	$15,741
2029	$134	17	1	$2,281	$1,520	$1,910
2030	$134	17	0	$0	$0	$0
2031	$134	17	1	$2,281	$1,328	$1,801
2032	$134	17	0	$0	$0	$0
2033	$134	17	0	$0	$0	$0
2034	$134	17	0	$0	$0	$0
2035	$134	17	0	$0	$0	$0
2036	$134	17	0	$0	$0	$0
-	-	-	20	$45,621	$34,235	$40,206

Issue 21: Category 1 Construction—Water Quality Degradation Due to Groundwater Withdrawal

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	39	8	$41,864	$34,174	$38,312
2027	$134	39	2	$10,466	$7,985	$9,299
2028	$134	39	8	$41,864	$29,849	$36,112
2029	$134	39	1	$5,233	$3,487	$4,383
2030	$134	39	0	$0	$0	$0
2031	$134	39	1	$5,233	$3,046	$4,131
2032	$134	39	0	$0	$0	$0
2033	$134	39	0	$0	$0	$0
2034	$134	39	0	$0	$0	$0
2035	$134	39	0	$0	$0	$0
2036	$134	39	0	$0	$0	$0
-	-	-	20	$104,661	$78,540	$92,237

Issue 22: Category 1 Construction—Water Quality Degradation Due to Offshore or In-Water Construction Activities

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	67	8	$71,921	$58,709	$65,818
2027	$134	67	2	$17,980	$13,717	$15,975
2028	$134	67	8	$71,921	$51,278	$62,039
2029	$134	67	1	$8,990	$5,990	$7,529
2030	$134	67	0	$0	$0	$0
2031	$134	67	1	$8,990	$5,232	$7,097
2032	$134	67	0	$0	$0	$0
2033	$134	67	0	$0	$0	$0

2034	$134	67	0	$0	$0	$0
2035	$134	67	0	$0	$0	$0
2036	$134	67	0	$0	$0	$0
-	-	-	20	$179,802	$134,927	$158,458

Issue 23: Category 1 Construction—Water Use Conflict Due to Plant Municipal Water Demand

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	67	8	$71,921	$58,709	$65,818
2027	$134	67	2	$17,980	$13,717	$15,975
2028	$134	67	8	$71,921	$51,278	$62,039
2029	$134	67	1	$8,990	$5,990	$7,529
2030	$134	67	0	$0	$0	$0
2031	$134	67	1	$8,990	$5,232	$7,097
2032	$134	67	0	$0	$0	$0
2033	$134	67	0	$0	$0	$0
2034	$134	67	0	$0	$0	$0
2035	$134	67	0	$0	$0	$0
2036	$134	67	0	$0	$0	$0
-	-	-	20	$179,802	$134,927	$158,458

Issue 24: Category 1 Construction—Degradation of Water Quality from Plant Effluent Discharges to Municipal Systems

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	150	8	$161,016	$131,437	$147,353
2027	$134	150	2	$40,254	$30,710	$35,765
2028	$134	150	8	$161,016	$114,802	$138,894
2029	$134	150	1	$20,127	$13,412	$16,856
2030	$134	150	0	$0	$0	$0
2031	$134	150	1	$20,127	$11,714	$15,888
2032	$134	150	0	$0	$0	$0
2033	$134	150	0	$0	$0	$0
2034	$134	150	0	$0	$0	$0
2035	$134	150	0	$0	$0	$0
2036	$134	150	0	$0	$0	$0
-	-	-	20	$402,541	$302,075	$354,757

Issue 25: Category 1 Operations—Surface Water Use Conflicts During Operation Due to Water Withdrawal from Flowing Waterbodies

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	109	8	$117,005	$95,511	$107,076
2027	$134	109	2	$29,251	$22,316	$25,989
2028	$134	109	8	$117,005	$83,423	$100,930

2029	$134	109	1	$14,626	$9,746	$12,249
2030	$134	109	0	$0	$0	$0
2031	$134	109	1	$14,626	$8,512	$11,546
2032	$134	109	0	$0	$0	$0
2033	$134	109	0	$0	$0	$0
2034	$134	109	0	$0	$0	$0
2035	$134	109	0	$0	$0	$0
2036	$134	109	0	$0	$0	$0
-	-	-	20	$292,513	$219,508	$257,790

Issue 26: Category 1 Operations—Surface Water Use Conflicts During Operation Due to Water Withdrawal from Non-Flowing Waterbodies

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	39	8	$41,864	$34,174	$38,312
2027	$134	39	2	$10,466	$7,985	$9,299
2028	$134	39	8	$41,864	$29,849	$36,112
2029	$134	39	1	$5,233	$3,487	$4,383
2030	$134	39	0	$0	$0	$0
2031	$134	39	1	$5,233	$3,046	$4,131
2032	$134	39	0	$0	$0	$0
2033	$134	39	0	$0	$0	$0
2034	$134	39	0	$0	$0	$0
2035	$134	39	0	$0	$0	$0
2036	$134	39	0	$0	$0	$0
-	-	-	20	$104,661	$78,540	$92,237

Issue 27: Category 1 Operations—Groundwater Use Conflicts Due to Building Foundation Dewatering

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	29	8	$31,130	$25,411	$28,488
2027	$134	29	2	$7,782	$5,937	$6,915
2028	$134	29	8	$31,130	$22,195	$26,853
2029	$134	29	1	$3,891	$2,593	$3,259
2030	$134	29	0	$0	$0	$0
2031	$134	29	1	$3,891	$2,265	$3,072
2032	$134	29	0	$0	$0	$0
2033	$134	29	0	$0	$0	$0
2034	$134	29	0	$0	$0	$0
2035	$134	29	0	$0	$0	$0
2036	$134	29	0	$0	$0	$0
-	-	-	20	$77,825	$58,401	$68,586

Issue 28: Category 1 Operations—Groundwater Use Conflicts Due to Groundwater Withdrawals for Plant Uses

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	57	8	$61,186	$49,946	$55,994
2027	$134	57	2	$15,297	$11,670	$13,591
2028	$134	57	8	$61,186	$43,625	$52,780
2029	$134	57	1	$7,648	$5,096	$6,405
2030	$134	57	0	$0	$0	$0
2031	$134	57	1	$7,648	$4,451	$6,038
2032	$134	57	0	$0	$0	$0
2033	$134	57	0	$0	$0	$0
2034	$134	57	0	$0	$0	$0
2035	$134	57	0	$0	$0	$0
2036	$134	57	0	$0	$0	$0
-	-	-	20	$152,966	$114,789	$134,808

Issue 29: Category 1 Operations—Surface Water Quality Degradation Due to Physical Effects from Operation of Intake and Discharge Structures

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	117	8	$125,593	$102,521	$114,935
2027	$134	117	2	$31,398	$23,954	$27,897
2028	$134	117	8	$125,593	$89,546	$108,337
2029	$134	117	1	$15,699	$10,461	$13,148
2030	$134	117	0	$0	$0	$0
2031	$134	117	1	$15,699	$9,137	$12,393
2032	$134	117	0	$0	$0	$0
2033	$134	117	0	$0	$0	$0
2034	$134	117	0	$0	$0	$0
2035	$134	117	0	$0	$0	$0
2036	$134	117	0	$0	$0	$0
-	-	-	20	$313,982	$235,619	$276,710

Issue 30: Category 1 Operations—Surface Water Quality Degradation Due to Changes in Salinity Gradients Resulting from Withdrawals

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	194	8	$208,248	$169,992	$190,576
2027	$134	194	2	$52,062	$39,718	$46,256
2028	$134	194	8	$208,248	$148,478	$179,636
2029	$134	194	1	$26,031	$17,346	$21,801
2030	$134	194	0	$0	$0	$0
2031	$134	194	1	$26,031	$15,150	$20,549
2032	$134	194	0	$0	$0	$0
2033	$134	194	0	$0	$0	$0

2034	$134	194	0	$0	$0	$0
2035	$134	194	0	$0	$0	$0
2036	$134	194	0	$0	$0	$0
-	-	-	20	$520,620	$390,684	$458,819

Issue 31: Category 1 Operations—Groundwater Quality Degradation Due to Plant Discharges

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	57	8	$61,186	$49,946	$55,994
2027	$134	57	2	$15,297	$11,670	$13,591
2028	$134	57	8	$61,186	$43,625	$52,780
2029	$134	57	1	$7,648	$5,096	$6,405
2030	$134	57	0	$0	$0	$0
2031	$134	57	1	$7,648	$4,451	$6,038
2032	$134	57	0	$0	$0	$0
2033	$134	57	0	$0	$0	$0
2034	$134	57	0	$0	$0	$0
2035	$134	57	0	$0	$0	$0
2036	$134	57	0	$0	$0	$0
-	-	-	20	$152,966	$114,789	$134,808

Issue 32: Category 1 Operations—Water Quality Degradation Due to Inadvertent Spills and Leaks During Operation

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	16	8	$17,175	$14,020	$15,718
2027	$134	16	2	$4,294	$3,276	$3,815
2028	$134	16	8	$17,175	$12,246	$14,815
2029	$134	16	1	$2,147	$1,431	$1,798
2030	$134	16	0	$0	$0	$0
2031	$134	16	1	$2,147	$1,250	$1,695
2032	$134	16	0	$0	$0	$0
2033	$134	16	0	$0	$0	$0
2034	$134	16	0	$0	$0	$0
2035	$134	16	0	$0	$0	$0
2036	$134	16	0	$0	$0	$0
-	-	-	20	$42,938	$32,221	$37,841

Issue 33: Category 1 Operations—Water Quality Degradation Due to Groundwater Withdrawals

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	43	8	$46,158	$37,679	$42,241
2027	$134	43	2	$11,540	$8,803	$10,253
2028	$134	43	8	$46,158	$32,910	$39,816

2029	$134	43	1	$5,770	$3,845	$4,832
2030	$134	43	0	$0	$0	$0
2031	$134	43	1	$5,770	$3,358	$4,555
2032	$134	43	0	$0	$0	$0
2033	$134	43	0	$0	$0	$0
2034	$134	43	0	$0	$0	$0
2035	$134	43	0	$0	$0	$0
2036	$134	43	0	$0	$0	$0
-	-	-	20	$115,395	$86,595	$101,697

Issue 34: Category 1 Operations—Water Use Conflict from Plant Municipal Water Demand

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	16	8	$17,175	$14,020	$15,718
2027	$134	16	2	$4,294	$3,276	$3,815
2028	$134	16	8	$17,175	$12,246	$14,815
2029	$134	16	1	$2,147	$1,431	$1,798
2030	$134	16	0	$0	$0	$0
2031	$134	16	1	$2,147	$1,250	$1,695
2032	$134	16	0	$0	$0	$0
2033	$134	16	0	$0	$0	$0
2034	$134	16	0	$0	$0	$0
2035	$134	16	0	$0	$0	$0
2036	$134	16	0	$0	$0	$0
-	-	-	20	$42,938	$32,221	$37,841

Issue 35: Category 1 Operations—Degradation of Water Quality from Plant Effluent Discharges to Municipal Systems

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	16	8	$17,175	$14,020	$15,718
2027	$134	16	2	$4,294	$3,276	$3,815
2028	$134	16	8	$17,175	$12,246	$14,815
2029	$134	16	1	$2,147	$1,431	$1,798
2030	$134	16	0	$0	$0	$0
2031	$134	16	1	$2,147	$1,250	$1,695
2032	$134	16	0	$0	$0	$0
2033	$134	16	0	$0	$0	$0
2034	$134	16	0	$0	$0	$0
2035	$134	16	0	$0	$0	$0
2036	$134	16	0	$0	$0	$0
-	-	-	20	$42,938	$32,221	$37,841

Issue 36: Category 1 Construction—Permanent and Temporary Loss, Conversion, Fragmentation, and Degradation of Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present	3% NPV

					Value (NPV)	
2026	$134	168	8	$180,338	$147,210	$165,035
2027	$134	168	2	$45,085	$34,395	$40,057
2028	$134	168	8	$180,338	$128,579	$155,561
2029	$134	168	1	$22,542	$15,021	$18,879
2030	$134	168	0	$0	$0	$0
2031	$134	168	1	$22,542	$13,120	$17,795
2032	$134	168	0	$0	$0	$0
2033	$134	168	0	$0	$0	$0
2034	$134	168	0	$0	$0	$0
2035	$134	168	0	$0	$0	$0
2036	$134	168	0	$0	$0	$0
-	-	-	20	$450,846	$338,324	$397,328

Issue 37: Category 1 Construction—Permanent and Temporary Loss and Degradation of Wetlands

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	168	8	$180,338	$147,210	$165,035
2027	$134	168	2	$45,085	$34,395	$40,057
2028	$134	168	8	$180,338	$128,579	$155,561
2029	$134	168	1	$22,542	$15,021	$18,879
2030	$134	168	0	$0	$0	$0
2031	$134	168	1	$22,542	$13,120	$17,795
2032	$134	168	0	$0	$0	$0
2033	$134	168	0	$0	$0	$0
2034	$134	168	0	$0	$0	$0
2035	$134	168	0	$0	$0	$0
2036	$134	168	0	$0	$0	$0
-	-	-	20	$450,846	$338,324	$397,328

Issue 38: Category 1 Construction—Effects of Building Noise on Wildlife

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	60	8	$64,407	$52,575	$58,941
2027	$134	60	2	$16,102	$12,284	$14,306
2028	$134	60	8	$64,407	$45,921	$55,558
2029	$134	60	1	$8,051	$5,365	$6,742
2030	$134	60	0	$0	$0	$0
2031	$134	60	1	$8,051	$4,686	$6,355
2032	$134	60	0	$0	$0	$0
2033	$134	60	0	$0	$0	$0
2034	$134	60	0	$0	$0	$0
2035	$134	60	0	$0	$0	$0
2036	$134	60	0	$0	$0	$0

-	-	-	20	$161,016	$120,830	$141,903

Issue 39: Category 1 Construction—Effects of Vehicular Collisions on Wildlife

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	50	8	$53,672	$43,812	$49,118
2027	$134	50	2	$13,418	$10,237	$11,922
2028	$134	50	8	$53,672	$38,267	$46,298
2029	$134	50	1	$6,709	$4,471	$5,619
2030	$134	50	0	$0	$0	$0
2031	$134	50	1	$6,709	$3,905	$5,296
2032	$134	50	0	$0	$0	$0
2033	$134	50	0	$0	$0	$0
2034	$134	50	0	$0	$0	$0
2035	$134	50	0	$0	$0	$0
2036	$134	50	0	$0	$0	$0
-	-	-	20	$134,180	$100,692	$118,252

Issue 40: Category 1 Construction—Bird Collisions and Injury from Structures and Transmission Lines

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	60	8	$64,407	$52,575	$58,941
2027	$134	60	2	$16,102	$12,284	$14,306
2028	$134	60	8	$64,407	$45,921	$55,558
2029	$134	60	1	$8,051	$5,365	$6,742
2030	$134	60	0	$0	$0	$0
2031	$134	60	1	$8,051	$4,686	$6,355
2032	$134	60	0	$0	$0	$0
2033	$134	60	0	$0	$0	$0
2034	$134	60	0	$0	$0	$0
2035	$134	60	0	$0	$0	$0
2036	$134	60	0	$0	$0	$0
-	-	-	20	$161,016	$120,830	$141,903

Issue 41: Category 1 Construction—Important Species and Habitats—Other Important Species and Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	84	8	$90,169	$73,605	$82,518
2027	$134	84	2	$22,542	$17,197	$20,029
2028	$134	84	8	$90,169	$64,289	$77,781
2029	$134	84	1	$11,271	$7,510	$9,439
2030	$134	84	0	$0	$0	$0
2031	$134	84	1	$11,271	$6,560	$8,898

2032	$134	84	0	$0	$0	$0
2033	$134	84	0	$0	$0	$0
2034	$134	84	0	$0	$0	$0
2035	$134	84	0	$0	$0	$0
2036	$134	84	0	$0	$0	$0
-	-	-	20	$225,423	$169,162	$198,664

Issue 42: Category 1 Operations—Permanent and Temporary Loss or Disturbance of Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	19	8	$20,395	$16,649	$18,665
2027	$134	19	2	$5,099	$3,890	$4,530
2028	$134	19	8	$20,395	$14,542	$17,593
2029	$134	19	1	$2,549	$1,699	$2,135
2030	$134	19	0	$0	$0	$0
2031	$134	19	1	$2,549	$1,484	$2,013
2032	$134	19	0	$0	$0	$0
2033	$134	19	0	$0	$0	$0
2034	$134	19	0	$0	$0	$0
2035	$134	19	0	$0	$0	$0
2036	$134	19	0	$0	$0	$0
-	-	-	20	$50,989	$38,263	$44,936

Issue 43: Category 1 Operations—Effects of Operational Noise on Wildlife

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	11	8	$11,808	$9,639	$10,806
2027	$134	11	2	$2,952	$2,252	$2,623
2028	$134	11	8	$11,808	$8,419	$10,186
2029	$134	11	1	$1,476	$984	$1,236
2030	$134	11	0	$0	$0	$0
2031	$134	11	1	$1,476	$859	$1,165
2032	$134	11	0	$0	$0	$0
2033	$134	11	0	$0	$0	$0
2034	$134	11	0	$0	$0	$0
2035	$134	11	0	$0	$0	$0
2036	$134	11	0	$0	$0	$0
-	-	-	20	$29,520	$22,152	$26,016

Issue 44: Category 1 Operations—Effects of Vehicular Collisions on Wildlife

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	9	8	$9,661	$7,886	$8,841
2027	$134	9	2	$2,415	$1,843	$2,146
2028	$134	9	8	$9,661	$6,888	$8,334

2029	$134	9	1	$1,208	$805	$1,011
2030	$134	9	0	$0	$0	$0
2031	$134	9	1	$1,208	$703	$953
2032	$134	9	0	$0	$0	$0
2033	$134	9	0	$0	$0	$0
2034	$134	9	0	$0	$0	$0
2035	$134	9	0	$0	$0	$0
2036	$134	9	0	$0	$0	$0
-	-	-	20	$24,152	$18,125	$21,285

Issue 45: Category 1 Construction—Exposure of Terrestrial Organisms to Radionuclides

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	38	8	$40,791	$33,297	$37,329
2027	$134	38	2	$10,198	$7,780	$9,061
2028	$134	38	8	$40,791	$29,083	$35,187
2029	$134	38	1	$5,099	$3,398	$4,270
2030	$134	38	0	$0	$0	$0
2031	$134	38	1	$5,099	$2,968	$4,025
2032	$134	38	0	$0	$0	$0
2033	$134	38	0	$0	$0	$0
2034	$134	38	0	$0	$0	$0
2035	$134	38	0	$0	$0	$0
2036	$134	38	0	$0	$0	$0
-	-	-	20	$101,977	$76,526	$89,872

Issue 46: Category 1 Operations—Cooling Tower Operational Impacts on Vegetation

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	37	8	$39,717	$32,421	$36,347
2027	$134	37	2	$9,929	$7,575	$8,822
2028	$134	37	8	$39,717	$28,318	$34,261
2029	$134	37	1	$4,965	$3,308	$4,158
2030	$134	37	0	$0	$0	$0
2031	$134	37	1	$4,965	$2,889	$3,919
2032	$134	37	0	$0	$0	$0
2033	$134	37	0	$0	$0	$0
2034	$134	37	0	$0	$0	$0
2035	$134	37	0	$0	$0	$0
2036	$134	37	0	$0	$0	$0
-	-	-	20	$99,293	$74,512	$87,507

Issue 47: Category 1 Operations—Bird Collisions and Injury from Structures and Transmission Lines

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present	3% NPV

					Value (NPV)	
2026	$134	19	8	$20,395	$16,649	$18,665
2027	$134	19	2	$5,099	$3,890	$4,530
2028	$134	19	8	$20,395	$14,542	$17,593
2029	$134	19	1	$2,549	$1,699	$2,135
2030	$134	19	0	$0	$0	$0
2031	$134	19	1	$2,549	$1,484	$2,013
2032	$134	19	0	$0	$0	$0
2033	$134	19	0	$0	$0	$0
2034	$134	19	0	$0	$0	$0
2035	$134	19	0	$0	$0	$0
2036	$134	19	0	$0	$0	$0
-	-	-	20	$50,989	$38,263	$44,936

Issue 48: Category 1 Operations—Bird Electrocutions from Transmission Lines

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	19	8	$20,395	$16,649	$18,665
2027	$134	19	2	$5,099	$3,890	$4,530
2028	$134	19	8	$20,395	$14,542	$17,593
2029	$134	19	1	$2,549	$1,699	$2,135
2030	$134	19	0	$0	$0	$0
2031	$134	19	1	$2,549	$1,484	$2,013
2032	$134	19	0	$0	$0	$0
2033	$134	19	0	$0	$0	$0
2034	$134	19	0	$0	$0	$0
2035	$134	19	0	$0	$0	$0
2036	$134	19	0	$0	$0	$0
-	-	-	20	$50,989	$38,263	$44,936

Issue 49: Category 1 Operations—Water Use Conflicts with Terrestrial Resources

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	83	8	$89,096	$72,729	$81,535
2027	$134	83	2	$22,274	$16,993	$19,790
2028	$134	83	8	$89,096	$63,524	$76,855
2029	$134	83	1	$11,137	$7,421	$9,327
2030	$134	83	0	$0	$0	$0
2031	$134	83	1	$11,137	$6,482	$8,792
2032	$134	83	0	$0	$0	$0
2033	$134	83	0	$0	$0	$0
2034	$134	83	0	$0	$0	$0
2035	$134	83	0	$0	$0	$0
2036	$134	83	0	$0	$0	$0
-	-	-	20	$222,739	$167,148	$196,299

Issue 50: Category 1 Operations—Effects of Transmission Line ROW Management on Terrestrial Resources

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	23	8	$24,689	$20,154	$22,594
2027	$134	23	2	$6,172	$4,709	$5,484
2028	$134	23	8	$24,689	$17,603	$21,297
2029	$134	23	1	$3,086	$2,056	$2,585
2030	$134	23	0	$0	$0	$0
2031	$134	23	1	$3,086	$1,796	$2,436
2032	$134	23	0	$0	$0	$0
2033	$134	23	0	$0	$0	$0
2034	$134	23	0	$0	$0	$0
2035	$134	23	0	$0	$0	$0
2036	$134	23	0	$0	$0	$0
-	-	-	20	$61,723	$46,318	$54,396

Issue 51: Category 1 Operations—Effects of Electromagnetic Fields on Flora and Fauna

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	4	8	$4,294	$3,505	$3,929
2027	$134	4	2	$1,073	$819	$954
2028	$134	4	8	$4,294	$3,061	$3,704
2029	$134	4	1	$537	$358	$449
2030	$134	4	0	$0	$0	$0
2031	$134	4	1	$537	$312	$424
2032	$134	4	0	$0	$0	$0
2033	$134	4	0	$0	$0	$0
2034	$134	4	0	$0	$0	$0
2035	$134	4	0	$0	$0	$0
2036	$134	4	0	$0	$0	$0
-	-	-	20	$10,734	$8,055	$9,460

Issue 52: Category 1 Operations—Important Species and Habitats—Other Important Species and Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	37	8	$39,717	$32,421	$36,347
2027	$134	37	2	$9,929	$7,575	$8,822
2028	$134	37	8	$39,717	$28,318	$34,261
2029	$134	37	1	$4,965	$3,308	$4,158
2030	$134	37	0	$0	$0	$0
2031	$134	37	1	$4,965	$2,889	$3,919
2032	$134	37	0	$0	$0	$0

2033	$134	37	0	$0	$0	$0
2034	$134	37	0	$0	$0	$0
2035	$134	37	0	$0	$0	$0
2036	$134	37	0	$0	$0	$0
-	-	-	20	$99,293	$74,512	$87,507

Issue 53: Category 1 Construction—Runoff and Sedimentation from Construction Areas

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	128	8	$137,401	$112,160	$125,741
2027	$134	128	2	$34,350	$26,206	$30,520
2028	$134	128	8	$137,401	$97,965	$118,523
2029	$134	128	1	$17,175	$11,444	$14,384
2030	$134	128	0	$0	$0	$0
2031	$134	128	1	$17,175	$9,996	$13,558
2032	$134	128	0	$0	$0	$0
2033	$134	128	0	$0	$0	$0
2034	$134	128	0	$0	$0	$0
2035	$134	128	0	$0	$0	$0
2036	$134	128	0	$0	$0	$0
-	-	-	20	$343,502	$257,771	$302,726

Issue 54: Category 1 Construction—Dredging and Filling Aquatic Habitats to Build Intake and Discharge Structures

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	128	8	$137,401	$112,160	$125,741
2027	$134	128	2	$34,350	$26,206	$30,520
2028	$134	128	8	$137,401	$97,965	$118,523
2029	$134	128	1	$17,175	$11,444	$14,384
2030	$134	128	0	$0	$0	$0
2031	$134	128	1	$17,175	$9,996	$13,558
2032	$134	128	0	$0	$0	$0
2033	$134	128	0	$0	$0	$0
2034	$134	128	0	$0	$0	$0
2035	$134	128	0	$0	$0	$0
2036	$134	128	0	$0	$0	$0
-	-	-	20	$343,502	$257,771	$302,726

Issue 55: Category 1 Construction—Building Transmission Lines, Pipelines, and Access Roads Across Surface Waterbodies

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	128	8	$137,401	$112,160	$125,741
2027	$134	128	2	$34,350	$26,206	$30,520

2028	$134	128	8	$137,401	$97,965	$118,523
2029	$134	128	1	$17,175	$11,444	$14,384
2030	$134	128	0	$0	$0	$0
2031	$134	128	1	$17,175	$9,996	$13,558
2032	$134	128	0	$0	$0	$0
2033	$134	128	0	$0	$0	$0
2034	$134	128	0	$0	$0	$0
2035	$134	128	0	$0	$0	$0
2036	$134	128	0	$0	$0	$0
-	-	-	20	$343,502	$257,771	$302,726

Issue 56: Category 1 Operations—Important Species and Habitats—Other Important Species and Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	128	8	$137,401	$112,160	$125,741
2027	$134	128	2	$34,350	$26,206	$30,520
2028	$134	128	8	$137,401	$97,965	$118,523
2029	$134	128	1	$17,175	$11,444	$14,384
2030	$134	128	0	$0	$0	$0
2031	$134	128	1	$17,175	$9,996	$13,558
2032	$134	128	0	$0	$0	$0
2033	$134	128	0	$0	$0	$0
2034	$134	128	0	$0	$0	$0
2035	$134	128	0	$0	$0	$0
2036	$134	128	0	$0	$0	$0
-	-	-	20	$343,502	$257,771	$302,726

Issue 57: Category 1 Operations—Stormwater Runoff

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	20	8	$21,469	$17,525	$19,647
2027	$134	20	2	$5,367	$4,095	$4,769
2028	$134	20	8	$21,469	$15,307	$18,519
2029	$134	20	1	$2,684	$1,788	$2,247
2030	$134	20	0	$0	$0	$0
2031	$134	20	1	$2,684	$1,562	$2,118
2032	$134	20	0	$0	$0	$0
2033	$134	20	0	$0	$0	$0
2034	$134	20	0	$0	$0	$0
2035	$134	20	0	$0	$0	$0
2036	$134	20	0	$0	$0	$0
-	-	-	20	$53,672	$40,277	$47,301

Issue 58: Category 1 Operations—Exposure of Aquatic Organisms to Radionuclides

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present	3% NPV

					Value (NPV)	
2026	$134	38	8	$40,791	$33,297	$37,329
2027	$134	38	2	$10,198	$7,780	$9,061
2028	$134	38	8	$40,791	$29,083	$35,187
2029	$134	38	1	$5,099	$3,398	$4,270
2030	$134	38	0	$0	$0	$0
2031	$134	38	1	$5,099	$2,968	$4,025
2032	$134	38	0	$0	$0	$0
2033	$134	38	0	$0	$0	$0
2034	$134	38	0	$0	$0	$0
2035	$134	38	0	$0	$0	$0
2036	$134	38	0	$0	$0	$0
-	-	-	20	$101,977	$76,526	$89,872

Issue 59: Category 1 Operations—Effects of Refurbishment on Aquatic Biota

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	20	8	$21,469	$17,525	$19,647
2027	$134	20	2	$5,367	$4,095	$4,769
2028	$134	20	8	$21,469	$15,307	$18,519
2029	$134	20	1	$2,684	$1,788	$2,247
2030	$134	20	0	$0	$0	$0
2031	$134	20	1	$2,684	$1,562	$2,118
2032	$134	20	0	$0	$0	$0
2033	$134	20	0	$0	$0	$0
2034	$134	20	0	$0	$0	$0
2035	$134	20	0	$0	$0	$0
2036	$134	20	0	$0	$0	$0
-	-	-	20	$53,672	$40,277	$47,301

Issue 60: Category 1 Operations—Effects of Maintenance Dredging on Aquatic Biota

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	97	8	$104,124	$84,996	$95,288
2027	$134	97	2	$26,031	$19,859	$23,128
2028	$134	97	8	$104,124	$74,239	$89,818
2029	$134	97	1	$13,015	$8,673	$10,900
2030	$134	97	0	$0	$0	$0
2031	$134	97	1	$13,015	$7,575	$10,275
2032	$134	97	0	$0	$0	$0
2033	$134	97	0	$0	$0	$0
2034	$134	97	0	$0	$0	$0
2035	$134	97	0	$0	$0	$0
2036	$134	97	0	$0	$0	$0
-	-	-	20	$260,310	$195,342	$229,409

Issue 61:	**Category 1 Operations—Impacts of Transmission Line Right-of-Way Management on Aquatic Resources**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)**	**3% NPV**
2026	$134	48	8	$51,525	$42,060	$47,153
2027	$134	48	2	$12,881	$9,827	$11,445
2028	$134	48	8	$51,525	$36,737	$44,446
2029	$134	48	1	$6,441	$4,292	$5,394
2030	$134	48	0	$0	$0	$0
2031	$134	48	1	$6,441	$3,749	$5,084
2032	$134	48	0	$0	$0	$0
2033	$134	48	0	$0	$0	$0
2034	$134	48	0	$0	$0	$0
2035	$134	48	0	$0	$0	$0
2036	$134	48	0	$0	$0	$0
-	-	-	20	$128,813	$96,664	$113,522

Issue 62:	**Category 1 Operations—Impingement and Entrainment of Aquatic Organisms**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)**	**3% NPV**
2026	$134	145	8	$155,649	$127,056	$142,441
2027	$134	145	2	$38,912	$29,686	$34,573
2028	$134	145	8	$155,649	$110,976	$134,264
2029	$134	145	1	$19,456	$12,964	$16,294
2030	$134	145	0	$0	$0	$0
2031	$134	145	1	$19,456	$11,324	$15,359
2032	$134	145	0	$0	$0	$0
2033	$134	145	0	$0	$0	$0
2034	$134	145	0	$0	$0	$0
2035	$134	145	0	$0	$0	$0
2036	$134	145	0	$0	$0	$0
-	-	-	20	$389,123	$292,006	$342,932

Issue 63:	**Category 1 Operations—Water Use Conflicts with Aquatic Resources**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)**	**3% NPV**
2026	$134	48	8	$51,525	$42,060	$47,153
2027	$134	48	2	$12,881	$9,827	$11,445
2028	$134	48	8	$51,525	$36,737	$44,446
2029	$134	48	1	$6,441	$4,292	$5,394
2030	$134	48	0	$0	$0	$0
2031	$134	48	1	$6,441	$3,749	$5,084
2032	$134	48	0	$0	$0	$0
2033	$134	48	0	$0	$0	$0

2034	$134	48	0	$0	$0	$0
2035	$134	48	0	$0	$0	$0
2036	$134	48	0	$0	$0	$0
-	-	-	20	$128,813	$96,664	$113,522

Issue 64: Category 1 Operations—Important Species and Habitats—Other Important Species and Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	145	8	$155,649	$127,056	$142,441
2027	$134	145	2	$38,912	$29,686	$34,573
2028	$134	145	8	$155,649	$110,976	$134,264
2029	$134	145	1	$19,456	$12,964	$16,294
2030	$134	145	0	$0	$0	$0
2031	$134	145	1	$19,456	$11,324	$15,359
2032	$134	145	0	$0	$0	$0
2033	$134	145	0	$0	$0	$0
2034	$134	145	0	$0	$0	$0
2035	$134	145	0	$0	$0	$0
2036	$134	145	0	$0	$0	$0
-	-	-	20	$389,123	$292,006	$342,932

Issue 65: Category 1 Construction——Radiological Dose to Construction Workers

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	117	8	$125,593	$102,521	$114,935
2027	$134	117	2	$31,398	$23,954	$27,897
2028	$134	117	8	$125,593	$89,546	$108,337
2029	$134	117	1	$15,699	$10,461	$13,148
2030	$134	117	0	$0	$0	$0
2031	$134	117	1	$15,699	$9,137	$12,393
2032	$134	117	0	$0	$0	$0
2033	$134	117	0	$0	$0	$0
2034	$134	117	0	$0	$0	$0
2035	$134	117	0	$0	$0	$0
2036	$134	117	0	$0	$0	$0
-	-	-	20	$313,982	$235,619	$276,710

Issue 66: Category 1 Operations—Occupational Doses to Workers

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	38	8	$40,791	$33,297	$37,329
2027	$134	38	2	$10,198	$7,780	$9,061
2028	$134	38	8	$40,791	$29,083	$35,187
2029	$134	38	1	$5,099	$3,398	$4,270

2030	$134	38	0	$0	$0	$0
2031	$134	38	1	$5,099	$2,968	$4,025
2032	$134	38	0	$0	$0	$0
2033	$134	38	0	$0	$0	$0
2034	$134	38	0	$0	$0	$0
2035	$134	38	0	$0	$0	$0
2036	$134	38	0	$0	$0	$0
-	-	-	20	$101,977	$76,526	$89,872

Issue 67: Category 1 Operations—Maximally Exposed Individual Annual Doses

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	38	8	$40,791	$33,297	$37,329
2027	$134	38	2	$10,198	$7,780	$9,061
2028	$134	38	8	$40,791	$29,083	$35,187
2029	$134	38	1	$5,099	$3,398	$4,270
2030	$134	38	0	$0	$0	$0
2031	$134	38	1	$5,099	$2,968	$4,025
2032	$134	38	0	$0	$0	$0
2033	$134	38	0	$0	$0	$0
2034	$134	38	0	$0	$0	$0
2035	$134	38	0	$0	$0	$0
2036	$134	38	0	$0	$0	$0
-	-	-	20	$101,977	$76,526	$89,872

Issue 68: Category 1 Operations——Total Population Annual Doses

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	42	8	$45,085	$36,802	$41,259
2027	$134	42	2	$11,271	$8,599	$10,014
2028	$134	42	8	$45,085	$32,145	$38,890
2029	$134	42	1	$5,636	$3,755	$4,720
2030	$134	42	0	$0	$0	$0
2031	$134	42	1	$5,636	$3,280	$4,449
2032	$134	42	0	$0	$0	$0
2033	$134	42	0	$0	$0	$0
2034	$134	42	0	$0	$0	$0
2035	$134	42	0	$0	$0	$0
2036	$134	42	0	$0	$0	$0
-	-	-	20	$112,712	$84,581	$99,332

Issue 69: Category 1 Operations—Nonhuman Biota Doses

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	42	8	$45,085	$36,802	$41,259

2027	$134	42	2	$11,271	$8,599	$10,014
2028	$134	42	8	$45,085	$32,145	$38,890
2029	$134	42	1	$5,636	$3,755	$4,720
2030	$134	42	0	$0	$0	$0
2031	$134	42	1	$5,636	$3,280	$4,449
2032	$134	42	0	$0	$0	$0
2033	$134	42	0	$0	$0	$0
2034	$134	42	0	$0	$0	$0
2035	$134	42	0	$0	$0	$0
2036	$134	42	0	$0	$0	$0
-	-	-	20	$112,712	$84,581	$99,332

Issue 70: Category 1 Construction—Building Impacts of Chemical, Biological, and Physical Nonradiological Hazards

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	52	8	$55,819	$45,565	$51,082
2027	$134	52	2	$13,955	$10,646	$12,399
2028	$134	52	8	$55,819	$39,798	$48,150
2029	$134	52	1	$6,977	$4,649	$5,843
2030	$134	52	0	$0	$0	$0
2031	$134	52	1	$6,977	$4,061	$5,508
2032	$134	52	0	$0	$0	$0
2033	$134	52	0	$0	$0	$0
2034	$134	52	0	$0	$0	$0
2035	$134	52	0	$0	$0	$0
2036	$134	52	0	$0	$0	$0
-	-	-	20	$139,548	$104,719	$122,982

Issue 71: Category 1 Operations—Operation Impacts of Chemical, Biological, and Physical Nonradiological Hazards

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	35	8	$37,571	$30,669	$34,382
2027	$134	35	2	$9,393	$7,166	$8,345
2028	$134	35	8	$37,571	$26,787	$32,409
2029	$134	35	1	$4,696	$3,129	$3,933
2030	$134	35	0	$0	$0	$0
2031	$134	35	1	$4,696	$2,733	$3,707
2032	$134	35	0	$0	$0	$0
2033	$134	35	0	$0	$0	$0
2034	$134	35	0	$0	$0	$0
2035	$134	35	0	$0	$0	$0
2036	$134	35	0	$0	$0	$0
-	-	-	20	$93,926	$70,484	$82,777

Issue 72: Category 1 Construction—Construction-Related Noise

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	23	8	$24,689	$20,154	$22,594
2027	$134	23	2	$6,172	$4,709	$5,484
2028	$134	23	8	$24,689	$17,603	$21,297
2029	$134	23	1	$3,086	$2,056	$2,585
2030	$134	23	0	$0	$0	$0
2031	$134	23	1	$3,086	$1,796	$2,436
2032	$134	23	0	$0	$0	$0
2033	$134	23	0	$0	$0	$0
2034	$134	23	0	$0	$0	$0
2035	$134	23	0	$0	$0	$0
2036	$134	23	0	$0	$0	$0
-	-	-	20	$61,723	$46,318	$54,396

Issue 73: Category 1 Operations—Operation-Related Noise

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	14	8	$15,028	$12,267	$13,753
2027	$134	14	2	$3,757	$2,866	$3,338
2028	$134	14	8	$15,028	$10,715	$12,963
2029	$134	14	1	$1,879	$1,252	$1,573
2030	$134	14	0	$0	$0	$0
2031	$134	14	1	$1,879	$1,093	$1,483
2032	$134	14	0	$0	$0	$0
2033	$134	14	0	$0	$0	$0
2034	$134	14	0	$0	$0	$0
2035	$134	14	0	$0	$0	$0
2036	$134	14	0	$0	$0	$0
-	-	-	20	$37,571	$28,194	$33,111

Issue 74: Category 1 Operations—Low-Level Radioactive Waste

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	232	8	$249,039	$203,290	$227,906
2027	$134	232	2	$62,260	$47,498	$55,317
2028	$134	232	8	$249,039	$177,561	$214,823
2029	$134	232	1	$31,130	$20,743	$26,071
2030	$134	232	0	$0	$0	$0
2031	$134	232	1	$31,130	$18,118	$24,574
2032	$134	232	0	$0	$0	$0
2033	$134	232	0	$0	$0	$0
2034	$134	232	0	$0	$0	$0
2035	$134	232	0	$0	$0	$0

2036	$134	232	0	$0	$0	$0
-	-	-	20	$622,597	$467,210	$548,691

Issue 75: Category 1 Operations—Onsite Spent Nuclear Fuel Management

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	232	8	$249,039	$203,290	$227,906
2027	$134	232	2	$62,260	$47,498	$55,317
2028	$134	232	8	$249,039	$177,561	$214,823
2029	$134	232	1	$31,130	$20,743	$26,071
2030	$134	232	0	$0	$0	$0
2031	$134	232	1	$31,130	$18,118	$24,574
2032	$134	232	0	$0	$0	$0
2033	$134	232	0	$0	$0	$0
2034	$134	232	0	$0	$0	$0
2035	$134	232	0	$0	$0	$0
2036	$134	232	0	$0	$0	$0
-	-	-	20	$622,597	$467,210	$548,691

Issue 76: Category 1 Operations—Mixed Waste

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$134	232	8	$249,039	$203,290	$227,906
2027	$134	232	2	$62,260	$47,498	$55,317
2028	$134	232	8	$249,039	$177,561	$214,823
2029	$134	232	1	$31,130	$20,743	$26,071
2030	$134	232	0	$0	$0	$0
2031	$134	232	1	$31,130	$18,118	$24,574
2032	$134	232	0	$0	$0	$0
2033	$134	232	0	$0	$0	$0
2034	$134	232	0	$0	$0	$0
2035	$134	232	0	$0	$0	$0
2036	$134	232	0	$0	$0	$0
-	-	-	20	$622,597	$467,210	$548,691

Issue 77: Category 1 Construction—Construction Nonradiological Waste

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	38	8	$40,791	$33,297	$37,329
2027	$134	38	2	$10,198	$7,780	$9,061
2028	$134	38	8	$40,791	$29,083	$35,187

2029	$134	38	1	$5,099	$3,398	$4,270
2030	$134	38	0	$0	$0	$0
2031	$134	38	1	$5,099	$2,968	$4,025
2032	$134	38	0	$0	$0	$0
2033	$134	38	0	$0	$0	$0
2034	$134	38	0	$0	$0	$0
2035	$134	38	0	$0	$0	$0
2036	$134	38	0	$0	$0	$0
-	-	-	20	$101,977	$76,526	$89,872

Issue 78: Category 1 Operations—Operation Nonradiological Waste

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	25	8	$26,836	$21,906	$24,559
2027	$134	25	2	$6,709	$5,118	$5,961
2028	$134	25	8	$26,836	$19,134	$23,149
2029	$134	25	1	$3,355	$2,235	$2,809
2030	$134	25	0	$0	$0	$0
2031	$134	25	1	$3,355	$1,952	$2,648
2032	$134	25	0	$0	$0	$0
2033	$134	25	0	$0	$0	$0
2034	$134	25	0	$0	$0	$0
2035	$134	25	0	$0	$0	$0
2036	$134	25	0	$0	$0	$0
-	-	-	20	$67,090	$50,346	$59,126

Issue 79: Category 1 Operations—Design Basis Accidents Involving Radiological Releases

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	172	8	$184,632	$150,715	$168,965
2027	$134	172	2	$46,158	$35,214	$41,011
2028	$134	172	8	$184,632	$131,640	$159,265
2029	$134	172	1	$23,079	$15,379	$19,328
2030	$134	172	0	$0	$0	$0
2031	$134	172	1	$23,079	$13,432	$18,219
2032	$134	172	0	$0	$0	$0
2033	$134	172	0	$0	$0	$0
2034	$134	172	0	$0	$0	$0
2035	$134	172	0	$0	$0	$0

2036	$134	172	0	$0	$0	$0
-	-	-	20	$461,580	$346,380	$406,788

Issue 80: Category 1 Operations—Accidents Involving Releases of Hazardous Chemicals

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	103	8	$110,565	$90,254	$101,182
2027	$134	103	2	$27,641	$21,087	$24,559
2028	$134	103	8	$110,565	$78,831	$95,374
2029	$134	103	1	$13,821	$9,209	$11,575
2030	$134	103	0	$0	$0	$0
2031	$134	103	1	$13,821	$8,044	$10,910
2032	$134	103	0	$0	$0	$0
2033	$134	103	0	$0	$0	$0
2034	$134	103	0	$0	$0	$0
2035	$134	103	0	$0	$0	$0
2036	$134	103	0	$0	$0	$0
-	-	-	20	$276,412	$207,425	$243,600

Issue 81: Category 1 Operations—Severe Accident Mitigation Design Alternatives

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	69	8	$74,068	$60,461	$67,782
2027	$134	69	2	$18,517	$14,126	$16,452
2028	$134	69	8	$74,068	$52,809	$63,891
2029	$134	69	1	$9,258	$6,169	$7,754
2030	$134	69	0	$0	$0	$0
2031	$134	69	1	$9,258	$5,388	$7,309
2032	$134	69	0	$0	$0	$0
2033	$134	69	0	$0	$0	$0
2034	$134	69	0	$0	$0	$0
2035	$134	69	0	$0	$0	$0
2036	$134	69	0	$0	$0	$0
-	-	-	20	$185,169	$138,955	$163,188

Issue 82:	**Category 1 Operations—Acts of Terrorism**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)7% Net Present Value (NPV)**	**3% NPV**
2026	$134	69	8	$74,068	$60,461	$67,782
2027	$134	69	2	$18,517	$14,126	$16,452
2028	$134	69	8	$74,068	$52,809	$63,891
2029	$134	69	1	$9,258	$6,169	$7,754
2030	$134	69	0	$0	$0	$0
2031	$134	69	1	$9,258	$5,388	$7,309
2032	$134	69	0	$0	$0	$0
2033	$134	69	0	$0	$0	$0
2034	$134	69	0	$0	$0	$0
2035	$134	69	0	$0	$0	$0
2036	$134	69	0	$0	$0	$0
-	-	-	20	$185,169	$138,955	$163,188

Issue 83:	**Category 1 Construction—Community Services and Infrastructure**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)7% Net Present Value (NPV)**	**3% NPV**
2026	$134	74	8	$79,435	$64,842	$72,694
2027	$134	74	2	$19,859	$15,150	$17,644
2028	$134	74	8	$79,435	$56,636	$68,521
2029	$134	74	1	$9,929	$6,616	$8,316
2030	$134	74	0	$0	$0	$0
2031	$134	74	1	$9,929	$5,779	$7,838
2032	$134	74	0	$0	$0	$0
2033	$134	74	0	$0	$0	$0
2034	$134	74	0	$0	$0	$0
2035	$134	74	0	$0	$0	$0
2036	$134	74	0	$0	$0	$0
-	-	-	20	$198,587	$149,024	$175,013

Issue 84:	**Category 1 Construction—Transportation Systems and Traffic**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)7% Net Present**	**3% NPV**

					Value (NPV)	
2026	$134	147	8	$157,796	$128,809	$144,406
2027	$134	147	2	$39,449	$30,095	$35,050
2028	$134	147	8	$157,796	$112,506	$136,116
2029	$134	147	1	$19,725	$13,143	$16,519
2030	$134	147	0	$0	$0	$0
2031	$134	147	1	$19,725	$11,480	$15,571
2032	$134	147	0	$0	$0	$0
2033	$134	147	0	$0	$0	$0
2034	$134	147	0	$0	$0	$0
2035	$134	147	0	$0	$0	$0
2036	$134	147	0	$0	$0	$0
-	-	-	20	$394,490	$296,034	$347,662

Issue 85: Category 1 Construction——Economic Impacts

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	74	8	$79,435	$64,842	$72,694
2027	$134	74	2	$19,859	$15,150	$17,644
2028	$134	74	8	$79,435	$56,636	$68,521
2029	$134	74	1	$9,929	$6,616	$8,316
2030	$134	74	0	$0	$0	$0
2031	$134	74	1	$9,929	$5,779	$7,838
2032	$134	74	0	$0	$0	$0
2033	$134	74	0	$0	$0	$0
2034	$134	74	0	$0	$0	$0
2035	$134	74	0	$0	$0	$0
2036	$134	74	0	$0	$0	$0
-	-	-	20	$198,587	$149,024	$175,013

Issue 86: Category 1 Construction——Tax Revenue Impacts

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	42	8	$45,085	$36,802	$41,259
2027	$134	42	2	$11,271	$8,599	$10,014
2028	$134	42	8	$45,085	$32,145	$38,890
2029	$134	42	1	$5,636	$3,755	$4,720
2030	$134	42	0	$0	$0	$0

2031	$134	42	1	$5,636	$3,280	$4,449
2032	$134	42	0	$0	$0	$0
2033	$134	42	0	$0	$0	$0
2034	$134	42	0	$0	$0	$0
2035	$134	42	0	$0	$0	$0
2036	$134	42	0	$0	$0	$0
-	-	-	20	$112,712	$84,581	$99,332

Issue 87: Category 1 Operations——Community Services and Infrastructure

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	50	8	$53,672	$43,812	$49,118
2027	$134	50	2	$13,418	$10,237	$11,922
2028	$134	50	8	$53,672	$38,267	$46,298
2029	$134	50	1	$6,709	$4,471	$5,619
2030	$134	50	0	$0	$0	$0
2031	$134	50	1	$6,709	$3,905	$5,296
2032	$134	50	0	$0	$0	$0
2033	$134	50	0	$0	$0	$0
2034	$134	50	0	$0	$0	$0
2035	$134	50	0	$0	$0	$0
2036	$134	50	0	$0	$0	$0
-	-	-	20	$134,180	$100,692	$118,252

Issue 88: Category 1 Operations——Transportation Systems and Traffic

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	25	8	$26,836	$21,906	$24,559
2027	$134	25	2	$6,709	$5,118	$5,961
2028	$134	25	8	$26,836	$19,134	$23,149
2029	$134	25	1	$3,355	$2,235	$2,809
2030	$134	25	0	$0	$0	$0
2031	$134	25	1	$3,355	$1,952	$2,648
2032	$134	25	0	$0	$0	$0
2033	$134	25	0	$0	$0	$0
2034	$134	25	0	$0	$0	$0
2035	$134	25	0	$0	$0	$0
2036	$134	25	0	$0	$0	$0
-	-	-	20	$67,090	$50,346	$59,126

Issue 89: Category 1 Operations——Economic Impacts

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	50	8	$53,672	$43,812	$49,118
2027	$134	50	2	$13,418	$10,237	$11,922
2028	$134	50	8	$53,672	$38,267	$46,298
2029	$134	50	1	$6,709	$4,471	$5,619
2030	$134	50	0	$0	$0	$0
2031	$134	50	1	$6,709	$3,905	$5,296
2032	$134	50	0	$0	$0	$0
2033	$134	50	0	$0	$0	$0
2034	$134	50	0	$0	$0	$0
2035	$134	50	0	$0	$0	$0
2036	$134	50	0	$0	$0	$0
-	-	-	20	$134,180	$100,692	$118,252

Issue 90: Category 1 Operations——Tax Revenue Impacts

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	98	8	$105,197	$85,872	$96,271
2027	$134	98	2	$26,299	$20,064	$23,367
2028	$134	98	8	$105,197	$75,004	$90,744
2029	$134	98	1	$13,150	$8,762	$11,013
2030	$134	98	0	$0	$0	$0
2031	$134	98	1	$13,150	$7,653	$10,380
2032	$134	98	0	$0	$0	$0
2033	$134	98	0	$0	$0	$0
2034	$134	98	0	$0	$0	$0
2035	$134	98	0	$0	$0	$0
2036	$134	98	0	$0	$0	$0
-	-	-	20	$262,994	$197,356	$231,774

Issue 91: Category 1 Operations——Uranium Recovery

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present	3% NPV

					Value (NPV)	
2026	$134	39	8	$41,864	$34,174	$38,312
2027	$134	39	2	$10,466	$7,985	$9,299
2028	$134	39	8	$41,864	$29,849	$36,112
2029	$134	39	1	$5,233	$3,487	$4,383
2030	$134	39	0	$0	$0	$0
2031	$134	39	1	$5,233	$3,046	$4,131
2032	$134	39	0	$0	$0	$0
2033	$134	39	0	$0	$0	$0
2034	$134	39	0	$0	$0	$0
2035	$134	39	0	$0	$0	$0
2036	$134	39	0	$0	$0	$0
-	-	-	20	$104,661	$78,540	$92,237

Issue 92: Category 1 Operations——Uranium Conversion

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	39	8	$41,864	$34,174	$38,312
2027	$134	39	2	$10,466	$7,985	$9,299
2028	$134	39	8	$41,864	$29,849	$36,112
2029	$134	39	1	$5,233	$3,487	$4,383
2030	$134	39	0	$0	$0	$0
2031	$134	39	1	$5,233	$3,046	$4,131
2032	$134	39	0	$0	$0	$0
2033	$134	39	0	$0	$0	$0
2034	$134	39	0	$0	$0	$0
2035	$134	39	0	$0	$0	$0
2036	$134	39	0	$0	$0	$0
-	-	-	20	$104,661	$78,540	$92,237

Issue 93: Category 1 Operations——Enrichment

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	39	8	$41,864	$34,174	$38,312
2027	$134	39	2	$10,466	$7,985	$9,299
2028	$134	39	8	$41,864	$29,849	$36,112
2029	$134	39	1	$5,233	$3,487	$4,383
2030	$134	39	0	$0	$0	$0

2031	$134	39	1	$5,233	$3,046	$4,131
2032	$134	39	0	$0	$0	$0
2033	$134	39	0	$0	$0	$0
2034	$134	39	0	$0	$0	$0
2035	$134	39	0	$0	$0	$0
2036	$134	39	0	$0	$0	$0
-	-	-	20	$104,661	$78,540	$92,237

Issue 94: Category 1 Operations——Fuel Fabrication

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	39	8	$41,864	$34,174	$38,312
2027	$134	39	2	$10,466	$7,985	$9,299
2028	$134	39	8	$41,864	$29,849	$36,112
2029	$134	39	1	$5,233	$3,487	$4,383
2030	$134	39	0	$0	$0	$0
2031	$134	39	1	$5,233	$3,046	$4,131
2032	$134	39	0	$0	$0	$0
2033	$134	39	0	$0	$0	$0
2034	$134	39	0	$0	$0	$0
2035	$134	39	0	$0	$0	$0
2036	$134	39	0	$0	$0	$0
-	-	-	20	$104,661	$78,540	$92,237

Issue 95: Category 1 Operations——Reprocessing

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	39	8	$41,864	$34,174	$38,312
2027	$134	39	2	$10,466	$7,985	$9,299
2028	$134	39	8	$41,864	$29,849	$36,112
2029	$134	39	1	$5,233	$3,487	$4,383
2030	$134	39	0	$0	$0	$0
2031	$134	39	1	$5,233	$3,046	$4,131
2032	$134	39	0	$0	$0	$0
2033	$134	39	0	$0	$0	$0
2034	$134	39	0	$0	$0	$0
2035	$134	39	0	$0	$0	$0
2036	$134	39	0	$0	$0	$0
-	-	-	20	$104,661	$78,540	$92,237

Issue 96:	**Category 1 Operations——Storage and Disposal of Radiological Wastes**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)7% Net Present Value (NPV)**	**3% NPV**
2026	$134	39	8	$41,864	$34,174	$38,312
2027	$134	39	2	$10,466	$7,985	$9,299
2028	$134	39	8	$41,864	$29,849	$36,112
2029	$134	39	1	$5,233	$3,487	$4,383
2030	$134	39	0	$0	$0	$0
2031	$134	39	1	$5,233	$3,046	$4,131
2032	$134	39	0	$0	$0	$0
2033	$134	39	0	$0	$0	$0
2034	$134	39	0	$0	$0	$0
2035	$134	39	0	$0	$0	$0
2036	$134	39	0	$0	$0	$0
-	-	-	20	$104,661	$78,540	$92,237

Issue 97:	**Category 1 Operations——Transportation of Unirradiated Fuel**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)7% Net Present Value (NPV)**	**3% NPV**
2026	$134	78	8	$83,729	$68,347	$76,623
2027	$134	78	2	$20,932	$15,969	$18,598
2028	$134	78	8	$83,729	$59,697	$72,225
2029	$134	78	1	$10,466	$6,974	$8,765
2030	$134	78	0	$0	$0	$0
2031	$134	78	1	$10,466	$6,091	$8,262
2032	$134	78	0	$0	$0	$0
2033	$134	78	0	$0	$0	$0
2034	$134	78	0	$0	$0	$0
2035	$134	78	0	$0	$0	$0
2036	$134	78	0	$0	$0	$0
-	-	-	20	$209,321	$157,079	$184,474

Issue 98:	**Category 1 Operations——Transportation of Radioactive Waste**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)7% Net Present**	**3% NPV**

					Value (NPV)	
2026	$134	78	8	$83,729	$68,347	$76,623
2027	$134	78	2	$20,932	$15,969	$18,598
2028	$134	78	8	$83,729	$59,697	$72,225
2029	$134	78	1	$10,466	$6,974	$8,765
2030	$134	78	0	$0	$0	$0
2031	$134	78	1	$10,466	$6,091	$8,262
2032	$134	78	0	$0	$0	$0
2033	$134	78	0	$0	$0	$0
2034	$134	78	0	$0	$0	$0
2035	$134	78	0	$0	$0	$0
2036	$134	78	0	$0	$0	$0
-	-	-	20	$209,321	$157,079	$184,474

Issue 99: Category 1 Operations——Transportation of Irradiated Fuel

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	155	8	$166,384	$135,819	$152,265
2027	$134	155	2	$41,596	$31,733	$36,957
2028	$134	155	8	$166,384	$118,629	$143,524
2029	$134	155	1	$20,798	$13,859	$17,418
2030	$134	155	0	$0	$0	$0
2031	$134	155	1	$20,798	$12,105	$16,418
2032	$134	155	0	$0	$0	$0
2033	$134	155	0	$0	$0	$0
2034	$134	155	0	$0	$0	$0
2035	$134	155	0	$0	$0	$0
2036	$134	155	0	$0	$0	$0
-	-	-	20	$415,959	$312,144	$366,582

Issue 100: Decommissioning

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)7% Net Present Value (NPV)	3% NPV
2026	$134	81	8	$86,949	$70,976	$79,571
2027	$134	81	2	$21,737	$16,583	$19,313
2028	$134	81	8	$86,949	$61,993	$75,003
2029	$134	81	1	$10,869	$7,242	$9,102
2030	$134	81	0	$0	$0	$0

2031	$134	81	1	$10,869	$6,326	$8,580
2032	$134	81	0	$0	$0	$0
2033	$134	81	0	$0	$0	$0
2034	$134	81	0	$0	$0	$0
2035	$134	81	0	$0	$0	$0
2036	$134	81	0	$0	$0	$0
-	-	-	20	$217,372	$163,121	$191,569

Table A.2 presents savings realized by NRC for each Category 1 issue covered by the proposed rule. NRC operations under the proposed rule would be somewhat lagged compared to industry to account for the period industry would need to generate and submit each application. Therefore, the NRC assumes that half of the needed environmental review would occur during the same year that industry submits an application, and the other half of the review could be completed in the year following application submittal by industry. The effect of this assumption is that while during the proposed rule analysis period (2026–2036) industry is assumed to submit 20 new nuclear reactor applications, during that same period NRC would be assumed to complete 20 application reviews.

The results presented in Table A.2 reflect the following input variables (Section 3.3.4 provides more detailed discussion):

- Labor rate: The NRC labor rate was assumed to be the weighted average between the NRC labor rate of $152/hour and the NRC contractor labor rate of $225/hour, since every new nuclear reactor application review involves the collective effort of NRC staff and NRC contractor staff. This weighed average equates to $195/hour.
- Hours per application: For each Category 1 issue, the NRC estimated the hours saved by utilizing the generic impact analysis findings in the NR GEIS. These impacts are a one-time realization of review effort savings per application realized when the application review is completed by NRC staff and NRC contractor staff and the licensing decision is rendered by the Commission.
- Applications per year: As discussed above and in Section 3.3.4, this represents the NRC's assumed number of new nuclear reactor applications utilizing the provisions of the proposed rule.

The values reported in Table A.2 roll up to the totals presented in Table 3.3.

Table A.2 Summary of Proposed Rule Savings Benefits to the NRC by Category 1 Issue (2021 Constant Dollars)

Issue 1:	**Category 1 Construction—Onsite Land Use**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)**	**3% NPV**
2026	$195	82	0	$0	$0	$0
2027	$195	82	8	$127,920	$97,590	$113,655
2028	$195	82	2	$31,980	$22,801	$27,586
2029	$195	82	8	$127,920	$85,238	$107,131
2030	$195	82	1	$15,990	$9,958	$13,001
2031	$195	82	0	$0	$0	$0

2032	$195	82	1	$15,990	$8,698	$12,255
2033	$195	82	0	$0	$0	$0
2034	$195	82	0	$0	$0	$0
2035	$195	82	0	$0	$0	$0
2036	$195	82	0	$0	$0	$0
-	-	-	**20**	**$319,800**	**$224,285**	**$273,629**

Issue 2: Category 1 Construction—Offsite Land Use

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	135	0	$0	$0	$0
2027	$195	135	8	$210,600	$160,666	$187,115
2028	$195	135	2	$52,650	$37,539	$45,416
2029	$195	135	8	$210,600	$140,332	$176,374
2030	$195	135	1	$26,325	$16,394	$21,405
2031	$195	135	0	$0	$0	$0
2032	$195	135	1	$26,325	$14,319	$20,176
2033	$195	135	0	$0	$0	$0
2034	$195	135	0	$0	$0	$0
2035	$195	135	0	$0	$0	$0
2036	$195	135	0	$0	$0	$0
-	-	-	**20**	**$526,500**	**$369,249**	**$450,486**

Issue 3: Category 1 Construction—Impacts on Prime and Unique Farmland

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	23	0	$0	$0	$0
2027	$195	23	8	$35,880	$27,373	$31,879
2028	$195	23	2	$8,970	$6,395	$7,738
2029	$195	23	8	$35,880	$23,908	$30,049
2030	$195	23	1	$4,485	$2,793	$3,647
2031	$195	23	0	$0	$0	$0
2032	$195	23	1	$4,485	$2,440	$3,437
2033	$195	23	0	$0	$0	$0
2034	$195	23	0	$0	$0	$0
2035	$195	23	0	$0	$0	$0
2036	$195	23	0	$0	$0	$0
-	-	-	**20**	**$89,700**	**$62,909**	**$76,750**

Issue 4: Category 1 Construction—Coastal Zone and Compliance with The Coastal Zone Management Act

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	9	0	$0	$0	$0
2027	$195	9	8	$14,040	$10,711	$12,474
2028	$195	9	2	$3,510	$2,503	$3,028
2029	$195	9	8	$14,040	$9,355	$11,758

2030	$195	9	1	$1,755	$1,093	$1,427
2031	$195	9	0	$0	$0	$0
2032	$195	9	1	$1,755	$955	$1,345
2033	$195	9	0	$0	$0	$0
2034	$195	9	0	$0	$0	$0
2035	$195	9	0	$0	$0	$0
2036	$195	9	0	$0	$0	$0
-	-	-	**20**	**$35,100**	**$24,617**	**$30,032**

Issue 5: Category 1 Operations—Onsite Land Use

Year	Labor Rate	Hours per Application	NRC Reviews per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	24	0	$0	$0	$0
2027	$195	24	8	$37,440	$28,563	$33,265
2028	$195	24	2	$9,360	$6,674	$8,074
2029	$195	24	8	$37,440	$24,948	$31,355
2030	$195	24	1	$4,680	$2,914	$3,805
2031	$195	24	0	$0	$0	$0
2032	$195	24	1	$4,680	$2,546	$3,587
2033	$195	24	0	$0	$0	$0
2034	$195	24	0	$0	$0	$0
2035	$195	24	0	$0	$0	$0
2036	$195	24	0	$0	$0	$0
-	-	-	**20**	**$93,600**	**$65,644**	**$80,086**

Issue 6: Category 1 Operations— Offsite Land Use

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	28	0	$0	$0	$0
2027	$195	28	8	$43,680	$33,323	$38,809
2028	$195	28	2	$10,920	$7,786	$9,420
2029	$195	28	8	$43,680	$29,106	$36,581
2030	$195	28	1	$5,460	$3,400	$4,439
2031	$195	28	0	$0	$0	$0
2032	$195	28	1	$5,460	$2,970	$4,185
2033	$195	28	0	$0	$0	$0
2034	$195	28	0	$0	$0	$0
2035	$195	28	0	$0	$0	$0
2036	$195	28	0	$0	$0	$0
-	-	-	**20**	**$109,200**	**$76,585**	**$93,434**

Issue 7: Category 1 Construction—Visual Impacts in Site and Vicinity

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	27	0	$0	$0	$0
2027	$195	27	8	$42,120	$32,133	$37,423
2028	$195	27	2	$10,530	$7,508	$9,083

2029	$195	27	8	$42,120	$28,066	$35,275
2030	$195	27	1	$5,265	$3,279	$4,281
2031	$195	27	0	$0	$0	$0
2032	$195	27	1	$5,265	$2,864	$4,035
2033	$195	27	0	$0	$0	$0
2034	$195	27	0	$0	$0	$0
2035	$195	27	0	$0	$0	$0
2036	$195	27	0	$0	$0	$0
-	-	-	**20**	**$105,300**	**$73,850**	**$90,097**

Issue 8: Category 1 Construction—Visual Impacts from Transmission Lines

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)—	3% NPV
2026	$195	9	0	$0	$0	$0
2027	$195	9	8	$14,040	$10,711	$12,474
2028	$195	9	2	$3,510	$2,503	$3,028
2029	$195	9	8	$14,040	$9,355	$11,758
2030	$195	9	1	$1,755	$1,093	$1,427
2031	$195	9	0	$0	$0	$0
2032	$195	9	1	$1,755	$955	$1,345
2033	$195	9	0	$0	$0	$0
2034	$195	9	0	$0	$0	$0
2035	$195	9	0	$0	$0	$0
2036	$195	9	0	$0	$0	$0
-	-	-	**20**	**$35,100**	**$24,617**	**$30,032**

Issue 9: Category 1 Operations—Visual Impacts During Operations

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	20	0	$0	$0	$0
2027	$195	20	8	$31,200	$23,802	$27,721
2028	$195	20	2	$7,800	$5,561	$6,728
2029	$195	20	8	$31,200	$20,790	$26,130
2030	$195	20	1	$3,900	$2,429	$3,171
2031	$195	20	0	$0	$0	$0
2032	$195	20	1	$3,900	$2,121	$2,989
2033	$195	20	0	$0	$0	$0
2034	$195	20	0	$0	$0	$0
2035	$195	20	0	$0	$0	$0
2036	$195	20	0	$0	$0	$0
-	-	-	**20**	**$78,000**	**$54,704**	**$66,739**

Issue 10:	**Category 1 Construction—Emissions of Criteria Pollutants and Dust During Construction**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)**	**3% NPV**
2026	$195	154	0	$0	$0	$0
2027	$195	154	8	$240,240	$183,278	$213,450
2028	$195	154	2	$60,060	$42,822	$51,808
2029	$195	154	8	$240,240	$160,082	$201,197
2030	$195	154	1	$30,030	$18,701	$24,417
2031	$195	154	0	$0	$0	$0
2032	$195	154	1	$30,030	$16,334	$23,015
2033	$195	154	0	$0	$0	$0
2034	$195	154	0	$0	$0	$0
2035	$195	154	0	$0	$0	$0
2036	$195	154	0	$0	$0	$0
-	-	-	**20**	**$600,600**	**$421,217**	**$513,888**

Issue 11:	**Category 1 Construction—Greenhouse Gas Emissions During Construction**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)**	**3% NPV**
2026	$195	134	0	$0	$0	$0
2027	$195	134	8	$209,040	$159,476	$185,729
2028	$195	134	2	$52,260	$37,261	$45,080
2029	$195	134	8	$209,040	$139,292	$175,068
2030	$195	134	1	$26,130	$16,272	$21,246
2031	$195	134	0	$0	$0	$0
2032	$195	134	1	$26,130	$14,213	$20,026
2033	$195	134	0	$0	$0	$0
2034	$195	134	0	$0	$0	$0
2035	$195	134	0	$0	$0	$0
2036	$195	134	0	$0	$0	$0
-	-	-	**20**	**$522,600**	**$366,514**	**$447,150**

Issue 12:	**Category 1 Operations—Emissions of Criteria and Hazardous Air Pollutants During Operation**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)**	**3% NPV**
2026	$195	163	0	$0	$0	$0
2027	$195	163	8	$254,280	$193,989	$225,924
2028	$195	163	2	$63,570	$45,325	$54,836
2029	$195	163	8	$254,280	$169,438	$212,955
2030	$195	163	1	$31,785	$19,794	$25,844
2031	$195	163	0	$0	$0	$0
2032	$195	163	1	$31,785	$17,289	$24,361
2033	$195	163	0	$0	$0	$0
2034	$195	163	0	$0	$0	$0

2035	$195	163	0	$0	$0	$0
2036	$195	163	0	$0	$0	$0
-	-	-	**20**	**$635,700**	**$445,834**	**$543,921**

Issue 13: Category 1 Operations—Greenhouse Gas Emissions During Operation

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	88	0	$0	$0	$0
2027	$195	88	8	$137,280	$104,730	$121,972
2028	$195	88	2	$34,320	$24,470	$29,605
2029	$195	88	8	$137,280	$91,475	$114,970
2030	$195	88	1	$17,160	$10,686	$13,953
2031	$195	88	0	$0	$0	$0
2032	$195	88	1	$17,160	$9,334	$13,152
2033	$195	88	0	$0	$0	$0
2034	$195	88	0	$0	$0	$0
2035	$195	88	0	$0	$0	$0
2036	$195	88	0	$0	$0	$0
-	-	-	**20**	**$343,200**	**$240,696**	**$293,650**

Issue 14: Category 1 Operations—Cooling System Emissions

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	18	0	$0	$0	$0
2027	$195	18	8	$28,080	$21,422	$24,949
2028	$195	18	2	$7,020	$5,005	$6,056
2029	$195	18	8	$28,080	$18,711	$23,517
2030	$195	18	1	$3,510	$2,186	$2,854
2031	$195	18	0	$0	$0	$0
2032	$195	18	1	$3,510	$1,909	$2,690
2033	$195	18	0	$0	$0	$0
2034	$195	18	0	$0	$0	$0
2035	$195	18	0	$0	$0	$0
2036	$195	18	0	$0	$0	$0
-	-	-	**20**	**$70,200**	**$49,233**	**$60,065**

Issue 15: Category 1 Operations—Emissions of Ozone and Nitrogen Oxides During Transmission Line Operation

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV Net Present Value (NPV)	3% NPV
2026	$195	15	0	$0	$0	$0
2027	$195	15	8	$23,400	$17,852	$20,791
2028	$195	15	2	$5,850	$4,171	$5,046
2029	$195	15	8	$23,400	$15,592	$19,597
2030	$195	15	1	$2,925	$1,822	$2,378
2031	$195	15	0	$0	$0	$0
2032	$195	15	1	$2,925	$1,591	$2,242

2033	$195	15	0	$0	$0	$0
2034	$195	15	0	$0	$0	$0
2035	$195	15	0	$0	$0	$0
2036	$195	15	0	$0	$0	$0
-	**-**	**-**	**20**	**$58,500**	**$41,028**	**$50,054**

Issue 16: Category 1 Construction—Surface Water Use Conflicts During Construction

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	60	0	$0	$0	$0
2027	$195	60	8	$93,600	$71,407	$83,162
2028	$195	60	2	$23,400	$16,684	$20,185
2029	$195	60	8	$93,600	$62,370	$78,389
2030	$195	60	1	$11,700	$7,286	$9,513
2031	$195	60	0	$0	$0	$0
2032	$195	60	1	$11,700	$6,364	$8,967
2033	$195	60	0	$0	$0	$0
2034	$195	60	0	$0	$0	$0
2035	$195	60	0	$0	$0	$0
2036	$195	60	0	$0	$0	$0
-	**-**	**-**	**20**	**$234,000**	**$164,111**	**$200,216**

Issue 17: Category 1 Construction—Groundwater Use Conflicts Due to Excavation Dewatering

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	123	0	$0	$0	$0
2027	$195	123	8	$191,880	$146,384	$170,483
2028	$195	123	2	$47,970	$34,202	$41,379
2029	$195	123	8	$191,880	$127,858	$160,696
2030	$195	123	1	$23,985	$14,937	$19,502
2031	$195	123	0	$0	$0	$0
2032	$195	123	1	$23,985	$13,046	$18,383
2033	$195	123	0	$0	$0	$0
2034	$195	123	0	$0	$0	$0
2035	$195	123	0	$0	$0	$0
2036	$195	123	0	$0	$0	$0
-	**-**	**-**	**20**	**$479,700**	**$336,427**	**$410,443**

Issue 18: Category 1 Construction—Groundwater Use Conflicts Due to Construction-Related Groundwater Withdrawals

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	115	0	$0	$0	$0
2027	$195	115	8	$179,400	$136,863	$159,395
2028	$195	115	2	$44,850	$31,977	$38,688
2029	$195	115	8	$179,400	$119,542	$150,245

2030	$195	115	1	$22,425	$13,965	$18,234
2031	$195	115	0	$0	$0	$0
2032	$195	115	1	$22,425	$12,198	$17,187
2033	$195	115	0	$0	$0	$0
2034	$195	115	0	$0	$0	$0
2035	$195	115	0	$0	$0	$0
2036	$195	115	0	$0	$0	$0
-	-	-	**20**	**$448,500**	**$314,546**	**$383,748**

Issue 19: Category 1 Construction—Water Quality Degradation Due to Construction-Related Discharges

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	62	0	$0	$0	$0
2027	$195	62	8	$96,720	$73,787	$85,934
2028	$195	62	2	$24,180	$17,240	$20,858
2029	$195	62	8	$96,720	$64,449	$81,001
2030	$195	62	1	$12,090	$7,529	$9,830
2031	$195	62	0	$0	$0	$0
2032	$195	62	1	$12,090	$6,576	$9,266
2033	$195	62	0	$0	$0	$0
2034	$195	62	0	$0	$0	$0
2035	$195	62	0	$0	$0	$0
2036	$195	62	0	$0	$0	$0
-	-	-	**20**	**$241,800**	**$169,581**	**$206,890**

Issue 20: Category 1 Construction—Water Quality Degradation Due to Inadvertent Spills During Construction

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	24	0	$0	$0	$0
2027	$195	24	8	$37,440	$28,563	$33,265
2028	$195	24	2	$9,360	$6,674	$8,074
2029	$195	24	8	$37,440	$24,948	$31,355
2030	$195	24	1	$4,680	$2,914	$3,805
2031	$195	24	0	$0	$0	$0
2032	$195	24	1	$4,680	$2,546	$3,587
2033	$195	24	0	$0	$0	$0
2034	$195	24	0	$0	$0	$0
2035	$195	24	0	$0	$0	$0
2036	$195	24	0	$0	$0	$0
-	-	-	**20**	**$93,600**	**$65,644**	**$80,086**

Issue 21: Category 1 Construction—Water Quality Degradation Due to Groundwater Withdrawal

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV

2026	$195	73	0	$0	$0	$0
2027	$195	73	8	$113,880	$86,879	$101,181
2028	$195	73	2	$28,470	$20,299	$24,558
2029	$195	73	8	$113,880	$75,883	$95,373
2030	$195	73	1	$14,235	$8,865	$11,574
2031	$195	73	0	$0	$0	$0
2032	$195	73	1	$14,235	$7,743	$10,910
2033	$195	73	0	$0	$0	$0
2034	$195	73	0	$0	$0	$0
2035	$195	73	0	$0	$0	$0
2036	$195	73	0	$0	$0	$0
-	**-**	**-**	**20**	**$284,700**	**$199,668**	**$243,596**

Issue 22: Category 1 Construction—Water Quality Degradation Due to Offshore or In-Water Construction Activities

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	56	0	$0	$0	$0
2027	$195	56	8	$87,360	$66,647	$77,618
2028	$195	56	2	$21,840	$15,572	$18,839
2029	$195	56	8	$87,360	$58,212	$73,163
2030	$195	56	1	$10,920	$6,800	$8,879
2031	$195	56	0	$0	$0	$0
2032	$195	56	1	$10,920	$5,940	$8,369
2033	$195	56	0	$0	$0	$0
2034	$195	56	0	$0	$0	$0
2035	$195	56	0	$0	$0	$0
2036	$195	56	0	$0	$0	$0
-	**-**	**-**	**20**	**$218,400**	**$153,170**	**$186,868**

Issue 23: Category 1 Construction—Water Use Conflict Due to Plant Municipal Water Demand

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	49	0	$0	$0	$0
2027	$195	49	8	$76,440	$58,316	$67,916
2028	$195	49	2	$19,110	$13,625	$16,484
2029	$195	49	8	$76,440	$50,935	$64,017
2030	$195	49	1	$9,555	$5,950	$7,769
2031	$195	49	0	$0	$0	$0
2032	$195	49	1	$9,555	$5,197	$7,323
2033	$195	49	0	$0	$0	$0
2034	$195	49	0	$0	$0	$0
2035	$195	49	0	$0	$0	$0
2036	$195	49	0	$0	$0	$0
-	**-**	**-**	**20**	**$191,100**	**$134,024**	**$163,510**

Issue 24: Category 1 Construction—Degradation of Water Quality from Plant Effluent Discharges to Municipal Systems

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	97	0	$0	$0	$0
2027	$195	97	8	$151,320	$115,441	$134,446
2028	$195	97	2	$37,830	$26,972	$32,632
2029	$195	97	8	$151,320	$100,831	$126,728
2030	$195	97	1	$18,915	$11,779	$15,380
2031	$195	97	0	$0	$0	$0
2032	$195	97	1	$18,915	$10,289	$14,497
2033	$195	97	0	$0	$0	$0
2034	$195	97	0	$0	$0	$0
2035	$195	97	0	$0	$0	$0
2036	$195	97	0	$0	$0	$0
-	-	-	**20**	**$378,300**	**$265,312**	**$323,683**

Issue 25: Category 1 Operations—Surface Water Use Conflicts During Operation Due to Water Withdrawal from Flowing Waterbodies

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	152	0	$0	$0	$0
2027	$195	152	8	$237,120	$180,898	$210,678
2028	$195	152	2	$59,280	$42,266	$51,135
2029	$195	152	8	$237,120	$158,003	$198,584
2030	$195	152	1	$29,640	$18,458	$24,100
2031	$195	152	0	$0	$0	$0
2032	$195	152	1	$29,640	$16,122	$22,717
2033	$195	152	0	$0	$0	$0
2034	$195	152	0	$0	$0	$0
2035	$195	152	0	$0	$0	$0
2036	$195	152	0	$0	$0	$0
-	-	-	**20**	**$592,800**	**$415,747**	**$507,214**

Issue 26: Category 1 Operations—Surface Water Use Conflicts During Operation Due to Water Withdrawal from Non-Flowing Waterbodies

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	113	0	$0	$0	$0
2027	$195	113	8	$176,280	$134,483	$156,622
2028	$195	113	2	$44,070	$31,421	$38,015
2029	$195	113	8	$176,280	$117,463	$147,632
2030	$195	113	1	$22,035	$13,722	$17,916
2031	$195	113	0	$0	$0	$0
2032	$195	113	1	$22,035	$11,986	$16,888
2033	$195	113	0	$0	$0	$0
2034	$195	113	0	$0	$0	$0

2035	$195	113	0	$0	$0	$0
2036	$195	113	0	$0	$0	$0
-	**-**	**-**	**20**	**$440,700**	**$309,075**	**$377,074**

Issue 27: Category 1 Operations—Groundwater Use Conflicts Due to Building Foundation Dewatering

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	57	0	$0	$0	$0
2027	$195	57	8	$88,920	$67,837	$79,004
2028	$195	57	2	$22,230	$15,850	$19,176
2029	$195	57	8	$88,920	$59,251	$74,469
2030	$195	57	1	$11,115	$6,922	$9,038
2031	$195	57	0	$0	$0	$0
2032	$195	57	1	$11,115	$6,046	$8,519
2033	$195	57	0	$0	$0	$0
2034	$195	57	0	$0	$0	$0
2035	$195	57	0	$0	$0	$0
2036	$195	57	0	$0	$0	$0
-	**-**	**-**	**20**	**$222,300**	**$155,905**	**$190,205**

Issue 28: Category 1 Operations—Groundwater Use Conflicts Due to Groundwater Withdrawals for Plant Uses

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	124	0	$0	$0	$0
2027	$195	124	8	$193,440	$147,574	$171,869
2028	$195	124	2	$48,360	$34,480	$41,716
2029	$195	124	8	$193,440	$128,897	$162,003
2030	$195	124	1	$24,180	$15,058	$19,661
2031	$195	124	0	$0	$0	$0
2032	$195	124	1	$24,180	$13,152	$18,532
2033	$195	124	0	$0	$0	$0
2034	$195	124	0	$0	$0	$0
2035	$195	124	0	$0	$0	$0
2036	$195	124	0	$0	$0	$0
-	**-**	**-**	**20**	**$483,600**	**$339,162**	**$413,780**

Issue 29: Category 1 Operations—Surface Water Quality Degradation Due to Physical Effects from Operation of Intake and Discharge Structures

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	95	0	$0	$0	$0
2027	$195	95	8	$148,200	$113,061	$131,674
2028	$195	95	2	$37,050	$26,416	$31,960
2029	$195	95	8	$148,200	$98,752	$124,115
2030	$195	95	1	$18,525	$11,536	$15,063

2031	$195	95	0	$0	$0	$0
2032	$195	95	1	$18,525	$10,076	$14,198
2033	$195	95	0	$0	$0	$0
2034	$195	95	0	$0	$0	$0
2035	$195	95	0	$0	$0	$0
2036	$195	95	0	$0	$0	$0
-	-	-	**20**	**$370,500**	**$259,842**	**$317,009**

Issue 30: Category 1 Operations—Surface Water Quality Degradation Due to Changes in Salinity Gradients Resulting from Withdrawals

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	158	0	$0	$0	$0
2027	$195	158	8	$246,480	$188,038	$218,994
2028	$195	158	2	$61,620	$43,934	$53,154
2029	$195	158	8	$246,480	$164,240	$206,423
2030	$195	158	1	$30,810	$19,187	$25,051
2031	$195	158	0	$0	$0	$0
2032	$195	158	1	$30,810	$16,759	$23,613
2033	$195	158	0	$0	$0	$0
2034	$195	158	0	$0	$0	$0
2035	$195	158	0	$0	$0	$0
2036	$195	158	0	$0	$0	$0
-	-	-	**20**	**$616,200**	**$432,158**	**$527,236**

Issue 31: Category 1 Operations—Groundwater Quality Degradation Due to Plant Discharges

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	97	0	$0	$0	$0
2027	$195	97	8	$151,320	$115,441	$134,446
2028	$195	97	2	$37,830	$26,972	$32,632
2029	$195	97	8	$151,320	$100,831	$126,728
2030	$195	97	1	$18,915	$11,779	$15,380
2031	$195	97	0	$0	$0	$0
2032	$195	97	1	$18,915	$10,289	$14,497
2033	$195	97	0	$0	$0	$0
2034	$195	97	0	$0	$0	$0
2035	$195	97	0	$0	$0	$0
2036	$195	97	0	$0	$0	$0
-	-	-	**20**	**$378,300**	**$265,312**	**$323,683**

Issue 32: Category 1 Operations—Water Quality Degradation Due to Inadvertent Spills and Leaks During Operation

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	22	0	$0	$0	$0

2027	$195	22	8	$34,320	$26,183	$30,493
2028	$195	22	2	$8,580	$6,117	$7,401
2029	$195	22	8	$34,320	$22,869	$28,742
2030	$195	22	1	$4,290	$2,672	$3,488
2031	$195	22	0	$0	$0	$0
2032	$195	22	1	$4,290	$2,333	$3,288
2033	$195	22	0	$0	$0	$0
2034	$195	22	0	$0	$0	$0
2035	$195	22	0	$0	$0	$0
2036	$195	22	0	$0	$0	$0
-	**-**	**-**	**20**	**$85,800**	**$60,174**	**$73,413**

Issue 33: Category 1 Operations—Water Quality Degradation Due to Groundwater Withdrawals

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	116	0	$0	$0	$0
2027	$195	116	8	$180,960	$138,054	$160,781
2028	$195	116	2	$45,240	$32,255	$39,024
2029	$195	116	8	$180,960	$120,581	$151,551
2030	$195	116	1	$22,620	$14,087	$18,392
2031	$195	116	0	$0	$0	$0
2032	$195	116	1	$22,620	$12,304	$17,336
2033	$195	116	0	$0	$0	$0
2034	$195	116	0	$0	$0	$0
2035	$195	116	0	$0	$0	$0
2036	$195	116	0	$0	$0	$0
-	**-**	**-**	**20**	**$452,400**	**$317,281**	**$387,085**

Issue 34: Category 1 Operations—Water Use Conflict from Plant Municipal Water Demand

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	26	0	$0	$0	$0
2027	$195	26	8	$40,560	$30,943	$36,037
2028	$195	26	2	$10,140	$7,230	$8,747
2029	$195	26	8	$40,560	$27,027	$33,968
2030	$195	26	1	$5,070	$3,157	$4,122
2031	$195	26	0	$0	$0	$0
2032	$195	26	1	$5,070	$2,758	$3,886
2033	$195	26	0	$0	$0	$0
2034	$195	26	0	$0	$0	$0
2035	$195	26	0	$0	$0	$0
2036	$195	26	0	$0	$0	$0
-	**-**	**-**	**20**	**$101,400**	**$71,115**	**$86,760**

Issue 35: Category 1 Operations—Degradation of Water Quality from Plant Effluent Discharges to Municipal Systems

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	26	0	$0	$0	$0
2027	$195	26	8	$40,560	$30,943	$36,037
2028	$195	26	2	$10,140	$7,230	$8,747
2029	$195	26	8	$40,560	$27,027	$33,968
2030	$195	26	1	$5,070	$3,157	$4,122
2031	$195	26	0	$0	$0	$0
2032	$195	26	1	$5,070	$2,758	$3,886
2033	$195	26	0	$0	$0	$0
2034	$195	26	0	$0	$0	$0
2035	$195	26	0	$0	$0	$0
2036	$195	26	0	$0	$0	$0
-	**-**	**-**	**20**	**$101,400**	**$71,115**	**$86,760**

Issue 36: Category 1 Construction—Permanent and Temporary Loss, Conversion, Fragmentation, and Degradation of Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	133	0	$0	$0	$0
2027	$195	133	8	$207,480	$158,285	$184,343
2028	$195	133	2	$51,870	$36,983	$44,744
2029	$195	133	8	$207,480	$138,253	$173,761
2030	$195	133	1	$25,935	$16,151	$21,088
2031	$195	133	0	$0	$0	$0
2032	$195	133	1	$25,935	$14,107	$19,877
2033	$195	133	0	$0	$0	$0
2034	$195	133	0	$0	$0	$0
2035	$195	133	0	$0	$0	$0
2036	$195	133	0	$0	$0	$0
-	**-**	**-**	**20**	**$518,700**	**$363,779**	**$443,813**

Issue 37: Category 1 Construction—Permanent and Temporary Loss and Degradation of Wetlands

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	133	0	$0	$0	$0
2027	$195	133	8	$207,480	$158,285	$184,343
2028	$195	133	2	$51,870	$36,983	$44,744
2029	$195	133	8	$207,480	$138,253	$173,761
2030	$195	133	1	$25,935	$16,151	$21,088
2031	$195	133	0	$0	$0	$0
2032	$195	133	1	$25,935	$14,107	$19,877
2033	$195	133	0	$0	$0	$0
2034	$195	133	0	$0	$0	$0
2035	$195	133	0	$0	$0	$0
2036	$195	133	0	$0	$0	$0

-	**-**	**-**	**20**	**$518,700**	**$363,779**	**$443,813**

Issue 38: Category 1 Construction—Effects of Building Noise on Wildlife

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	41	0	$0	$0	$0
2027	$195	41	8	$63,960	$48,795	$56,828
2028	$195	41	2	$15,990	$11,401	$13,793
2029	$195	41	8	$63,960	$42,619	$53,565
2030	$195	41	1	$7,995	$4,979	$6,501
2031	$195	41	0	$0	$0	$0
2032	$195	41	1	$7,995	$4,349	$6,128
2033	$195	41	0	$0	$0	$0
2034	$195	41	0	$0	$0	$0
2035	$195	41	0	$0	$0	$0
2036	$195	41	0	$0	$0	$0
-	**-**	**-**	**20**	**$159,900**	**$112,142**	**$136,814**

Issue 39: Category 1 Construction—Effects of Vehicular Collisions on Wildlife

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	36	0	$0	$0	$0
2027	$195	36	8	$56,160	$42,844	$49,897
2028	$195	36	2	$14,040	$10,010	$12,111
2029	$195	36	8	$56,160	$37,422	$47,033
2030	$195	36	1	$7,020	$4,372	$5,708
2031	$195	36	0	$0	$0	$0
2032	$195	36	1	$7,020	$3,818	$5,380
2033	$195	36	0	$0	$0	$0
2034	$195	36	0	$0	$0	$0
2035	$195	36	0	$0	$0	$0
2036	$195	36	0	$0	$0	$0
-	**-**	**-**	**20**	**$140,400**	**$98,466**	**$120,130**

Issue 40: Category 1 Construction—Bird Collisions and Injury from Structures and Transmission Lines

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	40	0	$0	$0	$0
2027	$195	40	8	$62,400	$47,605	$55,442
2028	$195	40	2	$15,600	$11,123	$13,457
2029	$195	40	8	$62,400	$41,580	$52,259
2030	$195	40	1	$7,800	$4,857	$6,342
2031	$195	40	0	$0	$0	$0
2032	$195	40	1	$7,800	$4,243	$5,978
2033	$195	40	0	$0	$0	$0

2034	$195	40	0	$0	$0	$0
2035	$195	40	0	$0	$0	$0
2036	$195	40	0	$0	$0	$0
-	**-**	**-**	**20**	**$156,000**	**$109,407**	**$133,477**

Issue 41: Category 1 Construction - Important Species and Habitats—Other Important Species and Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	70	0	-	-	-
2027	$195	70	8	$109,200	$83,308	$97,023
2028	$195	70	2	$27,300	$19,465	$23,549
2029	$195	70	8	$109,200	$72,765	$91,453
2030	$195	70	1	$13,650	$8,501	$11,099
2031	$195	70	0	$0	$0	$0
2032	$195	70	1	$13,650	$7,425	$10,462
2033	$195	70	0	$0	$0	$0
2034	$195	70	0	$0	$0	$0
2035	$195	70	0	$0	$0	$0
2036	$195	70	0	$0	$0	$0
-	**-**	**-**	**20**	**$273,000**	**$191,462**	**$233,586**

Issue 42: Category 1 Operations—Permanent and Temporary Loss or Disturbance of Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	13	0	-	-	-
2027	$195	13	8	$20,280	$15,472	$18,019
2028	$195	13	2	$5,070	$3,615	$4,373
2029	$195	13	8	$20,280	$13,513	$16,984
2030	$195	13	1	$2,535	$1,579	$2,061
2031	$195	13	0	$0	$0	$0
2032	$195	13	1	$2,535	$1,379	$1,943
2033	$195	13	0	$0	$0	$0
2034	$195	13	0	$0	$0	$0
2035	$195	13	0	$0	$0	$0
2036	$195	13	0	$0	$0	$0
-	**-**	**-**	**20**	**$50,700**	**$35,557**	**$43,380**

Issue 43: Category 1 Operations—Effects of Operational Noise on Wildlife

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	8	0	-	-	-
2027	$195	8	8	$12,480	$9,521	$11,088
2028	$195	8	2	$3,120	$2,225	$2,691
2029	$195	8	8	$12,480	$8,316	$10,452
2030	$195	8	1	$1,560	$971	$1,268

2031	$195	8	0	$0	$0	$0
2032	$195	8	1	$1,560	$849	$1,196
2033	$195	8	0	$0	$0	$0
2034	$195	8	0	$0	$0	$0
2035	$195	8	0	$0	$0	$0
2036	$195	8	0	$0	$0	$0
-	-	-	**20**	**$31,200**	**$21,881**	**$26,695**

Issue 44: Category 1 Operations—Effects of Vehicular Collisions on Wildlife

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	7	0	-	-	-
2027	$195	7	8	$10,920	$8,331	$9,702
2028	$195	7	2	$2,730	$1,946	$2,355
2029	$195	7	8	$10,920	$7,276	$9,145
2030	$195	7	1	$1,365	$850	$1,110
2031	$195	7	0	$0	$0	$0
2032	$195	7	1	$1,365	$742	$1,046
2033	$195	7	0	$0	$0	$0
2034	$195	7	0	$0	$0	$0
2035	$195	7	0	$0	$0	$0
2036	$195	7	0	$0	$0	$0
-	-	-	**20**	**$27,300**	**$19,146**	**$23,359**

Issue 45: Category 1 Construction—Exposure of Terrestrial Organisms to Radionuclides

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	28	0	-	-	-
2027	$195	28	8	$43,680	$33,323	$38,809
2028	$195	28	2	$10,920	$7,786	$9,420
2029	$195	28	8	$43,680	$29,106	$36,581
2030	$195	28	1	$5,460	$3,400	$4,439
2031	$195	28	0	$0	$0	$0
2032	$195	28	1	$5,460	$2,970	$4,185
2033	$195	28	0	$0	$0	$0
2034	$195	28	0	$0	$0	$0
2035	$195	28	0	$0	$0	$0
2036	$195	28	0	$0	$0	$0
-	-	-	**20**	**$109,200**	**$76,585**	**$93,434**

Issue 46: Category 1 Operations—Cooling Tower Operational Impacts on Vegetation

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	30	0	-	-	-
2027	$195	30	8	$46,800	$35,703	$41,581
2028	$195	30	2	$11,700	$8,342	$10,093

2029	$195	30	8	$46,800	$31,185	$39,194
2030	$195	30	1	$5,850	$3,643	$4,757
2031	$195	30	0	$0	$0	$0
2032	$195	30	1	$5,850	$3,182	$4,484
2033	$195	30	0	$0	$0	$0
2034	$195	30	0	$0	$0	$0
2035	$195	30	0	$0	$0	$0
2036	$195	30	0	$0	$0	$0
-	**-**	**-**	**20**	**$117,000**	**$82,055**	**$100,108**

Issue 47: Category 1 Operations—Bird Collisions and Injury from Structures and Transmission Lines

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	13	0	-	-	-
2027	$195	13	8	$20,280	$15,472	$18,019
2028	$195	13	2	$5,070	$3,615	$4,373
2029	$195	13	8	$20,280	$13,513	$16,984
2030	$195	13	1	$2,535	$1,579	$2,061
2031	$195	13	0	$0	$0	$0
2032	$195	13	1	$2,535	$1,379	$1,943
2033	$195	13	0	$0	$0	$0
2034	$195	13	0	$0	$0	$0
2035	$195	13	0	$0	$0	$0
2036	$195	13	0	$0	$0	$0
-	**-**	**-**	**20**	**$50,700**	**$35,557**	**$43,380**

Issue 48: Category 1 Operations—Bird Electrocutions from Transmission Lines

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	13	0	-	-	-
2027	$195	13	8	$20,280	$15,472	$18,019
2028	$195	13	2	$5,070	$3,615	$4,373
2029	$195	13	8	$20,280	$13,513	$16,984
2030	$195	13	1	$2,535	$1,579	$2,061
2031	$195	13	0	$0	$0	$0
2032	$195	13	1	$2,535	$1,379	$1,943
2033	$195	13	0	$0	$0	$0
2034	$195	13	0	$0	$0	$0
2035	$195	13	0	$0	$0	$0
2036	$195	13	0	$0	$0	$0
-	**-**	**-**	**20**	**$50,700**	**$35,557**	**$43,380**

Issue 49: Category 1 Operations—Water Use Conflicts with Terrestrial Resources

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	50	0	-	-	-

2027	$195	50	8	$78,000	$59,506	$69,302
2028	$195	50	2	$19,500	$13,903	$16,821
2029	$195	50	8	$78,000	$51,975	$65,324
2030	$195	50	1	$9,750	$6,072	$7,928
2031	$195	50	0	$0	$0	$0
2032	$195	50	1	$9,750	$5,303	$7,473
2033	$195	50	0	$0	$0	$0
2034	$195	50	0	$0	$0	$0
2035	$195	50	0	$0	$0	$0
2036	$195	50	0	$0	$0	$0
-	-	-	**20**	**$195,000**	**$136,759**	**$166,847**

Issue 50: Category 1 Operations—Effects of Transmission Line Right-of-Way Management on Terrestrial Resources

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	18	0	-	-	-
2027	$195	18	8	$28,080	$21,422	$24,949
2028	$195	18	2	$7,020	$5,005	$6,056
2029	$195	18	8	$28,080	$18,711	$23,517
2030	$195	18	1	$3,510	$2,186	$2,854
2031	$195	18	0	$0	$0	$0
2032	$195	18	1	$3,510	$1,909	$2,690
2033	$195	18	0	$0	$0	$0
2034	$195	18	0	$0	$0	$0
2035	$195	18	0	$0	$0	$0
2036	$195	18	0	$0	$0	$0
-	-	-	**20**	**$70,200**	**$49,233**	**$60,065**

Issue 51: Category 1 Operations—Effects of Electromagnetic Fields on Flora and Fauna

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	5	0	-	-	-
2027	$195	5	8	$7,800	$5,951	$6,930
2028	$195	5	2	$1,950	$1,390	$1,682
2029	$195	5	8	$7,800	$5,197	$6,532
2030	$195	5	1	$975	$607	$793
2031	$195	5	0	$0	$0	$0
2032	$195	5	1	$975	$530	$747
2033	$195	5	0	$0	$0	$0
2034	$195	5	0	$0	$0	$0
2035	$195	5	0	$0	$0	$0
2036	$195	5	0	$0	$0	$0
-	-	-	**20**	**$19,500**	**$13,676**	**$16,685**

Issue 52:	**Category 1 Operations—Important Species and Habitats—Other Important Species and Habitats**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)**	**3% NPV**
2026	$195	30	0	-	-	-
2027	$195	30	8	$46,800	$35,703	$41,581
2028	$195	30	2	$11,700	$8,342	$10,093
2029	$195	30	8	$46,800	$31,185	$39,194
2030	$195	30	1	$5,850	$3,643	$4,757
2031	$195	30	0	$0	$0	$0
2032	$195	30	1	$5,850	$3,182	$4,484
2033	$195	30	0	$0	$0	$0
2034	$195	30	0	$0	$0	$0
2035	$195	30	0	$0	$0	$0
2036	$195	30	0	$0	$0	$0
-	--	-	**20**	**$117,000**	**$82,055**	**$100,108**

Issue 53:	**Category 1 Construction—Runoff and Sedimentation from Construction Areas**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)**	**3% NPV**
2026	$195	124	0	-	-	-
2027	$195	124	8	$193,440	$147,574	$171,869
2028	$195	124	2	$48,360	$34,480	$41,716
2029	$195	124	8	$193,440	$128,897	$162,003
2030	$195	124	1	$24,180	$15,058	$19,661
2031	$195	124	0	$0	$0	$0
2032	$195	124	1	$24,180	$13,152	$18,532
2033	$195	124	0	$0	$0	$0
2034	$195	124	0	$0	$0	$0
2035	$195	124	0	$0	$0	$0
2036	$195	124	0	$0	$0	$0
-	-	-	**20**	**$483,600**	**$339,162**	**$413,780**

Issue 54:	**Category 1 Construction—Dredging and Filling Aquatic Habitats to Build Intake and Discharge Structures**					
Year	**Labor Rate**	**Hours per Application**	**Applications per Year**	**Undiscounted**	**7% Net Present Value (NPV)**	**3% NPV**
2026	$195	123	0	-	-	-
2027	$195	123	8	$191,880	$146,384	$170,483
2028	$195	123	2	$47,970	$34,202	$41,379
2029	$195	123	8	$191,880	$127,858	$160,696
2030	$195	123	1	$23,985	$14,937	$19,502
2031	$195	123	0	$0	$0	$0
2032	$195	123	1	$23,985	$13,046	$18,383
2033	$195	123	0	$0	$0	$0
2034	$195	123	0	$0	$0	$0
2035	$195	123	0	$0	$0	$0

2036	$195	123	0	$0	$0	$0
-	**-**	**-**	**20**	**$479,700**	**$336,427**	**$410,443**

Issue 55: Category 1 Construction—Building Transmission Lines, Pipelines, and Access Roads Across Surface Waterbodies

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	105	0	-	-	-
2027	$195	105	8	$163,800	$124,962	$145,534
2028	$195	105	2	$40,950	$29,197	$35,324
2029	$195	105	8	$163,800	$109,147	$137,180
2030	$195	105	1	$20,475	$12,751	$16,648
2031	$195	105	0	$0	$0	$0
2032	$195	105	1	$20,475	$11,137	$15,692
2033	$195	105	0	$0	$0	$0
2034	$195	105	0	$0	$0	$0
2035	$195	105	0	$0	$0	$0
2036	$195	105	0	$0	$0	$0
-	-	-	**20**	**$409,500**	**$287,194**	**$350,378**

Issue 56: Category 1 Operations—Important Species and Habitats—Other Important Species and Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	172	0	-	-	-
2027	$195	172	8	$268,320	$204,700	$238,399
2028	$195	172	2	$67,080	$47,827	$57,864
2029	$195	172	8	$268,320	$178,793	$224,714
2030	$195	172	1	$33,540	$20,887	$27,271
2031	$195	172	0	$0	$0	$0
2032	$195	172	1	$33,540	$18,244	$25,706
2033	$195	172	0	$0	$0	$0
2034	$195	172	0	$0	$0	$0
2035	$195	172	0	$0	$0	$0
2036	$195	172	0	$0	$0	$0
-	-	-	**20**	**$670,800**	**$470,451**	**$573,953**

Issue 57: Category 1 Operations—Stormwater Runoff

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	28	0	-	-	-
2027	$195	28	8	$43,680	$33,323	$38,809
2028	$195	28	2	$10,920	$7,786	$9,420
2029	$195	28	8	$43,680	$29,106	$36,581
2030	$195	28	1	$5,460	$3,400	$4,439
2031	$195	28	0	$0	$0	$0
2032	$195	28	1	$5,460	$2,970	$4,185

2033	$195	28	0	$0	$0	$0
2034	$195	28	0	$0	$0	$0
2035	$195	28	0	$0	$0	$0
2036	$195	28	0	$0	$0	$0
-	-	-	**20**	**$109,200**	**$76,585**	**$93,434**

Issue 58: Category 1 Operations—Exposure of Aquatic Organisms to Radionuclides

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	28	0	-	-	-
2027	$195	28	8	$43,680	$33,323	$38,809
2028	$195	28	2	$10,920	$7,786	$9,420
2029	$195	28	8	$43,680	$29,106	$36,581
2030	$195	28	1	$5,460	$3,400	$4,439
2031	$195	28	0	$0	$0	$0
2032	$195	28	1	$5,460	$2,970	$4,185
2033	$195	28	0	$0	$0	$0
2034	$195	28	0	$0	$0	$0
2035	$195	28	0	$0	$0	$0
2036	$195	28	0	$0	$0	$0
-	-	-	**20**	**$109,200**	**$76,585**	**$93,434**

Issue 59: Category 1 Operations—Effects of Refurbishment on Aquatic Biota

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	28	0	-	-	-
2027	$195	28	8	$43,680	$33,323	$38,809
2028	$195	28	2	$10,920	$7,786	$9,420
2029	$195	28	8	$43,680	$29,106	$36,581
2030	$195	28	1	$5,460	$3,400	$4,439
2031	$195	28	0	$0	$0	$0
2032	$195	28	1	$5,460	$2,970	$4,185
2033	$195	28	0	$0	$0	$0
2034	$195	28	0	$0	$0	$0
2035	$195	28	0	$0	$0	$0
2036	$195	28	0	$0	$0	$0
-	-	-	**20**	**$109,200**	**$76,585**	**$93,434**
2026	$195	28	0			

Issue 60: Category 1 Operations—Effects of Maintenance Dredging on Aquatic Biota

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	72	0	$0	$0	$0
2027	$195	72	8	$112,320	$85,688	$99,795
2028	$195	72	2	$28,080	$20,021	$24,222
2029	$195	72	8	$112,320	$74,844	$94,066
2030	$195	72	1	$14,040	$8,743	$11,416

2031	$195	72	0	$0	$0	$0
2032	$195	72	1	$14,040	$7,637	$10,760
2033	$195	72	0	$0	$0	$0
2034	$195	72	0	$0	$0	$0
2035	$195	72	0	$0	$0	$0
2036	$195	72	0	$0	$0	$0
-	-	-	**20**	**$280,800**	**$196,933**	**$240,259**

Issue 61: Category 1 Operations—Impacts of Transmission Line ROW Management on Aquatic Resources

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% Net Present Value (NPV)	3% NPV
2026	$195	44	0	$0	$0	$0
2027	$195	44	8	$68,640	$52,365	$60,986
2028	$195	44	2	$17,160	$12,235	$14,802
2029	$195	44	8	$68,640	$45,738	$57,485
2030	$195	44	1	$8,580	$5,343	$6,976
2031	$195	44	0	$0	$0	$0
2032	$195	44	1	$8,580	$4,667	$6,576
2033	$195	44	0	$0	$0	$0
2034	$195	44	0	$0	$0	$0
2035	$195	44	0	$0	$0	$0
2036	$195	44	0	$0	$0	$0
-	-	-	**20**	**$171,600**	**$120,348**	**$146,825**

Issue 62: Category 1 Operations - Impingement and Entrainment of Aquatic Organisms

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	115	0	$0	$0	$0
2027	$195	115	8	$179,400	$136,863	$159,395
2028	$195	115	2	$44,850	$31,977	$38,688
2029	$195	115	8	$179,400	$119,542	$150,245
2030	$195	115	1	$22,425	$13,965	$18,234
2031	$195	115	0	$0	$0	$0
2032	$195	115	1	$22,425	$12,198	$17,187
2033	$195	115	0	$0	$0	$0
2034	$195	115	0	$0	$0	$0
2035	$195	115	0	$0	$0	$0
2036	$195	115	0	$0	$0	$0
			20	**$448,500**	**$314,546**	**$383,748**

Issue 63: Category 1 Operations - Water Use Conflicts with Aquatic Resources

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	58	0	$0	$0	$0
2027	$195	58	8	$90,480	$69,027	$80,390
2028	$195	58	2	$22,620	$16,128	$19,512
2029	$195	58	8	$90,480	$60,291	$75,776
2030	$195	58	1	$11,310	$7,043	$9,196

2031	$195	58	0	$0	$0	$0
2032	$195	58	1	$11,310	$6,152	$8,668
2033	$195	58	0	$0	$0	$0
2034	$195	58	0	$0	$0	$0
2035	$195	58	0	$0	$0	$0
2036	$195	58	0	$0	$0	$0
			20	**$226,200**	**$158,640**	**$193,542**

Issue 64: Category 1 Operations - Important Species and Habitats – Other Important Species and Habitats

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	142	0	$0	$0	$0
2027	$195	142	8	$221,520	$168,997	$196,818
2028	$195	142	2	$55,380	$39,485	$47,771
2029	$195	142	8	$221,520	$147,608	$185,520
2030	$195	142	1	$27,690	$17,244	$22,515
2031	$195	142	0	$0	$0	$0
2032	$195	142	1	$27,690	$15,062	$21,222
2033	$195	142	0	$0	$0	$0
2034	$195	142	0	$0	$0	$0
2035	$195	142	0	$0	$0	$0
2036	$195	142	0	$0	$0	$0
			20	**$553,800**	**$388,395**	**$473,845**

Issue 65: Category 1 Construction - Radiological Dose to Construction Workers

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	97	0	$0	$0	$0
2027	$195	97	8	$151,320	$115,441	$134,446
2028	$195	97	2	$37,830	$26,972	$32,632
2029	$195	97	8	$151,320	$100,831	$126,728
2030	$195	97	1	$18,915	$11,779	$15,380
2031	$195	97	0	$0	$0	$0
2032	$195	97	1	$18,915	$10,289	$14,497
2033	$195	97	0	$0	$0	$0
2034	$195	97	0	$0	$0	$0
2035	$195	97	0	$0	$0	$0
2036	$195	97	0	$0	$0	$0
			20	**$378,300**	**$265,312**	**$323,683**

Issue 66: Category 1 Operations - Occupational Doses to Workers

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	62	0	$0	$0	$0
2027	$195	62	8	$96,720	$73,787	$85,934
2028	$195	62	2	$24,180	$17,240	$20,858
2029	$195	62	8	$96,720	$64,449	$81,001
2030	$195	62	1	$12,090	$7,529	$9,830
2031	$195	62	0	$0	$0	$0
2032	$195	62	1	$12,090	$6,576	$9,266

2033	$195	62	0	$0	$0	$0
2034	$195	62	0	$0	$0	$0
2035	$195	62	0	$0	$0	$0
2036	$195	62	0	$0	$0	$0
			20	**$241,800**	**$169,581**	**$206,890**

Issue 67: Category 1 Operations - Maximally Exposed Individual Annual Doses

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	53	0	$0	$0	$0
2027	$195	53	8	$82,680	$63,076	$73,460
2028	$195	53	2	$20,670	$14,737	$17,830
2029	$195	53	8	$82,680	$55,093	$69,243
2030	$195	53	1	$10,335	$6,436	$8,403
2031	$195	53	0	$0	$0	$0
2032	$195	53	1	$10,335	$5,622	$7,921
2033	$195	53	0	$0	$0	$0
2034	$195	53	0	$0	$0	$0
2035	$195	53	0	$0	$0	$0
2036	$195	53	0	$0	$0	$0
			20	**$206,700**	**$144,964**	**$176,858**

Issue 68: Category 1 Operations - Total Population Annual Doses

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	64	0	$0	$0	$0
2027	$195	64	8	$99,840	$76,167	$88,707
2028	$195	64	2	$24,960	$17,796	$21,531
2029	$195	64	8	$99,840	$66,528	$83,614
2030	$195	64	1	$12,480	$7,772	$10,147
2031	$195	64	0	$0	$0	$0
2032	$195	64	1	$12,480	$6,788	$9,565
2033	$195	64	0	$0	$0	$0
2034	$195	64	0	$0	$0	$0
2035	$195	64	0	$0	$0	$0
2036	$195	64	0	$0	$0	$0
			20	**$249,600**	**$175,051**	**$213,564**

Issue 69: Category 1 Operations - Nonhuman Biota Doses

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	36	0	$0	$0	$0
2027	$195	36	8	$56,160	$42,844	$49,897
2028	$195	36	2	$14,040	$10,010	$12,111
2029	$195	36	8	$56,160	$37,422	$47,033
2030	$195	36	1	$7,020	$4,372	$5,708
2031	$195	36	0	$0	$0	$0
2032	$195	36	1	$7,020	$3,818	$5,380
2033	$195	36	0	$0	$0	$0
2034	$195	36	0	$0	$0	$0
2035	$195	36	0	$0	$0	$0

2036	$195	36	0	$0	$0	$0
			20	**$140,400**	**$98,466**	**$120,130**

Issue 70: Category 1 Construction - Building Impacts of Chemical, Biological, and Physical Nonradiological Hazards

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	44	0	$0	$0	$0
2027	$195	44	8	$68,640	$52,365	$60,986
2028	$195	44	2	$17,160	$12,235	$14,802
2029	$195	44	8	$68,640	$45,738	$57,485
2030	$195	44	1	$8,580	$5,343	$6,976
2031	$195	44	0	$0	$0	$0
2032	$195	44	1	$8,580	$4,667	$6,576
2033	$195	44	0	$0	$0	$0
2034	$195	44	0	$0	$0	$0
2035	$195	44	0	$0	$0	$0
2036	$195	44	0	$0	$0	$0
			20	**$171,600**	**$120,348**	**$146,825**

Issue 71: Category 1 Operations - Operation Impacts of Chemical, Biological, and Physical Nonradiological Hazards

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	23	0	$0	$0	$0
2027	$195	23	8	$35,880	$27,373	$31,879
2028	$195	23	2	$8,970	$6,395	$7,738
2029	$195	23	8	$35,880	$23,908	$30,049
2030	$195	23	1	$4,485	$2,793	$3,647
2031	$195	23	0	$0	$0	$0
2032	$195	23	1	$4,485	$2,440	$3,437
2033	$195	23	0	$0	$0	$0
2034	$195	23	0	$0	$0	$0
2035	$195	23	0	$0	$0	$0
2036	$195	23	0	$0	$0	$0
			20	**$89,700**	**$62,909**	**$76,750**

Issue 72: Category 1 Construction - Construction-Related Noise

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	17	0	$0	$0	$0
2027	$195	17	8	$26,520	$20,232	$23,563
2028	$195	17	2	$6,630	$4,727	$5,719
2029	$195	17	8	$26,520	$17,671	$22,210
2030	$195	17	1	$3,315	$2,064	$2,695
2031	$195	17	0	$0	$0	$0
2032	$195	17	1	$3,315	$1,803	$2,541
2033	$195	17	0	$0	$0	$0
2034	$195	17	0	$0	$0	$0
2035	$195	17	0	$0	$0	$0
2036	$195	17	0	$0	$0	$0

			20	**$66,300**	**$46,498**	**$56,728**

Issue 73: Category 1 Operations - Operation-Related Noise

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	10	0	$0	$0	$0
2027	$195	10	8	$15,600	$11,901	$13,860
2028	$195	10	2	$3,900	$2,781	$3,364
2029	$195	10	8	$15,600	$10,395	$13,065
2030	$195	10	1	$1,950	$1,214	$1,586
2031	$195	10	0	$0	$0	$0
2032	$195	10	1	$1,950	$1,061	$1,495
2033	$195	10	0	$0	$0	$0
2034	$195	10	0	$0	$0	$0
2035	$195	10	0	$0	$0	$0
2036	$195	10	0	$0	$0	$0
			20	**$39,000**	**$27,352**	**$33,369**

Issue 74: Category 1 Operations - Low-Level Radioactive Waste

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	145	0	$0	$0	$0
2027	$195	145	8	$226,200	$172,567	$200,976
2028	$195	145	2	$56,550	$40,319	$48,781
2029	$195	145	8	$226,200	$150,727	$189,439
2030	$195	145	1	$28,275	$17,608	$22,990
2031	$195	145	0	$0	$0	$0
2032	$195	145	1	$28,275	$15,380	$21,670
2033	$195	145	0	$0	$0	$0
2034	$195	145	0	$0	$0	$0
2035	$195	145	0	$0	$0	$0
2036	$195	145	0	$0	$0	$0
			20	**$565,500**	**$396,601**	**$483,856**

Issue 75: Category 1 Operations - Onsite Spent Nuclear Fuel Management

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	176	0	$0	$0	$0
2027	$195	176	8	$274,560	$209,461	$243,943
2028	$195	176	2	$68,640	$48,939	$59,209
2029	$195	176	8	$274,560	$182,951	$229,940
2030	$195	176	1	$34,320	$21,373	$27,905
2031	$195	176	0	$0	$0	$0
2032	$195	176	1	$34,320	$18,668	$26,303
2033	$195	176	0	$0	$0	$0
2034	$195	176	0	$0	$0	$0
2035	$195	176	0	$0	$0	$0
2036	$195	176	0	$0	$0	$0
			20	**$686,400**	**$481,391**	**$587,301**

Issue 76: Category 1 Operations - Mixed Waste

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	136	0	$0	$0	$0
2027	$195	136	8	$212,160	$161,856	$188,501
2028	$195	136	2	$53,040	$37,817	$45,753
2029	$195	136	8	$212,160	$141,371	$177,681
2030	$195	136	1	$26,520	$16,515	$21,563
2031	$195	136	0	$0	$0	$0
2032	$195	136	1	$26,520	$14,425	$20,325
2033	$195	136	0	$0	$0	$0
2034	$195	136	0	$0	$0	$0
2035	$195	136	0	$0	$0	$0
2036	$195	136	0	$0	$0	$0
			20	**$530,400**	**$371,984**	**$453,823**

Issue 77: Category 1 Construction - Construction Nonradiological Waste

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	34	0	$0	$0	$0
2027	$195	34	8	$53,040	$40,464	$47,125
2028	$195	34	2	$13,260	$9,454	$11,438
2029	$195	34	8	$53,040	$35,343	$44,420
2030	$195	34	1	$6,630	$4,129	$5,391
2031	$195	34	0	$0	$0	$0
2032	$195	34	1	$6,630	$3,606	$5,081
2033	$195	34	0	$0	$0	$0
2034	$195	34	0	$0	$0	$0
2035	$195	34	0	$0	$0	$0
2036	$195	34	0	$0	$0	$0
			20	**$132,600**	**$92,996**	**$113,456**

Issue 78: Category 1 Operations - Operation Nonradiological Waste

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	17	0	$0	$0	$0
2027	$195	17	8	$26,520	$20,232	$23,563
2028	$195	17	2	$6,630	$4,727	$5,719
2029	$195	17	8	$26,520	$17,671	$22,210
2030	$195	17	1	$3,315	$2,064	$2,695
2031	$195	17	0	$0	$0	$0
2032	$195	17	1	$3,315	$1,803	$2,541
2033	$195	17	0	$0	$0	$0
2034	$195	17	0	$0	$0	$0
2035	$195	17	0	$0	$0	$0
2036	$195	17	0	$0	$0	$0
			20	**$66,300**	**$46,498**	**$56,728**

Issue 79: Category 1 Operations - Design Basis Accidents Involving Radiological Releases

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV

2026	$195	120	0	$0	$0	$0
2027	$195	120	8	$187,200	$142,814	$166,325
2028	$195	120	2	$46,800	$33,368	$40,370
2029	$195	120	8	$187,200	$124,739	$156,777
2030	$195	120	1	$23,400	$14,572	$19,026
2031	$195	120	0	$0	$0	$0
2032	$195	120	1	$23,400	$12,728	$17,934
2033	$195	120	0	$0	$0	$0
2034	$195	120	0	$0	$0	$0
2035	$195	120	0	$0	$0	$0
2036	$195	120	0	$0	$0	$0
			20	**$468,000**	**$328,221**	**$400,432**

Issue 80: Category 1 Operations - Accidents Involving Releases of Hazardous Chemicals

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	120	0	$0	$0	$0
2027	$195	120	8	$187,200	$142,814	$166,325
2028	$195	120	2	$46,800	$33,368	$40,370
2029	$195	120	8	$187,200	$124,739	$156,777
2030	$195	120	1	$23,400	$14,572	$19,026
2031	$195	120	0	$0	$0	$0
2032	$195	120	1	$23,400	$12,728	$17,934
2033	$195	120	0	$0	$0	$0
2034	$195	120	0	$0	$0	$0
2035	$195	120	0	$0	$0	$0
2036	$195	120	0	$0	$0	$0
			20	**$468,000**	**$328,221**	**$400,432**

Issue 81: Category 1 Operations - Severe Accident Mitigation Design Alternatives

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	61	0	$0	$0	$0
2027	$195	61	8	$95,160	$72,597	$84,548
2028	$195	61	2	$23,790	$16,962	$20,521
2029	$195	61	8	$95,160	$63,409	$79,695
2030	$195	61	1	$11,895	$7,408	$9,672
2031	$195	61	0	$0	$0	$0
2032	$195	61	1	$11,895	$6,470	$9,117
2033	$195	61	0	$0	$0	$0
2034	$195	61	0	$0	$0	$0
2035	$195	61	0	$0	$0	$0
2036	$195	61	0	$0	$0	$0
			20	**$237,900**	**$166,846**	**$203,553**

Issue 82: Category 1 Operations - Acts of Terrorism

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	57	0	$0	$0	$0
2027	$195	57	8	$88,920	$67,837	$79,004
2028	$195	57	2	$22,230	$15,850	$19,176

2029	$195	57	8	$88,920	$59,251	$74,469
2030	$195	57	1	$11,115	$6,922	$9,038
2031	$195	57	0	$0	$0	$0
2032	$195	57	1	$11,115	$6,046	$8,519
2033	$195	57	0	$0	$0	$0
2034	$195	57	0	$0	$0	$0
2035	$195	57	0	$0	$0	$0
2036	$195	57	0	$0	$0	$0
			20	**$222,300**	**$155,905**	**$190,205**

Issue 83: Category 1 Construction - Community Services and Infrastructure

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	44	0	$0	$0	$0
2027	$195	44	8	$68,640	$52,365	$60,986
2028	$195	44	2	$17,160	$12,235	$14,802
2029	$195	44	8	$68,640	$45,738	$57,485
2030	$195	44	1	$8,580	$5,343	$6,976
2031	$195	44	0	$0	$0	$0
2032	$195	44	1	$8,580	$4,667	$6,576
2033	$195	44	0	$0	$0	$0
2034	$195	44	0	$0	$0	$0
2035	$195	44	0	$0	$0	$0
2036	$195	44	0	$0	$0	$0
			20	**$171,600**	**$120,348**	**$146,825**

Issue 84: Category 1 Construction - Transportation Systems and Traffic

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	89	0	$0	$0	$0
2027	$195	89	8	$138,840	$105,920	$123,358
2028	$195	89	2	$34,710	$24,748	$29,941
2029	$195	89	8	$138,840	$92,515	$116,276
2030	$195	89	1	$17,355	$10,808	$14,111
2031	$195	89	0	$0	$0	$0
2032	$195	89	1	$17,355	$9,440	$13,301
2033	$195	89	0	$0	$0	$0
2034	$195	89	0	$0	$0	$0
2035	$195	89	0	$0	$0	$0
2036	$195	89	0	$0	$0	$0
			20	**$347,100**	**$243,431**	**$296,987**

Issue 85: Category 1 Construction - Economic Impacts

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	43	0	$0	$0	$0
2027	$195	43	8	$67,080	$51,175	$59,600
2028	$195	43	2	$16,770	$11,957	$14,466
2029	$195	43	8	$67,080	$44,698	$56,178
2030	$195	43	1	$8,385	$5,222	$6,818
2031	$195	43	0	$0	$0	$0

2032	$195	43	1	$8,385	$4,561	$6,426
2033	$195	43	0	$0	$0	$0
2034	$195	43	0	$0	$0	$0
2035	$195	43	0	$0	$0	$0
2036	$195	43	0	$0	$0	$0
			20	**$167,700**	**$117,613**	**$143,488**

Issue 86: Category 1 Construction - Tax Revenue Impacts

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	25	0	$0	$0	$0
2027	$195	25	8	$39,000	$29,753	$34,651
2028	$195	25	2	$9,750	$6,952	$8,410
2029	$195	25	8	$39,000	$25,987	$32,662
2030	$195	25	1	$4,875	$3,036	$3,964
2031	$195	25	0	$0	$0	$0
2032	$195	25	1	$4,875	$2,652	$3,736
2033	$195	25	0	$0	$0	$0
2034	$195	25	0	$0	$0	$0
2035	$195	25	0	$0	$0	$0
2036	$195	25	0	$0	$0	$0
			20	**$97,500**	**$68,379**	**$83,423**

Issue 87: Category 1 Operations - Community Services and Infrastructure

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	29	0	$0	$0	$0
2027	$195	29	8	$45,240	$34,513	$40,195
2028	$195	29	2	$11,310	$8,064	$9,756
2029	$195	29	8	$45,240	$30,145	$37,888
2030	$195	29	1	$5,655	$3,522	$4,598
2031	$195	29	0	$0	$0	$0
2032	$195	29	1	$5,655	$3,076	$4,334
2033	$195	29	0	$0	$0	$0
2034	$195	29	0	$0	$0	$0
2035	$195	29	0	$0	$0	$0
2036	$195	29	0	$0	$0	$0
			20	**$113,100**	**$79,320**	**$96,771**

Issue 88: Category 1 Operations - Transportation Systems and Traffic

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	15	0	$0	$0	$0
2027	$195	15	8	$23,400	$17,852	$20,791
2028	$195	15	2	$5,850	$4,171	$5,046
2029	$195	15	8	$23,400	$15,592	$19,597
2030	$195	15	1	$2,925	$1,822	$2,378
2031	$195	15	0	$0	$0	$0
2032	$195	15	1	$2,925	$1,591	$2,242
2033	$195	15	0	$0	$0	$0
2034	$195	15	0	$0	$0	$0

2035	$195	15	0	$0	$0	$0
2036	$195	15	0	$0	$0	$0
			20	**$58,500**	**$41,028**	**$50,054**

Issue 89: Category 1 Operations - Economic Impacts

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	29	0	$0	$0	$0
2027	$195	29	8	$45,240	$34,513	$40,195
2028	$195	29	2	$11,310	$8,064	$9,756
2029	$195	29	8	$45,240	$30,145	$37,888
2030	$195	29	1	$5,655	$3,522	$4,598
2031	$195	29	0	$0	$0	$0
2032	$195	29	1	$5,655	$3,076	$4,334
2033	$195	29	0	$0	$0	$0
2034	$195	29	0	$0	$0	$0
2035	$195	29	0	$0	$0	$0
2036	$195	29	0	$0	$0	$0
			20	**$113,100**	**$79,320**	**$96,771**

Issue 90: Category 1 Operations - Tax Revenue Impacts

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	57	0	$0	$0	$0
2027	$195	57	8	$88,920	$67,837	$79,004
2028	$195	57	2	$22,230	$15,850	$19,176
2029	$195	57	8	$88,920	$59,251	$74,469
2030	$195	57	1	$11,115	$6,922	$9,038
2031	$195	57	0	$0	$0	$0
2032	$195	57	1	$11,115	$6,046	$8,519
2033	$195	57	0	$0	$0	$0
2034	$195	57	0	$0	$0	$0
2035	$195	57	0	$0	$0	$0
2036	$195	57	0	$0	$0	$0
			20	**$222,300**	**$155,905**	**$190,205**

Issue 91: Category 1 Operations - Uranium Recovery

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	26	0	$0	$0	$0
2027	$195	26	8	$40,560	$30,943	$36,037
2028	$195	26	2	$10,140	$7,230	$8,747
2029	$195	26	8	$40,560	$27,027	$33,968
2030	$195	26	1	$5,070	$3,157	$4,122
2031	$195	26	0	$0	$0	$0
2032	$195	26	1	$5,070	$2,758	$3,886
2033	$195	26	0	$0	$0	$0
2034	$195	26	0	$0	$0	$0
2035	$195	26	0	$0	$0	$0
2036	$195	26	0	$0	$0	$0
			20	**$101,400**	**$71,115**	**$86,760**

Issue 92: Category 1 Operations - Uranium Conversion

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	26	0	$0	$0	$0
2027	$195	26	8	$40,560	$30,943	$36,037
2028	$195	26	2	$10,140	$7,230	$8,747
2029	$195	26	8	$40,560	$27,027	$33,968
2030	$195	26	1	$5,070	$3,157	$4,122
2031	$195	26	0	$0	$0	$0
2032	$195	26	1	$5,070	$2,758	$3,886
2033	$195	26	0	$0	$0	$0
2034	$195	26	0	$0	$0	$0
2035	$195	26	0	$0	$0	$0
2036	$195	26	0	$0	$0	$0
			20	**$101,400**	**$71,115**	**$86,760**
2026	$195	26	0	$0	$0	$0

Issue 93: Category 1 Operations - Enrichment

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	32	0	$0	$0	$0
2027	$195	32	8	$49,920	$38,084	$44,353
2028	$195	32	2	$12,480	$8,898	$10,765
2029	$195	32	8	$49,920	$33,264	$41,807
2030	$195	32	1	$6,240	$3,886	$5,074
2031	$195	32	0	$0	$0	$0
2032	$195	32	1	$6,240	$3,394	$4,782
2033	$195	32	0	$0	$0	$0
2034	$195	32	0	$0	$0	$0
2035	$195	32	0	$0	$0	$0
2036	$195	32	0	$0	$0	$0
			20	**$124,800**	**$87,526**	**$106,782**

Issue 94: Category 1 Operations - Fuel Fabrication

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	37	0	$0	$0	$0
2027	$195	37	8	$57,720	$44,034	$51,283
2028	$195	37	2	$14,430	$10,288	$12,447
2029	$195	37	8	$57,720	$38,461	$48,340
2030	$195	37	1	$7,215	$4,493	$5,866
2031	$195	37	0	$0	$0	$0
2032	$195	37	1	$7,215	$3,924	$5,530
2033	$195	37	0	$0	$0	$0
2034	$195	37	0	$0	$0	$0
2035	$195	37	0	$0	$0	$0
2036	$195	37	0	$0	$0	$0
			20	**$144,300**	**$101,202**	**$123,467**

Issue 95: Category 1 Operations - Reprocessing

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	27	0	$0	$0	$0
2027	$195	27	8	$42,120	$32,133	$37,423
2028	$195	27	2	$10,530	$7,508	$9,083
2029	$195	27	8	$42,120	$28,066	$35,275
2030	$195	27	1	$5,265	$3,279	$4,281
2031	$195	27	0	$0	$0	$0
2032	$195	27	1	$5,265	$2,864	$4,035
2033	$195	27	0	$0	$0	$0
2034	$195	27	0	$0	$0	$0
2035	$195	27	0	$0	$0	$0
2036	$195	27	0	$0	$0	$0
			20	**$105,300**	**$73,850**	**$90,097**

Issue 96: Category 1 Operations - Storage and Disposal of Radiological Wastes

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	37	0	$0	$0	$0
2027	$195	37	8	$57,720	$44,034	$51,283
2028	$195	37	2	$14,430	$10,288	$12,447
2029	$195	37	8	$57,720	$38,461	$48,340
2030	$195	37	1	$7,215	$4,493	$5,866
2031	$195	37	0	$0	$0	$0
2032	$195	37	1	$7,215	$3,924	$5,530
2033	$195	37	0	$0	$0	$0
2034	$195	37	0	$0	$0	$0
2035	$195	37	0	$0	$0	$0
2036	$195	37	0	$0	$0	$0
			20	**$144,300**	**$101,202**	**$123,467**

Issue 97: Category 1 Operations - Transportation of Unirradiated Fuel

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	57	0	$0	$0	$0
2027	$195	57	8	$88,920	$67,837	$79,004
2028	$195	57	2	$22,230	$15,850	$19,176
2029	$195	57	8	$88,920	$59,251	$74,469
2030	$195	57	1	$11,115	$6,922	$9,038
2031	$195	57	0	$0	$0	$0
2032	$195	57	1	$11,115	$6,046	$8,519
2033	$195	57	0	$0	$0	$0
2034	$195	57	0	$0	$0	$0
2035	$195	57	0	$0	$0	$0
2036	$195	57	0	$0	$0	$0
			20	**$222,300**	**$155,905**	**$190,205**

Issue 98: Category 1 Operations - Transportation of Radioactive Waste

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	57	0	$0	$0	$0
2027	$195	57	8	$88,920	$67,837	$79,004
2028	$195	57	2	$22,230	$15,850	$19,176
2029	$195	57	8	$88,920	$59,251	$74,469
2030	$195	57	1	$11,115	$6,922	$9,038
2031	$195	57	0	$0	$0	$0
2032	$195	57	1	$11,115	$6,046	$8,519
2033	$195	57	0	$0	$0	$0
2034	$195	57	0	$0	$0	$0
2035	$195	57	0	$0	$0	$0
2036	$195	57	0	$0	$0	$0
			20	**$222,300**	**$155,905**	**$190,205**

Issue 99: Category 1 Operations - Transportation of Irradiated Fuel

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	181	0	$0	$0	$0
2027	$195	181	8	$282,360	$215,411	$250,873
2028	$195	181	2	$70,590	$50,330	$60,892
2029	$195	181	8	$282,360	$188,148	$236,472
2030	$195	181	1	$35,295	$21,980	$28,698
2031	$195	181	0	$0	$0	$0
2032	$195	181	1	$35,295	$19,198	$27,051
2033	$195	181	0	$0	$0	$0
2034	$195	181	0	$0	$0	$0
2035	$195	181	0	$0	$0	$0
2036	$195	181	0	$0	$0	$0
			20	**$705,900**	**$495,067**	**$603,986**

Issue 100: Decommissioning

Year	Labor Rate	Hours per Application	Applications per Year	Undiscounted	7% NPV	3% NPV
2026	$195	95	0	$0	$0	$0
2027	$195	95	8	$148,200	$113,061	$131,674
2028	$195	95	2	$37,050	$26,416	$31,960
2029	$195	95	8	$148,200	$98,752	$124,115
2030	$195	95	1	$18,525	$11,536	$15,063
2031	$195	95	0	$0	$0	$0
2032	$195	95	1	$18,525	$10,076	$14,198
2033	$195	95	0	$0	$0	$0
2034	$195	95	0	$0	$0	$0
2035	$195	95	0	$0	$0	$0
2036	$195	95	0	$0	$0	$0
			20	**$370,500**	**$259,842**	**$317,009**

Table A.3 presents the BLS Labor Rates used to generate the blended, weighted labor rate used for industry activity in this regulatory analysis.

Table A.3 Bureau of Labor Statistics Labor Rates in the Regulatory Analysis

Industry: Nuclear Electric Power Generation (NAICS code 221113)			
Period: May 2023			
Occupation (SOC code)	**Hourly mean wage***	**Hourly 25th percentile wage***	**Hourly 75th percentile wage***
General and Operations Managers (111021)	$102.84	$79.04	$126.64
Industrial Production Managers (113051)	$91.55	$78.75	$101.18
Nuclear Engineers (172161)	$60.10	$49.54	$67.63
Life, Physical, and Social Science Occupations (190000)	$52.31	$47.92	$59.12
Physical Scientists (192000)	$60.40	$50.53	$64.49
Environmental Scientists and Geoscientists (192040)	$60.72	$54.13	$65.28
Office and Administrative Support Occupations (430000)	$39.15	$28.71	$49.97
First-Line Supervisors of Office and Administrative Support Workers (431011)	$56.18	$39.08	$65.61
Office Clerks General (439061)	$31.17	$26.14	$36.51
First-Line Supervisors of Mechanics Installers and Repairers (491011)	$65.32	$54.76	$73.45
First-Line Supervisors of Production and Operating Workers (511011)	$78.48	$66.07	$86.80
Industry: Electric Power Generation, Transmission and Distribution (NAICS code 221100)			
Period: May 2023			
Occupation (SOC code)	**Hourly mean wage**	**Hourly 25th percentile wage**	**Hourly 75th percentile wage**
Biological Scientists (191020)	$44.43	$34.23	$48.86
Lawyers (231011)	$102.69	$79.46	$125.92
Paralegals and Legal Assistants (232011)	$43.62	$37.71	$49.53

* These labor rates are unburdened by overhead factors in the Bureau of Labor Statistics data. This regulatory analysis multiplied these rates by a labor multiplier of 2.4, and then binned them into categories for use in creating the blended, weighted labor rate in this analysis. The categories and burdened mean hourly wages are: Managers, $202.91; Technical Staff, $130.54; Administrative Staff, $101.20; and Licensing Staff, $73.16.