

Enclosure 1: Proposed Agency Action and Reasonable Range of Alternatives

Existing Regulatory Framework and Practice

The U.S. Nuclear Regulatory Commission (NRC) regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions,” for preparation of environmental impact statements (EISs) require the consideration of alternatives to a proposed action. The proposed action is related to an underlying purpose and need driving the action. Once the purpose and need are clearly defined, the agency may identify alternatives that can also meet that purpose and need. The Council on Environmental Quality (CEQ) has traditionally considered the alternatives analysis to be the “heart of the environmental impact statement,”¹ and the NRC has echoed this emphasis in Appendix A, “Format for Presentation of Material in Environmental Impact Statements,” to Subpart A, “National Environmental Policy Act—Regulations Implementing Section 102(2),” of 10 CFR Part 51.² As an independent regulatory agency, the Commission’s policy toward the CEQ’s National Environmental Policy Act (NEPA) regulations has been “to take account of the regulations...voluntarily, subject to certain conditions.”³

At the NRC, many proposed actions and alternatives to the proposed actions are currently analyzed under NEPA in terms of the applicant’s or societal purpose and need rather than the NRC’s purpose and need. In the context of licensing nuclear power plants, for example, this results in a purpose and need statement typically framed around a need for electrical power, with a resulting set of alternatives that would also achieve the stated need for additional electrical power, including other forms of power generation.

A detailed summary of the staff’s existing framework and current process for selecting reasonable alternatives for various types of NEPA reviews may be found in SECY-23-0068, “Evaluation of the U.S. Nuclear Regulatory Commission’s Process for Selecting Reasonable Alternatives for National Environmental Policy Act Reviews,” dated August 10, 2023 (Agencywide Documents Access and Management System No. ML23180A262). In SECY-23-0068, the staff evaluated its processes for selecting reasonable alternatives in three areas: (1) new and advanced reactor licensing, (2) reactor license renewals, and (3) materials licensing.

¹ This phrase was included in 40 CFR 1502.14 when CEQ’s regulations were first issued in 1978, removed in 2020, and then reinstated in 2024 (89 FR 35442, 35502; May 1, 2024).

² Section 5, “Alternatives including the proposed action,” of Appendix A to Subpart A of 10 CFR Part 51 states the following:

This section is the heart of the environmental impact statement. It will present the environmental impacts of the proposal and the alternatives in comparative form. Where important to the comparative evaluation of alternatives, appropriate mitigating measures of the alternatives will be discussed. All reasonable alternatives will be identified. The range of alternatives discussed will encompass those proposed to be considered by the ultimate decisionmaker. An otherwise reasonable alternative will not be excluded from discussion solely on the ground that it is not within the jurisdiction of the NRC.⁴ The discussion of alternatives will take into accounts, without duplicating, the environmental information and analyses included in sections, 4., 6. and 7. of this appendix.

⁴ With respect to limitations on NRC’s NEPA authority and responsibility imposed by the Federal Water Pollution Control Act Amendments of 1972, see sections 51.10(c), 51.22(c)(17) and 51.71(d).

³ See 10 CFR 51.10(a).

Alternatives considered in new and advanced reactor licensing EISs have commonly included, as applicable, a no action alternative, site alternatives, energy generation alternatives, and system design alternatives.⁴ The Commission's current policy for operating reactor license renewals is to consider other energy sources as alternatives to the proposed action.⁵ For environmental reviews for materials licensing actions, the staff determines the need for the detailed evaluation of alternatives (other than the no action alternative) on a case-by-case basis, depending on the licensing action proposed and the characteristics of the licensing action. In most cases, EISs evaluate only the action and the no action alternative, but they may briefly discuss alternatives eliminated from detailed analysis.⁶

In SECY-23-0068, the staff "determined there are no process changes to recommend to the Commission at this time," but also acknowledged that —

[staff] will continue to monitor and participate in Governmentwide initiatives...to streamline the NEPA process. ...[and] will continue to review the recent NEPA amendments included in the Fiscal Responsibility Act of 2023 to determine any impacts to the NRC's alternatives analysis process.

Furthermore, the analysis in SECY-23-0068 did not evaluate the CEQ Phase 2 proposed rule given that SECY-23-0068 was completed before CEQ's Phase 2 proposed rule was published.

NEPA Amendments

The relevant NEPA amendments related to the issue discussed in this enclosure are reproduced below:

SECTION 102(2)(C).

...consistent with the provisions of this Act and except where compliance would be inconsistent with other statutory requirements, include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) reasonably foreseeable environmental impact effects of the proposed agency action;

⁴ See "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments" (49 FR 9352, 9353–9356; March 12, 1984).

⁵ See "Environmental Review for Renewal of Nuclear Power Plant Operating Licenses" (61 FR 28467; June 5, 1996). In this final rule, the Commission expanded the purpose and need for the proposed license renewal action to include alternative energy sources to address comments from States and the CEQ.

⁶ Two recent examples evaluations in materials-related licensing actions that that evaluate only the action and no action alternative include NUREG-2237, "Environmental Impact Statement for the Holtec International's License Application for a Consolidated Interim Storage Facility for Spent Nuclear Fuel in Lea County, New Mexico," issued July 2022 (ML22181B094), and NUREG-2239, "Environmental Impact Statement for Interim Storage Partners LLC's License Application for a Consolidated Interim Storage Facility for Spent Nuclear Fuel in Andrews County, Texas," issued July 2021 (ML21209A955). Two recent examples of evaluations in materials-related licensing actions that included alternatives other than the no action alternative are NUREG-2243, "Environmental Impact Statement for the Disposal of Mine Waste at the United Nuclear Corporation Mill Site in McKinley County, New Mexico," issued January 2023, (ML22356A145), and NUREG-2248, "Environmental Impact Statement for the License Renewal of the Columbia Fuel Fabrication Facility in Richland County, South Carolina," issued July 2022 (ML22201A131).

- (ii) any reasonably foreseeable adverse environmental effects which cannot be avoided should the proposal be implemented;
- (iii) a reasonable range of alternatives to the proposed agency action, including an analysis of any negative environmental impacts of not implementing the proposed agency action in the case of a no action alternative, that are technically and economically feasible, and meet the purpose and need of the proposal;
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and
- (v) any irreversible and irretrievable commitments of Federal resources which would be involved in the proposed agency action should it be implemented.

SECTION 107. TIMELY AND UNIFIED FEDERAL REVIEWS.

- (d) STATEMENT OF PURPOSE AND NEED.—Each environmental document shall include a statement of purpose and need that briefly summarizes the underlying purpose and need for the proposed agency action.

SECTION 111. DEFINITIONS.

In this title:

- (12) PROPOSAL.—The term “proposal” means a proposed action at a stage when an agency has a goal, is actively preparing to make a decision on one or more alternative means of accomplishing that goal, and can meaningfully evaluate its effects.

Summary

The Fiscal Responsibility Act of 2023 (FRA) added the word “agency” to the phrase “proposed action” everywhere the phrase previously occurred, as well as most uses in the new NEPA provisions.⁷ The FRA also adds the words “reasonable range of” to “alternatives to the proposed agency action...that are technically and economically feasible, and meet the purpose and need of the proposal” in section 102(2)(C)(iii) and requires “an analysis of any negative environmental impacts of not implementing the proposed agency action in the case of a no action alternative.” In addition, the FRA adds the word “Federal” before “resources” in section 102(2)(C)(v).

The definition of “proposal” in NEPA section 111(12) defines the timing of the proposal to be when the agency has a goal before it, is actively preparing to decide between alternatives to accomplish that goal and can meaningfully evaluate the effects of the proposal.

⁷ In the four locations where “proposed action” action is used rather than “proposed agency action” (sections 106(a)(4), 109(1) and (3), and 111(12)), it is clear from context that the action is an agency action. For example, section 106(a)(4) first uses the term “proposed agency action” then refers to the agency taking “the proposed action” later in the same sentence.

Change for the NRC

The FRA's use of the term "proposed agency action" in lieu of "proposed action" could be interpreted as a nonsubstantive addition because NEPA, based on preexisting language in its section 102(2)(C), already expressly applied only to "major *Federal* actions" (emphasis added). The revisions to the wording of section 102(2)(C) may be considered largely clarifying that Congress intends the proposed action to be the *agency* action. The CEQ Phase 2 final rule (89 FR 35442) clarifies that the proposed agency action is the basis for determining the purpose and need, and the alternatives, consistent with the NEPA amendments.⁸ It is noteworthy that the CEQ Phase 2 final rule also allows for agencies to "include reasonable alternatives not within the jurisdiction of the lead agency" in section 1502.14 (89 FR 35442, 35565). Still, "CEQ anticipates that such consideration [of alternatives outside the agencies jurisdiction] would be a relatively infrequent occurrence" and "may be relevant, for instance, when agencies are considering program-level decisions or anticipate funding for a project not yet authorized by Congress" (89 FR 35442, 35503). Therefore, it may be appropriate for the NRC to evaluate through the rulemaking process whether its current approach for defining the purpose and need and alternatives (especially for reactors) sufficiently "take[s] account of" the CEQ's Phase 2 final rule and other recent efforts to streamline environmental reviews.

Other changes to NEPA section 102(2)(C)(iii) address requirements related to choosing from a "reasonable range of" alternatives. The alternatives considered in a NEPA review must constitute a reasonable range of possibilities that are technically and economically feasible to meet the agency's stated purpose and need for a "proposal" (which is a newly defined term in NEPA (section 111(12), "Proposal") that addresses a particular phase in an agency decision-making process in which the staff weighs alternatives to achieve the agency's goals). The environmental review must also identify any negative environmental effects of the no action alternative (i.e., not implementing the proposed agency action).

The word "Federal" before "resources" in section 102(2)(C)(v) narrows the consideration and analysis of the irreversible and irretrievable commitments of resources involved in the proposed "agency" action in environmental reviews to only "Federal" resources.⁹ This reduces the scope of the NRC's environmental reviews. The current wording of 10 CFR 51.45(b)(5) requires applicants, in any environmental report they submit, to describe "any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." The staff are revisiting the discussion of irreversible and irretrievable commitments of resources in the EIS given the NEPA amendment.

Staff Actions for Compliance

The staff is proceeding with site-specific reviews under existing NRC regulations implementing NEPA and existing guidance in addition to implementing the following additional actions to ensure

⁸ In the 1978 version of CEQ regulations (43 FR 55990, 55996; November 29, 1978), 40 CFR 1502.13 stated "the statement shall briefly specify the underlying purpose and need to which the agency is responding in preparing the alternatives for the proposed action." The Phase 1 final rule (87 FR 23453, 23469; April 20, 2022) revised 40 CFR 1502.13 as "the statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." The Phase 2 final rule (89 FR 35442, 35565) states "the environmental impact statement shall include a statement that briefly summarizes the underlying purpose and need for the proposed agency action."

⁹ In its Phase 2 final rule, CEQ interprets the phrase "Federal resources" to plainly mean resources owned by the Federal Government or held in trust for Tribal Nations (89 FR 35442, 35507).

compliance with NEPA. Staff is ensuring the analysis of the no-action alternative discusses reasonably foreseeable negative environmental impacts, per NEPA section 102(2)(C)(iii). Staff is ensuring that all findings of no significant impact (FONSIs) include statements of “purpose and need,” per NEPA section 107(d) (such statements are already included in all EAs and EISs). Staff is not taking action to address the insertion of “reasonably foreseeable” because the staff already applies this standard. In response to the insertion of the word “Federal” before “resources” in section 102(2)(C)(v)), staff plan to limit the discussion of irreversible and irretrievable commitments of resources in EISs to Federal resources.¹⁰

Implementation Options for Improved Alignment and Efficiency

The staff offers the following options for Commission consideration to more clearly and effectively implement the NEPA amendments to the language regarding proposed agency action and alternatives.

Option 1.a: Status Quo

Under this option, the staff would not change the NRC’s NEPA review process for alternatives. The staff already considers a reasonable range of technically and economically feasible alternatives. The staff would maintain the existing framework and current process for defining the purpose and need and selecting reasonable alternatives for various types of NEPA reviews as described in SECY-23-0068. Maintaining the status quo would allow the staff to focus on effective implementation of the existing processes.¹¹

The staff would pursue minor revisions to update the regulations for consistency with the NEPA amendments (e.g., inserting the word “agency” before “action”) as noted in the rulemaking plan, but these edits would not result in changes to the review process. The staff would update the regulations to insert the word “Federal” before “resources” and would revise NRC NEPA guidance to refer to irreversible and irretrievable commitment of Federal resources.

Pros:

- Minimal impact on staff processes.

Cons:

- Applicants and the NRC would expend more resources analyzing alternatives compared to Option 1.b.
- The assessment would continue to include some alternatives that are outside the scope of the NRC’s statutory authority. As a result, this may cause confusion regarding NRC authorities, and stakeholders may perceive that the NRC has influence over the selection of these alternatives.

¹⁰ In its Phase 2 final rule, CEQ interprets the phrase “Federal resources” to plainly mean resources owned by the Federal Government or held in trust for Tribal Nations (89 FR 35442, 35507).

¹¹ As described in SECY-23-0068—

Because of the dramatic increase in workload anticipated over the next several years, the staff believes that its limited resources will be best focused on effective implementation of the process already developed. As these reviews are completed, the staff will continue to use this additional experience to determine whether additional process improvements would be helpful in streamlining the alternatives analysis process for new reactor licensing applications.

Option 1.b: Modify Purpose and Need to Focus on Agency Action (Recommended)

Under this option, the scope of the NRC's NEPA review would focus on the range of agency actions—regulatory and licensing decisions. The staff would evaluate through the rulemaking process whether its current approach for defining the purpose and need and alternatives (especially for reactors) sufficiently “take[s] account of” the CEQ's Phase 2 final rule and other recent efforts to streamline environmental reviews. The staff would evaluate the reasonably foreseeable environmental effects of the agency's regulatory or licensing decision. In most cases, the reasonable range of alternatives to the regulatory or licensing decision would be defined as and limited to the no action alternative (i.e., not issuing the license) because not engaging in regulatory or licensing decisions is the only reasonable alternative to the agency action. The staff would analyze the reasonably foreseeable environmental effects of the no action alternative (including negative environmental impacts of not implementing the proposed agency action). The environmental effects of the no action alternative may include the environmental impacts from termination of operation and decommissioning, energy conservation, and energy imports, as well as replacement energy options and alternative nuclear material production, processing, and storage. Under this option, the staff would likely consider replacement energy options¹² as reasonably foreseeable consequences of the no action alternative instead of as “alternatives to the proposed agency action.” However, the NRC generally would not consider alternatives to the proposed action that the agency does not have the authority to implement (e.g., siting and energy alternatives).

Similar to Option 1.a, the staff would pursue minor regulatory revisions to update the regulations for consistency with the NEPA amendments (e.g., inserting the word “agency” before “action”), as noted in the rulemaking plan. The staff would update the regulations to insert the word “Federal” before “resources” and would revise NRC NEPA guidance to refer to irreversible and irretrievable commitment of Federal resources.

Pros:

- Improve NRC environmental review efficiency (e.g., reduce review times, and staff and applicant resources).
- More accurately reflect the NRC's regulatory authority than Option 1.a (e.g., the NRC does not have authority for the regulation of other energy sources).

Cons:

- Requires more near-term resources for rulemaking than Option 1.a.
- Stakeholders may perceive that the NRC is not considering a reasonable range of alternatives (e.g., they may prefer that the NRC address other energy sources as separate alternatives, rather than as consequences of the no action alternative).

Recommendation

¹² Replacement energy options would include those listed in the environmental report as well as purchased power (i.e., “energy imports”), delayed retirement, existing sources of power generation in the affected region, and demand side management (i.e., “energy conservation”) (61 FR 28467, 28483; June 5, 1996).

Considering these two options, the staff recommends Option 1.b because it improves the NRC's environmental NEPA review efficiency for licensing and regulatory actions and more accurately reflects the agency's regulatory authority. Enclosure 7 contains the rulemaking plan, and enclosure 8 provides resource information.