
NRC Response to Public Comments

NRC Reviews of Reactor Designs Previously Authorized by U.S. Department of Energy or Department of War

NRC-2025-1503; RIN 3150-AL60

Narrative Comment Summary and Response Report

U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

Office of Nuclear Material Safety and Safeguards

October 2026

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Abbreviations

ACRS	Advisory Committee on Reactor Safeguards
ADAMS	Agencywide Documents Access and Management System
AEA	Atomic Energy Act of 1954
APA	Administrative Procedure Act
ASME	American Society of Mechanical Engineers
CFR	<i>Code of Federal Regulations</i>
DC	Design certification
DOD	U.S. Department of Defense (see DOW)
DOE	U.S. Department of Energy
DOW	U.S. Department of War
EIS	Environmental impact statement
ERA	Energy Reorganization Act of 1974
ES&H	Environment, safety, and health (DOE)
FRN	<i>Federal Register</i> notice
ISG	Interim staff guidance
LMP	Licensing Modernization Project
LWR	Light-water reactor
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act of 1969
NRC	U.S. Nuclear Regulatory Commission
OMB	Office of Management and Budget
PRA	Probabilistic risk assessment
RA	Regulatory analysis
RIS	Regulatory Issue Summary
SDA	Standard design approval

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**U.S. NUCLEAR REGULATORY COMMISSION
RESPONSE TO PUBLIC COMMENTS RECEIVED ON THE PROPOSED RULE
NRC REVIEWS OF REACTOR DESIGNS PREVIOUSLY AUTHORIZED BY
U.S. DEPARTMENT OF ENERGY OR DEPARTMENT OF WAR**

Introduction

This document presents the U.S. Nuclear Regulatory Commission's (NRC's) responses to written public comments received on the proposed rule, "NRC Reviews of Reactor Designs Previously Authorized by U.S. Department of Energy or Department of War." The NRC published the proposed rule in the *Federal Register* on April 2, 2026 (91 FR 16584), for public comment with a 30-day public comment period. The proposed rule is available from the Federal e-Rulemaking website at <https://www.regulations.gov/document/NRC-2025-1503-0001>.

In developing the final rule and supporting guidance, the NRC reviewed all the comments provided in response to the proposed rule. If, as a result of its review of a public comment, the NRC changed the rule, the NRC's response to the comment describes the change.

Comment Overview

The NRC received 136 unique comment submissions from individuals and organizations, with 280 identified comments within those comment submissions. The NRC analyzed all the submissions and determined that 78 submissions are unique and contain substantive content, including 3 of which are form letter masters and 22 of which are copies associated with form letter campaigns with some additional unique text (form letter plus text). Additionally, 36 submissions were copies associated with form letter campaigns. The NRC also received 19 comments that were entirely non-substantive. Finally, the NRC also received 3 duplicate submissions. This report summarizes the 78 unique and responsive submissions received. All comment submissions were consolidated and can be found under Agency Documents and Management System (ADAMS) Accession Nos. ML26126A298 and ML26132A212.

Table 1 identifies all unique comment submissions. The NRC reviewed and annotated the comment submissions to identify separate comments within each submission. Accordingly, a single submission may have several individual comments associated with it. The NRC gave each individual comment within a submission a unique identifier. The NRC's summaries include this unique identifier to identify which individual comments are addressed by each response.

Table 1. Unique Comment Submissions on NRC Reviews of Reactor Designs Previously Authorized by U.S. Department of Energy or Department of War Proposed Rule

Commenter	Commenter Type	Regulations.gov ID No.
Anonymous	Anonymous	NRC-2025-1503-0004
Fred Schofer	Private individual	NRC-2025-1503-0005
Anonymous	Anonymous	NRC-2025-1503-0006
Anonymous	Anonymous	NRC-2025-1503-0007
Anonymous	Anonymous	NRC-2025-1503-0009
Valar Atomics	Nuclear industry company	NRC-2025-1503-0010
Anonymous	Anonymous	NRC-2025-1503-0012
Ryan McIntyre	Private individual	NRC-2025-1503-0013
Anonymous	Anonymous	NRC-2025-1503-0014
Gina Doyle	Private individual	NRC-2025-1503-0015
Anonymous	Anonymous	NRC-2025-1503-0016
Libbe HaLevy	Private individual	NRC-2025-1503-0019
Anonymous	Anonymous	NRC-2025-1503-0020
Laurence Kirby	Private individual	NRC-2025-1503-0022
Richard Barrett	Private individual	NRC-2025-1503-0023
Loring Wirbel	Private individual	NRC-2025-1503-0026
JML Advocates	Advocacy organization/non-governmental organization	NRC-2025-1503-0027
Ava Curtis	Private individual	NRC-2025-1503-0028
ClearPath	Advocacy organization/non-governmental organization	NRC-2025-1503-0033
Anonymous	Anonymous	NRC-2025-1503-0034
Billy Foreman	Private individual	NRC-2025-1503-0035
Lisa Bentz	Private individual	NRC-2025-1503-0036
Sharon Hoffman	Private individual	NRC-2025-1503-0037
Ace Hoffman	Private individual	NRC-2025-1503-0038
Kristin Edmark	Private individual	NRC-2025-1503-0044
Anonymous	Anonymous	NRC-2025-1503-0051
Radiant Industries LLC	Nuclear industry company	NRC-2025-1503-0054
David Pedersen	Private individual	NRC-2025-1503-0056
Jack Strosnider	Private individual	NRC-2025-1503-0059
Deep Fission, Inc.	Nuclear industry company	NRC-2025-1503-0065
Anonymous	Anonymous	NRC-2025-1503-0067
Pilgrim Watch	Advocacy organization/non-governmental organization	NRC-2025-1503-0068
Steve Roddy	Private individual	NRC-2025-1503-0072
Tom Clements	Private individual	NRC-2025-1503-0073
Terence Chan	Private individual	NRC-2025-1503-0077
Linda Seeley	Private individual	NRC-2025-1503-0078

Nuclear Free Hawai'i	Advocacy organization/non-governmental organization	NRC-2025-1503-0079
San Francisco Bay Physicians for Social Responsibility	Advocacy organization/non-governmental organization	NRC-2025-1503-0081
Michael Ravnitzky	Private individual	NRC-2025-1503-0082
San Luis Obispo Mothers for Peace	Advocacy organization/non-governmental organization	NRC-2025-1503-0083
Jan Boudart	Private individual	NRC-2025-1503-0085
LEAF of Hudson Valley	Advocacy organization/non-governmental organization	NRC-2025-1503-0088
Barry Quigley	Private individual	NRC-2025-1503-0089
Stephanie Bilenko	Private individual	NRC-2025-1503-0090
The Healthy Environment Alliance of Utah	Advocacy organization/non-governmental organization	NRC-2025-1503-0091
Jack Spencer and Trevar Kolodny	Private individual	NRC-2025-1503-0093
Cathryn Chudy	Private individual	NRC-2025-1503-0095
Heidi Cody	Private individual	NRC-2025-1503-0096
Peter Fels	Private individual	NRC-2025-1503-0097
The Edison Electric Institute	Other	NRC-2025-1503-0098
Ecological Options Network	Advocacy organization/non-governmental organization	NRC-2025-1503-0099
Theodora Tsongas	Private individual	NRC-2025-1503-0100
No Spray Zone	Advocacy organization/non-governmental organization	NRC-2025-1503-0101
Nuclear Innovation Alliance	Advocacy organization/non-governmental organization	NRC-2025-1503-0102
Catherine Skopic	Private individual	NRC-2025-1503-0103
Lynne Hyerle	Private individual	NRC-2025-1503-0104
HGP Intelligent Energy LLC	Nuclear industry company	NRC-2025-1503-0107
Saskia Hostetler Lippy	Private individual	NRC-2025-1503-0108
Anita Thomas	Private individual	NRC-2025-1503-0109
Oregon Department of Energy	State/local/Tribal government or official	NRC-2025-1503-0112
Anonymous	Anonymous	NRC-2025-1503-0113
Anonymous	Anonymous	NRC-2025-1503-0117
State of New York	State/local/Tribal government or official	NRC-2025-1503-0119
Jacquelyn Drechsler	Private individual	NRC-2025-1503-0121
John Nettleton	Private individual	NRC-2025-1503-0122
Thomas N Gordon	Private individual	NRC-2025-1503-0123
Nuclear Information and Resource Service, et al.	Advocacy organization/non-governmental organization	NRC-2025-1503-0124
Nuclear Energy Institute	Nuclear industry trade association	NRC-2025-1503-0125
The Breakthrough Institute	Advocacy organization/non-governmental organization	NRC-2025-1503-0126

Union of Concerned Scientists	Advocacy organization/non-governmental organization	NRC-2025-1503-0128
Diana Gordon	Private individual	NRC-2025-1503-0129
Wood County Ohio Green Party	Advocacy organization/non-governmental organization	NRC-2025-1503-0130
Pennie O	Private individual	NRC-2025-1503-0132
Main Street Foundation Center for Regulatory Analysis and Engagement	Advocacy organization/non-governmental organization	NRC-2025-1503-0133
ClearPath	Advocacy organization/non-governmental organization	NRC-2025-1503-0134
Sally Jane Gellert	Private individual	NRC-2025-1503-0135
Patricia Marida	Private individual	NRC-2025-1503-0139
LEAD Agency, Inc.	Advocacy organization/non-governmental organization	NRC-2025-1503-0142

1. General Feedback on the Proposed Rule

1.1. General support for the proposed rule

Comment Bin 1.1.A: *General support*

A few commenters expressed support for the proposed rule.¹ A couple of commenters stated that allowing designs previously approved by Department of War (DOW) or Department of Energy (DOE) would leverage the agencies' expertise instead of duplicating them.² One commenter remarked that the safety record of nuclear energy in the U.S. should provide confidence that a less burdensome, equally safe approach can be developed. Describing a long history of NRC and DOE actions that the commenter described as resulting in increasing costs but not higher safety in the nuclear industry, a commenter concluded that the proposed rule is a step in the right direction towards a more streamlined approach.

The commenter further stated that the proposed rule provides an opportunity to shift the paradigm for how commercial nuclear power plants are designed, constructed, and operated, allowing private firms to pursue research, development, and demonstration under DOE's authority and deploy the technology commercially. The commenter remarked that the rule better aligns responsibilities within relevant government agencies. In addition to their support for the rule, the commenter recommended that the NRC be required to accept DOE's technical conclusions and provide an expedited application review.³ Another commenter expressed support for the proposed rule because of the opportunities it will provide for future applicants.⁴

NRC Response: The NRC acknowledges these general statements of support for the rule. The NRC disagrees that it should be required to accept DOE's technical conclusions and therefore provide an expedited application review. As explained in Comment Responses 1.2.B and 2.4.A, while the NRC expects to be able to leverage relevant information from DOE or DOW authorizations where appropriate, the NRC will continue to conduct independent reviews and make its own regulatory decisions. In addition, the NRC acknowledges that the design and testing authorized by DOE or DOW may vary in scope. For example, an authorization could be more limited in scope in comparison to information needed for an NRC application, potentially addressing only a subset of requirements associated with commercial operation (e.g., material qualification for the duration of DOE or DOW authorization, where testing may differ from material qualification for a commercial 40-year lifecycle). In all cases, an applicant is responsible for justifying the applicability and relevance of any DOE or DOW analyses or authorizations it seeks to rely upon.

Accordingly, the NRC did not change the rule language in response to these comments.

¹ NRC-2025-1503-0016; NRC-2025-1503-0093; The Edison Electric Institute (NRC-2025-1503-0098).

² NRC-2025-1503-0093; The Edison Electric Institute (NRC-2025-1503-0098).

³ NRC-2025-1503-0093.

⁴ NRC-2025-1503-0016.

1.2. General opposition to the proposed rule

Comment Bin 1.2.A: *General opposition*

Numerous commenters expressed opposition to the proposed rule.⁵ Several commenters remarked that the rule does not provide sufficient information for the public to review, access, or challenge the proposed changes.⁶ A couple of commenters requested that the rule be withdrawn, with some of the commenters suggesting that it be withdrawn until a set of comprehensive, independent regulatory guidance is provided for public review.⁷ A commenter called the proposed rule “redundant,” stating that current applicants are also free to provide analyses, data, and experiences of DOE and DOW-authorized reactors under existing provisions. This commenter stated that the standards of evaluation do not change under § 50.43(e)(3), as all applicants would still need to meet applicable NRC regulations.⁸

NRC Response: The NRC agrees, in part, and disagrees, in part, with these comments. The NRC agrees that applicants are still required to meet all applicable NRC regulations and that, under existing regulations, applicants are free to provide information from DOE- or DOW-authorized reactor designs.

The NRC disagrees that the rule should be withdrawn and that it is redundant to existing regulations. This rulemaking explicitly establishes a pathway to allow for streamlined reviews for licensing commercial reactor designs that have previously received DOE or DOW authorization and that have been tested and have demonstrated the ability to function safely. Commensurate with the strength of the applicant’s justification for how the prior DOE or DOW authorization supports meeting NRC requirements, this approach is thus intended to support the NRC’s ability to adjust the focus and depth of associated reviews. In conjunction with other activities, this rulemaking is intended to improve NRC licensing review efficiency, and thus capacity, for conducting licensing reviews. In turn, this would contribute to enabling the safe and secure use and deployment of civilian nuclear energy technologies.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 1.2.B: *NRC’s independent review of applications*

A few commenters highlighted the importance of the NRC performing independent evaluations of technologies.⁹ Several commenters stated that independent NRC review is mandated under the Atomic Energy Act of 1954 (AEA)¹⁰ and expressed the need for the NRC to maintain

⁵ NRC-2025-1503-0005; NRC-2025-1503-0007; NRC-2025-1503-0014; NRC-2025-1503-0015; NRC-2025-1503-0023; NRC-2025-1503-0026; NRC-2025-1503-0037; NRC-2025-1503-0044; NRC-2025-1503-0090; The Healthy Environment Alliance of Utah (HEAL Utah) (NRC-2025-1503-0091); NRC-2025-1503-0100; NRC-2025-1503-0108; NRC-2025-1503-0117; Union of Concerned Scientists (NRC-2025-1503-0128); NRC-2025-1503-0139.

⁶ NRC-2025-1503-0023; NRC-2025-1503-0035; NRC-2025-1503-0044; NRC-2025-1503-0056; NRC-2025-1503-0100.

⁷ NRC-2025-1503-0005; NRC-2025-1503-0023; LEAF of Hudson Valley (NRC-2025-1503-0088); NRC-2025-1503-0044; NRC-2025-1503-0037.

⁸ Union of Concerned Scientists (NRC-2025-1503-0128).

⁹ NRC-2025-1503-0051; NRC-2025-1503-0056; NRC-2025-1503-0044; NRC-2025-1503-0026.

¹⁰ NRC-2025-1503-0044; NRC-2025-1503-0056.

independent review of applications.¹¹ One commenter stated that the proposed rule is inconsistent with the NRC's statutory independent review mandate and the DOE and DOW authorization frameworks it proposes to credit.¹² Another commenter stated that the NRC must maintain full independent safety and environmental reviews that incorporate environmental justice protections and cumulative impact assessments. The commenter stated that these reviews should not only rely on "legacy approvals."¹³ Another commenter stated that the NRC must be clearly required to complete an independent review for commercial applications in the final rule; the commenter expressed concern that the proposed rule language is ambiguous on the NRC conducting an independent licensing review for a commercial application.¹⁴

NRC Response: The NRC agrees, in part, and disagrees, in part, with these comments. The NRC agrees that it is important for it to conduct independent reviews, and the NRC will continue to do so regardless of whether an application references a previous DOE or DOW authorization.

The NRC disagrees that this rulemaking is inconsistent with any obligation requiring the NRC to conduct an independent review. This rulemaking neither changes an applicant's obligation to submit a complete application to the NRC nor the NRC's responsibility to conduct an independent review. In addition, the NRC retains the ability to request additional information from applicants to conduct its review and to adjust the focus and depth of its reviews, as appropriate. To enhance clarity, additional explanation has been added to the "Discussion" section of the *Federal Register* notice (FRN).

To the extent comments remark on the NRC's environmental reviews, the details associated with the NRC's environmental reviews are outside the scope of this rulemaking.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 1.2.C: *External agency review standards*

One commenter stated that the streamlined pathway does not provide enough transparency or independence to make decisions that protect the public and expressed concern that the rule is an attempt to bypass safety, environmental, and public review.¹⁵ Another commenter remarked that DOW- or DOE-authorized designs may be subject to less rigorous standards than NRC standards.¹⁶ A commenter stated that DOE and DOW may have different objectives to the NRC that may make them fast-track designs unsuitable for commercial use.¹⁷

NRC Response: The NRC disagrees, in part, and agrees, in part, with these comments. The NRC agrees that the NRC's mission differs from that of DOE and DOW, that the NRC's review processes are separate from DOE and DOW processes, and that NRC requirements may differ from requirements for a DOE or DOW authorization. However, the NRC disagrees that this rulemaking does anything to bypass the NRC's review or any rights of the public. As stated in

¹¹ NRC-2025-1503-0016; Nuclear Innovation Alliance (NRC-2025-1503-0102); State of New York (NRC-2025-1503-0119).

¹² NRC-2025-1503-0005.

¹³ The Healthy Environment Alliance of Utah (HEAL Utah) (NRC-2025-1503-0091).

¹⁴ State of New York (NRC-2025-1503-0119).

¹⁵ NRC-2025-1503-0015.

¹⁶ NRC-2025-1503-0007.

¹⁷ NRC-2025-1503-0051.

Comment Responses 1.2.B and 2.4.A, the NRC will continue to conduct independent reviews and make independent findings.

Further, requirements associated with NRC environmental reviews and NRC adjudications are outside the scope of this rulemaking. In particular, this rulemaking does not affect hearing rights under the AEA, including the ability of an interested person to request a hearing in a proceeding for the granting or issuance of a license to construct or operate a reactor where the underlying application references a DOE or DOW authorization, nor does it alter hearing procedures codified in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 2, “Agency Rules of Practice and Procedure.”

The NRC will continue to conduct these activities transparently, in accordance with its Principles of Good Regulation. This rulemaking does not change the requirement for an applicant to submit a complete application on the docket, and the NRC will follow its processes for controlling associated information, including the handling of sensitive information.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 1.2.D: *New pathway efficiency*

Multiple commenters expressed concerns regarding efficiency, e.g., that efficiency must never come at the expense of public health and safety or democratic accountability,¹⁸ and that the rule must balance efficiency with other factors such as credibility and predictability in order to develop safe, long-lasting regulatory reform.¹⁹ A few commenters stated that the proposed rule benefits stakeholders, such as investors, while putting the general public at risk.²⁰

NRC Response: The NRC agrees, in part, and disagrees, in part, with the comments. The NRC agrees that public health and safety and security are and will continue to be paramount, and the NRC disagrees that the rule places efficiency before protection of the public health and safety or that it puts the public at risk. To that end, the rule language in §§ 50.43(f) and 53.440(a)(1) explicitly states that an application that references a DOE or DOW authorization “must identify how attributes of the authorization satisfy NRC regulations.” Otherwise stated, the same safety and security standards that generally apply to all NRC applicants for a license to construct and operate a commercial reactor facility will also generally apply to applicants that reference a DOE or DOW authorization. For example, the AEA explicitly precludes the Commission from issuing a license if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public. Therefore, the rule continues to prioritize safety and appropriately reflects the importance of regulatory efficiency, credibility, and predictability.

Accordingly, the NRC did not change the rule language in response to these comments.

¹⁸ The Healthy Environment Alliance of Utah (HEAL Utah) (NRC-2025-1503-0091).

¹⁹ Nuclear Innovation Alliance (NRC-2025-1503-0102).

²⁰ NRC-2025-1503-0014; NRC-2025-1503-0117; The Healthy Environment Alliance of Utah (HEAL Utah) (NRC-2025-1503-0091).

1.3. Other general comments on the proposed rule

Comment Bin 1.3.A: *Benefits of new pathways*

A commenter stated the use of previously approved reactor designs is beneficial for promoting clean energy and can incentivize companies to start investing in designs that may have a smoother, cost-saving approval rate.²¹

NRC Response: The NRC acknowledges the comment. The comment supports the proposed rule and suggests no specific changes.

Accordingly, the NRC did not change the rule language in response to this comment.

Comment Bin 1.3.B: *Safe use of nuclear energy*

A commenter stated that the NRC needs to judge applicants closely to ensure only the safest reactors are approved.²² A commenter expressed concern regarding civilian use of nuclear energy and military use.²³

NRC Response: The NRC acknowledges the statement that the NRC needs to ensure the safety of nuclear energy. As stated under Comment Response 1.2.D, this proposed rule does not alter the safety or security standards for an NRC license application review. For example, the AEA explicitly precludes the Commission from issuing a license if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public.

Accordingly, the NRC did not change the rule language in response to this comment.

2. Legal Issues Asserted by Comments

2.1. NRC statutory requirements

Comment Bin 2.1.A: *Public review of safety determinations and conflicts*

A few commenters raised concerns regarding issues about public knowledge and involvement.²⁴ A couple of commenters remarked that the potential use of classified materials would prevent the public from knowing about, examining, or engaging with proposed reactor plans or safety determinations.²⁵ For example, one of these commenters stated that substituting DOW's mission, which relies on classified material, could be a violation of the AEA's non-delegable adequate-protection standard. Further, the commenter remarked that the rule would not allow for public participation opportunities in reactor licensing proceedings despite certain hearing

²¹ NRC-2025-1503-0009.

²² NRC-2025-1503-0016.

²³ NRC-2025-1503-0009.

²⁴ NRC-2025-1503-0100; NRC-2025-1503-0121; Wood County Ohio Green Party (NRC-2025-1503-0130).

²⁵ NRC-2025-1503-0100; NRC-2025-1503-0121.

rights reflected in section 189(a) of the AEA.²⁶ Similarly, another commenter stated that there is no publicly available review of the processes DOE or DOW use to assess reactor design safety, leaving open the possibility that there is no review beyond accepting an applicant's analysis, something the commenter reasoned would violate Title 10 of the *Code of Federal Regulations* and potentially risk nuclear disaster.²⁷

Several commenters echoed comments from a specific commenter (NRC-2025-1503-0005) on potential contradictions between the proposed rule and existing legislation or guidance or potential conflicts introduced by the proposed rule.²⁸ One commenter stated that the NRC will not be able to determine if a proposed reactor that relies on DOE and DOW certifications meets the NRC's requirements and would thus have to reject all applications.²⁹

NRC Response: The NRC disagrees with these comments. First, nothing in this rulemaking affects the right of any person whose interest may be affected by a proceeding to request a hearing on a license application pursuant to section 189(a) of the AEA or 10 CFR Part 2, and nothing in this rulemaking alters the NRC's procedures or requirements governing such proceedings. Further, an applicant will still be required to submit a complete license application on the docket, and the NRC will make that information publicly available or withhold it from public disclosure in accordance with its established processes. For example, where National Security Information or Restricted Data is involved in an adjudicatory proceeding, 10 CFR Part 2, Subpart I, provides procedures to effectively safeguard and prevent disclosure to unauthorized persons with minimum impairment of procedural rights.

Next, nothing in this rulemaking delegates the NRC's authorities to any other agency or its obligation to faithfully apply the AEA's adequate protection standard. As reiterated throughout this comment response document, the NRC will continue to conduct independent reviews, make independent safety findings, and make its own regulatory decisions. The NRC acknowledges that DOE and DOW have processes related to their reactor authorizations that are different and separate from the NRC's processes. Such DOE and DOW processes are not within the scope of this rulemaking nor the NRC's jurisdiction. Nevertheless, if an applicant seeks to support its NRC application via reference to a DOE or DOW authorization, the applicant must submit a complete application to the NRC demonstrating how attributes of the authorization satisfy particular NRC requirements, and the NRC will determine the adequacy of that demonstration.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 2.1.B: *Inadequate safety standards*

Citing *Union of Concerned Scientists v. NRC*, a form letter campaign reasoned that by introducing a vague standard of "safe," the proposed rule does not indicate the NRC will apply the adequate protection standard, which requires that licensing decisions be based entirely on safety without regard to costs. This commenter also stated that the proposed rule violates the AEA and Energy Reorganization Act of 1974 (ERA) by providing little justification for its changes, only briefly referring to the National Technology Transfer and Advancement Act and

²⁶ NRC-2025-1503-0121.

²⁷ Wood County Ohio Green Party (NRC-2025-1503-0130).

²⁸ NRC-2025-1503-0037; NRC-2025-1503-0038.

²⁹ NRC-2025-1503-0037.

promising to offer future guidance.³⁰ Commenters also provided rule language recommendations for the proposed rule.³¹

NRC Response: The NRC disagrees with these comments. The NRC disagrees that the rule indicates that the adequate protection standard will not apply to applications that reference a DOE or DOW authorization. Neither the language in the proposed rule for §§ 50.43(e)(3) and 53.440(a)(1) nor the discussion in the preamble to the proposed rule introduce or purport to introduce a new safety standard. Rather, the rule language explicitly states that references to DOE or DOW authorizations “must identify how attributes of the authorization satisfy NRC regulations,” one primary purpose of which is to implement the AEA’s adequate protection standard. The final rule language continues to include this requirement.

The NRC also disagrees that the rule violates the AEA and the ERA by providing inadequate justification or otherwise. In the preamble to the proposed rule, the NRC explained that the revisions reflect the explicit option for NRC applicants to reference a design that has been previously authorized by the DOE or DOW in an NRC application. The NRC further explained that it generally expects certain efficiencies and cost savings for commercial license applicants and the NRC where such an authorization may be referenced. In addition, the reference to the National Technology Transfer and Advancement Act in the “Voluntary Consensus Standards” section is not the justification for the rule revisions; it merely notes that the rule does not constitute the establishment of a standard that contains generally applicable requirements in the context of that Act. Furthermore, while the NRC noted in the proposed rule that related guidance would be forthcoming, that guidance is not necessary for implementation of the rule and is intended to provide a roadmap identifying foundational areas of reactor facility safety and the protection of public health and safety early in the development of an application.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 2.1.C: NRC’s application review focus

A commenter—writing that section 182 of the AEA does not statutorily require the NRC to revisit established information; that E.O. 14300 directs the NRC to avoid revisiting addressed risks; and that the proposed rule lacks a clear limit on the NRC’s scope of review—recommended that the rule explicitly state, “NRC review should be focused on new or increased risks arising from differences in design, operation, or siting” and “[previously] evaluated and accepted safety functions, risks, and design features should not be reanalyzed absent identified differences or new information that materially affects the underlying safety conclusions.” The commenter recommended, as an example, establishing a rebuttable presumption that DOE or DOW technical conclusions from DOE and DOW authorizations provide an adequate technical basis for the NRC’s review of an application referencing the DOE or DOW authorization where those determinations are materially similar to findings required under NRC regulations, while preserving the NRC’s authority to reach different conclusions where warranted and to make independent determinations. The commenter reasoned that this would allow the NRC to focus on applicability and differences.³²

³⁰ Nuclear Information and Resource Service, et al. (NRC-2025-1503-0124) [Form Letter Master].

³¹ Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133); Deep Fission, Inc. (NRC-2025-1503-0065).

³² Deep Fission, Inc. (NRC-2025-1503-0065).

NRC Response: The NRC disagrees with this comment. The NRC recognizes there will be overlapping topical areas considered in DOE and DOW authorization reviews that will involve information that the NRC will seek to leverage to the maximum extent practical in its own independent reviews, including by risk-informing its reviews, and adjusting the focus and depth of review, as appropriate. However, the NRC declines to modify the rule to create the rebuttable presumption suggested by the commenter because it is unclear, in this context, how it would be consistent with the NRC’s commitment to conducting independent reviews.

In particular, DOE and DOW conduct their respective reactor programs to ensure safe and secure activities within their jurisdictions. However, the Commission and NRC staff are not charged with performing DOE and DOW authorization reviews, and the DOE and DOW authorization reviews do not involve the application of the NRC’s regulations to the specific reactor design that is the subject of the DOE or DOW authorization review. Rather, DOE and DOW set and apply their own standards and make determinations fit for the purposes of their programs. To be clear, the NRC recognizes that such standards and associated analyses or testing may also be sufficient to satisfy particular NRC requirements. That is why this rule focuses on creating an explicit pathway allowing for NRC applicants to show how an attribute of a prior DOE or DOW authorization is sufficient to bridge the gap between determinations made by DOE or DOW and determinations that the NRC makes. In this way, this rule allows DOE and DOW authorizations to be credited to the extent appropriate while also maintaining the Commission’s independent statutory role.

Accordingly, no changes to the rule language were made as a result of this comment.

2.2. Executive orders (e.g., E.O. 14299, E.O. 14300, E.O. 14301, E.O. 14302)

Comment Bin 2.2.A: *Executive orders*

A few commenters voiced concerns regarding the proposed rule and Executive Orders.³³ A commenter remarked that the proposed rule, as part of a broader shift indicated by E.O. 14300, would undermine meaningful public participation by streamlining nuclear licensing and prioritizing speed over industry accountability. The commenter expressed concern that recent rulemakings could eliminate public input in safety review, particularly impacting the democratic participation of populations already burdened by radioactive exposure.³⁴ Voicing concerns about tradeoffs between safety and efficiency under the proposed rule, a commenter wrote that the NRC must consider that many Executive Orders “have been found to be illegal.”³⁵ Another commenter wrote that the E.O. incorrectly treats safety determinations by mission-driven or promotional agencies similarly to those of the NRC, a civilian safety regulator, ignoring substantial differences, such as differing risk tolerances in military contexts versus civilian ones.³⁶

NRC Response: While section 5(d) of E.O. 14300 was the impetus for this rulemaking, comments on E.O. 14300, other Executive Orders, and other recent rulemaking activity referenced in the comments are outside the scope of this rulemaking. For this rulemaking,

³³ The Healthy Environment Alliance of Utah (HEAL Utah) (NRC-2025-1503-0091); Wood County Ohio Green Party (NRC-2025-1503-0130); Oregon Department of Energy (NRC-2025-1503-0112).

³⁴ The Healthy Environment Alliance of Utah (HEAL Utah) (NRC-2025-1503-0091).

³⁵ Wood County Ohio Green Party (NRC-2025-1503-0130).

³⁶ Oregon Department of Energy (NRC-2025-1503-0112).

consistent with authorities and obligations under the AEA and other applicable laws, the NRC exercised its independent, expert judgment to determine the most appropriate pathway for leveraging technical information from prior DOE or DOW reactor authorizations, where referenced in certain NRC applications.

To the extent that the comments raise concerns regarding the effect of the rule on public participation in nuclear licensing proceedings or safety and efficiency, the NRC disagrees with these comments. As explained in Comment Response 2.1.A, nothing in this rulemaking affects the right of any person whose interest may be affected by a proceeding to request a hearing on a license application pursuant to section 189(a) of the AEA or 10 CFR Part 2, and nothing in this rulemaking alters the NRC's procedures or requirements governing such proceedings. Further, the rule reflects the principle that efficiencies may be achieved where an applicant appropriately references and justifies information from a prior DOE or DOW authorization. As reiterated throughout this comment response document, in all cases, the NRC will continue to conduct an independent review, and nothing in this rule reduces safety or security.

Accordingly, the NRC did not change the rule language in response to these comments.

2.3. Administrative Procedure Act (APA)

Comment Bin 2.3.A: APA adherence

Several commenters, including a form letter campaign, expressed concerns regarding the proposed rule's adherence to the APA.³⁷ A couple of commenters voiced specific concerns about the adequacy of the public's ability to comment or provide input for the proposed rule.³⁸ For example, one such commenter urged the NRC to withdraw the proposed rule, reasoning that its lack of specificity prevents meaningful opportunity for public comment or assessment of its impact on NRC review of license applications.³⁹ The other commenter stated that finalizing the rule without issuing draft implementing guidance violates notice-and-comment requirements under the APA, as the public cannot assess a regulatory framework without its operative details.⁴⁰

A different commenter wrote that by failing to provide an objective standard to determine when a DOE or DOW authorization supports an NRC licensing finding, the proposed rule lacks a "defined regulatory benchmark," thus, failing to both meet the APA's requirements for reasoned decisions or provide fair notice of the proposed rule's demands.⁴¹ Expressing concerns about the proposed rule's vagueness and enforceability, a form letter campaign concluded that the proposed rule violates the APA's requirement that agency actions must not be arbitrary and capricious.⁴²

NRC Response: The NRC disagrees with these comments. The NRC has provided adequate notice and sufficient opportunity to comment on the proposed rule and has supplied a well-

³⁷ NRC-2025-1503-0005; NRC-2025-1503-0023; Nuclear Information and Resource Service, et al. (NRC-2025-1503-0124) [Form Letter Master].

³⁸ NRC-2025-1503-0005; NRC-2025-1503-0023.

³⁹ NRC-2025-1503-0023.

⁴⁰ NRC-2025-1503-0005.

⁴¹ NRC-2025-1503-0005.

⁴² Nuclear Information and Resource Service, et al. (NRC-2025-1503-0124) [Form Letter Master].

reasoned basis for the rule. To that end, the preamble to the proposed rule includes a plain-language description of the revisions, an explanation of the effects of the revisions, the proposed amendatory text, and an unofficial redline strikeout version to facilitate public comment. The NRC also disagrees that the rule is vague and that it lacks “defined regulatory benchmark.” The rule language for both §§ 50.43(f) and 53.440(a)(1) specifies that applicants that reference a prior DOE or DOW authorization must explain how attributes of the authorization meet applicable NRC regulations. That is, the same regulations that generally apply to reactor applicants that do not reference a prior DOE or DOW authorization apply to those that do, and those regulations have all been promulgated in compliance with the APA.

In addition, the NRC disagrees that publishing the proposed rule separate from draft guidance violates the APA. The NRC acknowledges that it published for comment a related draft Interim Staff Guidance (ISG) document approximately two weeks following the publication of the proposed rule. However, the APA does not require the issuance of draft guidance concurrently with a proposed rule, and the meaning of the rule and its implementation are not dependent on that draft ISG or other guidance. Consistent with this approach, the draft ISG explains that it is intended to serve as a roadmap to NRC requirements that pre-applicants can consider while establishing their DOE or DOW authorization request by compiling select existing, foundational NRC regulations and associated guidance in one document (91 FR 20717, 20718; April 17, 2026).

Accordingly, the NRC did not change the rule language in response to these comments.

2.4. NRC independence

Comment Bin 2.4.A: *Proposed rule would impede the NRC's independence*

Numerous commenters wrote that the proposed rule would weaken the NRC's role as an independent regulator and safeguard.⁴³ Several commenters, including multiple form letter campaigns, argued that the NRC's independent safety review is non-delegable under the AEA and cannot be replaced by DOE or DOW authorizations.⁴⁴ Several commenters stated that the D.C. Circuit Court of Appeals decision in *Union of Concerned Scientists v. NRC* confirmed that the AEA's adequate protection standard is non-delegable.⁴⁵ A commenter argued that the NRC is an independent Federal agency and is not obligated to honor any Executive Order.⁴⁶

Numerous commenters including a form letter campaign argued that the proposed rule would compromise the purpose of the ERA to separate the regulation and the promotion and

⁴³ NRC-2025-1503-0015; NRC-2025-1503-0019; NRC-2025-1503-0020; NRC-2025-1503-0022; NRC-2025-1503-0034; NRC-2025-1503-0035; NRC-2025-1503-0036; NRC-2025-1503-0038; LEAD Agency, Inc. (NRC-2025-1503-0142).

⁴⁴ JML ADVOCATES (NRC-2025-1503-0027) [Form Letter Master]; NRC-2025-1503-0056; Pilgrim Watch (NRC-2025-1503-0068); NRC-2025-1503-0073; San Francisco Bay Physicians for Social Responsibility (NRC-2025-1503-0081); San Luis Obispo Mothers for Peace (NRC-2025-1503-0083); LEAF of Hudson Valley (NRC-2025-1503-0088); NRC-2025-1503-0095, Nuclear Information and Resource Service, et al. (NRC-2025-1503-0124) [Form Letter Master].

⁴⁵ LEAF of Hudson Valley (NRC-2025-1503-0088); NRC-2025-1503-0005; NRC-2025-1503-0103.

⁴⁶ Union of Concerned Scientists (NRC-2025-1503-0128).

development of nuclear power.⁴⁷ A commenter wrote that Congress established this arrangement because it recognized that nuclear technology must be “legally, functionally, and culturally decoupled from its regulation” to ensure public safety. The commenter added that this “statutory insulation” is a reason why U.S. nuclear technology is trusted nationally and globally and ensures that an NRC license is a credible and independent certification.⁴⁸

A commenter wrote that the AEA charges only the NRC with making independent safety findings for commercial reactor licenses. Specifically, the commenter wrote that section 182(a) of the AEA requires applicants to provide information to the NRC to confirm the issuance of a license will not be “inimical to the health and safety of the public” and that this finding must rest on the NRC’s own independent technical judgment, not that of another executive branch agency. The commenter added that in *Union of Concerned Scientists v. NRC*, the D.C. Circuit Court of Appeals found that the AEA’s adequate-protection standard cannot be satisfied by reference to economic costs or other non-safety considerations, and this same logic would inhibit reliance on prior DOE or DOW authorizations. The commenter argued that the rule should include a statement that DOE and DOW authorization information may inform, but may not substitute for, the NRC’s own independent safety finding, and that the NRC retains full authority to require whatever additional analysis is necessary to support that finding.⁴⁹ A form letter campaign wrote that they agreed with this comment.⁵⁰

A commenter wrote that the final rule must explicitly preserve the NRC’s independent statutory authority to evaluate reactor safety. The commenter argued that the NRC’s authority is grounded in a specific mandate to evaluate whether reactor designs and their proposed applications meet established safety requirements, and the proposed rule cannot alter the requirement that the NRC independently determine compliance with its governing statutes and regulations and act as the final decision-maker on safety. The commenter added it is acceptable for prior testing and authorization conducted by other Federal entities to serve as inputs to the NRC’s evaluation, but that these findings are not inherently equivalent to a determination of compliance with the NRC’s requirements. The commenter wrote that the NRC risks ceding its statutorily defined decision-making authority if it does not assess whether conditions, assumptions, and the scope of previous evaluations align with the NRC’s specific required criteria.⁵¹

A commenter argued that the use of DOE or DOW resources to assist the NRC in collaborative and efficient review of designs can be accomplished under existing NRC regulations, but the proposed rule would surrender the NRC’s mandated regulatory authority.⁵²

A commenter wrote that the proposed rule could be read to place substantive reliance on prior determinations made under the DOE or DOW, when the AEA states that the authority to license and regulate civilian nuclear power reactors falls under the NRC. The commenter wrote that the rule text or preamble should be updated to indicate that the NRC retains sole authority and

⁴⁷ NRC-2025-1503-0012; NRC-2025-1503-0013; NRC-2025-1503-0015; NRC-2025-1503-0077; NRC-2025-1503-0113 [Form Letter Master]; State of New York (NRC-2025-1503-0119); NRC-2025-1503-0121; Wood County Ohio Green Party (NRC-2025-1503-0130).

⁴⁸ Oregon Department of Energy (NRC-2025-1503-0112).

⁴⁹ NRC-2025-1503-0005.

⁵⁰ NRC-2025-1503-0028 [Form Letter Master].

⁵¹ Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

⁵² NRC-2025-1503-0077.

accountability for licensing determinations, and that any prior authorization, testing, or operating experience from other Federal programs is treated solely as supporting information that must be independently evaluated and found acceptable under NRC requirements.⁵³ A commenter argued that, even when prior Federal information is leveraged, certain areas must remain within the NRC's independent review to satisfy the AEA, including site-specific hazards, operational programs, emergency planning, defense-in-depth evaluations, and plant-level risk integration.⁵⁴ A commenter argued that the rule should be amended to require an independent validation of any prior DOE or DOW approvals against the NRC's standards.⁵⁵ A commenter wrote that the NRC must be allowed to fully vet new technologies and conduct its own independent safety evaluations.⁵⁶ A commenter argued that the reliance on leveraging prior Federal approvals would narrow the scope and depth of the NRC's analysis in key technical areas.⁵⁷

A commenter wrote that the NRC's independent authority is essential to preserving public confidence in the nuclear regulatory system and argued that if stakeholders perceive that licensing decisions are being driven by findings from other agencies without sufficient NRC review then confidence in the system may be undermined. The commenter suggested the NRC must provide transparency in how prior findings are evaluated and clarity regarding the NRC's role in that process.⁵⁸ A commenter argued that if the NRC credited DOE or DOW findings instead of performing its own independent review then this would damage the NRC's reputation as an independent nuclear regulator.⁵⁹ A commenter wrote that the NRC must avoid the appearance of being seen as a junior partner in efforts with the DOE and executive branch to promote nuclear energy, and must maintain independence "in fact" and "in appearance" in order to fulfil its statutory obligations and protect the public.⁶⁰ A commenter argued that under the proposed rule the NRC would no longer be an independent agency and its rules would be subject to executive branch review with the DOE directing NRC decisions.⁶¹

A form letter campaign wrote that the proposed rule places responsibility on applicants to demonstrate that the standards of DOE and DOW approvals comply with the NRC's regulations which excuses the NRC's statutory responsibilities to independently review designs. The commenter added that the proposed rule would see the NRC shirk its regulatory responsibilities and act as a rubber stamp for reactor reviews.⁶² A commenter argued that the proposed rule would eliminate the NRC's regulatory function as no corporation looking to build a new reactor would submit their design to the NRC when they could "submit them to the inadequate review by the DOE or DOW instead."⁶³ A commenter wrote that the NRC is much more experienced in licensing commercial reactors compared to DOE or DOW and has the required staff and processes to conduct independent reviews.⁶⁴

⁵³ NRC-2025-1503-0089.

⁵⁴ NRC-2025-1503-0082.

⁵⁵ NRC-2025-1503-0013.

⁵⁶ NRC-2025-1503-0051.

⁵⁷ The Healthy Environment Alliance of Utah (HEAL Utah) (NRC-2025-1503-0091).

⁵⁸ Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

⁵⁹ State of New York (NRC-2025-1503-0119).

⁶⁰ Oregon Department of Energy (NRC-2025-1503-0112).

⁶¹ NRC-2025-1503-0100.

⁶² Nuclear Information and Resource Service, et al. (NRC-2025-1503-0124) [Form Letter Master].

⁶³ Wood County Ohio Green Party (NRC-2025-1503-0130).

⁶⁴ State of New York (NRC-2025-1503-0119).

A commenter stated that, to fulfil E.O. 14300, the NRC would need to issue a number of exemptions when approving designs authorized by DOE or DOW, ceding a significant part of its own statutory authority. However, the commenter argued that the proposed rule does not actually go this far and does not direct the NRC to expedite approvals of designs that do not satisfy its regulations.⁶⁵

A commenter wrote they agreed with the NRC's position that there will be no "rubber stamping" of DOE or DOW approvals. However, the commenter wrote that the final rule should clarify that prior DOE or DOW authorization may inform, but does not substitute for, the NRC's independent safety determination.⁶⁶

A commenter wrote that the proposed rule could be read as crediting a DOE or DOW authorization to effectively approve an application submitted to the NRC without sufficient review. The commenter wrote that the NRC should refine the proposed rule to clarify that it will conduct an independent safety review that considers the testing data and operating experience produced by DOE and DOW reactors demonstrations, and clarify that the NRC staff's risk-informed review of an application cannot avoid independent review of testing data and operating experience or reduce the required review in a way that amounts to simply crediting authorization findings from DOE or DOW.⁶⁷

NRC Response: The NRC agrees to the extent the comments suggest that the NRC continue to conduct independent reviews. The NRC disagrees that the rule in any way undermines the NRC's statutory role as an independent safety and security regulator. Nothing in this rule delegates to DOE, DOW, or any other agency the NRC's functions to evaluate a request for NRC approval; nor does the rule allow the NRC to forego an independent review. Regardless of whether an applicant references a prior DOE or DOW authorization, it remains the applicant's responsibility to demonstrate compliance with all applicable requirements under the AEA and NRC regulations, and the NRC will continue to conduct the independent assessments necessary to confirm whether such requirements have indeed been satisfied. The NRC acknowledges that the design and testing authorized by DOE or DOW may vary in scope. For example, an authorization could be more limited in scope in comparison to information needed for an NRC application, potentially addressing only a subset of requirements associated with commercial operation (e.g., material qualification for the duration of a DOE or DOW authorization may differ from material qualification for a commercial 40-year lifecycle). Where an NRC applicant references a prior design authorized and tested by DOE or DOW, the applicant's responsibility includes justifying the applicability and relevance of any DOE or DOW analyses or authorizations it seeks to rely upon, and where it does so, the NRC may be able to tailor the focus and depth of its review. Furthermore, the NRC retains its authorities with respect to its interactions with applicants regardless of whether the applicant has referenced a prior DOE or DOW authorization, including the ability to request additional information from the applicant and the ability to deny or condition a license or other form of regulatory approval, as appropriate.

The NRC also disagrees with the comments suggesting that the new rule text should be modified to reflect the NRC's independent review obligations. For example, comments suggested that the rule text should be modified to state that a prior DOE or DOW authorization may inform but is not a substitute for an independent NRC review. The NRC agrees that this principle is accurate in its characterization; however, the NRC believes that the rule text

⁶⁵ Union of Concerned Scientists (NRC-2025-1503-0128-0003).

⁶⁶ Nuclear Innovation Alliance (NRC-2025-1503-0102).

⁶⁷ State of New York (NRC-2025-1503-0119).

sufficiently reflects this principle. Moreover, the broader, general principle that the NRC will conduct an independent review for a request for regulatory approval, regardless of the source of the information that an applicant uses to support its application, is at the core of the NRC's mission, not just the specific case of an application referencing a prior DOE or DOW authorization. The NRC declines to revise the rule text as suggested by these comments as it could raise the question of whether the principle applies where the NRC regulations do not explicitly state as such.

Accordingly, the NRC did not change the rule language in response to these comments; however, to enhance clarity, additional explanation regarding the subject of the independence of NRC's licensing review process has been added to the "Discussion" section of the FRN.

Comment Bin 2.4.B: *Public participation would be harmed by the proposed rule*

Several commenters, including a form letter campaign, expressed concern that the public would not be able to access or challenge DOE or DOW authorizations.⁶⁸ A couple of commenters argued that safety documents in the DOE Reactor Pilot Program are not on any public docket, and these "secret safety reviews" would serve as the legal basis for commercial reactor licenses.⁶⁹ A commenter argued that section 189(a) of the AEA guarantees a statutory right for the public to participate in an NRC contested licensing proceeding, and this is undermined if the operative safety determination is made by DOE or DOW staff applying criteria not on the public record.⁷⁰ A commenter argued that DOE does not seek public comments on its projects, meaning the public will be ignored in the NRC's licensing considerations under the proposed rule.⁷¹

A commenter argued that background information, analyses, and decision bases, including previously classified information, should be made accessible to the public in order to maintain the public's trust that the NRC has appropriately evaluated the safety aspects of new designs.⁷² A commenter wrote that the official Japanese government report on the Fukushima incident indicated it was caused by "willful negligence and prioritizing the goals of the organization before the safety of the public." The commenter further stated the proposed rule would establish "secret licensing" and encourage more of the same behavior.⁷³ A commenter argued that a lack of insight for the public into the DOE or DOW safety reviews would circumvent the process that considers input from all stakeholders, compromising the existing system of checks and balances "that have kept the public relatively safe for over 50 years."⁷⁴ Several commenters including a form letter campaign expressed concern that classified DOE or DOW materials could form part

⁶⁸ NRC-2025-1503-0019; NRC-2025-1503-0020; JML ADVOCATES (NRC-2025-1503-0027) [Form Letter Master]; NRC-2025-1503-0034; NRC-2025-1503-0035; NRC-2025-1503-0036; San Luis Obispo Mothers for Peace (NRC-2025-1503-0083); NRC-2025-1503-0100; NRC-2025-1503-0135; NRC-2025-1503-0139; NRC-2025-1503-0139; NRC-2025-1503-0132.

⁶⁹ NRC-2025-1503-0078; Nuclear Free Hawai'i (NRC-2025-1503-0079); Ecological Options Network (NRC-2025-1503-0099).

⁷⁰ NRC-2025-1503-0005.

⁷¹ NRC-2025-1503-0073.

⁷² State of New York (NRC-2025-1503-0119).

⁷³ Ecological Options Network (NRC-2025-1503-0099).

⁷⁴ No Spray Zone (NRC-2025-1503-0101); NRC-2025-1503-0104.

of a licensing basis for commercial reactors that would prevent public review and input.⁷⁵ A couple of commenters argued that the proposed rule would eliminate the public's statutory right to participate.^{76, 77}

NRC Response: The NRC disagrees with the comments asserting that the rule would inhibit public participation in NRC licensing proceedings. As clarified in the preamble to this rule and as reiterated in numerous responses to comments in this document, the NRC will make its own regulatory decisions, and DOE or DOW will not make safety determinations for the NRC. That is, this rulemaking concerns certain applications submitted to the NRC that reference a prior DOE or DOW authorization. As discussed in Comment Responses 1.2.C and 2.1.A, such an application, if accepted for docketing by the NRC, would be subject to applicable procedures codified in 10 CFR Part 2, including the procedures for an opportunity to request an adjudicatory hearing and procedures for adjudicatory proceedings involving Restricted Data and/or National Security Information. Additionally, this rulemaking does not change the requirement for an applicant to submit a complete application on the docket, and the NRC will follow its processes for controlling such information, including the handling of sensitive information.

The comments concerning DOE- or DOW-specific processes are outside the scope of this rulemaking. In the same way that DOE or DOW do not prescribe the processes for the NRC to conduct its independent reviews, the NRC does not prescribe the processes that DOE or DOW use regarding exercises of authority within their jurisdiction.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 2.4.C: *Mixed or supportive comments on the proposed rule's impact on the NRC's independence*

A commenter wrote that sections 161 and 182(a) of the AEA give the NRC broad discretion to define both the information required in a license application and the scope and focus of its review. The commenter wrote that the U.S. Court of Appeals for the Sixth Circuit found in *Kelley v. Selin* that the AEA permits the NRC to determine the information necessary to support the factual findings of the agency, which is sufficient to support a rulemaking directing the NRC to leverage prior DOE or DOW analyses, testing, prototype operation, and operating experience to the maximum extent permitted under the AEA and the NRC's regulations, and to adjust the focus and depth of its technical review. The commenter added that the NRC must retain authority to require whatever additional information is necessary to make the findings required by the AEA and the NRC's regulations, and that the final rule cannot displace the NRC's own independent determination of reasonable assurance of adequate protection by transferring it to another agency.⁷⁸

NRC Response: The NRC agrees with these comments to the extent they suggest that sections 161 and 182(a) of the AEA confer broad discretion to the NRC. The NRC reaffirms that it continues to retain the authority to require additional information necessary to make findings required by the AEA and NRC regulations, and that the rule does not transfer or purport to transfer any of the NRC's functions to another agency.

⁷⁵ San Luis Obispo Mothers for Peace (NRC-2025-1503-0083); NRC-2025-1503-0037; LEAF of Hudson Valley (NRC-2025-1503-0088); NRC-2025-1503-0113 [Form Letter Master].

⁷⁶ NRC-2025-1503-0078; Nuclear Free Hawai'i (NRC-2025-1503-0079).

⁷⁷ NRC-2025-1503-0005.

⁷⁸ Nuclear Energy Institute (NRC-2025-1503-0125).

Accordingly, the NRC did not change the rule language in response to this comment.

3. Background and Need for Rulemaking/Purpose and Scope of the Proposed Rule

Comment Bin 3.A: *Need for rulemaking*

A commenter expressed support for the need for the proposed rule. Articulating that duplicative review burdens applicants and agencies; limits the coordination of the Federal Government; can discourage investment and development; and undermines the United States' technological leadership, the commenter expressed support for the proposed rule as "justified and necessary." The commenter elaborated that the proposed rule's effectiveness would depend on its clarity and structure but concluded that "eliminating unnecessary duplication" does not constitute a "relaxation of standards" but an improvement in their application. Voicing further support for the proposed rule, the commenter discussed the need to incorporate demonstrated performance and previous data into the review process and remarked that alignment of nuclear licensing with prior testing and authorization is reflective of evolving regulatory processes and agency expertise.⁷⁹

A commenter voiced concerns regarding the need for the proposed rule. The commenter, despite acknowledging that collaboration between the NRC, DOE, and DOW offers benefits such as safer and more robust commercial designs for licensing, reasoned that respective authorization processes serve "fundamentally different" functions and expressed concern about the challenges and inconsistencies of applying DOE and DOW authorization to NRC licensing requirements. Accordingly, the commenter concluded that the proposed rule should focus not on direct adoption of DOE and DOW authorization decisions by the NRC or a significant transfer of licensing authority, but rather improvement of usability and transferability of relevant data that preserves NRC decision-making. Based on this reasoning as well as their statement that the NRC has not demonstrated the proposed rule will reduce burden, the commenter said that the NRC has not shown why such a change requires codification, as opposed to guidance, such as in the form of a Regulatory Issue Summary (RIS) stating that test and operational data collected by DOE or DOW reactors can be used in license applications. The commenter urged the NRC to provide further explanation and clarification.

The same commenter, while acknowledging that the proposed rule appropriately narrows E.O. 14300's directive by preserving NRC independence and standards, stated that the rule formalizes the application of an evidentiary practice for which the agency already has authority without creating an expedited pathway for previous DOE or DOW authorizations. Thus, the commenter remarked that the proposed rule's practical value will depend on accompanying guidance, rather than additional changes to the rule itself.⁸⁰

One commenter stated that the proposed changes are unnecessary – asserting that existing § 50.43(e)(1) and (2) are sufficient to handle the goals of the proposed revisions.⁸¹ Another commenter stated that the flexibility described under the proposed rule already exists under

⁷⁹ Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

⁸⁰ The Breakthrough Institute (NRC-2025-1503-0126).

⁸¹ NRC-2025-1503-0006.

§ 50.43(e)(1) and (2) to allow applicants to provide technical justification from any appropriate source; the commenter recommended that the NRC not issue a final rule and instead issue a RIS stating that test and operational data collected by DOE and DOW authorized reactors can be used in a license application.⁸²

NRC Response: The NRC acknowledges comments supporting the background and need for the proposed rule.

The NRC disagrees that the objectives of this rulemaking would be better achieved via the issuance of a RIS in lieu of a rulemaking. The NRC acknowledges that § 50.43(e)(1) and (e)(2) offers pathways for nuclear reactor designs that differ significantly from light-water reactor (LWR) designs to provide adequate justification to accomplish their safety functions, which could include technical aspects from a DOE or DOW review. This rulemaking provides an additional, explicit option for meeting the requirements in § 50.43(e). This rule is aimed at providing longstanding reliability, and as stated in the proposed rule's preamble, providing additional clarity by explicitly establishing an option for NRC Class 103 license applicants to directly leverage a prior DOE or DOW authorization when demonstrating compliance with NRC regulatory requirements.

Accordingly, the NRC did not change any rule language in response to these comments.

4. Major Provisions of the Proposal

4.1. Pathway in 10 CFR Parts 50 and 52 for streamlined licensing reviews of commercial reactor designs that have previously received DOE or DOW authorization

4.1.1. New option in § 50.43(e) for applicants to directly reference a prior DOE or DOW authorization when demonstrating compliance with NRC regulatory requirements

Comment Bin 4.1.1.A: *Support for new option in § 50.43(e)*

A few commenters supported the proposed new option in § 50.43(e).⁸³ One commenter stated that the proposed rule appropriately acknowledges that DOE and DOW testing and authorization processes can provide high-quality, relevant safety evidence, reducing unnecessary duplication and improving licensing efficiency. The commenter further expressed that the rule will lower barriers for advanced and non-LWR technologies.⁸⁴

One commenter stated that the proposed change will remove duplication of effort for the NRC by avoiding the need to conduct de novo engineering evaluations on designs previously tested and authorized by the DOE or DOW.⁸⁵

One commenter stated that while there may be differences between DOE and DOW authorization frameworks, these differences would be areas for increased focus during NRC

⁸² ClearPath (NRC-2025-1503-0134).

⁸³ Valar Atomix (NRC-2025-1503-0010); Deep Fission, Inc. (NRC-2025-1503-0065); Nuclear Energy Institute (NRC-2025-1503-0125).

⁸⁴ Deep Fission, Inc. (NRC-2025-1503-0065).

⁸⁵ Valar Atomix (NRC-2025-1503-0010).

review rather than a reason to reject the prior authorization. The commenter supported the approaches taken in the proposed rule and also in draft DANU-ISG-2026-XX with respect to balancing prior DOE and DOW authorizations to the maximum extent practical while also focusing on site-specific factors.⁸⁶

One commenter underscored the importance of the proposed changes for the economic viability of their business model.⁸⁷

NRC Response: The NRC acknowledges these comments. The comments support the proposed rule and suggest no specific changes.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 4.1.1.B: *Opposition for new option in § 50.43(e)*

Several commenters expressed concerns about differences between DOE and DOW and NRC review processes or criteria.⁸⁸ One commenter stated that DOE itself has acknowledged that its authorization process and qualifications of its technical staff are inadequate for the regulation of new technologies and described DOE standards that the commenter described as weaker than NRC ones. The commenter expressed concern about a recent watering down of DOE standards in the Reactor Pilot Program.⁸⁹ Another commenter expressed concerns about converting designs previously approved for experimental or military use to commercial use without additional review of safety, applicability, efficiency, cost-effectiveness, need, alternatives, waste disposal, or fuel.⁹⁰ Another commenter said that DOE and DOW processes do not continually assess prolonged vulnerabilities including but not limited to site-based cumulative effects, environmental impacts, waste management, decommissioning, groundwater protection, or lasting public health outcomes. The commenter expressed specific concerns about limiting the NRC review scope to “new or increased risks” because the commenter stated that the NRC cannot determine if a risk has been sufficiently assessed without evaluating prior DOE and DOW findings.⁹¹

A commenter asked what roles the NRC staff will have relative to DOE or DOW staff, and what the NRC’s role would be in verifying that technical methods, assumptions, criteria, and interpretations have all been applied appropriately and consistent with the NRC’s procedures. The commenter also asked how significant technical differences or matters of public health and safety between agencies would be resolved, adding it is not clear what process will be used by the NRC in the case of interagency disagreements. Finally, the commenter asked if the NRC will have the authority to limit or otherwise restrict or qualify, the scope and application of DOE or DOW design authorizations as related to operation for commercial purposes.⁹² Another commenter stated that the NRC uses its own differing professional opinion process, however if

⁸⁶ Nuclear Energy Institute (NRC-2025-1503-0125).

⁸⁷ Valar Atomics (NRC-2025-1503-0010).

⁸⁸ Union of Concerned Scientists (NRC-2025-1503-0128); NRC-2025-1503-0038; LEAD Agency, Inc. (NRC-2025-1503-0142).

⁸⁹ Union of Concerned Scientists (NRC-2025-1503-0128).

⁹⁰ NRC-2025-1503-0038.

⁹¹ LEAD Agency, Inc. (NRC-2025-1503-0142).

⁹² NRC-2025-1503-0077.

safety concerns are raised by staff as a part of the DOE's review of reactors, there would be no record of this to alert the NRC or the public.⁹³ Additionally, a few commenters stated that under the Memorandum of Understanding (MOU) dated October 24, 2025, "Addendum No. 9 to the Memorandum of Understanding Between the DOE and the NRC on Nuclear Energy Innovation for Coordinating DOE and NRC Technical Expertise and Knowledge on Advanced Nuclear Reactor and Advanced Reactor Fuel Technologies" (ML25303A288), unresolved technical concerns raised by NRC staff detailed to DOE are resolved through DOE's internal Idaho Management System Office Procedure 01.OP.13 rather than the NRC's own Differing Professional Opinion process. The commenter further argued that this means safety concerns identified during DOE prototype reviews may not be resolved in accordance with the NRC's procedural safeguards before being treated as resolved for purposes of a commercial license application. The commenter argued that the NRC's Differing Professional Opinion process should govern the resolution of safety concerns identified during NRC review of DOE and DOW materials.⁹⁴

A commenter wrote that DOE and DOW programs are often focused on research, development, demonstration, and mission-specific applications, which may involve different operational contexts, risk tolerances, and evaluation criteria than those applied in civilian licensing, and are not designed to serve as substitutes for the NRC's review, which encompasses a broader and more standardized set of safety considerations. The commenter added that, even where prior DOE or DOW testing provides substantial evidence regarding a design's safety, independent NRC verification is still necessary as reactor performance can be influenced by site conditions, environmental factors, operational configurations, and other variables that may not have been fully addressed in earlier testing. The commenter wrote that applicants may also introduce modifications or adaptations to a design that alters its characteristics in ways that are not captured by prior evaluations.⁹⁵

One commenter stated that assuming DOE and DOW safety findings are sufficient shifts responsibility from applicants and the NRC to the public and other stakeholders to identify deficiencies retrospectively.⁹⁶

NRC Response: The NRC disagrees, in part, with these comments. The NRC acknowledges that there are differences among the NRC's and DOE's and DOW's processes and missions and that an applicant may introduce modifications to a DOE- or DOW-authorized design before submitting an application to the NRC.

The NRC disagrees that this rulemaking will shift the responsibility from applicants and the NRC to the public and other stakeholders to identify deficiencies retrospectively. As stated in previous responses, an applicant is still responsible for providing a complete application. If an applicant chooses to reference a prior DOE or DOW authorization, it is the applicant's responsibility to demonstrate to the NRC how attributes of that authorization satisfy NRC requirements. If any modifications are made to the referenced DOE- or DOW-authorized design, the applicant would need to explain what effect those modifications have with respect to satisfying NRC regulations. The NRC will then conduct an independent review of that application. See also, Comment Responses 1.2.B and 1.2.C.

⁹³ NRC-2025-1503-0121.

⁹⁴ NRC-2025-1503-0005; LEAF of Hudson Valley (NRC-2025-1503-0088).

⁹⁵ Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

⁹⁶ LEAD Agency, Inc. (NRC-2025-1503-0142).

In addition, the NRC refers commenters to “Addendum No. 9 to the Memorandum of Understanding between U.S. Department of Energy and U.S. Nuclear Regulatory Commission on Nuclear Energy Innovation for Coordinating DOE And NRC Technical Expertise and Knowledge on Advanced Nuclear Reactor and Advanced Reactor Fuel Technologies,” (DOE-NRC MOU No. 9) which defines roles, responsibilities, and processes for the coordination of activities supporting technical readiness and sharing of technical expertise and knowledge on advanced nuclear reactor and advanced reactor fuel technologies. The MOU states that any differing opinions provided during the DOE authorization process will be addressed through DOE’s Office Procedure 01.OP.13, *Resolution of ES&H Technical Concerns*. The NRC acknowledges that the DOE maintains full authority over its own reviews and processes. Separately, the NRC will address any differing opinions during the NRC’s review through NRC processes such as Management Directive 10.159, “NRC’s Differing Professional Opinion Program.”

The NRC also refers commenters to the memorandum issued on December 11, 2025, “Expectations for NRC Staff Involvement with Prospective NRC License Applicants Planning to Refer to DOE And DOW Authorization Processes” (ML25322A208), which outlines expectations for NRC staff engaging prospective applicants planning to utilize a prior DOE or DOW reactor facility authorization. This memorandum reinforces that the NRC staff has no regulatory authority in either DOE’s or DOW’s authorization processes and that NRC staff participation in the process will be only as an observer. However, the memorandum further emphasizes that NRC staff’s participation at the appropriate points can yield tangible benefits for future licensing.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 4.1.1.C: Conflicts between proposed § 50.43(e)(3) and existing § 50.43(e)(1) and (2)

A few commenters expressed concerns about perceived conflict between proposed § 50.43(e)(3) and existing § 50.43(e)(1) and (2) and proposed updates to the proposed rule as a result.⁹⁷

- A commenter suggested that the NRC revise § 50.43(e)(3) to be consistent with § 50.43(e)(1) and (2) and to require demonstration of the ability to function safely “over a sufficient range of normal operating conditions, transient conditions, and specified accident sequences, including equilibrium core conditions.” In addition to providing greater assurance of safety for the full spectrum of possible conditions, the commenter stated that this change would provide greater clarity to the license applicant, DOE, and DOW on what license applications need to contain and will aid the DOE and DOW in conducting their safety reviews and designing and implementing programs to support future NRC applications. The commenter further added that a lack of consistency between the proposed requirements and existing requirements in § 50.43(e)(1) and (2) would create the potential for a different licensing basis for reactors licensed based on references to DOE- and DOW-authorized designs; the commenter stated it is not clear from a safety perspective why the requirements would differ.⁹⁸

⁹⁷ NRC-2025-1503-0077; NRC-2025-1503-0059; NRC-2025-1503-0089.

⁹⁸ NRC-2025-1503-0059.

- A commenter stated that § 50.43(e)(3) is not commensurate with § 50.43(e)(1) and (2) as the existing standard clearly articulates requirements to be performed, demonstrated, and met, and the various operational conditions that must be considered and evaluated. The commenter stated that, in contrast, § 50.43(e)(3) only requires consideration of relevant information from a previously authorized design, and does not require that applicants demonstrate how they have met the NRC's requirements. The commenter expressed concern about consistency of review and safety standards and stated that the proposed rule would create a two-tiered structure of quality of safety for substantially identical designs submitted under § 50.43(e)(1) or (e)(2) versus § 50.43(e)(3). The commenter suggested that the NRC revise § 50.43(e)(3) to be clear that the "relevant information gathered" shall be considered relevant only if it is based on meeting § 50.43(e)(1) or (2).⁹⁹
- A commenter stated that § 50.43(e)(3) does not include the following language from § 50.43(e)(1) and (2): "over a sufficient range of normal operating conditions, transient conditions, and specified accident sequences, including equilibrium core conditions...." The commenter stated that it is unclear whether this omission was intentional and recommended that the NRC modify the rule language to ensure consistency across the requirements where the range is intended to apply.¹⁰⁰
- A commenter stated that requiring comparison to "NRC regulations" does not reflect the reality that many NRC regulations are performance-based and do not prescribe specific analytical methods or levels of detail; the commenter further added that demonstrating that a design satisfies NRC regulations alone does not ensure consistency with the methods and level of rigor expected by the NRC staff. The commenter recommended that § 50.43(e)(3) be removed or revised to require a clear demonstration of equivalency to NRC requirements, including verification that the underlying data are complete, applicable to the proposed design and operating conditions, and sufficient to support validation of the analytical methods used in the safety analysis, consistent with § 50.43(e)(1).¹⁰¹
- The commenter wrote that the proposed rule also does not ensure that the completeness of supporting data, applicability of the test conditions, or validation of analytical methods meet the requirements of § 50.43(e)(1), and it does not ensure that interdependent effects among safety features have been evaluated under conditions consistent with the NRC's licensing basis.¹⁰²
- A commenter expressed specific concerns about demonstration facilities, stating that if DOE and DOW authorized designs are to be eventually operated for commercial purposes or located on non-DOE and DOW property, those facilities should be subject to the same requirements as § 50.43(e)(1) or (2). The commenter further noted that demonstration facilities will eventually no longer be deemed "demonstration" and the criteria which underpinned that reactor design's authorization, if less than what are required of a non-demonstration facility, should be reevaluated for adequacy. The commenter recommended adoption of a definition of "Demonstration Facility" in § 50.2.¹⁰³
- A commenter wrote that there may be limited testing or operating experience that could be leveraged in an NRC review to justify that a utilization facility "has been tested and

⁹⁹ NRC-2025-1503-0077.

¹⁰⁰ Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁰¹ NRC-2025-1503-0089.

¹⁰² NRC-2025-1503-0089.

¹⁰³ NRC-2025-1503-0077.

has demonstrated the ability to function safely,” and the final rule should maintain flexibility for applicants to show equivalence to the current pathways in § 50.43(e)(1) and (2), and § 53.440(a)(1), using information such as operating experience or first-of-a-kind tests.¹⁰⁴

NRC Response: The NRC agrees, in part, and disagrees, in part, with these comments. In the proposed rule, the NRC did not propose to include in § 50.43(e)(3) explicit language similar to § 50.43(e)(1) and (2) specifying that the associated analyses, testing, or other information from a DOE or DOW authorization be represented “over a sufficient range of normal operating conditions, transient conditions, and specified accident sequences, including equilibrium core conditions.” However, the omission of that language was not intended to suggest that an applicant should disregard identification and consideration of appropriate testing conditions to support a commercial reactor licensing basis. The NRC agrees that updates to the proposed rule language are warranted to enhance clarity and consistency. In particular, the NRC has moved the language originally proposed to be included as § 50.43(e)(3) to a new subsection, § 50.43(f), to clarify and to reaffirm that this rulemaking does not alter the safety standard established in § 50.43(e) and to enhance consistency with the approach taken in the rule revision to § 53.440(a)(1). The revised language further acknowledges that an approved authorization and its associated testing may reflect only a portion of the NRC requirements applicable to commercial reactors. In such cases, as previously noted, an applicant retains the responsibility to demonstrate full compliance with all applicable NRC regulations, including those in § 50.43(e).

The NRC disagrees with the assertion that this rulemaking alters the safety standards applicable to NRC applications. The NRC also disagrees that a definition of “Demonstration Facility” is necessary as part of this rulemaking. As stated in Comment Response 1.2.B, this rulemaking does not change the NRC’s responsibility to conduct an independent review, nor does it change the requirement for an applicant to submit a complete application, regardless of whether the applicant references a prior DOE or DOW authorization. The NRC agrees that public health and safety and security are and will continue to be paramount. To that end, the rule language in §§ 50.43(f) and 53.440(a)(1) explicitly states that an application that references a DOE or DOW authorization “must identify how attributes of the authorization satisfy NRC regulations.”

Accordingly, the NRC moved the language in § 50.43(e)(3) to a new subsection, § 50.43(f), in response to these comments to clarify and to reaffirm that this rulemaking does not alter the safety standard established in § 50.43(e) while still maintaining the intended flexibility of the rule language.

Comment Bin 4.1.1.D: *International use of U.S. reactor designs*

A commenter stated that many international countries will authorize use of U.S. reactor designs in their countries if the designs are approved and certified by the NRC. The commenter stated, “For those designs authorized by DOE or DOD under (e)(3) which may not have complied with the provisions of, and complied fully with all NRC requirements associated with (e)(1) or (e)(2), they should not be approved or certified as exportable designs without additional review, required changes if necessary, and approval by NRC.”¹⁰⁵

¹⁰⁴ ClearPath (NRC-2025-1503-0134).

¹⁰⁵ NRC-2025-1503-0077.

NRC Response: The NRC acknowledges that there is international interest in using U.S. reactor designs that have received regulatory approval from the NRC. To the extent the commenter is concerned that certain representative testing and demonstration conditions are not clearly reflected in the final rule language for § 50.43(f), the NRC notes that the final rule clarifies the rule language as discussed in Comment Response 4.1.1.C. In addition, the NRC notes that it does not conduct design-based approvals or certifications for the international export of reactors.

Accordingly, the NRC did not update rule language in response to this comment.

Comment Bin 4.1.1.E: *Revisiting DOE and DOW authorization processes*

A commenter recommended adding the following sentence to the end of proposed § 50.43(e)(3): “NRC review shall focus solely on risks that may arise from new applications permitted by NRC licensure, rather than revisiting risks that have been addressed in the Department of Energy or Department of Defense processes.” The commenter stated that the sentence is largely taken from section 5(d) of E.O. 14300 and would help ensure that future administrations do not undermine the proposed rule by second-guessing conclusions that the DOE and DOW have already reached.¹⁰⁶

NRC Response: The NRC acknowledges this comment. To clarify, this rule is one part of a broader strategy to address section 5(d) of E.O. 14300, including, for example, developing guidance and coordinating with DOE to sign an addendum to a MOU on nuclear energy innovation. This rule is focused on establishing clearly and explicitly in NRC regulations a pathway for an applicant to reference a prior DOE or DOW authorization to support its NRC application. Such DOE and DOW authorization processes are separate and apart from NRC licensing processes. Nevertheless, the NRC acknowledges that there may be applicable information from DOE and DOW authorizations that can support an applicant’s ability to demonstrate that NRC requirements are satisfied and help to streamline NRC reviews. The NRC will seek to leverage this information to the maximum extent practical in its own independent reviews, including by risk-informing its reviews, and adjusting the focus and depth of review, as appropriate. At the same time, the rule preserves the NRC’s ability to determine, in the first instance, whether applicable AEA requirements and NRC regulations are satisfied. Therefore, the NRC does not agree that the commenter’s recommended revisions are warranted.

Accordingly, the NRC did not update rule language in response to this comment.

Comment Bin 4.1.1.F: *Rule language rearrangement*

A commenter recommended that the NRC consider moving proposed § 50.43(e)(3) to a new subsection (e.g., § 50.43(f)) to help avoid an unintended perception that the proposed rule is a requirement for advanced reactor designs rather than a targeted framework for specific circumstances.¹⁰⁷

¹⁰⁶ NRC-2025-1503-0093.

¹⁰⁷ Nuclear Energy Institute (NRC-2025-1503-0125).

NRC Response: The NRC disagrees with this comment. The NRC disagrees that the proposed rule implied a requirement for developers to receive a DOE or DOW authorization. The proposed rule described an optional pathway within § 50.43(e) for applicants proposing new reactor designs to demonstrate that the design can perform its safety functions.

Accordingly, the NRC did not update rule language in response to this comment. However, as discussed in Comment Response 4.1.1.C, the NRC moved the language of the proposed § 50.43(e)(3) to § 50.43(f) to clarify that this rulemaking does not alter the safety standards set forth by § 50.43(e).

Comment Bin 4.1.1.G: Reactor prototypes

A commenter stated that for advanced reactors, the prototype is likely to deviate from the performance characteristics used in DOE and DOW authorizing analyses. The commenter stated that this is especially true for the neutronic characteristics of the plant, including the reactivity coefficients. The commenter further noted that the plant may even reach criticality at a point which is not correctly predicted by the authorizing analysis.¹⁰⁸

Another commenter expressed that the proposed rule does not address the transferability of short-duration prototype test results to long-term commercial operation.¹⁰⁹

NRC Response: The NRC acknowledges the comments. The NRC acknowledges that the technology and breadth of testing performed under a DOE or DOW authorization may not be identical to the design and analysis submitted in an application to the NRC. However, this rulemaking does not change the NRC application submittal requirements or the responsibility that an applicant provide a complete application. That responsibility provides the opportunity for applicants to explain the applicability of information from the DOE or DOW authorization to NRC regulations as well as any associated limitations thereof. The NRC will then perform an independent review to determine, on a case-by-case basis, the adequacy of the justification and whether any additional information is needed to support the NRC's reasonable assurance finding.

Accordingly, the NRC did not update the rule language in response to these comments.

4.1.2. Requirement for applicants to identify how aspects of a prior authorization, including testing and operation, satisfy NRC regulations

Comment Bin 4.1.2.A: Acceptance criteria and mapping of requirements

Several commenters, including a form letter campaign, wrote that the proposed rule does not include any objective acceptance criteria.¹¹⁰ A commenter wrote that the proposed rule does not include a standard for objective acceptance criteria and argued that at a minimum the rule should include:

¹⁰⁸ NRC-2025-1503-0023.

¹⁰⁹ NRC-2025-1503-0005.

¹¹⁰ NRC-2025-1503-0068, NRC-2025-1503-0078, NRC-2025-1503-0079, San Luis Obispo Mothers for Peace (NRC-2025-1503-0083), Ecological Options Network (NRC-2025-1503-0099), NRC-2025-1503-0100, NRC-2025-1503-0113 [Form Letter Master], NRC-2025-1503-0139.

- A requirement-by-requirement mapping between DOE and DOW authorization basis and each applicable NRC regulatory requirement, identifying all gaps, differences in assumptions, limitations, and conditions of use.
- Specified minimum documentation requirements, including identification of all test conditions and performance boundaries, scaling analyses from prototype to commercial configuration, and comparison of DOE and DOW acceptance criteria to NRC design-basis and beyond-design-basis event requirements.
- An explicit statement that referencing a DOE or DOW authorization does not relieve applicants of their burden to demonstrate compliance with the NRC's standards through NRC-acceptable analyses, test data, and confirmatory information.¹¹¹

A form letter campaign wrote that they supported the commenter's argument.¹¹² Another commenter wrote that the proposed rule should define objective acceptance criteria for demonstrated safe operation, including allowable power level, duration, and test conditions. The commenter asked how the NRC plans to structure the regulatory pathway for a reactor design demonstrated under DOE and DOW authorizations without requiring repeated revalidation of previously demonstrated safety functions. The commenter also asked if the NRC will define a clear and traceable framework for how DOE and DOW developed safety documentation would map to a safety analysis report.¹¹³ A commenter wrote that the proposed rule does not indicate how applicants should identify how prior DOE or DOW authorizations satisfy the NRC's regulations, and recommended that the NRC establish a clear and predictable framework for applicants to map prior work to the NRC's requirements including identification of gaps, differences in assumptions, and conditions of applicability.¹¹⁴

A commenter wrote that the requirement for applicants to identify how the safety attributes of a prior DOE or DOW reactor authorization satisfy the NRC's framework is "doctrinally sound," preserves the NRC's independent authority, and is consistent with the principle that the NRC "should not require applicants to re-litigate technical questions that have been adequately resolved in another federal forum that the Commission has determined to be qualifying for this purpose."¹¹⁵ A commenter wrote that the requirement for applicants to provide a "bridge" between DOE or DOW findings and the NRC's requirements is essential for transparency and accountability and should not be removed from the rule.¹¹⁶

Several commenters expressed concerns about a lack of objective acceptance criteria for determining whether a prior authorization satisfies NRC requirements.¹¹⁷ One commenter urged the NRC to provide clear instructions regarding documentation requirements, establish consistent review processes, and minimize the potential for iterative or duplicative evaluation.¹¹⁸ Another commenter stated that proposed § 50.43(e)(3) would require consideration of relevant information from the DOE and DOW as demonstration of the ability to function safely but would

¹¹¹ NRC-2025-1503-0005.

¹¹² NRC-2025-1503-0028 [Form Letter Master].

¹¹³ Radiant Industries LLC (NRC-2025-1503-0054).

¹¹⁴ Nuclear Innovation Alliance (NRC-2025-1503-0102).

¹¹⁵ HGP Intelligent Energy LLC (NRC-2025-1503-0107).

¹¹⁶ LEAD Agency, Inc. (NRC-2025-1503-0142).

¹¹⁷ LEAF of Hudson Valley (NRC-2025-1503-0088); NRC-2025-1503-0089.

¹¹⁸ Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

not require a determination by the NRC that its requirements will be or have been met as part of that demonstration.¹¹⁹

A couple of commenters, including a form letter campaign, expressed concerns about vague language in the proposed rule.¹²⁰ A commenter wrote that the proposed rule lacks clear, defined standards for when and how the NRC can rely on prior DOE or DOW authorizations, including what qualifies as a prior authorization, what constitutes sufficient demonstration of safe operation, and how prior findings should be mapped to NRC requirements.¹²¹

A commenter wrote that the proposed rule contains an absence of clearly defined criteria governing when and how prior DOE and DOW authorization and testing may be relied upon in the NRC's licensing process. The commenter wrote that specifically, there is a lack of clarity surrounding what constitutes a "prior authorization" where the proposed rule refers broadly to designs that have been authorized by the DOE and DOW but does not specify the types of authorizations that meet this threshold. The commenter continued that the proposed rule does not define what is meant by a design having "demonstrated the ability to function safely," nor does it establish a threshold for what constitutes sufficient evidence of such performance. Additionally, the commenter argued that the proposed rule does not establish a method for mapping prior DOE and DOW findings to the NRC's regulatory requirements and instead requires applicants to identify how prior authorization satisfies the NRC's regulations. The commenter argued that this results in a risk of inconsistent licensing applications, as well as legal vulnerabilities for the NRC. In light of the concerns about vague language as well as an overreliance on discretionary assessment, inconsistent outcomes, and legal vulnerabilities for the NRC, a commenter recommended that the proposed rule incorporate explicit, codified criteria, such as defined eligibility thresholds, structured evaluation methods, and clear reliance standards to reduce ambiguity, ensure consistent implementation, and improve legal defensibility while achieving the proposed rule's intended efficiency gains.¹²²

Additionally, a commenter suggested that the proposed rule offer more specificity regarding the information the NRC may utilize, specifically that the NRC be allowed to utilize DOE or DOW "analysis, testing, operational experience, or a combination thereof," which the commenter stated would reflect § 50.43(e)(1). The commenter added that in cases where the NRC requires additional data to make its findings, it should be allowed to leverage the data collected and analyzed by the DOE or DOW.¹²³

Another commenter stated that "[b]y explicitly requiring the applicant, rather than the NRC, to identify the scope of prior authorization and testing, the safety functions and design features addressed, and any relevant differences in design, operation, or siting, the proposed change appropriately places the burden of demonstrating applicability on the applicant."¹²⁴

NRC Response: The NRC disagrees, in part, with the comments. The NRC disagrees with adding specific criteria to the rule language. The rule text is intentionally structured to be flexible to allow the NRC to leverage a wide variety of technologies, testing approaches, and

¹¹⁹ NRC-2025-1503-0077.

¹²⁰ Nuclear Information and Resource Service, et al. (NRC-2025-1503-0124) [Form Letter Master]; Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

¹²¹ Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

¹²² Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

¹²³ Deep Fission, Inc. (NRC-2025-1503-0065).

¹²⁴ Nuclear Energy Institute (NRC-2025-1503-0125).

information from a previously DOE- or DOW-authorized and tested design (e.g., information from an authorization involving criticality testing versus full scale demonstration). The NRC also notes that testing and authorization conducted by DOE or DOW may be performed under operating conditions that do not represent the full scope of a commercial reactor's lifecycle. It is the applicant's responsibility to clearly justify how the results of such review and testing support compliance with applicable NRC requirements, to explain any limitations thereof, and to provide supplemental information if such results do not sufficiently demonstrate compliance with NRC regulations.

The NRC also disagrees that this rulemaking should establish a mapping between DOE or DOW authorization bases and NRC requirements. The DOE and DOW authorization processes are distinct from the NRC licensing process, and because applicants possess the most detailed understanding of their design, deployment strategy, and the DOE or DOW requirements under which their design was previously authorized, they are best positioned to demonstrate how that prior authorization basis aligns with NRC regulations. To support this, the NRC encourages early engagement from applicants pursuing a commercial license to discuss the information from prior authorizations that applicants intend to rely upon.

However, the NRC agrees that providing additional clarity on the types of information applicants should identify from a prior authorization would be beneficial. In response to these comments, the NRC has clarified in the final rule preamble example categories of information that applicants should consider providing to support an NRC license application.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 4.1.2.B: *Differences between NRC and DOE and DOW frameworks*

A commenter wrote that the NRC's licensing framework includes aging management review, materials surveillance programs, and analysis of the full design life, while DOE demonstration authorizations are typically issued for limited operational periods.¹²⁵ Another commenter wrote that assessments for experimental reactor designs assume the equipment will only be needed for a short period of time, and relying on these assessments would eliminate review of potential dangers from aging equipment. The commenter also argued that commercial reactors have additional levels of safety, cost-effectiveness, and life expectancy not applicable to experimental DOE or DOW designs.¹²⁶

A commenter wrote that DOE prototype testing and DOW microreactor deployments at military installations do not generate siting analyses or emergency planning zone determinations similar to the NRC's existing siting and emergency planning requirements, and the proposed rule does not require applicants to address this gap.¹²⁷ Another commenter wrote that reactors developed under DOE or DOW authorizations were developed without environmental review requirements, emergency preparedness standards, or community protections and were not planned for use in communities near population centers.¹²⁸

¹²⁵ NRC-2025-1503-0005.

¹²⁶ NRC-2025-1503-0037.

¹²⁷ NRC-2025-1503-0005.

¹²⁸ The Healthy Environment Alliance of Utah (HEAL Utah) (NRC-2025-1503-0091).

A commenter argued that the NRC should clearly define and strictly limit what qualifies as a proven design.¹²⁹ A commenter suggested that the final rule should include a requirement that ensuring safety tests conducted by DOE or DOW are comparable to the NRC's analyses.¹³⁰

A commenter argued that there are a number of fundamental differences between DOE and DOW and the NRC's review standards. The commenter wrote specifically that DOE's nuclear safety framework under 10 CFR Part 830, "Nuclear Safety Management," relies on a contractor-prepared documented safety analysis, where by contrast the NRC's licensing is conducted by an independent regulator applying public-health-protective standards developed over decades of commercial reactor experience, including deterministic design-basis accident criteria, general design criteria, defense-in-depth requirements, siting dose limits, and quantitative health objectives.

Additionally, the commenter argued that DOE safety standards require "reasonable assurance of adequate protection of workers, the public, and the environment," and this is similar to the NRC's framework but structurally distinct because the DOE's framework applies a hazard-categorization graded approach without requiring compliance with the NRC's general design criteria, probabilistic risk assessment (PRA) methodologies accepted under the Licensing Modernization Project (LMP), and qualitative health objectives. The commenter stated that DOE and DOW prototype and operational reactors are explicitly exempt from NRC licensing under section 91 of the AEA and § 50.11(b) and operate under classified mission constraints with risk acceptance determined by military authorities, not independent regulators.

The commenter added that DOE prototype demonstrations authorized under the expedited DOE-STD-1271-2025, "Authorization Pathway for Nuclear Facilities," standard use a stage-gate process with 45-day review windows that is incompatible with the NRC's multi-year licensing review required for commercial reactors. Finally, the commenter stated that the NRC's quantitative health objectives are not systematically applied in DOE prototype authorizations or DOW operational authorizations. The commenter argued that the final rule should specify that prior authorization under DOE and DOW frameworks is not presumptively transferable to commercial licensing and that applicants must affirmatively demonstrate compatibility with the NRC's standards.¹³¹

A commenter wrote that prior authorization and testing conducted under DOE or DOW frameworks may be informative, but it does not by itself establish equivalence with the NRC's requirements for design, analysis, and validation.¹³²

Citing a study from the Energy Facilities Contractors Group and DOE and NRC regulations, one commenter expressed concern about a lack of equivalence between DOE and DOW and the NRC quality assurance frameworks. The commenter stated that for DOW designs, quality assurance controls may reflect military specifications or classified program requirements with no equivalent civilian nuclear quality assurance basis. The commenter recommended that the final rule should require applicants to demonstrate not only that DOE or DOW data exist, but that they were generated, controlled, preserved, and made traceable under quality standards adequate for NRC reliance under appendix B to Part 50. The commenter further recommended

¹²⁹ NRC-2025-1503-0015.

¹³⁰ NRC-2025-1503-0016.

¹³¹ NRC-2025-1503-0005.

¹³² NRC-2025-1503-0089.

that where such pedigree cannot be established, the NRC should be required to perform or demand independent confirmatory review before the data may be credited.¹³³

A commenter argued that all the activities outlined in the memorandum to the NRC staff dated December 11, 2025, “Expectations for NRC Staff Involvement with Prospective NRC License Applicants Planning to Refer to DOE and DOW Authorization Processes” (ML25322A208), can be accomplished without the proposed rule change; however, the proposed rule would require vendor designs authorized by DOE or DOW, which may not meet the NRC standard’s and requirements for commercial use, to be licensed by the NRC without change. The commenter wrote that this process does not provide NRC authority to discuss issues with vendors or impose its requirements if vendor designs are to be used for commercial purposes, outside of DOE and DOW jurisdiction. The commenter stated that § 50.43(e)(3) does not appear to be equivalent to § 50.43(e)(1) and (2) because the NRC has no role in the DOE or DOW authorization process other than as an observer and has no authority to stipulate what NRC requirements or regulatory guidance vendors will need to meet if the operation of those designs will be extended beyond DOE or DOW jurisdiction.¹³⁴

A commenter argued that the proposed rule does not require NRC staff to perform confirmatory analysis when DOE or DOW information is used to support a licensing safety-function finding, asserting that this would be inconsistent with NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition,” and NRC policy statements on advanced reactors, including SECY-93-092, “Issues Pertaining to the Advanced Reactor (PRISM, MHTGR, and PIUS) and CANDU 3 Designs and Their Relationship to Current Regulatory Requirements,” and SECY-03-0047, “Policy Issues Related to Licensing Non-Light-Water Reactor Designs.”¹³⁵

A commenter wrote that NRC commercial reactor licensees are subject to cybersecurity and physical security requirements, while DOE and DOW facilities operate under separate, often classified, security frameworks. The commenter wrote that the proposed rule does not address this gap or explain how applicants will demonstrate that security assumptions embedded in DOE or DOW safety bases are compatible with NRC commercial licensing requirements.¹³⁶

A commenter wrote that any reactors built at DOE sites will not be able to comply with the NRC regulations or procedures, and as a result there would be little basis for DOE authorizations to be used to license reactors under the NRC’s permitting procedures.¹³⁷

A few commenters wrote that the safety basis for DOE and DOW reviews cannot be scaled as the NRC’s regulations define prototype plants as similar to commercial reactors, which does not match the profile of reactors that have received DOE and DOW authorization.¹³⁸ A commenter

¹³³ NRC-2025-1503-0005.

¹³⁴ NRC-2025-1503-0077.

¹³⁵ NRC-2025-1503-0005.

¹³⁶ NRC-2025-1503-0005.

¹³⁷ NRC-2025-1503-0073.

¹³⁸ Pilgrim Watch (NRC-2025-1503-0068), NRC-2025-1503-0078, NRC-2025-1503-0079, San Francisco Bay Physicians for Social Responsibility (NRC-2025-1503-0081), LEAF of Hudson Valley (NRC-2025-1503-0088), Ecological Options Network (NRC-2025-1503-0099), NRC-2025-1503-0100, NRC-2025-1503-0139.

wrote that the proposed rule contains no mechanism to systematically scale test reactor performance of DOE or DOW designs to the characteristics of NRC licensed reactors.¹³⁹

A commenter wrote that DOE and DOW reactors are often sited on remote federal property, and under the proposed rule commercial reactors based on the same designs could be sited near large population centers without consideration for the increased consequences.¹⁴⁰

NRC Response: The NRC acknowledges these comments. As discussed in Comment Response 1.2.C, the NRC acknowledges that its mission and requirements differ from those of DOE and DOW in some respects. However, the focus of this rulemaking is not on delineating the precise similarities and differences between the NRC's requirements and requirements associated with DOE and DOW authorizations. As such, to the extent that commenters remark on particular differences or any potential limitations associated with certain kinds of information from DOE or DOW authorizations, the NRC declines to take a position. As stated in Comment Responses 1.2.B and 4.1.2.A, to the extent that an applicant seeks to use a prior DOE or DOW authorization to support its NRC application, the applicant will have the responsibility of demonstrating how attributes of the authorization satisfy NRC regulations. To the extent that a prior DOE or DOW authorization is not used to demonstrate satisfaction of applicable NRC regulations, the applicant will remain responsible for doing so via other means.

In addition, some comments appear to reflect an understanding that this rule is geared toward the NRC licensing a specific reactor that was previously built by DOE or DOW under their separate authorities. Rather, this rule is focused on the licensing of reactors that are based on the designs used in a prior DOE or DOW authorization, not the NRC licensing of specific reactors built by DOE or DOW themselves. Accordingly, to the extent that the comments assert that specific reactors built by DOE or DOW may not necessarily comply with NRC regulations, the NRC notes that the authorization activities associated with those specific reactors would fall within the jurisdiction of DOE or DOW. However, the NRC notes that this rulemaking does not preclude the commercial licensing of a specific reactor that was previously built under DOE or DOW authorization. As stated, the applicant retains the responsibility to demonstrate how the information provided in the application satisfies all relevant NRC regulatory and statutory requirements, including providing adequate justification for any reliance on applicable portions of a prior authorization. The applicant must also supply the information necessary, such as documentation supporting performance and control of quality-related activities, for the NRC staff to reach a finding of reasonable assurance that the facility was constructed and will operate in accordance with NRC requirements.

The NRC disagrees with comments suggesting that this rule would result in the agency accepting vendor designs previously authorized by DOE or DOW, regardless of whether those designs meet NRC standards. As discussed in Comment Response 1.2.B, this rulemaking does not alter the applicant's obligation to submit a complete and accurate application that addresses all topical areas required by NRC regulations, including those not evaluated under DOE or DOW frameworks. As stated in Comment Response 4.1.2.A, the NRC also acknowledges that the technologies tested and authorized by DOE or DOW may, for example, only address a subset of requirements for commercial licensing. Applicants remain responsible for demonstrating how their design satisfies all applicable NRC requirements.

¹³⁹ NRC-2025-1503-0023.

¹⁴⁰ NRC-2025-1503-0037.

This rulemaking also does not change the NRC's responsibility to conduct an independent safety review. Furthermore, the NRC retains full authority to request additional information from applicants, as appropriate, to ensure that all regulatory requirements are adequately addressed. When an applicant chooses to reference information from a DOE or DOW authorization, that information may be used to help focus the NRC's review on areas of highest safety significance and new information, but it does not relieve the applicant of the responsibility to demonstrate compliance with NRC standards.

Accordingly, the NRC did not make any changes to the rule in response to these comments.

Comment Bin 4.1.2.C: *Guidance dependence and clarification on DOE/DOW authorization reliance*

A commenter wrote that their principal concern with the proposed rule is not its objectives, but rather that the rule language leaves too much to guidance. The commenter wrote that, to fully leverage prior reviews, the final rule should include direction that applicants may incorporate by reference relevant information from DOE- or DOW-authorized reactor designs with demonstrated safety performance, while ensuring that any such material is treated as part of the NRC application and formally docketed for the NRC's review. The commenter wrote that the final rule should clarify how the NRC plans to rely on relevant information from prior authorizations in order to avoid duplicative analysis. Specifically, the commenter stated that the NRC should consider clarifying that relevant DOE or DOW authorization information may be credited for demonstrated safety functions where the applicant shows that the information is applicable, while also preserving the NRC's responsibility to determine that all statutory and regulatory requirements have been met. Finally, the commenter said that the NRC's decisions to require that applicants demonstrate safety functions or requirements beyond those considered in DOE and DOW authorizations should be documented for the record in order to provide greater clarity on regulatory expectations, reduce the potential for unnecessary or duplicative requirements, and support more efficient licensing outcomes. The commenter provided suggested rule text to implement these suggestions.¹⁴¹

NRC Response: The NRC agrees, in part, and disagrees, in part, with this comment. The NRC acknowledges that applicants may incorporate by reference information from DOE or DOW authorizations, as appropriate, while ensuring that any such information is part of the NRC application and formally docketed for the NRC's review. However, the NRC does not agree that changes to the rule language are necessary to enable this practice, as applicants already have the ability to incorporate such information into their applications. Applicants remain responsible for demonstrating how the referenced information supports their safety case and satisfies applicable NRC requirements.

The NRC also agrees that relevant DOE or DOW authorization information may be credited where the applicant shows that the information is applicable to the proposed design and licensing basis, while also preserving the NRC's responsibility to determine that statutory and regulatory requirements have been met. However, the NRC does not agree that changes to the rule language are necessary to enable this practice.

The NRC disagrees that any decisions to require applicants to demonstrate safety functions or requirements beyond those considered in DOE and DOW authorizations should be separately

¹⁴¹ Nuclear Energy Institute (NRC-2025-1503-0125).

documented for the record, though the NRC acknowledges that the record may reflect such decisions. This rulemaking neither changes an applicant's obligation to submit a complete application to the NRC nor the NRC's responsibility to conduct an independent review, and the NRC retains the ability to request additional information from applicants to conduct its review, as appropriate. The NRC's finding will be documented in a safety evaluation report.

Accordingly, the NRC did not make changes to the rule language in response to this comment.

Comment Bin 4.1.2.D: *Application review risks and tailoring*

One commenter provided that effective implementation of the proposed rule depends on ensuring that regulatory burden is aligned with risk in order to allow the NRC to allocate resources toward areas of genuine uncertainty or potential hazard. The commenter stated that a critical component of this is to differentiate between varying levels of design maturity allowing for a more streamlined process where designs have been proven, while preserving more rigorous evaluation for novel or substantially altered systems. The commenter added this would allow the NRC to tailor its review processes to the characteristics of each application and ensure that regulatory effort is proportionate to the issues at stake and requires incorporating operational experience into the licensing process as real-world performance data provides a level of validation that cannot be fully replicated through analysis or testing.¹⁴²

NRC Response: The NRC agrees with the comment to the extent that it suggests that varying levels of design maturity are an important consideration in implementing this rulemaking. As discussed in Comment Response 2.4.A, the NRC acknowledges that the scope and level of detail in DOE and DOW authorizations may differ from requirements for commercial licensing. That is, for designs that have been authorized and tested by DOE or DOW, those that more closely align with NRC regulations offer the greatest opportunity for the NRC to leverage authorization information in a subsequent license application, which can support a more efficient NRC review. Based on the applicant's justification for how attributes of a prior DOE or DOW authorization satisfy NRC requirements, the NRC may be able to tailor the focus and depth of its review, placing emphasis on new or unresolved areas of risk that have not yet been evaluated and approved.

Accordingly, the NRC did not make changes to the rule language in response to this comment.

Comment Bin 4.1.2.E: *NRC's application review scope*

A commenter wrote that the proposed rule focuses the scope of the NRC's review on the incremental risks that arise from commercial deployment. The commenter added that without this approach, the reference mechanism would produce no schedule benefit because an open-scope review would reopen matters the reference is intended to resolve. The commenter added that the proposed rule depends on the NRC's ability to obtain underlying source material from the issuing Federal agency, which is effectively addressed by DOE-NRC MOU No. 9.¹⁴³

NRC Response: The NRC agrees, in part, and disagrees, in part, with this comment. The NRC agrees that an important aspect of this rulemaking is to enable the NRC to focus its reviews, where appropriate, on information in a commercial application that was not previously evaluated

¹⁴² Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

¹⁴³ HGP Intelligent Energy LLC (NRC-2025-1503-0107).

and authorized by DOE or DOW. The NRC also agrees that any information from a DOE or DOW authorization used to support meeting NRC requirements must be submitted on the docket as part of the application, consistent with the current practice for all applicants.

However, the NRC disagrees that the implementation of the rule depends on information provided through the interagency coordination framework in DOE-NRC MOU No. 9. This rulemaking does not alter the requirement for applicants to submit a complete application, including justification for how information from a DOE or DOW authorization supports meeting NRC requirements. Nothing in DOE-NRC MOU No. 9 is intended to suggest that the NRC will obtain information from DOE on behalf of an applicant. The applicant is responsible for coordinating with DOE to ensure that the NRC receives all pertinent information needed to support the agency's independent review. See Comment Response 4.1.2.C, which reinforces that applicants remain responsible for demonstrating how any referenced material supports their safety case and satisfies applicable NRC requirements.

Accordingly, the NRC did not change the rule language in response to this comment.

Comment Bin 4.1.2.F: *Assessments at various agencies*

A commenter wrote that the proposed rule may introduce “regulatory arbitrage” where applicants play various agencies against each other in order to achieve the most favorable safety finding. To address this, the commenter recommended that the final rule be modified to state that the underlying safety and technical assumptions used by DOE or DOW must be proven compatible with the NRC’s regulatory requirements, clarify that prior DOE or DOW authorization contains no presumption of safety, and crosswalks of DOE or DOW standards to the NRC’s must be made public.¹⁴⁴

NRC Response: The NRC disagrees, in part, with the comment. The NRC acknowledges that there may be a perception that applicants may seek to “play various agencies against each other.” However, as explained in Comment Response 2.4.A, it remains the applicant’s responsibility to demonstrate compliance with all applicable requirements under the AEA and NRC regulations, and the NRC will continue to conduct the independent assessments necessary to confirm whether such requirements have indeed been satisfied. As also discussed in that response, when an NRC applicant relies on information from a design previously authorized or tested by DOE or DOW, the applicant is responsible for demonstrating the applicability and relevance of any DOE or DOW analyses or authorizations to NRC regulations.

In addition, the NRC notes that its processes governing the availability of information are outside the scope of this rulemaking. However, the NRC acknowledges that information for a license application that supports the NRC’s licensing determinations must be docketed, and the agency intends to continue to use its existing processes governing the availability of information.

Accordingly, the NRC made no changes to the rule language in response to this comment.

Comment Bin 4.1.2.G: *Incorporation by reference*

¹⁴⁴ Oregon Department of Energy (NRC-2025-1503-0112).

A commenter wrote that it is a mischaracterization that an entire DOE or DOW authorization application or approval should be automatically incorporated by reference in an NRC license application. The commenter stated that rule language regarding incorporation by reference does not need to be included in the final rule. The commenter stated that incorporation by reference should not be added to the final rule as it would significantly decrease application flexibility and may include information on the docket that is not appropriate due to different purposes or uses of a reference in a DOE or DOW authorized facility. The commenter added that it is already possible under existing NRC practice to incorporate documents by reference in an application.¹⁴⁵

NRC Response: The NRC agrees that rule language regarding incorporation by reference should not be added to the final rule. See also, Comment Response 4.1.2.C.

Accordingly, the NRC made no changes to the rule language in response to this comment.

Comment Bin 4.1.2.H: *NRC review process integrity*

A commenter wrote that the NRC should implement the following changes in the final rule in order to maintain the integrity of the review process:

- Establish an independent audit procedure to be triggered whenever an interagency agreement on a technical or safety assumption is questioned.
- Enhance two-way communication by providing updated regulatory crosswalks and continuous validation of technical reactor modeling products used across agencies.
- Ensure all interactions between “embedded” NRC staff and DOE and DOW staff are documented.
- Ensure “embedded” NRC staff have a direct reporting line back to the NRC to ensure regulators do not become too closely aligned with developers.¹⁴⁶

NRC Response: The NRC disagrees with this comment. As discussed in Comment Response 4.1.1.B, the NRC and DOE have entered into an MOU that outlines roles and responsibilities for NRC staff detailed to DOE in support of authorization technical reviews. The MOU also outlines the process for resolving technical differences that may arise during these reviews. As explained in Comment Response 2.4.A, the NRC will perform an independent safety and security review of any application submitted to the agency, regardless of NRC staff participation (e.g., in an observational capacity or as detailees) during the DOE authorization process. In the event of a disagreement with information provided to the NRC by an applicant, the NRC would engage with the applicant through the appropriate process (e.g., request for additional information, regulatory audit) to obtain a better understanding of the information. If the NRC ultimately reaches a determination on an NRC application that the applicant disagrees with, the NRC notes that an applicant may choose to challenge the NRC's determination before an impartial adjudicator via its hearing processes.

To the extent that the comment addresses interactions and reporting procedures governing NRC staff detailed to other agencies, the NRC notes that this is outside the scope of this rulemaking.

¹⁴⁵ ClearPath (NRC-2025-1503-0134).

¹⁴⁶ Oregon Department of Energy (NRC-2025-1503-0112).

Accordingly, the NRC made no changes to the rule language in response to this comment.

4.1.3. Requirement for applicants to address how any changes to the design, functionality, associated hazards, siting information, or underlying safety assumptions from those considered in prior authorization reviews meet applicable NRC requirements

Comment Bin 4.1.3.A: Adjustments to DOE and DOW analyses

A commenter wrote that results of reactor testing may reveal the need for design modifications from prototype reactors and asked how the NRC will adjust DOE and DOW analyses to account for these changes given the proposed rule does not use test data to validate licensing models.¹⁴⁷

NRC Response: The NRC agrees with the comment to the extent it suggests that design modifications may be made to the commercial reactor design relative to the DOE- or DOW-authorized design before an application is submitted to the NRC. As discussed in Comment Response 4.1.1.B, if an applicant chooses to reference a prior DOE or DOW authorization, it is the applicant's responsibility to demonstrate to the NRC how attributes of the authorization satisfy NRC requirements. If any modifications are made to the referenced DOE- or DOW-authorized design, the applicant would need to explain what effect those modifications have with respect to satisfying NRC regulations. The NRC will then conduct an independent review of that application. See also, Comment Responses 1.2.B and 1.2.C.

Accordingly, the NRC made no changes to the rule language in response to this comment.

4.1.4. Other comments on the new pathway and revisions to § 50.43

Comment Bin 4.1.4.A: Applicability

One commenter requested that the NRC expand the scope of the rule to all Class 103 facilities, including those with other commercial applications like medical isotope production facilities. In addition, the commenter recommended that the NRC modify § 50.43 to extend applicability to Class 104(c) production and utilization facilities and Class 104(a) medical therapy facilities.¹⁴⁸

A commenter stated that the proposed rule's applicability to U-233 fuel cycle designs is unclear. The commenter asserted that without clarification about whether the proposed revisions apply to facilities that meet the definition of "production facility," there is potential ambiguity regarding whether reactors employing the Th-232/U-233 fuel cycle fall within the scope of the rule. The commenter recommended that the NRC clarify the applicability of the proposed provisions to such designs, including how the "primarily for the formation of U-233" criterion would be evaluated.¹⁴⁹

NRC Response: The NRC disagrees with these comments. The rule language states, in part, that an application can include "relevant information gathered from a design that has been

¹⁴⁷ NRC-2025-1503-0023.

¹⁴⁸ NRC-2025-1503-0004.

¹⁴⁹ NRC-2025-1503-0089.

previously authorized by the Department of Energy or the Department of Defense as a *utilization* facility” (emphasis added). The intent of this rulemaking is focused on Class 103 commercial license applicants and does not include provisions to include “production facilities” or Class 104 licenses in its scope. While outside the scope of this rulemaking, an applicant for such a facility may nevertheless reference information from a relevant DOE or DOW authorization in its application under existing regulations, and the NRC will continue its current practice of considering such information in its reviews.

Accordingly, the NRC did not update the rule language in response to these comments.

Comment Bin 4.1.4.B: Scaled reactors

One commenter expressed concerns about the lack of scaling analysis requirements, minimum size relationships between prototypes and commercial design, and requirements to validate the computational tools used to predict commercial-scale reactor behavior. The commenter described a conclusion from 38 countries that small-scale test facilities are considered not directly applicable to full-scale conditions due to scale distortions. The commenter described a scenario where the NRC would be told to accept a secret safety review for a nuclear reactor the size of a shipping container as the foundation for licensing reactors potentially 100 times larger in size.¹⁵⁰ Another commenter echoed concerns about application of the proposed rule to SMRs.¹⁵¹

NRC Response: The NRC acknowledges the comments. As discussed in Comment Response 2.4.A, where an NRC applicant references a prior design authorized and tested by DOE or DOW, the applicant’s responsibility includes justifying the applicability and relevance of any DOE or DOW analyses or authorizations it seeks to rely upon, and the NRC will then conduct an independent review of that application, including evaluation of the justification therein.

Accordingly, the NRC did not update the rule language in response to these comments.

Comment Bin 4.1.4.C: Public engagement and secret information in prior DOE and DOW authorizations

A few commenters expressed concerns about lack of public participation or access to public information in DOE and DOW reviews (and as a result, NRC reviews under the proposed rule).¹⁵² One commenter noted that the safety documents for reactors currently in the DOE Reactor Pilot Program are not on any public docket. The commenter further stated that with no public record, there is no basis to challenge safety determinations in court.¹⁵³ Another commenter agreed – stating that classified military material could form the safety basis for a commercial license that the public cannot examine or challenge in a hearing.¹⁵⁴ One commenter

¹⁵⁰ NRC-2025-1503-0121.

¹⁵¹ NRC-2025-1503-0129.

¹⁵² San Francisco Bay Physicians for Social Responsibility (NRC-2025-1503-0081); LEAF of Hudson Valley (NRC-2025-1503-0088); NRC-2025-1503-0037; NRC-2025-1503-0121; Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁵³ LEAF of Hudson Valley (NRC-2025-1503-0088).

¹⁵⁴ San Francisco Bay Physicians for Social Responsibility (NRC-2025-1503-0081).

expressed concerns about lack of opportunity for public comment on approvals based on classified data or for the data needed for proper emergency planning.¹⁵⁵ Another commenter echoed these concerns and said that there will be no opportunity for the public to challenge safety determinations because the public will not know about them.¹⁵⁶ Describing the secret nature of some DOE and DOW projects, another commenter stated that the NRC has a responsibility to independently verify data submitted by prospective licensees, but the proposed rule would require the NRC to accept DOE and DOW approvals as proof without verification.¹⁵⁷

A commenter recommended that the NRC revise the proposed rule to require that information relied upon be submitted as part of the application and docketed with the Commission for review, subject to existing public-disclosure rules, exemptions, and withholding provisions. The commenter stated that this will ensure that the Commission's findings rest on an NRC record, will give staff direct access to the underlying authorization materials rather than just applicant characterizations of them, and preserve meaningful hearing participation by ensuring that the factual basis for the licensing determination is part of the proceeding to the extent permitted by law. The commenter proposed edits to § 50.43(e)(3) and § 53.440(a)(1) to confirm that nothing in the prior authorization licensing pathway relieves the applicant of the obligation to submit a complete application or provide the information necessary for the Commission to make the required findings; limits the NRC's authority to make an independent finding of reasonable assurance of adequate protection of public health and safety and the common defense and security; or affects the hearing opportunity rights of persons whose interests may be affected by the proceeding. The commenter noted that these changes would be important to ensure the final rule's legal durability with respect to the NRC's independent safety obligations under AEA section 182(a) and 189(a). The commenter proposed the following be added to § 50.43(e)(3) as "a new subpart":¹⁵⁸

(iv) Nothing in paragraph (e)(3) of this section relieves the applicant from its obligation to submit a complete application or to provide the information necessary for the Commission to make the findings required by the Act and this chapter, limits the Commission's authority to make an independent finding of reasonable assurance of adequate protection of public health and safety and the common defense and security, or affects the right of any person whose interest may be affected by a proceeding to request a hearing on the license application pursuant to [section] 189(a) of the Act and the relevant hearing provisions of this chapter.

NRC Response: The NRC agrees, in part, with these comments. As discussed in Comment Response 1.2.C, this rulemaking does not affect hearing rights under the AEA, including the ability of an interested person to request a hearing in a proceeding for the granting or issuance of a license to construct or operate a reactor where the underlying application references a DOE or DOW authorization, nor does it alter hearing procedures codified in 10 CFR Part 2. The NRC will conduct these activities transparently, consistent with legal requirements and its Principles of Good Regulation. This rulemaking also does not change the requirement for submittal of a complete application on the docket, and the NRC will follow its processes for controlling such information, including the handling of sensitive information. However, the NRC does not agree that a revision to the rule language is necessary to reflect these principles.

Accordingly, the NRC did not update the rule language in response to these comments.

¹⁵⁵ NRC-2025-1503-0037.

¹⁵⁶ NRC-2025-1503-0121.

¹⁵⁷ NRC-2025-1503-0037.

¹⁵⁸ Nuclear Energy Institute (NRC-2025-1503-0125).

Comment Bin 4.1.4.D: Coordination with other Federal agencies

A commenter encouraged the NRC to continue strengthening coordination with DOE and DOW and to clearly define in guidance for NRC reviewers how differences in scope (e.g., lifecycle considerations, siting, emergency planning, decommissioning, National Environmental Policy Act [NEPA]) are identified and addressed in NRC application review.¹⁵⁹

A commenter stated that the coordination described in the proposed rule cannot be achieved through general acknowledgement alone and requires a structured framework with clearly defined roles and boundaries for each participating agency. The commenter said that stakeholders must be able to understand how prior Federal findings are being used, what standards are being applied, and how decisions are reached. Further, the commenter stated that informal or ad hoc reliance on prior Federal findings can lead to ambiguity in how those findings are interpreted and different reviewers may reach different conclusions regarding relevance or sufficiency. The commenter said that without a formal framework for coordination, it is difficult to establish a stable regulatory framework, increases the likelihood for protracted review cycles, and exposes the Commission to legal challenges. For these reasons, the commenter recommended that coordination among Federal agencies be included in the final rule regulatory framework – including explicit provisions that define how prior Federal findings are to be integrated into NRC decision-making, criteria for their use, scope of applicability, and limits of reliance.¹⁶⁰

A commenter recommended that the NRC establish and provide clarity on processes and procedures that document NRC participation in DOE or DOW authorization, and the applicant's alignment with NRC requirements as determined in those authorizations. The commenter recommended that the process provide a record of Commission reviews and determinations that provide finality and are able to more fully leverage previous DOE and DOW authorizations to further streamline NRC reviews.¹⁶¹

NRC Response: The NRC agrees, in part, and disagrees, in part, with these comments. The NRC acknowledges the importance of strong federal coordination and remains committed to maintaining clearly defined roles and responsibilities in its engagements with other agencies. The NRC uses MOUs to establish formal, cooperative frameworks with other government agencies, departments, or organizations. Its core purpose is to define shared goals, delineate regulatory boundaries, and streamline procedures. For instance, as outlined in DOE-NRC MOU No. 9, the NRC and DOE have roles, responsibilities, and processes to support effective coordination on sharing of technical expertise and knowledge on advanced nuclear reactor technologies and nuclear energy innovation. Because these agreements define the scope and mechanisms of interagency coordination, the NRC does not agree that such coordination should be specified within the regulatory text itself.

Additionally, as discussed in Comment Response 4.1.2.A, the intent of the rule language is to provide applicants with maximum flexibility to leverage previously authorized and tested designs that may vary in degree of similarity to commercial reactors. At the same time, the NRC agrees

¹⁵⁹ Nuclear Innovation Alliance (NRC-2025-1503-0102).

¹⁶⁰ Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

¹⁶¹ Nuclear Energy Institute (NRC-2025-1503-0125).

that providing further clarity on the types of information applicants may identify from a prior authorization would be beneficial.

Accordingly, while the NRC did not revise the rule language in response to these comments, the NRC has clarified in the preamble example categories of information that applicants may consider submitting in support of a license application.

Comment Bin 4.1.4.E: *Perceived reduced regulatory scrutiny*

One commenter stated that the proposed rule risks institutionalizing reduced regulatory scrutiny for designs with prior authorizations and expressed particular concerns about unknown design flaws being replicated for small modular reactors (with proposed modularity and factory production lines).¹⁶² Another commenter echoed these concerns – stating that the rule is configured to fast-track advanced reactor technologies but that many are lacking in extensive operational data.¹⁶³

NRC Response: The NRC disagrees with these comments. The NRC believes that, depending on information provided in an NRC application, this rulemaking can support a more efficient NRC licensing review. As explained in Comment Response 1.2.B and 2.4.A, this rulemaking does not alter the NRC’s commitment to conduct an independent safety review, nor does it change the requirement for an applicant to submit a complete and accurate application—including a justification for the applicability and relevance of any information leveraged from a DOE or DOW authorization. Consistent with this approach, nothing in this rule reduces safety or security.

Accordingly, the NRC did not update the rule language in response to these comments.

4.2. Pathway in 10 CFR Part 53 for streamlined licensing reviews of commercial reactor designs that have previously received DOE or DOW authorization

4.2.1. New option in § 53.440(a)(1) for applicants to directly reference a prior DOE or DOW authorization to demonstrate that design features required by § 53.400 meet the functional design criteria required by §§ 53.410 and 53.420

Comment Bin 4.2.1.A: *Support for new option in § 53.440(a)(1)*

A couple of commenters stated support for the inclusion of a new pathway for streamlined licensing reviews under Part 53. A commenter expressed support for the proposed pathway in § 53.440(a)(1), reasoning that it resolves a fundamental inefficiency in the existing regulatory structure whereby the NRC has subjected commercial applications to duplicative engineering evaluations, without regard for whether a design has already undergone rigorous testing and authorization by the DOE or DOW. The commenter also reasoned that the proposed pathway would allow the NRC to focus its analytical resources strictly on novel risks or site-specific

¹⁶² The Healthy Environment Alliance of Utah (HEAL Utah) (NRC-2025-1503-0091).

¹⁶³ LEAD Agency, Inc. (NRC-2025-1503-0142).

variances while providing efficiency benefits to companies.¹⁶⁴ Another commenter similarly endorsed the proposed pathway and supported the inclusion of parallel provisions in Parts 50 and 53 as critical to ensuring consistency across licensing pathways and avoiding regulatory fragmentation; however, the commenter stated that additional clarity is needed to ensure the rule fully realizes its intended efficiency benefits.¹⁶⁵

NRC Response: The NRC acknowledges these comments. The comments support the proposed rule and suggest no specific changes.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 4.2.1.B: *Regulatory language alignment and proposed alternatives or changes*

Several commenters discussed alignment between the proposed language under Part 53 and Part 50, with some commenters requesting revisions or clarification.¹⁶⁶ For example, a commenter expressed general concern that the proposed language in Part 53 is very similar to Part 50, writing that Part 53 discusses risk information awareness.¹⁶⁷ Another commenter expressed concern that the introduction of permissive language in § 53.440 (“may include consideration of...”) weakens the requirement by allowing reliance on prior design information without establishing when such information must be used, or how its completeness and applicability are to be demonstrated. They warned that this language would shift the provision from a requirement to demonstrate compliance to an option to reference prior information, without preserving the same burden of proof.¹⁶⁸

Another commenter recommended, should the NRC adopt the proposed changes to § 50.43, it should also include conforming changes to § 53.440. The commenter reasoned that Part 50 and Part 53 should apply consistent standards for reliance on DOE and DOW authorizations and consistency in the NRC’s review, to avoid unintended regulatory disparities.¹⁶⁹ Another commenter similarly endorsed full structural and substantive parallelism between the Part 50 and Part 53 provisions, reasoning that many of the advanced reactor designs most likely to use the proposed pathway may pursue Part 53 licensing. Specifically, the commenter encouraged the NRC to align operational principles in both Part 50 and 53 including docketed reliance on prior authorization information; a targeted applicant showing; an NRC review scope and level of analysis that are appropriately informed by, and do not unnecessarily duplicate, the prior DOE and DOW authorizations; and explicit preservation of complete-application obligations, independent NRC safety findings, and hearing rights. The commenter additionally suggested that the final rule preamble or subsequent guidance confirm that information developed under one acceptable framework may be leveraged in another where applicable, subject to the same operational principles, reasoning that such clarification would be particularly useful for Part 53 applicants.¹⁷⁰

¹⁶⁴ Valar Atomics (NRC-2025-1503-0010).

¹⁶⁵ Deep Fission, Inc. (NRC-2025-1503-0065).

¹⁶⁶ Nuclear Energy Institute (NRC-2025-1503-0125); Deep Fission, Inc. (NRC-2025-1503-0065); NRC-2025-1503-0059; NRC-2025-1503-0077; NRC-2025-1503-0089.

¹⁶⁷ NRC-2025-1503-0016.

¹⁶⁸ NRC-2025-1503-0089.

¹⁶⁹ Deep Fission, Inc. (NRC-2025-1503-0065).

¹⁷⁰ Nuclear Energy Institute (NRC-2025-1503-0125).

This same commenter noted that a statement included in proposed § 50.43(e)(1) and (2)—“...over a sufficient range of normal operating conditions, transient conditions, and specified accident sequences, including equilibrium core conditions...” —was excluded from § 50.43(e)(3) and § 53.440(a)(1), writing that it was not clear whether this statement was intentionally excluded or whether the NRC implicitly presumed its implication. The commenter proposed that the NRC determine whether the statement on the range of conditions in § 50.43(e)(1) and (2) is intended to apply to § 50.43(e)(3) and § 53.440(a)(1) and modify the rule language to ensure consistency across the requirements where the range is intended to apply.¹⁷¹

A commenter suggested that the NRC align the language in § 53.440(a)(1) with the requirements in § 50.43(e)(1) and (2) to demonstrate the ability to function safely “over a sufficient range of normal operating conditions, transient conditions, and specified accident sequences, including equilibrium core conditions.” They reasoned that this approach would align with NRC’s goals of regulatory clarity and efficiency, advance the proposed rule’s stated goals, and provide greater assurance of the safety of new reactor designs. The commenter further reasoned that this approach would aid DOE and DOW in conducting safety reviews and in designing and implementing demonstration programs such that they can support applicants in preparing their NRC license applications, while also supporting timely and efficient NRC reviews. The commenter wrote that § 53.440(a)(1) should be at least as specific and clear as § 50.43(e)(1) and (2) regarding the type of testing that needs to be done to support an NRC licensing review, citing the safety benefits of establishing requirements that are as comprehensive and well-defined as the existing requirements.¹⁷²

A different commenter expressed concern that proposed § 50.43(e)(3) creates inconsistency between § 50.43(e) and § 53.440(a)(1). The commenter said it is unclear whether the reference to the “...consideration of relevant information...which has been tested and demonstrated the ability to function safely” can be interpreted as a substitute for the demonstration requirements stated in the regulatory provisions before the proposed insertion. The commenter recommended that the NRC remove any potential conflict between § 50.43(e) and § 53.440(a)(1) by clearly stating that testing and demonstrated safe performance associated with DOE or DOW authorization may satisfy the demonstration requirements in § 53.440(a)(1). Among other recommendations relating to backfit analysis requirements and DOE- and DOW-authorized designs, the commenter further suggested that the NRC adopt a definition of “Demonstration Facility” in Part 53, Subpart A.¹⁷³

Finally, a commenter wrote that many proposed provisions contradict existing legislation and NRC regulations, placing the NRC in an “impossible position” where it would have to reject applications where the agency is unable to determine whether a proposed commercial reactor that relies on DOE and DOW certification meets NRC requirements.¹⁷⁴

NRC Response: The NRC agrees, in part, and disagrees, in part, with these comments. As explained in Comment Response 4.1.1.C, the NRC agrees that the language in the proposed rule for § 50.43(e)(3) did not explicitly restate the language provided in § 50.43(e)(1) and (2) regarding testing over a “sufficient range...of conditions.” The NRC also acknowledges that the language in § 53.440(a)(1) includes a comparable requirement, stating “this demonstration must

¹⁷¹ Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁷² NRC-2025-1503-0059.

¹⁷³ NRC-2025-1503-0077.

¹⁷⁴ NRC-2025-1503-0037.

consider interdependent effects throughout the commercial nuclear plant and the range of conditions under which the design features required by § 53.400 must function throughout the plant's lifetime." Therefore, as discussed in Comment Response 4.1.1.C, the language in the proposed rule for § 50.43(e)(3) has been moved to a separate subsection, § 50.43(f), to make clear that this rulemaking does not alter the safety standard established in § 50.43(e) and to enhance consistency with the approach taken in the rule revision to § 53.440(a)(1).

However, the NRC disagrees with the assertion that the rule language for § 53.440(a)(1) is too similar to the language in § 50.43(e). The language in § 53.440(a)(1) is intentionally tailored to reflect the differences between the Part 50 and 53 regulatory frameworks. Additionally, the NRC disagrees that the introduction of permissive language in § 53.440 ("may include consideration of...") weakens underlying requirements. The provision is written to allow applicants to use information developed under a DOE or DOW authorization, but it does not obligate applicants to do so, nor does it weaken the standards they must meet. Further, the NRC disagrees that the rule language should explicitly state that information developed under one acceptable framework may be leveraged in another, where applicable. As stated in other comment responses, applicants remain responsible for demonstrating how the information in their application satisfies NRC regulations. Such a demonstration may include information originally developed for a different framework. The NRC encourages preapplication engagement to discuss how an applicant intends to incorporate and justify such information. Finally, the NRC disagrees that the rule contradicts existing legislation and NRC regulations, as addressed in responses under Section 2 of this comment response document.

Accordingly, the NRC moved the rule language in proposed § 50.43(e)(3) to a separate subsection, § 50.43(f), in response to these comments to reinforce that this rulemaking does not alter the safety standards established in § 50.43(e) and to enhance consistency with the approach taken in § 53.440(a)(1).

4.2.2. Requirement for applicants to identify how aspects of a prior authorization satisfy NRC regulations

Comment Bin 4.2.2.A Acceptance criteria and mapping of requirements

A few commenters remarked on the requirement for applicants to identify how aspects of a prior authorization satisfy the NRC's regulations in Part 53, with some suggesting revisions to the proposed rule for increased clarity or flexibility.¹⁷⁵ One of these commenters recommended that § 53.440 be modified to include a clear presumption that DOE- and DOW-authorized designs that have demonstrated the ability to function safely provide an adequate technical basis for demonstrating functional design criteria, where those determinations are materially similar to findings required under NRC regulations, absent identified differences or new information that materially affects the underlying safety conclusions. The commenter said such a presumption should preserve the Commission's obligation to make an independent reasonable assurance finding. The commenter reasoned that including this presumption would reduce applicant burdens and duplicative analysis, while providing greater regulatory certainty to applicants.¹⁷⁶

¹⁷⁵ Deep Fission, Inc. (NRC-2025-1503-0065); Nuclear Energy Institute (NRC-2025-1503-0125); ClearPath (NRC-2025-1503-0134); NRC-2025-1503-0005.

¹⁷⁶ Deep Fission, Inc. (NRC-2025-1503-0065).

Similarly, and while citing § 53.440(a)(1), a commenter suggested that the NRC fully leverage prior Federal reviews by including a clear direction that applications may incorporate by reference relevant information from DOE- or DOW-authorized reactor designs with demonstrated safety performance, while ensuring that this material is treated as part of the NRC application and formally docketed for Commission review. Accordingly, the commenter suggested language in § 53.440(a)(1) that reads:

(a)(1) Analysis, appropriate test programs, prototype testing, operating experience, or a combination thereof must demonstrate that each design feature required by § 53.400 meets the defined functional design criteria required by §§ 53.410 and 53.420. This demonstration must consider interdependent effects throughout the commercial nuclear plant and the range of conditions under which the design features required by § 53.400 must function throughout the plant's lifetime. The bases for this demonstration may include information from a design that has been previously authorized by the Department of Energy or the Department of Defense as a utilization facility, and which has been determined by that Department, based on analysis, testing, prototype operation, operating experience, or a combination thereof, to be capable of performing the safety functions addressed in that authorization. Information relied on under this paragraph shall be submitted for docketing and review, as part of the application, or as material previously filed with the Commission and specifically incorporated by reference, subject to the public disclosure rules, exemptions, and withholding provisions of this chapter.¹⁷⁷

This same commenter further suggested that the NRC's decisions requiring that applicants demonstrate safety functions or requirements beyond those considered in DOE and DOW authorizations should be documented for the record. The commenter reasoned that this would provide applicants with greater clarity, reduce the potential for unnecessary or duplicative requirements, and support more efficient licensing outcomes, while preserving the NRC's authority to address legitimate safety concerns. The commenter proposed a new subpart in § 53.440(a)(1) that reads:

(iii) In any instance where the Commission requires the applicant to demonstrate performance of a safety function or satisfaction of a requirement beyond those considered in the prior Department of Energy or Department of Defense authorization, the Commission shall provide written justification demonstrating that the safety function or requirement is necessary to provide adequate protection of the public health or safety or otherwise comply with the Act and the Commission's regulations.¹⁷⁸

Another commenter stated that there may be limited testing or operating experience that could be leveraged in an NRC review to justify that a utilization facility "has been tested and has demonstrated the ability to function safely." The commenter suggested that the proposed rule maintain flexibility for applicants to show equivalence to the current pathways in § 53.440(a)(1), using information such as operating experience or first-of-a-kind tests.¹⁷⁹

¹⁷⁷ Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁷⁸ Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁷⁹ ClearPath (NRC-2025-1503-0134).

NRC Response: The NRC acknowledges these comments. These comments on revisions to § 53.440(a)(1) raise substantially the same concerns as those associated with comments on the rule language for the proposed § 50.43(e)(3). As such, the NRC refers the commenters to (1) Comment Response 2.1.C addressing the topic of establishing a rebuttable presumption of adequacy for DOE- and DOW-authorized reactor designs; (2) Comment Response 4.1.2.C for suggested modifications to the rule language to include direction that applicants may incorporate by reference relevant information for DOE- or DOW-authorized reactor designs; and (3) Comment Response 4.1.2.A for concerns on maintaining the flexibility of the rule language.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 4.2.2.B: *Differences between NRC and DOE and DOW frameworks*

Another commenter wrote that the proposed rule does not adequately address certain technical areas where DOE or DOW authorization may systematically fall short of NRC commercial licensing requirements. For example, the commenter said the rule does not explain how PRA-based Part 53 requirements are satisfied when the referenced DOE authorization did not include a comparable probabilistic analysis. The commenter reasoned that while Part 53 requires a full plant-level PRA meeting the NRC-endorsed LMP methodology to support safety classification and defense-in-depth determinations, DOE prototype authorizations under DOE-STD-1271-2025 rely on Documented Safety Analysis and Preliminary Documented Safety Analysis processes that do not systematically produce a PRA at the scope and depth required by Part 53.¹⁸⁰

NRC Response: The NRC acknowledges this comment. As discussed in Comment Response 4.1.2.B, the NRC acknowledges that its requirements may differ from those of DOE and DOW in some respects. However, the focus of this rulemaking is not on delineating the precise similarities and differences between the NRC's requirements and requirements associated with DOE and DOW authorizations. As discussed in Comment Responses 1.2.B and 4.1.2.A, the NRC reiterates that this rulemaking does not change an applicant's obligation to submit a complete application to the NRC and that to the extent that an applicant seeks to use a prior DOE or DOW authorization to support its NRC application, the applicant will have the responsibility of demonstrating how attributes of the authorization satisfy NRC regulations.

Accordingly, the NRC did not change the rule language in response to this comment.

4.2.3. Requirement for applicants to consider interdependent effects throughout the commercial nuclear plant and the range of conditions under which the design features required by § 53.400 must function throughout the plant's lifetime

Comment Bin 4.2.3.A:

While citing § 53.440(a)(1), a commenter wrote that by explicitly requiring the applicant, rather than the NRC, to identify the scope of prior authorization and testing, the safety functions and design features addressed, and relevant differences in design, operation, or siting, the proposal

¹⁸⁰ NRC-2025-1503-0005.

would appropriately place the burden of demonstrating applicability on the applicant. The commenter, therefore, suggested that the NRC add a new subpart in § 53.440(a)(1) that reads:

- (ii) The applicant shall identify:
 - (A) the scope of the prior authorization, including the testing, analyses, and operational experience on which it relied, as applicable;
 - (B) the safety functions and design features addressed by such authorization, as relevant and applicable to the design features required by § 53.400 and to the functional design criteria required by §§ 53.410 and 53.420; and
 - (C) any differences in design, operational, or siting factors relevant to the application that are material to the Commission's licensing review.¹⁸¹

The same commenter also recommended additional clarity on how the NRC plans to rely on relevant information from prior authorizations to ensure reviews are focused on evaluating the applicability of that information to the proposed design and not duplicative analysis. The commenter suggested that the NRC clarify that relevant DOE or DOW authorization information—including analyses, testing, operating experience, and data—may be credited for demonstrated safety functions where the applicant shows that the information is applicable, while preserving the Commission's independent responsibility to determine that all statutory and regulatory requirements have been met. To this end, the commenter suggested that NRC add a new subpart in § 53.440(a)(1) that reads:

- (i) The Commission shall consider and rely upon information from a design previously authorized by the Department of Energy or the Department of Defense, as identified by the applicant, to the maximum extent permitted by the Act and this chapter. Consistent with this obligation, the Commission's review shall:
 - (A) Adjust its technical review of attributes of the applicant's proposed design that were previously approved by the Department of Energy or the Department of Defense, to focus on material differences between the prior authorization and the subject application; and
 - (B) Avoid unnecessary duplication of analyses, tests, prototype testing, or operational experience assessments that were approved or accepted by the Department of Energy or the Department of Defense in connection with the previously authorized design.¹⁸²

NRC Response: The NRC disagrees, in part, with the comments. As discussed in Comment Response 4.1.2.A, the rule text here is intentionally structured to provide flexibility so the NRC can leverage a wide range of technologies, testing methodologies, and information from previously authorized and tested designs (for example, information from an authorization involving criticality testing versus a full-scale demonstration). The NRC also does not agree that the rule text should be revised to add a new subpart expressly stating that the Commission will rely on information from a DOE or DOW authorization to the maximum extent permitted by the AEA. While the NRC intends to continue to leverage such information to the maximum extent practical in its independent reviews—including by risk-informing those reviews and adjusting the scope and depth of the evaluation as appropriate—the NRC does not consider it necessary to specify that approach in rule language as the rule is geared toward the responsibility of the applicant to propose information to be leveraged from the application.

¹⁸¹ Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁸² Nuclear Energy Institute (NRC-2025-1503-0125).

The NRC agrees, however, that additional clarity on the types of information applicants may identify from a prior authorization would be beneficial. In response to these comments, the NRC has clarified in the preamble example categories of information that applicants may consider providing to support an NRC license application. This will include examples such as (A) the scope of the prior authorization, including the testing, analyses, and operational experience on which it relied, as applicable; (B) the safety functions and design features addressed by such authorization; and (C) any differences from the prior authorization in design, operational, or siting factors relevant to the application that are material to the Commission's licensing review. The NRC intends to update guidance to provide more specific considerations for these examples, such as what information may constitute operating experience.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 4.2.3.B: Another commenter addressed the proposed amendment to § 53.440(a)(1) requiring that the demonstration consider “interdependent effects throughout the commercial nuclear plant and the range of conditions under which the design features required by § 53.400 must function throughout the plant’s lifetime.” The commenter noted that DOE and DOW prototype authorizations typically evaluate the prototype configuration, rather than a full commercial plant with multiple shared or interconnected systems, adding that the rule lacks a requirement that applicants address the gap between prototype scale testing and commercial plant-wide interdependency analysis.¹⁸³

NRC Response: The NRC acknowledges the comment. As discussed in Comment Response 4.1.1.G, the NRC acknowledges that the technology and breadth of testing performed under a DOE or DOW authorization may not be identical to the design and analysis submitted in an application to the NRC. However, this rulemaking does not change the NRC application submittal requirements or the responsibility that an applicant provide a complete application.

Accordingly, the NRC did not change the rule language in response to this comment.

4.2.4. Other comments on the new pathway and revisions to § 53.440

Comment Bin 4.2.4.A: *NRC independent review and hearing rights under § 53.440(a)(1)*

While citing § 53.440(a)(1), a commenter said that explicitly stating that applicants must still submit a complete application reaffirms the NRC’s authority to make an independent determination of reasonable assurance and preserves the integrity of the regulatory process. The commenter added that clarifying that existing hearing rights under section 189(a) of the AEA remain unaffected would ensure transparency and public confidence. The commenter, therefore, proposed that the NRC add a new subpart in § 53.440(a)(1) that reads:

(iv) Nothing in paragraph (a)(1) of this section relieves the applicant from its obligation to submit a complete application or to provide the information necessary for the Commission to make the findings required by the Act and this chapter, limits the Commission’s authority to make an independent finding of

¹⁸³ NRC-2025-1503-0005.

reasonable assurance of adequate protection of public health and safety and the common defense and security, or affects the right of any person whose interest may be affected by a proceeding to request a hearing on the license application pursuant to § 189(a) of the Act and the relevant hearing provisions of this chapter.¹⁸⁴

NRC Response: The NRC agrees, in part, with this comment. As discussed in Comment Response 4.1.4.C, this rulemaking does not affect hearing rights under the AEA, nor does it alter hearing procedures codified in 10 CFR Part 2. This rulemaking also does not change the requirement for an applicant to submit a complete application on the docket, and the NRC will follow its processes for controlling such information, including the handling of sensitive information. However, the NRC does not agree that a revision to the rule language to affirm this principle is necessary.

Accordingly, the NRC did not update the rule language in response to this comment.

4.3. Comments on perceived increase in regulatory burden

Comment Bin 4.3.A: *Additional burdens on applicants and clarifications on crosswalk between agencies*

A couple of commenters addressed regulatory burdens that they assert are associated with the proposed rule.¹⁸⁵ One of the commenters said, while the proposed rule represents an “important step,” it does not fully achieve the intended balance between risk management and regulatory efficiency, potentially increasing costs without commensurate safety benefits. The commenter said the proposal could create inefficiencies for both the NRC and applicants by requiring duplicative effort, suggesting that the NRC instead use a risk-informed, performance-based approach tailored to the technology and safety case, and leverage technical findings from prior DOE and DOW reviews.¹⁸⁶

Both commenters expressed additional concern that the proposed rule would place unnecessary burdens on applicants, specifically by requiring them to independently map DOE and DOW authorizations to the NRC’s frameworks, a task they said the NRC is better equipped to perform.¹⁸⁷ One of these commenters reasoned that the applicant should not be required to conduct significantly more research and analysis under the proposal than they would under alternative approaches. This commenter also wrote that the proposed rule requires applicants to “identify how attributes of the authorization satisfy NRC regulations,” which suggests that applicants must perform a detailed crosswalk with DOE and DOW regulatory frameworks and go beyond demonstrating that an applicant’s information supports the Commission’s reasonable assurance findings.¹⁸⁸

Similarly, the other commenter cited concerns expressed at the April 14th public meeting on the rulemaking that the proposed approach would risk turning the pathway into an open-ended

¹⁸⁴ Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁸⁵ Deep Fission, Inc. (NRC-2025-1503-0065); Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁸⁶ Deep Fission, Inc. (NRC-2025-1503-0065).

¹⁸⁷ Deep Fission, Inc. (NRC-2025-1503-0065); Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁸⁸ Deep Fission, Inc. (NRC-2025-1503-0065).

“crosswalk” exercise, placing the burden on applicants to re-demonstrate compliance. The commenter proposed alternative rule text to provide an appropriate level of applicant responsibility to incorporate the information from the prior authorization, without requiring a provision-by-provision inter-framework mapping exercise that only the NRC can authoritatively perform.¹⁸⁹

Another commenter wrote that the proposed rule should allow the NRC to leverage DOE and DOW analysis, testing, operational experience, or a combination thereof, and clarify how the NRC may rely on DOE or DOW analysis, testing, and operational experience in conducting its review. The commenter added that the proposed rule currently allows an application to include “consideration of relevant information gathered from” a design authorized by DOE and DOW that has been tested and has demonstrated the ability to function safely, but it is not clear what this “relevant information” might be.¹⁹⁰

In light of these concerns, the commenters recommended that the rule should instead clarify the applicant’s role to identify the scope of the prior authorization, including the testing, analyses, and operating experience on which it relied; the safety functions and design features addressed; and any design, operational, or siting differences material to the Commission’s review.¹⁹¹ One of the commenters suggested that the NRC should, in turn, work with the DOE and DOW to understand how their authorizations map to the NRC’s regulations and guidance, with an emphasis on safe performance outcome objectives, rather than “rote compliance with a potentially moving target.”¹⁹² The other commenter similarly cited a December 11, 2025, internal memorandum (ML25322A208), which indicated that the NRC is already coordinating with the DOE to develop a crosswalk to assist in identifying opportunities for leveraging prior DOE or DOW authorizations.¹⁹³

NRC Response: The NRC disagrees, in part, with these comments. As discussed in Comment Response 4.1.2.A, the rule text is intentionally structured to remain flexible to allow for the NRC to leverage a wide variety of technologies, testing approaches and information from a previously authorized and tested design.

The NRC also disagrees that this rulemaking should establish a mapping between DOE or DOW authorization bases and NRC requirements, as discussed in Comment Response 4.1.2.A. The DOE and DOW authorization processes are distinct from the NRC licensing process, and because applicants possess the most detailed understanding of their design, deployment strategy, and the DOE or DOW requirements under which their design was previously authorized, they are best positioned to demonstrate how that prior authorization basis aligns with NRC regulations.

However, the NRC agrees that providing additional clarity on the types of information applicants may identify from a prior authorization would be beneficial. As discussed in Comment Response 4.2.3.A, in response to these comments, the NRC has clarified in the preamble example categories of information that applicants may consider providing to support an NRC license application.

¹⁸⁹ Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁹⁰ Deep Fission, Inc. (NRC-2025-1503-0065).

¹⁹¹ Deep Fission, Inc. (NRC-2025-1503-0065); Nuclear Energy Institute (NRC-2025-1503-0125).

¹⁹² Deep Fission, Inc. (NRC-2025-1503-0065).

¹⁹³ Nuclear Energy Institute (NRC-2025-1503-0125).

Accordingly, the NRC did not update the rule language in response to these comments.

5. Accompanying Guidance

Comment Bin 5.A: *Guidance*

Implementation and timing of future guidance

One commenter expressed particular concern that the companion ISG to the proposed rule instructs the NRC staff to defer to DOE and DOW authorizations to the “maximum extent practical” without defining that term.¹⁹⁴

A commenter urged the Commission to finalize the proposed rule “without delay” and encouraged prompt issuance of the supporting guidance documents referenced in the proposal.¹⁹⁵ A commenter said that regulatory guidance should be issued at the same time that the final rule goes into effect, or in time to inform DOE, DOW, and license applicant activities. The commenter reasoned that, without accompanying regulatory guidance, the proposed rule could lead to confusion on what DOE, DOW, NRC, and applicants need to satisfy the regulations, resulting in licensing process delays or unintended safety consequences.¹⁹⁶ Another commenter expressed appreciation that the NRC already released the draft interim guidance noted in the proposed rule, and said the NRC should finalize and publish implementation guidance in close coordination with the final rule, and provide a clear process for continued public engagement on guidance development.¹⁹⁷

A few commenters expressed concern with the NRC’s decision to issue guidance after finalization of the proposed rule. The commenters reasoned that, absent such guidance, the proposal deprives the public of a meaningful opportunity to comment on the regulatory framework.¹⁹⁸ One of the commenters argued the guidance demonstrates how the NRC will operationalize the acceptance criteria, confirmatory review obligations, and documentation requirements.¹⁹⁹ One of these commenters requested that the NRC withdraw the rule until regulatory guidance is available,²⁰⁰ while the other commenter suggested that the NRC publish draft implementing guidance for public comment before finalizing the rule.²⁰¹ A form letter campaign, expressing concerns with the proposed rule’s compliance with statutory obligations, generally expressed concern that the NRC “provides virtually no explanation of these proposed amendments to the regulations,” instead promising to publish guidance in the future.²⁰²

¹⁹⁴ LEAF of Hudson Valley (NRC-2025-1503-0088).

¹⁹⁵ Valar Atomics (NRC-2025-1503-0010).

¹⁹⁶ NRC-2025-1503-0059.

¹⁹⁷ Nuclear Innovation Alliance (NRC-2025-1503-0102).

¹⁹⁸ NRC-2025-1503-0023; NRC-2025-1503-0005.

¹⁹⁹ NRC-2025-1503-0005.

²⁰⁰ NRC-2025-1503-0023.

²⁰¹ NRC-2025-1503-0005.

²⁰² Nuclear Information and Resource Service, et al. (NRC-2025-1503-0124) [Form Letter Master].

Comments and recommendations related to future guidance

Several commenters noted specific gaps in the regulatory guidance or provided recommendations for future guidance, as summarized below.

General recommendations and alignment between the NRC and DOE and DOW requirements

A commenter urged the NRC to refine the draft guidance and provide greater clarity on how the proposed pathway would function in practice, including for first-of-a-kind applicants.²⁰³ A commenter suggested, at minimum, future guidance should address: (1) acceptance criteria for DOE or DOW authorization information; (2) the NRC staff confirmatory review process; (3) treatment of design changes from the prior authorization; (4) minimum technical documentation requirements; and (5) procedures for handling classified information.²⁰⁴ Another commenter suggested that the NRC provide regulatory guidance on how the NRC would handle deviations in advanced reactor performance and the performance characteristics assumed in DOE and DOW analyses in future license reviews. For example, the commenter noted that the neutronic characteristics of the plant may differ, including the reactivity coefficients, adding that the plant may reach criticality at a point which is not correctly predicted by the authorizing analysis.²⁰⁵

A commenter wrote that, while the proposed rule requires that prior Federal authorizations “demonstrate the ability to function safely,” it lacks specific criteria for testing, documentation, or the degree of representativeness for prior information to meet NRC safety standards. The commenter suggested that NRC incorporate into staff guidance minimum evidentiary expectations—including documentation of test conditions, coverage of design-basis events, and confirmation that the tested configuration is sufficiently representative of the proposed commercial design—to ensure consistent application and predictability in line with NUREG-0800, Section 15. They reasoned, for example, that differences in fuel form, coolant chemistry, or control system architecture between a prototype and a commercial configuration may materially affect whether physical phenomena are predicted accurately.²⁰⁶

Another commenter proposed that future NRC guidance incorporate a roadmap detailing additional, subsequent guidance beyond the draft ISG related to DOE and DOW authorization, as processes are finalized and implemented, adding that such guidance should be consistent across the different licensing pathways in 10 CFR Parts 50, 52, 53, and 57. First, the commenter proposed that future guidance should identify areas where information utilized during the DOE and DOW authorization process can directly apply to an the NRC license process, such as principal design criteria and technical specifications. For example, the commenter suggested that the NRC develop guidance endorsing technical methodologies, including any necessary conditions, and identify endorsement topics such as codes and standards, including American Society of Mechanical Engineers Section VIII or additional quality assurance standards; licensing basis event selection methodologies; system, structure, and component classification methodologies; and fuel and materials qualification data. Second, the commenter suggested that the NEPA obligations, such as by delineating areas where information from other authorizations can be used to inform NRC environmental reviews.²⁰⁷

²⁰³ Nuclear Innovation Alliance (NRC-2025-1503-0102).

²⁰⁴ NRC-2025-1503-0005.

²⁰⁵ NRC-2025-1503-0023.

²⁰⁶ NRC-2025-1503-0082.

²⁰⁷ ClearPath (NRC-2025-1503-0134).

NRC's responsibilities and authority

A few commenters expressed concerns that the guidance, as written, allows the NRC to shift the responsibility for the safety review to other agencies or lacks clarity around the NRC's responsibilities. One of these commenters wrote that the draft ISG and associated MOU would allow commercial applicants to reference safety data from reactors like the Advanced Test Reactor to satisfy NRC requirements, potentially leading to the "de facto" acceptance of another agency's safety finding and causing the NRC to effectively abdicate its statutory role. The commenter further expressed concern that DOE-NRC MOU No. 9 suggests that the resolution of technical concerns may follow the DOE's "Idaho System and Procedures," setting a potentially dangerous precedent while creating an inherent conflict of interest. In light of these concerns the commenter suggested that the final rule and ISG include integrity measures, including: independent audit procedures, validation of modeling products, documentation of embedded staff, and anti-capture support.²⁰⁸ Another commenter similarly expressed concern that the ISG includes "troubling" statements that support the interpretation that NRC would substantially credit a DOE or DOW authorization with a corresponding reduced level of review by the NRC staff, effectively shifting responsibility for the core safety review from NRC to another agency without statutory authority. The commenter suggested revisions to the rule language to clarify the NRC's role in conducting independent safety reviews, and cautioned against relying on the ISG as the primary mechanism for implementing the proposed framework.²⁰⁹

A commenter suggested that any final guidance should remain aligned with the operative text of the proposed rule, reasoning that the proposed amendments do not alter NRC licensing standards, application-content requirements, nor the NRC's obligation to make independent findings under the applicable regulatory framework. For example, the commenter noted confusion among stakeholders about the practical effects of the proposed rule, which shows limited regulatory text changes but is accompanied by a 53-page draft ISG, raising concerns that later guidance or stakeholder expectations could adopt an interpretation broader than the rule text supports. The commenter continued, stating that while some stakeholders interpret the rule as creating an expedited pathway, others voice concern that the NRC is weakening or compromising its independent regulatory role. The commenter suggested additional clarification that review efficiency should ultimately arise from the quality and applicability of the information, to avoid the risk that a narrow evidentiary clarification will be understood as creating a broader shortcut, preference, or presumption not supported by the regulatory text.²¹⁰

Another commenter said the draft ISG and associated materials lack guidance regarding the NRC's roles, responsibilities, and authority, related to the application of NRC regulatory requirements for when designs authorized by DOE or DOW may be extended beyond DOE or DOW jurisdiction and used in a commercial operation manner. The commenter said it is not clear under § 50.43(e)(3) what NRC guidance would need to be followed and to what degree they would be applied; what guidance would be used by DOE or DOW as the bases for their authorization, if not NRC's guidance; the differences between the NRC's guidance and DOE or DOW requirements; and how the NRC would justify the acceptance of those differences. The commenter reasoned that NRC has no role in the DOE or DOW authorization process other than as an observer, and, therefore, has no authority to stipulate which NRC requirements or

²⁰⁸ Oregon Department of Energy (NRC-2025-1503-0112).

²⁰⁹ State of New York (NRC-2025-1503-0119).

²¹⁰ The Breakthrough Institute (NRC-2025-1503-0126).

guidance vendors would need to meet if the operation of those designs are extended beyond DOE or DOW jurisdiction.²¹¹

Extent and nature of the NRC's reliance on guidance to implement the proposed pathway

A few commenters discouraged the NRC from relying on non-binding guidance to implement the prior authorization pathway,²¹² with one commenter reasoning that this would promote procedural transparency.²¹³ A commenter further reasoned that while the ISG contains needed operational concepts and would support streamlined NRC reviews, these principles appear only in nonbinding staff guidance, not in the regulatory text that will govern future proceedings. The commenter said the final rule should not leave the core structure of the prior authorization pathway to guidance alone.²¹⁴ Another commenter, providing detailed remarks, said that while guidance can serve an important role in explaining or elaborating upon regulatory requirements, it is not a substitute for stable, clearly articulated standards within the regulatory text and, thus, should not serve as the primary mechanism for defining policy. The commenter suggested that key elements of the framework—such as essential definitions, criteria, and procedural requirements—should be codified within the rule itself, to enhance transparency and consistency, while strengthening the legal defensibility of the rule.²¹⁵ A different commenter wrote that while the future guidance would presumably, define the vague phrase, “has demonstrated the ability to function safely,” the guidance itself cannot provide a roadmap for regulatory relief that goes beyond the constraints of the plain rule language.²¹⁶

Another commenter supported implementation principles outlined in the ISG, specifically with respect to the consideration of NRC requirements during the development of DOE and DOW authorization applications, the maximization of overlap between the two regimes, and early engagement with the NRC to improve efficiency. The commenter further endorsed the ISG's mention of a “core team” application review approach to minimize or eliminate duplicative reviews. They noted, however, that these principles should not replace the core architecture of the pathway in the rule itself, reasoning that the regulations should establish the binding NRC review focus and applicant requirements, while the NRC guidance should explain how that model is implemented in particular technical areas. They reasoned that such sequencing is important as much of the practical streamlining is expected to occur in the ISG and related pre-application interactions.²¹⁷

On the other hand, a commenter proposed that the NRC utilize a guidance-led approach for leveraging DOE and DOW authorization reviews and testing. The commenter said that the NRC correctly provides regulatory flexibility for an applicant to justify how it meets the NRC's requirements, with the practical benefit of the proposed framework stemming from the supporting regulatory guidance. The commenter noted that the NRC should develop limited, technology-neutral guidance while the DOE implements its new authorization process under the Reactor Pilot Program. Likewise, they discouraged the NRC from developing additional near-

²¹¹ NRC-2025-1503-0077.

²¹² Nuclear Energy Institute (NRC-2025-1503-0125); State of New York (NRC-2025-1503-0119); Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

²¹³ State of New York (NRC-2025-1503-0119).

²¹⁴ Nuclear Energy Institute (NRC-2025-1503-0125).

²¹⁵ Main Street Foundation Center for Regulatory Analysis and Engagement (NRC-2025-1503-0133).

²¹⁶ Union of Concerned Scientists (NRC-2025-1503-0128).

²¹⁷ Nuclear Energy Institute (NRC-2025-1503-0125).

term guidance without adequate technical justification, reasoning that the NRC should at least clarify that testing and operational data under DOE and DOW authorizations can be referenced.²¹⁸

Parallelism between Parts 50 and 53

A commenter expressed support for full structural and substantive parallelism between the Part 50 and Part 53 provisions and suggested that subsequent guidance confirm that information developed under one acceptable framework may be leveraged in another where applicable.²¹⁹

Other comments on NRC guidance

A commenter noted that, since the NRC did not approve the requests to extend the notice of proposed rulemaking comment period to align with the draft ISG comment period, there would likely be public comments requesting additional changes to the rule text to account for a lack of guidance.²²⁰

Another commenter wrote that the ISG lacks clarity where it instructs the NRC to defer to DOE and DOW authorization to “the maximum extent practical,” reasoning that there is no definition to reference.²²¹

NRC Response: To the extent that the comments express views as to the draft ISG (91 FR 20717, 20718; April 17, 2026) or the potential for future guidance, the NRC notes that such comments are outside the scope of this rule. The NRC will address these comments if the comments were submitted in response to the ISG *Federal Register* notice. See also, Comment Response 2.3.A. The NRC notes that comment resolution for the draft guidance is being addressed separately. The NRC acknowledges the comments regarding the need for guidance on the process to transition from a DOE- or DOW-tested and authorized design to an NRC licensing framework. For these applications, the NRC staff will continue to use its existing licensing application review procedures, together with the ISG, “NRC Application Pathway for Reactor Designs Previously Authorized by the U.S. Department of Energy or Department of War.” The staff will also assess, based on licensing experience, whether additional or more detailed implementation guidance is warranted.

The NRC disagrees with comments suggesting that the rule or any associated guidance undermines the NRC’s statutory role. See also, Comment Response 2.4.A.

Accordingly, the NRC did not change the rule language in response to these comments.

²¹⁸ ClearPath (NRC-2025-1503-0134).

²¹⁹ Nuclear Energy Institute (NRC-2025-1503-0125).

²²⁰ ClearPath (NRC-2025-1503-0134).

²²¹ NRC-2025-1503-0121.

6. Procedural Matters and Other Supporting Documents

6.1. Regulatory impact analysis, regulatory flexibility certification, and backfitting

6.1.1. Qualitative analysis provided in regulatory analysis

Comment Bin 6.1.1.A: *Qualitative regulatory analysis*

A couple of commenters stated that the rule relies on an inadequate regulatory analysis (RA).²²²

A commenter wrote that the RA in the proposed rule omits several critical factors resulting in flaws in the analysis of costs and benefits.

- **Baseline costs:** The commenter wrote that the proposed rule identifies reduced review burden as the primary benefit of the proposed rule but provides no baseline estimate of the costs of demonstrating safety functions under the existing pathways. The commenter added that without a baseline, no cost savings from the rule can be validated. The commenter further suggested that ongoing advanced reactor reviews, such as the TerraPower Sodium construction permit application, could provide the basis for a baseline estimate.
- **NRC staff burden:** The commenter wrote that the proposed rule assumes that referencing a DOE or DOW authorization would reduce the NRC staff's burden, but that assumption may be incorrect as evaluating DOE and DOW information would require the NRC staff to obtain and review classified DOW materials, assess differences between DOE hazard analyses and the NRC's safety analyses, conduct confirmatory calculations for novel design features, and develop ad hoc review criteria where no established precedent exists. The commenter wrote these activities could generate equal or greater review burden than a conventional application. The commenter also wrote that, based on the methodology prescribed in NUREG/BR-0058, Revision 4, the NRC staff should at minimum develop bounding estimates or threshold analyses.
- **Litigation risk and license challenge costs:** The commenter wrote that the sufficiency of using DOE or DOW information as a substitute for the NRC's safety analysis is untested and could be challenged under section 182(a) of the AEA, which could result in legal costs that are not identified in the RA.
- **Guidance costs:** The commenter wrote that the RA should estimate costs related to guidance development including staff time, contractor support, and public comment processing costs.
- **Price-Anderson Act and indemnification:** The commenter wrote that DOE demonstration reactor operators access nuclear hazard indemnification under DOE Acquisition Regulation 952.250-70 rather than the Price-Anderson Act framework, and the RA does not evaluate whether commercial applicants relying on DOE or DOW authorizations will encounter limitations in obtaining standard Price-Anderson Act indemnification.
- **Cost of under-review or misapplication:** The commenter wrote that "[t]he regulatory analysis should evaluate the expected-value cost of licensing a commercial reactor whose safety basis inadequately addresses commercial operating conditions due to over-reliance on DOE or DOW prototype results. While the probability may be low, the consequence is severe, and [Office of Management and Budget] OMB Circular A-4 requires probabilistic treatment of uncertainty in benefit-cost analysis."²²³

²²² NRC-2025-1503-0044; NRC-2025-1503-0005.

²²³ NRC-2025-1503-0005.

NRC Response: The NRC agrees, in part, and disagrees, in part, with the comments. The NRC disagrees with the comment that no baseline estimate of the costs of demonstrating safety functions under the existing pathways was provided. The baseline of the RA is the regulatory baseline (i.e., the “no action” alternative), and there is no need to quantify the baseline if there are no quantified incremental effects. The regulatory baseline used in NRC analyses does not have to be fully quantified in order for incremental changes to parts of the baseline resulting from a proposed rule to be quantified. In addition, the RA is consistent with NUREG/BR-0058, Revision 4; the AEA; and OMB Circular A-4, and there are no further impacts to quantify, nor incremental impacts to discuss qualitatively with an explanation of why they cannot be measured. The NRC disagrees that current review burden would need to be detailed in the RA in order for the RA to assert that there may be a reduction in review burden, assuming that a high-quality application is submitted. No quantification of the baseline is needed for a qualitative analysis of the potential costs and benefits of this rule. No change to the RA was made due to this comment.

The NRC disagrees with the comment that, due to the revisions to § 50.43, the review of an application could result in a greater review burden for the NRC. Where appropriately justified by a commercial license applicant, this approach is intended to involve adjusting the focus and depth of such NRC reviews, with no impact on safety or security. No change to the RA was made due to this comment.

The NRC disagrees there would be increased “litigation risk and license challenge cost” to applicants using § 50.43(f) compared to an application that does not reference information from a DOE or DOW authorization. As explained in Comment Response 1.2.D, the same safety and security standards that generally apply to all NRC applicants for a license to construct and operate a commercial reactor facility will also generally apply to applicants that reference a DOE or DOW authorization. As discussed in Comment Response 1.2.B, this rulemaking neither changes an applicant’s obligation to submit a complete application to the NRC nor the NRC’s responsibility to conduct an independent review. In addition, the NRC retains the ability to request additional information from applicants to conduct its review and to adjust the focus and depth of its reviews, as appropriate. Accordingly, the NRC does not anticipate this rule to have any effect on the asserted risks or costs. Also, regardless of whether an applicant references a prior DOE or DOW authorization, the NRC notes that costs related to litigation risks during the NRC’s review process may be more dependent on the quality of an application. As such, the assumption of a high-quality application was added to the RA as a result of this and other comments.

The NRC acknowledges that guidance-related costs could have been included in the proposed rule RA. However, because the guidance is being developed alongside this rule, the final rule guidance development costs have already been realized (i.e., sunk) at the time the rule is issued and were therefore not added to the final rule RA. In addition, consistent with broader federal government regulatory analysis practice, the NRC has not included rulemaking costs in this RA. No change to the RA was made due to this comment.

The NRC agrees with the comment that the RA does not specifically discuss Price-Anderson indemnification. This discussion is not included in the RA because, relative to an applicant that does not reference a prior DOE or DOW authorization, the NRC does not expect that the fact the design was approved by DOE or DOW to have any impact on the NRC applicant in this regard, particularly because this rule does not change underlying safety and security requirements. No change to the RA was made due to this comment.

The NRC also disagrees with the comment that there would be an “under-review” or “misapplication” that would lead to an inadequate safety basis being approved by the NRC. First, to the extent that a risk of “under-review” or “misapplication” exists for any application review, as asserted by the commenter, the NRC notes that nothing in this rule would result in an incremental change to that risk relative to an application submitted under the regulatory baseline because this rule does not alter underlying safety or security requirements. Second, the application to the NRC of the previously approved DOE or DOW design is assumed to be a high-quality application. As stated in previous comment responses, this rulemaking does not change an applicant’s obligation to submit a complete application to the NRC and that, to the extent that an applicant seeks to use a prior DOE or DOW authorization to support its NRC application, the applicant will have the responsibility of demonstrating how attributes of the authorization satisfy NRC regulations.

Accordingly, the assumption of a high-quality application was added to the RA as a result of these comments.

6.1.2. Other comments on regulatory analysis

Comment Bin 6.1.2.A: *Regulatory analysis expansion*

Multiple commenters including a form letter campaign generally expressed concerns that the RA is “empty”²²⁴ or lacks an analysis of cost and benefits or cost savings.²²⁵ Several commenters including a form letter campaign stated that not quantifying the costs or benefits of the proposed rule violates E.O. 12866, OMB Circular A-4, and the NRC’s NUREG/BR-0058 RA guidelines.²²⁶ Similarly, a commenter wrote that the proposed rule is substantial enough to require a full evaluation of safety, legal, and economic impacts.²²⁷

One of these commenters wrote that OMB Circular A-4 requires agencies to assess costs and benefits quantitatively “to the extent feasible” and to explain why quantification is infeasible where it is not attempted. The commenter argued that the RA does not offer any explanation, and the NRC’s assertion that it cannot quantify the effects is unsupported because multiple cost and benefit categories are analytically tractable. The commenter wrote that this violates the Commission’s direction in SECY-14-0087 which explicitly stated it was not authorizing an expansion of qualitative analysis and directed that the NRC’s RA guidance should continue to analyze quantitative factors to the extent possible while using qualitative factors when quantitative analyses are not possible or practical. The commenter wrote that this statement reaffirmed the longstanding standard for RA guidance in NUREG/BR-0058, Rev. 4 which states that costs and benefits should be expressed in monetary terms whenever possible, inexact quantification with large uncertainties is preferable to no quantification, and an attribute should not be omitted from an analysis because it is determined to be unquantifiable. The commenter

²²⁴ NRC-2025-1503-0078; Nuclear Free Hawai’i (NRC-2025-1503-0079); Ecological Options Network (NRC-2025-1503-0099); NRC-2025-1503-0113 [Form Letter Master].

²²⁵ NRC-2025-1503-0022; NRC-2025-1503-0100; NRC-2025-1503-0028 [Form Letter Master].

²²⁶ NRC-2025-1503-0078; Nuclear Free Hawai’i (NRC-2025-1503-0079); LEAF of Hudson Valley (NRC-2025-1503-0088); Ecological Options Network (NRC-2025-1503-0099); NRC-2025-1503-0113 [Form Letter Master]; NRC-2025-1503-0139; NRC-2025-1503-0005.

²²⁷ San Luis Obispo Mothers for Peace (NRC-2025-1503-0083).

added that the NRC's draft of NUREG/BR-0058, Rev. 5 was specifically designed to strengthen and expand the quantification methods available to staff for difficult-to-monetize factors, including bounding analyses, sensitivity analyses, and internal rates of return. The commenter argued that the proposed rule's RA violates all of these Commission-directed standards.²²⁸ A form letter campaign wrote that they agreed with this comment.²²⁹

A commenter reasoned that an RA would be beneficial to industry, as industry may have concerns or be able to offer more cost-effective methods.²³⁰ Another commenter stated that a cost-benefit analysis for the proposed rule would support the adoption of the proposed rule. The commenter cited data indicating that nuclear energy has become more costly rising from \$600 to \$900 per kW in 1967 to \$3,000 to \$6,000 per kW in the 1970s (2010 dollars). The commenter also argued that reactors now take longer to build, when historically nuclear energy was less expensive and reactors could be built in as few as 5 years as compared to 15 years for Vogtle Units 3 and 4. The commenter, while advocating for a comprehensive cost-benefit analysis, reasoned that the current costs associated with nuclear energy are not inherent to the technology, and thus the idea that nuclear energy is expensive must be "outright rejected."²³¹

A commenter wrote that the proposed rule indicates the NRC expects cost savings for the applicants and agency and labeled it a deregulatory regulatory action; however, there is substantial overlap with the proposed rule's provisions and existing coordination mechanisms between the NRC and DOE. The commenter added that the NRC has not shown that the new pathways will actually reduce burden and suggested revising the proposed rule to provide justification.²³²

NRC Response: The NRC disagrees, in part, with the comments. The NRC disagrees that there are multiple other tractable cost and benefit categories, as explained in the comment responses in Section 6.1, and that E.O. 12866, OMB Circular A-4, or the NRC's standards have been violated. To remain conservative, the potential savings are expressed as a possibility, with no characterization of the magnitude, specifically because the magnitude of the benefit is unknown.

The NRC disagrees that the proposed rule RA violates Commission direction or guidance regarding quantification and the use of qualitative factors, because—as is discussed in this comment response document—there are no other areas of identifiable cost, and, therefore, there is no need to justify omitted elements when none were omitted.

The NRC acknowledges that a quantitative analysis could potentially be beneficial to industry and would likely support the adoption of the proposed rule. However, as discussed in the comment responses in Section 6.1, there is no need for quantification. The NRC disagrees that it has not shown that the new pathways will reduce burden and asserts that because the new pathways are additional options, they would likely only be pursued if applicants believe the business case supports a reduction in burden. The NRC also acknowledges the comments regarding the costs associated with nuclear energy. The intent of this rule is to create an explicit pathway for developers to reference information from a DOE or DOW authorization in an NRC application. Any potential cost savings, however, will depend heavily on the specific

²²⁸ NRC-2025-1503-0005.

²²⁹ NRC-2025-1503-0028 [Form Letter Master].

²³⁰ NRC-2025-1503-0100.

²³¹ NRC-2025-1503-0093.

²³² The Breakthrough Institute (NRC-2025-1503-0126).

technologies authorized and tested by DOE or DOW, their relevance to commercial reactor operations, and the overall quality of the application submitted. Ultimately, as the NRC previously noted, determining the business case for using this pathway rests with the developer.

Therefore, based on the reasoning included in Comment Responses 6.1, the NRC also disagrees that this final rule requires a separate RA with quantified effects.

As a result of these comments, the assumption of a high quality application was added to the RA, as well as additional explanation that, while the new process may result in some amount of additional work for the first applications received under § 50.43(f) due to any unforeseen implementation ambiguity, the learning curve for future applications should result in cost savings over time, to both the NRC and applicants, as a result of the additional flexibility this final rule provides to applicants.

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- 6.2. Other comments on procedural matters (e.g., plain writing, Cumulative Effects of Regulation, voluntary consensus standards, other Executive Orders, Paperwork Reduction Act, National Environmental Policy Act, voluntary consensus standards)

Comment Bin 6.2.A: NEPA Concerns

A commenter recommended that the NRC publish an Environmental Impact Statement (EIS) and a Preliminary Safety Analysis Report, remarking that the public has a right to review this documentation.²³³ A form letter campaign disagreed that the proposed rule is merely procedural and subject to a categorical exclusion, reasoning that the proposed rule would substitute a different safety standard than the AEA standard for reactor license approval as well as accept the determinations of other agencies without the NRC necessarily making its own determinations. The commenter concluded that these changes are profound and may result in risks to the human environment, therefore triggering the NEPA requirement to conduct an EIS or environmental assessment.²³⁴

NRC Response: The NRC disagrees with these comments. The preamble for the proposed rule explained that the action is eligible for a categorical exclusion because the rulemaking meets the criterion described in § 51.22(c)(3). Since the publication of the proposed rule, the NRC has published a final rule that amended the NRC's regulations for categorical exclusions. As a result, the applicable categorical exclusion citation is now § 51.22(a)(1) because this rule is procedural in nature. The NRC notes that, for any particular licensing action that would use the pathways established by this rule, the NRC will comply with its obligations under NEPA, including by developing or using an environmental impact statement, environmental assessment, or categorical exclusion, as applicable. Additionally, the NRC will also comply with its licensing processes, including with respect to procedures for publication of related documentation. However, the NRC continues to maintain that the amendments to § 50.43, "Additional standards and provisions affecting class 103 licenses and certifications for commercial power," and § 53.440, "Design requirements," do not individually or cumulatively have a significant effect on the human environment.

As explained in other comment responses, this rule does not change safety or security standards for reactor license approval, and the NRC will not simply accept determinations from

²³³ NRC-2025-1503-0035.

²³⁴ Nuclear Information and Resource Service, et al. (NRC-2025-1503-0124) [Form Letter Master].

other agencies in place of its own independent review. The NRC will continue to evaluate all applications independently.

Accordingly, the NRC did not change its determination that the rule is eligible for categorical exclusion in response to these comments.

7. Other Comments on the Proposed Rule

Comment Bin 7.A: *Implementation and interagency coordination*

A commenter requested further clarification around the applicability of the rule across licensing stages, including construction permits and operating licenses, to ensure consistent expectations for applicants.²³⁵

A commenter proposed, in cases where an applicant relies on the proposed pathway to incorporate non-public DOE and DOW data, that the NRC publish a plain-language public safety synthesis comprising the scope of prior testing, what aspects the NRC is crediting, and what areas the NRC is independently evaluating. The commenter reasoned that this synthesis would allow the public to participate meaningfully in licensing proceedings without compromising sensitive information, align with the NRC's commitments in NUREG-1379, and clarify how prototype information is being used within the NRC's independent statutory responsibilities under the AEA.²³⁶

A commenter proposed a process for issuing a non-binding applicability determination for each design prior to an applicant formally relying on this pathway. The commenter reasoned that, by identifying which portions of a DOE and DOW authorization are directly relevant to NRC requirements and which areas still require supplemental NRC review, this approach would advance efficiency objectives while ensuring that the NRC remains the sole arbiter of evidentiary sufficiency for its licensing framework, consistent with the quality and uniformity objectives of NUREG-0800.²³⁷

A commenter urged the NRC to ensure that the proposed rule does not create avoidable inconsistency across licensing frameworks, reasoning that replicating similar language across 10 CFR Parts 50, 53, and 57 without harmonizing eligibility terms, transferability criteria, and implementation expectations would reduce predictability rather than improve it. For example, the commenter suggested that the NRC clarify in the final rule or statement of considerations whether the proposed Part 53 pathway is intended to cover non-commercial DOE- and DOW-authorized reactor designs where the underlying information is otherwise relevant to a commercial NRC application. If not, the commenter said the NRC should explain why the Part 53 pathway is intended to be narrower than the Part 50 pathway and how that narrower scope is consistent with the purpose of the rule. The commenter suggested that the NRC address cross-framework issues in the final rule by identifying the intended scope of the Part 50 and 53 provisions, explaining how any future Part 57 analogue would be coordinated with Parts 50 and 53, and confirming that DOE and DOW-derived information would be evaluated consistently across licensing frameworks.²³⁸

²³⁵ Nuclear Innovation Alliance (NRC-2025-1503-0102).

²³⁶ NRC-2025-1503-0082.

²³⁷ NRC-2025-1503-0082.

²³⁸ The Breakthrough Institute (NRC-2025-1503-0126).

Another commenter encouraged continued coordination between the NRC and DOE and DOW to ensure that review processes are sufficiently performed and documented in a way that supports NRC licensing activities. While referencing the DOE Reactor Pilot Program, the commenter said that although DOE should strive to align its process as closely as possible with the NRC's, DOE review should also maintain its flexibility to meet its own mission and objectives. The commenter stated, therefore, that DOE's flexibility may be challenging for the NRC to broadly review and endorse because there is a fundamental difference between the purposes of the two agencies and their respective reviews.²³⁹

NRC Response: The NRC agrees, in part, and disagrees, in part, with these comments.

The NRC agrees that additional clarity on applicability of the rule across licensing stages and the scope of each framework would generally be beneficial. While information from a prior authorization may be leveraged at any licensing stage, the expectations for information maturity at those stages are not modified by this rule (e.g., information from a prior authorization can be leveraged in both a construction permit and operating license application; however, the contents of those applications under § 50.34, "Contents of application; technical information," and considerations regarding design maturity at those stages are not modified by this rule). Additionally, this rulemaking does not modify the existing scope of facilities able to be licensed under a given NRC licensing framework (e.g., the provisions of 10 CFR Part 53 remain limited to the licensing of commercial facilities). However, information from a non-commercial DOE-authorized facility may be leveraged in a 10 CFR Part 53 application for a commercial facility where relevant. The NRC disagrees with addressing how DOE- and DOW-derived information would be evaluated across licensing frameworks in the final rule because the broad spectrum of types of information that may be leveraged necessitates flexibility in the rule language. However, the NRC may assess the need for additional details regarding implementation across licensing frameworks as licensing experience is gained.

The NRC agrees that continued coordination between the NRC and DOE would be beneficial, and that there is a fundamental difference between the purposes of the reviews of the NRC and DOE. As discussed in DOE-NRC MOU No. 9, NRC technical staff may be provided with access and the opportunity to observe and learn about the DOE authorization process as well as the technologies authorized by DOE to facilitate the NRC's ability to leverage such information in future licensing reviews.

The NRC disagrees with the proposed processes of publishing syntheses of information or issuing applicability determinations. Information submitted by applicants and information developed by the NRC, including safety evaluations, will continue to be subject to existing provisions of 10 CFR 2.390, "Public inspections, exemptions, requests for withholding." Additionally, applicants are encouraged to engage with the NRC early in the application development process to understand the potential ability to leverage prior authorization information and suitability of licensing frameworks. The proposed non-binding applicability determination process appears to duplicate outcomes that may already be obtained through existing processes of pre-application meetings and pre-application readiness assessments.

Accordingly, the NRC did not change the rule language in response to these comments.

²³⁹ ClearPath (NRC-2025-1503-0134).

Comment Bin 7.B: Terminology in the proposed rule

A commenter noted that the proposed rule and associated materials use both “Department of War” and “Department of Defense,” and suggested that the NRC maintain consistent terminology, such as “military,” where possible to avoid confusion for applicants.²⁴⁰

NRC Response: The NRC disagrees with this comment. Consistent with E.O. 14347, “Restoring the United States Department of War,” the proposed rule FRN refers to the “Department of War” and “Department of Defense” interchangeably. Per section 2(d) of E.O. 14347, the regulatory text for this limited scope rulemaking would continue to use the title, “Department of Defense,” to avoid creating inconsistencies with or causing confusion in the NRC’s existing regulations in Title 10 of the *Code of Federal Regulations*.

Accordingly, the NRC did not change the rule language in response to this comment.

8. Rulemaking Timeline and Implementation

Comment Bin 8.A: Comment period extension

Two commenters expressed that the comment period for the rule should be extended.²⁴¹ A commenter stated that they experienced stress while trying to get comments onto the docket over the weekend while the website was “apparently down.”²⁴² A commenter requested that the comment period be extended to May 18, 2026, to align with the close of comment period of the draft ISG. This commenter stated that the proposed rule relies heavily on this guidance. This commenter also states that the additional time to comment would not adversely affect relevant entities and “would likely” improve the quality of stakeholder feedback.²⁴³

NRC Response: The NRC disagrees with these comments. The commenters did not provide sufficient reasoning to warrant a comment period extension. As stated in the proposed rule FRN, the comment period for the proposed rule closed on May 4, 2026. In addition, as discussed in this comment response document, the referenced draft guidance is not necessary for implementation of the rule.

Accordingly, the NRC did not change the comment period duration in response to these comments.

9. Other Out of Scope

Comment Bin 9.A: Technical comments

Several commenters provided comments that were outside of the scope of the rulemaking, including on topics such as the following: concerns about general impacts of nuclear safety

²⁴⁰ Nuclear Innovation Alliance (NRC-2025-1503-0102).

²⁴¹ ClearPath (NRC-2025-1503-0033); NRC-2025-1503-0121.

²⁴² NRC-2025-1503-0121.

²⁴³ ClearPath (NRC-2025-1503-0033).

(including nuclear waste) to the public,²⁴⁴ Price-Anderson Act and nuclear industry insurance,²⁴⁵ policies of the Trump Administration that are not relevant to this rulemaking and competitiveness of the U.S. nuclear industry,²⁴⁶ linear no-threshold model and radiation dose limits,²⁴⁷ application of current scientific standards on low-dose radiation exposure and cumulative risk,²⁴⁸ concerns about missing data,²⁴⁹ multi-unit sites,²⁵⁰ artificial intelligence,²⁵¹ high-assay, low-enriched uranium fuel,²⁵² guidance,²⁵³ public review of nuclear reactors,²⁵⁴ relative authorities of DOE/DOW/NRC,²⁵⁵ and environmental impacts.²⁵⁶

NRC Response: The NRC considers these comments to be out of scope of the rulemaking. This rulemaking is limited to the narrow issue of facilitating the direct leveraging of prior DOE or DOW authorizations of demonstration reactors into the NRC's licensing reviews of commercial reactor facility applications that reference those designs.

Accordingly, the NRC did not change the rule language based on these comments.

Comment Bin 9.B: *Deadline for new pathways*

Citing the 18-month timeline requirement for final decisions under section 5(a) of E.O. 14300, a commenter suggested that the NRC add a deadline into the proposed regulation, to ensure that applications that use the new pathway are treated in a timely manner. For example, the commenter proposed that the NRC include secondary consequences (e.g., prohibiting NRC fee collection on overdue permit applications), to ensure the speedy permit review envisioned in the proposal.²⁵⁷

NRC Response: The NRC considers these comments to be out of scope of the rulemaking. This rulemaking is intended to address, in part, section 5(d) of E.O. 14300 and is not intended to address section 5(a).

²⁴⁴ NRC-2025-1503-0022; JML ADVOCATES (NRC-2025-1503-0027); NRC-2025-1503-0037; NRC-2025-1503-0038; NRC-2025-1503-0085; NRC-2025-1503-0103; NRC-2025-1503-0109; NRC-2025-1503-0113 [Form Letter Master]; NRC-2025-1503-0121; NRC-2025-1503-0122; NRC-2025-1503-0123; NRC-2025-1503-0129.

²⁴⁵ NRC-2025-1503-0037; NRC-2025-1503-0038; NRC-2025-1503-0109; Wood County Ohio Green Party (NRC-2025-1503-0130).

²⁴⁶ NRC-2025-1503-0038; NRC-2025-1503-0067; NRC-2025-1503-0093; Nuclear Information and Resource Service, et al. (NRC-2025-1503-0124) [Form Letter Master].

²⁴⁷ NRC-2025-1503-0038; NRC-2025-1503-0090.

²⁴⁸ NRC-2025-1503-0015.

²⁴⁹ NRC-2025-1503-0038.

²⁵⁰ NRC-2025-1503-0068; NRC-2025-1503-0078; Nuclear Free Hawai'i (NRC-2025-1503-0079); San Francisco Bay Physicians for Social Responsibility (NRC-2025-1503-0081); LEAF of Hudson Valley (NRC-2025-1503-0088); Ecological Options Network (NRC-2025-1503-0099); NRC-2025-1503-0100; NRC-2025-1503-0113 [Form Letter Master]; NRC-2025-1503-0139.

²⁵¹ NRC-2025-1503-0072.

²⁵² NRC-2025-1503-0072.

²⁵³ NRC-2025-1503-0072; HGP Intelligent Energy LLC (NRC-2025-1503-0107).

²⁵⁴ NRC-2025-1503-0096.

²⁵⁵ Nuclear Information and Resource Service, et al. (NRC-2025-1503-0124) [Form Letter Master].

²⁵⁶ NRC-2025-1503-0135.

²⁵⁷ NRC-2025-1503-0093.

Accordingly, the NRC did not change the rule language in response to this comment.

Comment Bin 9.C: *NRC retrospective review of new pathway*

A commenter recommended that the NRC conduct a retrospective review within 3 years of the first license issuance under the proposed pathway to assess whether it is achieving the intended efficiencies, whether applicants are using it as anticipated, and whether adjustments to guidance are needed to ensure consistent application across reactor technologies.²⁵⁸ Another commenter additionally urged the NRC to balance efficiency with credibility and predictability as it implements the proposed rule and recommended that NRC work with applicants to glean lessons learned and adapt its approach over time.²⁵⁹

NRC Response: The NRC considers these comments outside the scope of the rulemaking. While the NRC does not commit to the described retrospective review and lessons learned assessment, the NRC regularly conducts lessons learned activities related to its licensing and regulatory decisions and processes as part of its efforts to continually improve efficiency and effectiveness.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 9.D: *Leveraging of NEPA reviews*

A commenter encouraged the NRC to state explicitly in the final rule preamble that it will seek to leverage prior NEPA reviews conducted by DOE and DOW, including categorical exclusions, to the maximum extent practicable, consistent with recent congressional directives to streamline environmental reviews, citing the 2023 Fiscal Responsibility Act and section 506 of the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act. The commenter additionally noted that in February 2026, DOE created a new Categorical Exclusion for Advanced Nuclear Reactors (CX B5.26), and SRM-SECY-24-0046 directed the NRC to consider establishing new categorical exclusions for microreactor licensing, advanced demonstration projects, and site envelopes for specific reactor technologies.²⁶⁰

A commenter voiced concern that the proposal would remove or hinder environmental review under NEPA, precluding stakeholder input that could be used to challenge agency decisions from the NRC, DOE, and DOW.²⁶¹

NRC Response: The NRC considers these comments outside the scope of this rulemaking. This rulemaking does not modify regulations or processes related to its NEPA implementing regulations or otherwise affect its environmental review procedures.

Accordingly, the NRC did not change the rule language in response to these comments.

²⁵⁸ NRC-2025-1503-0082.

²⁵⁹ Nuclear Innovation Alliance (NRC-2025-1503-0102).

²⁶⁰ Nuclear Energy Institute (NRC-2025-1503-0125).

²⁶¹ NRC-2025-1503-0121.

Comment Bin 9.E: Backfit regulation modification

A commenter recommended that the NRC modify the proposed rule to clarify that the backfit analysis requirements in § 53.1590(a)(2) or (a)(3) “...shall not apply to designs authorized by DOE or [DOW] if those designs may be operated for commercial purpose but need to be backfitted in order to be consistent with requirements applicable to commercial use on public lands.”²⁶²

The same commenter expressed concerns about potential waste of resources for the NRC to follow its backfit analysis requirements to ensure compliance for § 50.43(e)(3) facilities. The commenter recommended the proposed rule be modified to be clear that the backfit analysis requirements shall not apply to designs authorized under § 50.43(e)(3) if those designs are to be operated in a commercial manner on DOE or DOW property or may be located on non-DOE and DOW lands but need to be backfitted in order to be consistent with the provisions of § 50.43(e)(1) or (2).²⁶³

NRC Response: The NRC considers these comments outside the scope of this rulemaking. This rulemaking does not affect the NRC’s backfitting or issue finality regulations, regardless of whether an applicant references a prior DOE or DOW authorization.

Accordingly, the NRC did not change the rule language in response to these comments.

Comment Bin 9.F: Safety measures and considerations

A commenter requested clarification regarding how the ACRS would engage in reviews that rely on prior DOE or DOW work, recommending that ACRS’s review should focus on the NRC’s independent safety evaluation and novel issues that arise. In cases where the NRC accepts prior Federal evaluations, they suggested that the ACRS assess whether the NRC’s reliance is technically justified, to preserve ACRS’s role in providing independent advice on safety-significant matters without creating duplicative review of prior Federal work. The commenter further suggested, where DOE evaluations address novel or first-of-a-kind issues that are likely to be referenced in a future NRC application, DOE and applicants could seek optional ACRS engagement during the DOE review process, reasoning that early input could help streamline subsequent NRC review and reduce uncertainty for applicants.²⁶⁴

NRC Response: The NRC considers this comment outside the scope of this rulemaking. This rulemaking does not modify regulations or processes regarding the ACRS.

Accordingly, the NRC did not change the rule language in response to this comment.

Comment Bin 9.G: Diablo Canyon licensing decisions

A commenter also expressed concern about future licensing decisions related to Diablo Canyon, writing that a weakening of the NRC’s independence could reduce public scrutiny.²⁶⁵

²⁶² NRC-2025-1503-0077.

²⁶³ NRC-2025-1503-0077.

²⁶⁴ Nuclear Innovation Alliance (NRC-2025-1503-0102).

²⁶⁵ San Luis Obispo Mothers for Peace (NRC-2025-1503-0083).

NRC Response: Future licensing decisions related to the current operating fleet, including at the Diablo Canyon site, are not within the scope of this rulemaking.

Accordingly, the NRC did not change the rule language in response to this comment.