August 31, 2026

The Honorable Ho K. Nieh, Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Docket ID No. NRC-2025-0975; RIN 3150-AL44; *Modernizing Reactor Licensing, Safety Oversight, and Siting Practices*, 91 Fed. Reg. 44,560 (July 16, 2026)

Submitted via Regulations.gov (Docket NRC-2025-0975)

Dear Chairman Nieh:

This letter provides the comments of the Natural Resources Defense Council (NRDC) on the Commission's proposed rule, Modernizing Reactor Licensing, Safety Oversight, and Siting Practices.[1] NRDC is a national nonprofit environmental organization with over 3 million members and online activists, and its members live, work, recreate, and draw drinking water near facilities the Commission licenses. These comments address the proposed licensing framework, and they take no position on whether any particular facility should be licensed. NRDC recognizes the zero-carbon generation benefits of nuclear power and its important continuing role in decarbonizing the nation's energy system, and NRDC does not oppose considered, continuous improvement of the Commission's regulations. In evaluating this Proposed Rule, NRDC has applied two measures that the rule's own purpose invites: whether a provision could speed the deployment of zero-carbon generation, and whether it would do so while preserving the environmental and safety protections on which durable, responsible nuclear deployment depends. We find that several provisions pair a potential efficiency with a corresponding safeguard, and NRDC supports them by name below. We respectfully oppose those that in our judgement would trade efficiency for uncertainty or the likelihood of reduced safety and/or added environmental harms. In NRDC's view coherent, rigorous, and independent regulation is not an obstacle to the nuclear enterprise but a necessary condition for it.

As we explain below, these comments identify where the Proposed Rule states positions without support, contradicts itself or its own supporting documents, or leaves its frameworks incomplete. One structural defect recurs across the package: operative safety criteria are placed in non-binding guidance rather than in regulatory text. NRDC documents six instances below: the numeric thresholds that define design basis events (DG-1454); the scope limits and decision principles for alternative acceptance criteria (DG-1464); the risk-tier mechanics that determine which modeling changes the NRC ever reviews (DG-1468, DG-1466); the limiting criteria for risk-informed aging-management alternatives, addressed in the preamble and draft interim staff guidance only; operative emergency planning zone sizing criterion (DG-1430); and the site-characterization methods behind Part 100's new tiers (DG-4036). To these NRDC would add one decisional

[1] Modernizing Reactor Licensing, Safety Oversight, and Siting Practices, 91 Fed. Reg. 44,560 (July 16, 2026) (Proposed Rule).

standard whose implementing method has not been written at all, the societal risk-benefit assessment for siting reactors in areas of greater population density.[2] A related category of concern is that safeguards asserted in the preamble appear nowhere in the regulatory text. NRDC notes that guidance, in its true form, binds no person or entity and may be revised, or withdrawn, without notice and comment. In fact, one guidance document in this very package was withdrawn as "outdated and incorrect" on the twelfth day of the comment period.[3] Two settled principles govern where such criteria must sit. First, when an agency treats a guidance document as controlling in the field, courts have held that the document operates as a binding legislative rule subject to notice-and-comment rulemaking, whatever label the agency attaches to it.[4] Second, an agency that eliminates a previously codified requirement, or relocates it to the preamble, without a reasoned explanation for the change, acts arbitrarily and capriciously.[5] Where a criterion is operative, NRDC submits that this sort of information belongs in the rule itself.

1. The forty-six-day comment period is inadequate for this package and has not afforded a meaningful opportunity for public comment. The Commission has allowed forty-six days, from July 16 through August 31, 2026, to comment on a 157-page, three-column Federal Register notice, amending eight parts of title 10 across 17 substantive topic areas and accompanied on the same docket by 24 draft guidance documents (one of which the Commission withdrew mid-period, as discussed below), a draft environmental assessment, and a draft regulatory analysis.[6] The package includes four entirely new regulatory frameworks (Appendix T; §§ 50.220/52.220; § 50.221; and the Part 100 Tier 1/Tier 2 restructure), each of which would historically have proceeded as its own rulemaking.

The comment period was not only short but also unstable and incomplete. On July 27, the twelfth day, the Commission withdrew DG-4037, the package's environmental-report guidance, as containing "outdated and incorrect information," directing that "[s]takeholders should disregard" it and promising only to "consider whether revised or consolidated implementing guidance is warranted in the future."[7] Commenters thus spent the opening quarter of the period reviewing guidance that the agency then disclaimed, and no replacement will exist within the period. The notice itself styled DG-4037 as Revision 5 to Regulatory Guide 4.2, whose Revision 4 the

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[2] DG-1454 at 13–18; DG-1464 at 3, 6–7; DG-1468 at 8–9; 91 Fed. Reg. at 44,601 (§ 54.21(a)(4) limits stated in preamble only); DG-1430, App. A at A-5; DG-4036 at 13–16, 31–32; 91 Fed. Reg. at 44,604 ("Implementing guidance for these assessments will be developed.").

[3] Modernizing Reactor Licensing, Safety Oversight, and Siting Practices; Correction, 91 Fed. Reg. 46,869 (July 27, 2026) (withdrawing DG-4037).

[4] *See Appalachian Power Co. v. E.P.A.*, 208 F.3d 1015, 1020–21 (D.C. Cir. 2000) (a guidance document operates as a binding legislative rule where the agency treats it as controlling in the field or leads regulated parties to believe it will take adverse action unless they comply with its terms).

[5] *Motor Vehicle Mfrs. Ass'n of the U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 41–42 (1983) (an agency that rescinds or changes a rule must supply a reasoned analysis for the change); *Ass'n of Priv. Sector Colls. & Univs. v. Duncan*, 681 F.3d 427, 441 (D.C. Cir. 2012) (an agency's unexplained departure from past practice can render its action arbitrary and capricious).

[6] 91 Fed. Reg. 44,560–44,716; Draft Environmental Assessment (ML26181A100) § 2.3 ("these 17 rule task amendments").

[7] 91 Fed. Reg. at 46,869.

Commission had issued only three months earlier with its New Reactor Generic Environmental Impact Statement final rule[8] — the package thus went to public comment with environmental-report guidance already overtaken by the agency's own April action. Separately, the rule proposes a new standard of decision, the societal risk-benefit assessment that would permit siting in areas of greater population density, while conceding that "[i]mplementing guidance for these assessments will be developed"; the guidance issued with the rule contains no such methodology.[9] In NRDC's view, the public cannot meaningfully comment on a decisional standard whose method of application has not yet been written.

The Commission's disposition of extension requests confirms the difficulty. The Connecticut Department of Energy and Environmental Protection, a state radiation-control and environmental agency and precisely the constituency whose role the emergency preparedness provisions would reduce, requested an extension on July 18, and the NRC denied it on July 29 without stating any reason.[10] The operative paragraph of that denial reads as a form letter, for the identical language appears in denials on at least two other concurrent rulemakings implementing Executive Order 14300, including a denial of the pro-deployment Nuclear Innovation Alliance's request on the microreactor docket.[11] The Commission's own recent practice has been otherwise: the Part 53 proposed rule, a single new part, received approximately 120 days of comment, including a sixty-day extension, and the Commission separately extended the comment period on the regulatory basis for this rule's own increased-enrichment component.[12] Executive Order 12866, which the notice invokes, calls for "a meaningful opportunity to comment," which "in most cases should include a comment period of not less than 60 days"; and while the Administrative Procedure Act prescribes no minimum, it requires an opportunity to comment that is meaningful in substance rather than nominal in form.[13]

Overlapping rulemakings compound the burden. Since July 1, 2026, the Commission has opened at least three other major rulemakings with comment deadlines in the same window, including the revision of its NEPA-implementing procedures and the overhaul of its radiation-protection framework; the latter is due the same day as this rule and bears directly on this rule's dose provisions, and these interdependent proposals cannot meaningfully be reviewed together within overlapping 45-day periods.[14] NRDC also notes that the Advisory Committee on Reactor

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[8] 91 Fed. Reg. at 44,650 (guidance list item 22, styling DG-4037 as "Revision 5 to the existing RG 4.2"); Generic Environmental Impact Statement for Licensing of New Nuclear Reactors, 91 Fed. Reg. 22,394 (Apr. 24, 2026) (codifying NUREG-2249 and issuing RG 4.2, Revision 4).

[9] 91 Fed. Reg. at 44,604; DG-4036 (containing no societal risk-benefit methodology).

[10] Letter, Connecticut Dep't of Energy & Envtl. Protection (July 18, 2026); Letter, M. Franovich, NRC, to E. Cimino (July 29, 2026) (ML26210A425; Docket No. NRC-2025-0975-0073).

[11] *See* denials on Docket Nos. NRC-2025-1503 (document 0071) and NRC-2025-0379 (document 0022, Nuclear Innovation Alliance).

[12] *See* Docket No. NRC-2019-0062 (Part 53 proposed rule, published Oct. 31, 2024; comments through Feb. 28, 2025, including a 60-day extension); 88 Fed. Reg. 76,143 (Nov. 6, 2023) (extending comment period on the increased-enrichment regulatory basis, 88 Fed. Reg. 61,986 (Sept. 8, 2023)).

[13] E.O. 12866 § 6(a)(1); *see* 91 Fed. Reg. at 44,648–50 (§ XLV.A, invoking E.O. 12866 as amended).

[14] Implementation of the National Environmental Policy Act, 91 Fed. Reg. 42,086 (July 7, 2026); Integrated Low-Level Radioactive Waste Disposal, 91 Fed. Reg. 40,290 (comments due August 17, 2026); Reforming and

Safeguards' full-committee presentations and deliberation on this package were scheduled for a single day, July 8, 2026, eight days before publication.[15]

NRDC requests that the Commission extend the comment period to not less than 120 days from completion of the corrected package, measured from re-issuance of the withdrawn environmental-report guidance, and that it re-notice any provisions whose implementing methodology does not yet exist.

2. Theme A: the new-build licensing pipeline pairs potential efficiencies with safeguards that are self-certified rather than verified. Here NRDC begins with the provisions it supports, because they pair an efficiency with a safeguard. Proposed § 52.158(c), which permits optional early submittal of manufacturing-license operational programs, has each efficiency (early review and finality) paired with its safeguard (NRC approval before finality attaches, a hearing opportunity, and defined change control).[16] On the same footing, NRDC supports keying preliminary safety analysis report detail to the § 50.35(a) findings and adopting the technology-inclusive containment wording in § 50.34; eliminating the duplicative exemption request for "Inspections, Tests, Analyses, and Acceptance Criteria" (ITAAC) changes, which remain subject to license amendment and the § 52.97(b) finding; and codifying the § 52.1 tier definitions in rule text rather than leaving them to individual design appendices.[17] NRDC's support narrows where an efficiency is paired not with a verified safeguard but with a self-certified one. That narrowing begins with the direction accompanying the tier definitions to pare Tier 1 to functional-level content, which would shrink the hearing-tested core on which the construction-phase departure flexibilities discussed below operate. On early site permits, NRDC does not object to removing the fixed term, because proposed § 52.39 correctly relocates the protection: preclusive effect sunsets at 20 years unless the holder refreshes the time-sensitive data through an amendment subject to NRC review and hearing.[18] In response to Question 21, NRDC submits that the 20-year finality limit should be retained, because the retained new-and-significant-information review is applicant-performed and no substitute for current seismic, hydrologic, meteorological, population, and environmental baselines; and an application referencing a lapsed-finality permit should be required to include updated time-sensitive site information.

The § 50.10(h) general license to construct. NRDC does not oppose in principle a general license limited to the non-nuclear-island portions of a design that has been built, operated, and afforded generic finality after a public proceeding.[19] As proposed, however, every operative safeguard is self-certifying. Construction of safety-adjacent structures may begin upon a notification letter to

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Modernizing the NRC's Radiation Protection Framework, 91 Fed. Reg. 43,456 (comments due August 31, 2026); *see* 91 Fed. Reg. at 44,679–80 (proposed § 50.67(b)).

[15] 737th Meeting of the Advisory Committee on Reactor Safeguards (ACRS), 91 Fed. Reg. 36,888–89 (June 18, 2026).

[16] 91 Fed. Reg. at 44,596–97, 44,640–41 (Questions 18–19: extension to design certifications is acceptable only with the same structure, with change control resolved in the certification rule itself).

[17] 91 Fed. Reg. at 44,580–81, 44,586–88.

[18] *Id.* at 44,597–98.

[19] *Id.* at 44,668–69 (proposed § 50.10(h)).

the NRC filed at docketing, which is an administrative completeness check rather than a technical review, and before any NRC finding that the applicant's site in fact falls within the generic site-parameter envelope, that required permits have been obtained, or that federal consultations are complete.[20] The environmental review is likewise borrowed from the reference plant, for the condition looks to the reference plant's categorical exclusion or finding of no significant impact while the new site receives no site-specific pre-construction environmental review; the notice states flatly that for activities outside the narrowed construction definition "an environmental review under [NEPA] is not required."[21] In other words, the environmental clearance that lets construction begin was earned by a different project, and the applicant is using it in place of examining its own site's wetlands, groundwater, habitat, and community. In response to Question 3, NRDC notes that the question frames safety review as "regulatory risk" for applicants to balance through "business decisions," which inverts the premise that construction licensing protects the public rather than the applicant's schedule; its reference to hold points, however, is the right direction.[22] NRDC recommends requiring an NRC acceptance determination on the site-parameter bounding demonstration before construction begins, codifying NRC verification, rather than applicant self-certification, of permit and consultation completion, and requiring site-specific environmental review before site-specific construction. In response to Question 1, NRDC submits that the operating-reference-plant predicate should be retained, and not weakened to construction-complete status or to a never-built certified design.

Section 50.220 and the general design criteria. Proposed § 50.220, under which any specific acceptance criterion in Part 50 may be replaced by plant-specific alternatives, contains no standard of approval. It tells applicants what to submit, but it never states what the Commission must find before the deterministic acceptance criteria that form the codified backbone of reactor safety review are set aside. The preamble promises "a more transparent and structured process for NRC review and acceptance of alternative criteria," yet that process appears nowhere in the regulatory text.[23] The implementing guidance compounds the problem by reading the Proposed Rule down: DG-1464 instructs that defense-in-depth and safety margins, which are separate and mandatory elements of § 50.220(b)(3), need not be "independently met" because "very low risk can offset reduced safety margins," it locates the "limited number of regulations" scope restriction in guidance that the same document declares non-binding, and it directs that detailed supporting analyses be available for audit rather than submitted on the docket.[24] The Appendix A amendment also contains a drafting defect that the Commission should correct, for as amended the departures from the general design criteria (GDC) "may be identified and justified within the licensing submittal," which makes identification and justification textually optional, contrary to the preamble's stated intent.[25] And revised GDC 28 replaces the enumerated reactivity accidents with a functional formulation for the candid reason that it avoids "the information that would be

[20] *Id.* at 44,668–69, 44,567 (construction "entirely at the risk of the general licensee").

[21] *Id.* at 44,566.

[22] *Id.* at 44,639 (Question 3).

[23] *Id.* at 44,581, 44,683–84 (proposed § 50.220).

[24] DG-1464 at 3, 6–7.

[25] 91 Fed. Reg. at 44,684–85; *compare* 44,582 (preamble intent).

required in proposed 10 CFR 50.220(b),"[26] creating an alternative design-basis-accident pathway without § 50.220's showings. NRDC recommends that the Commission re-propose § 50.220 with an express approval finding (equivalent protection, preserved defense-in-depth, and preserved safety margins, each independently satisfied), codify the scope limit, require submission of supporting analyses, make GDC identification and justification mandatory in the Appendix A text, and route GDC 28 alternatives through a § 50.220(b)-equivalent showing. In response to Question 41, NRDC's answer is no. The showings that § 50.220 demands, that is equivalent protection, preserved defense-in-depth, and preserved safety margins, are specific to each plant's design and site, so a previously approved alternative cannot carry over to a later adopter without a new application.

Three further Theme A concerns warrant brief statement. First, the narrowed definition of "construction" relies on applicant-performed categorization of which activities "may impact the required functions" of safety-relevant structures, systems, and components, removes emergency response facilities from construction-stage licensing, and contracts the scope of federal-action environmental review, a consequence that the draft environmental assessment never analyzes (see Section 4).[27] NRDC's support for technology-informed scoping is conditioned on NRC review or endorsement of the classification methodology before reliance. Second, the proposal would let licensees depart from Tier 1 certified design descriptions during construction on their own 50.59-like evaluation and then treat those self-approved departures as resolved matters entitled to finality, which inverts the Part 52 bargain in which finality was the reward for completed NRC review and hearing. The Commission's evidence is a single design at a single site (the AP1000 at Vogtle) yet it declines to extend the same Tier 2* flexibility during construction to the Advanced Boiling Water Reactor and the Economic Simplified Boiling-Water Reactor, which lack comparable construction experience.[28] In response to Question 8, NRDC's answer is again no, and the same logic confines the Tier 1 flexibility to designs with completed U.S. construction experience, with self-approved departures acquiring no issue finality. Third, a single reference-plant proceeding would now simultaneously anchor generic finality, the § 50.10(h) general license, and Appendix T eligibility, concentrating reliance on one proceeding litigated years before anyone knows where later plants will be sited.

3. Theme B: the safety-analytics provisions move operative criteria into guidance and the NRC's checks into licensee self-evaluation. Here too NRDC begins with support. Appendix T's graded, ISO 19443-informed quality assurance (QA) framework, with its explicit software QA criteria, addresses real gaps in a 1970-era appendix, and the proposal properly requires NRC approval of the quality management system and prior approval of changes.[29] The § 50.55a(z) expansion reasonably substitutes better-fitting criteria for exemption practice, and scaling decommissioning funding assurance to the facility is sound in principle.

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[26] *Id.* at 44,582, 44,685 (GDC 28 as revised).

[27] *Id.* at 44,564–66.

[28] *Id.* at 44,587–89, 44,639–40 (Question 8).

[29] *Id.* at 44,575–79, 44,687–88 (Appendix T).

Design basis event definitions (§ 50.2). The proposed definitions are circular, defining a design basis event as an event above "a determinate, data-backed threshold . . . deemed acceptable by the NRC," when nothing in the Proposed Rule is in fact determinate. The two thresholds that structure the framework, which are 10^{-4} per reactor-year, at or above which an initiating event is a design basis event the reactor must be designed to withstand, and 10^{-6} per reactor-year, below which an event is deemed non-credible and escapes safety assessment entirely, appear only in DG-1454, which binds no one and can be revised without notice and comment. The beyond-design-basis events that fall between the two thresholds receive only graded, best-estimate treatment.[30] Placing the operative thresholds in guidance does not render them any less binding. Because compliance obligations throughout Part 50 turn on these values, the thresholds would function as a legislative rule despite the Commission's non-binding characterization. Courts have treated as legislative rules those guidance documents that an agency applies as the controlling standard in the field.[31] Removing the numerical trigger from the Proposed Rule while retaining the obligation it enforces also deprives regulated parties of fair notice, because if the Commission attempts to treat this document as guidance, it could revise the value at any time and applicants would have no regulatory text against which to measure their compliance.[32] The notice candidly explains that the thresholds attach to initiating-event frequencies rather than event-sequence frequencies "[t]o avoid imposing additional requirements," even though sequence frequency is what measures risk and the guidance's own appendix concedes that the IAEA's comparable frequency bands "are event sequence frequencies" and are "not directly comparable."[33] And the framework's single most consequential screening judgment, that an event is non-credible and requires no safety assessment, would be "documented and retained by the applicant" and never docketed.[34] NRDC recommends codifying the quantitative thresholds and their uncertainty treatment in Proposed Rule text and requiring submission of non-credible-event justifications with the application.

Risk-informing § 50.59 and the new § 50.221. In 1999 the Commission explained that § 50.59(c)(2)(viii) exists to preserve NRC oversight of "the safety margins and conservatisms that form the basis of the NRC's licensing decision." This Proposed Rule would instead, in the Commission's own words, "establish a new licensing basis that focuses on how methods are selected and applied, rather than the characteristics of the specific method and the inherent conservatisms," while assigning to the licensee both the scope of its verification, validation, and uncertainty quantification (VVUQ) program and, in practice, the risk-tier classification that determines whether the NRC ever reviews a changed method again; only "high risk" modeling requires NRC review, and nothing in the Proposed Rule text says who assigns the tier.[35] The

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[30] DG-1454 at 16 (§ C.3.2, DBE threshold of 1×10^{-4}/reactor-year); id. at 18 (§ C.4.2, BDBE threshold of 1×10^{-6}/reactor-year); *id.* at 17 (§ C.4, non-credible events require no safety assessment).

[31] *See Appalachian Power*, 208 F.3d at 1020–21; *see also* 5 U.S.C. § 553 (rulemaking notice-and-comment requirements).

[32] *See Gen. Elec. Co. v. U.S. E.P.A.*, 53 F.3d 1324, 1328–29 (D.C. Cir. 1995) (under the fair-notice doctrine, an agency's regulations must give regulated parties notice of the standards with which the agency expects compliance).

[33] 91 Fed. Reg. at 44,569–70; DG-1454, App. A at A-1.

[34] DG-1454 at 17.

[35] 91 Fed. Reg. at 44,572 (quoting 64 Fed. Reg. 53,598 (Oct. 4, 1999)), 44,574, 44,684 (proposed § 50.221(b)(3)).

guidance concedes the hard case, for as to the data-poor advanced-reactor applications that the preamble cites as the principal beneficiaries, DG-1468 acknowledges that validation is "the sole mechanism for establishing credibility" and that, absent independent validation data, computed uncertainty is only "a lower bound" on true predictive uncertainty.[36] The quantitative screening thresholds for new § 50.59(e) are likewise left to guidance, and § 50.59 contains no cumulative-tracking requirement, even though proposed § 50.220(b)(3)(vii) requires exactly that in a parallel context, so that the rule plainly knows how to impose it.[37] NRDC recommends codifying the screening thresholds and probabilistic-risk-assessment scope adequacy in rule text; adding cumulative-effects tracking that mirrors § 50.220(b)(3)(vii); requiring NRC approval of, or concurrence in, risk-tier assignments, with express independence and qualification criteria for external reviewers; and retaining the license-amendment requirement for methods departures affecting high-risk design-basis safety analyses. In response to Question 4, NRDC notes that the revisions do not address digital instrumentation and control common-cause failure, and that § 50.59(e) should remain confined to criteria (c)(2)(i)–(ii), stated expressly in the final rule. In response to Question 11, NRDC submits that these flexibilities should carry into the Part 52 change process only with the safeguards recommended above—codified screening thresholds, cumulative-effects tracking, and NRC concurrence in risk-tier assignments—and not during construction.

License renewal (Part 54). NRDC as a general matter supports the continued long-term operation of the existing reactor fleet as a decarbonization measure, and we concur with the Commission that its aging-management experience reaches 80 years of operation. Within that analyzed envelope, NRDC does not object to a 40-year renewed term. NRDC's objection is confined to what the notice itself brackets. The Commission proposes to double the renewed term to 40 years, which would authorize operation to 100 and even 120 years, while conceding in the same notice that its aging-management guidance "was based on evaluations of up to . . . 80 total years," that the codified license renewal environmental analysis reaches only the second renewal, and that "[n]ew degradation mechanisms may emerge, existing mechanisms may progress faster than expected, or safety margins may be reduced."[38] The notice itself draws the line, explaining that no gap analysis is needed "for an initial renewal, extending operation from 40 to 80 years, as the current subsequent renewal guidance readily applies to 80 total years," while operation beyond 80 years would require an applicant to supplement that guidance.[39] Those concessions are, in NRDC's view, the argument against a 40-year interval between reviews at 80 to 120 years of plant age, *a range with no operating experience anywhere in the world*. The preamble's assurance that risk-informed alternatives under § 54.21(a)(4) "could not inappropriately weaken" aging management appears nowhere in the three-sentence rule text.[40] The Proposed Rule also asks the public to

[36] DG-1468 at 21.

[37] 91 Fed. Reg. at 44,573 (thresholds and scope stated in preamble only); *id.* at 44,683–84 (§ 50.220(b)(3)(vii)).

[38] *Id.* at 44,600–01, 44,714–15 (proposed §§ 54.31(b)–(c)).

[39] *Id.* at 44,600 (no gap analysis needed "for an initial renewal, extending operation from 40 to 80 years, as the current subsequent renewal guidance readily applies to 80 total years," while operation beyond 80 years would require the applicant to supplement that guidance).

[40] *Id.* at 44,601, 44,715 (proposed § 54.21(a)(4)).

resolve, after the fact, how aging-management commitments will be enforced under a tack-on license not yet in effect. In response to Question 24, NRDC submits that aging-management conditions should be made enforceable from issuance. In response to Question 25, NRDC's answer is yes: the supersession option for shorter renewals should be retained. That approach would apply the Commission's knowledge to the full extent of the present record, and no further. NRDC accordingly recommends retaining the 20-year maximum renewal term for any renewal extending operation beyond 80 total years, until updated aging-management guidance exists and the supporting environmental analysis is codified; codifying the § 54.21(a)(4) limiting criteria; and restoring docketed, rather than audit-only, aging-management detail for beyond-80 operation.

Appendix T's vendor-oversight signal. The preamble states that Appendix T "may eliminate the need for NRC oversight of suppliers and vendors."[41] Nothing in the appendix text compels that regulatory retreat, and the statement rests on a snapshot theory of vendor quality that the counterfeit- and fraudulent-items record does not support, because verifying a vendor during first-of-a-kind construction says little about the items it manufactures for later units years afterward. NRDC recommends that the Commission disavow or bound that statement and condition nth-of-a-kind (NOAK) eligibility on a defined minimum reference-plant operating period and on closure of the reference plant's construction-phase vendor findings; the term "operated," without more, could be satisfied by only weeks of operation.[42] In response to Question 39, NRDC submits that Appendix T should not be extended to first-of-a-kind plants, whose supply chains have by definition never been verified. In response to Question 40, NRDC submits that prior NRC approval of quality management system changes should be retained.

Finally, with respect to decommissioning funding, the preamble promises that design-specific cost estimates will "include NRC review and approval," yet proposed § 50.75(b)(2) contains no approval requirement, standard, or process, and the rule would then let later applicants reference the first "approved" estimate across a technology class for which no decommissioning has ever been performed. That is, in NRDC's view, an honor-system design at odds with the documented history of decommissioning cost underestimation.[43] The way the Commission has located this approval step is itself legally vulnerable. An assurance stated only in the preamble does not bind the agency or applicants, so if the Commission intends design-specific estimates to receive NRC review and approval, that requirement must appear in the rule text and be adopted through notice and comment.[44] Relocating a substantive requirement from rule text to a non-binding preamble, without a reasoned explanation for declining to codify it, is also arbitrary and capricious.[45] NRDC

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[41] *Id.* at 44,576.

[42] *Id.* at 44,687–88 (Appendix T § I; first-of-a-kind defined without an operating-duration criterion).

[43] *Id.* at 44,574–75; *id.* at 44,680–81 (proposed § 50.75(b)(2)); see also U.S. Gov't Accountability Office, GAO-12-258, NRC's Oversight of Nuclear Power Reactors' Decommissioning Funds Could Be Further Strengthened (2012) (NRC formula captured 57 to 76 percent of site-specific cost estimates for 5 of 12 reactors examined).

[44] *See Consumer Energy Council of Am. v. FERC*, 673 F.2d 425, 446 (D.C. Cir. 1982) (the APA expressly contemplates that notice and an opportunity to comment will be provided before an agency decision to repeal a rule); 5 U.S.C. § 553.

[45] *See State Farm*, 463 U.S. at 42–43; *Duncan*, 681 F.3d at 441.

recommends codifying the approval step and its criteria, providing for periodic revalidation against actual cost experience, and deferring reference use until such experience exists.

4. Theme C: the public-facing provisions reduce emergency planning, siting, and accident-analysis safeguards that the draft environmental assessment never analyzes. NRDC supports the enablement of accident tolerant fuel, because the engineering goal of oxidation-resistant cladding is buying coping time in exactly the accident sequences that matter, a genuine safety benefit consistent with NRDC's commitment to decarbonization. NRDC also supports opening the performance-based § 50.160 emergency preparedness framework to all reactor types, which would replace piecemeal exemptions with a single, structured framework, provided that its extension to large light-water reactors rests on documented FEMA consultation and a technical basis addressing the concerns FEMA raised on the record when the framework was adopted, including that site-boundary planning zones would curtail Federal oversight of offsite preparedness.[46] NRDC further supports proposed § 50.47(g), which would require the documented agreement of State, local, and Tribal authorities before an operating licensee may shrink its emergency planning zone (EPZ), and NRDC supports graded site characterization as a concept, including the codification of the Tier 1 entry criterion in rule text rather than guidance, which is better practice than is found elsewhere in this package.[47]

Emergency planning. The notice titles its EPZ provisions "EPZ Certainty" and is candid about whose certainty is meant, stating that the object is to "provide certainty for a smaller EPZ or a site-boundary EPZ without requiring extensive analyses on the part of the applicant or licensee."[48] For a community beside a 299-megawatt-thermal reactor, the certainty delivered is that there will be no offsite plume-exposure EPZ at all, a result fixed by a power-level threshold rather than by any analysis of that site's source term, meteorology, or evacuation constraints. The only support offered is "NRC staff review of available technical analyses," yet no analysis is identified or docketed, so that the public cannot test it; and the Commission is considering factors that would obviate even the analyses supporting "a determination that no EPZ is needed."[49] The source-term literature, including the Commission's own State-of-the-Art Reactor Consequence Analyses (SOARCA) and their successors,[50] may well support individual zone reductions; but every such analysis is design- and site-specific, and the case-by-case pathway that this rule retains, which NRDC does not oppose, is where such analyses are docketed and tested design by design. A categorical power-level line is not something that literature has been docketed to support. Thermal power is, in any event, a weak proxy for the variables that determine offsite consequence, among them radionuclide inventory, source-term chemical form and mobility, release energetics and timing, and containment function. A site-boundary EPZ places the point of concern at the site

[46] Letter, B. Foreman, Federal Emergency Management Agency, to NRC, Docket ID No. NRC-2015-0225 (ML20213C415); *see* Emergency Preparedness for Small Modular Reactors and Other New Technologies, 88 Fed. Reg. 80,050 (Nov. 16, 2023).

[47] 91 Fed. Reg. at 44,591 (§ 50.160 scope), 44,677–78 (proposed § 50.47(g)), 44,715 (proposed § 100.3).

[48] *Id.* at 44,593.

[49] *Id.* at 44,640–41 (Questions 16–17 and lead-in).

[50] NRC, NUREG-1935, State-of-the-Art Reactor Consequence Analyses (SOARCA) Report (2012); *see also* NRC, NUREG/CR-7110, Vols. 1–2 (Peach Bottom and Surry analyses).

boundary itself, where atmospheric dispersion factors are least certain. At the short distances involved, the calculation that govern accident dose calculations vary by close to an order of magnitude with atmospheric stability class, wind speed, release height, and building wake effects, so that two sites hosting identical reactors at identical thermal power can present materially different boundary doses. A threshold expressed in megawatts thermal cannot capture that variability. In response to Questions 16 and 17, NRDC recommends that the Commission withdraw the categorical site-boundary provision in favor of the case-by-case pathway that the same rule preserves, with the supporting analyses docketed and re-noticed; any factors considered should be source-term, release-mechanism, and site factors, including evacuation constraints and physical impediments to emergency planning, rather than power level alone. NRDC separately opposes eliminating the 50-mile ingestion-pathway EPZ for all reactors because its proposed replacement lacks clear distances, criteria, and required capabilities for an adequate emergency response. The notice's entire stated basis is the availability of geographic information systems and unmanned aerial vehicles.[51] Monitoring technology locates contamination, but it does not supply the interdiction authority, sampling networks, interstate coordination, and compensation arrangements that a designated ingestion planning zone exists to pre-arrange, and it was the absence of that machinery that dominated the agricultural consequences of Chernobyl and Fukushima. Revised § 50.54(q)(3) confines the reduction-in-effectiveness test to six planning standards, on the rationale that those standards "have a direct impact on the ability to effectively implement" emergency response; yet training and drills and exercises, which have exactly the same direct impact, are excluded, and the supporting analyses are "performed and retained" rather than submitted.[52] NRDC recommends adding training and drills and exercises to the risk-significant list, requiring submission or annual reporting of the retained analyses, and extending § 50.47(g)'s agreement standard to an applicant's initial EPZ determination; as drafted, communities that already host a reactor hold a consent right that communities asked to host a new one do not, since a new applicant owes only "coordination" and a description of "the extent of the applicant's interaction," with no FEMA findings.[53] The Commission should also conform § 50.160(c)(3), which omits Tribal authorities, to § 50.47(g). In response to Questions 13 and 15, NRDC recommends retaining the biennial full-participation exercise cycle; no exercise-frequency change appears in the Proposed Rule's text, and any such change would require a new proposed rule. Finally, the rule deletes the requirement to update evacuation time estimates when EPZ population changes between censuses, even as it amends Part 100 to permit siting in areas of greater population density, an inconsistency that neither section acknowledges.[54]

Siting (Part 100). NRDC does not object to deleting Appendix A in isolation, because its deterministic safe-shutdown-earthquake (SSE) method has been superseded by probabilistic seismic hazard analysis. NRDC objects, rather, to what the rule does in combination: proposed § 100.3 admits a new class of power reactors into subpart A; proposed § 100.23(a) makes the codified seismic and geologic investigation-scope and SSE-determination requirements of §

[51] *Id.* at 44,595.

[52] *Id.* at 44,596, 44,678–79 (proposed § 50.54(q)(1)(v), (q)(3)).

[53] *Id.* at 44,594.

[54] *Id.* at 44,595–96 (deleting App. E ¶¶ IV.5–IV.7), 44,604 (population-density flexibility).

100.23(c)–(d) inapplicable to them; and Appendix A, which is subpart A's only seismic criteria, is deleted, leaving a cross-reference to Appendix S of Part 50 that supplies earthquake engineering criteria for designing to an SSE rather than requirements for determining one.[55] The required scope and method of hazard characterization for Tier 1 power reactors would thus live entirely in DG-4036, which would permit sites in the two lowest siting categories to substitute the USGS National Seismic Hazard Model and the ASCE/SEI 7-22 risk-targeted maximum considered earthquake for a site-specific probabilistic seismic hazard analysis, using a "Default" site condition where site-specific shear-wave velocity data have not been obtained.[56] The recency of the National Seismic Hazard Model is not the concern; the risk-targeted maximum considered earthquake is calibrated to an acceptable probability of building collapse, a performance target never derived for nuclear structures, systems, and components, and the Default condition substitutes an assumption for the site-response data that can dominate hazard at soil sites. The Commission explains that the seismic design basis "often has a significant impact on cost and schedule."[57] In NRDC's view, cost and schedule are not seismic criteria and cannot substitute for them. On population density, the Proposed Rule would allow the population-center-distance requirement to be satisfied by "assessments of societal risks in comparison to societal benefits," and this for Tier 2 reactors, the higher-consequence class, while conceding that "[i]mplementing guidance for these assessments will be developed."[58] NRDC affirmatively supports one factor that the Proposed Rule would let applicants weigh, namely the reuse of already-disturbed land, including "the ability to use existing infrastructure for a retired fossil fuel power plant" and reduced "impact on undeveloped areas, wetlands or endangered species."[59] Reusing such sites, with their existing grid interconnection, cooling water, and trained workforce, advances responsible decarbonization and is preferable to clearing intact habitat. The same enumerated list, however, folds in the developer's construction economics, such as "better access to skilled labor for construction, better rail and highway access, [and] shorter transmission line requirements," weighed against the incremental accident risk borne by the host community. NRDC asks that the enumerated benefits be confined to factors bearing on public health, safety, and the environment, which would excise the construction-economics entries. NRDC further notes that brownfield sites disproportionately lie in communities already bearing environmental burdens, an environmental-justice consequence that the draft environmental assessment, in which the words "environmental justice" appear zero times, never analyzes, inconsistent with past practice. In response to Question 42, NRDC's answer is that there are indeed implications that must be addressed in rule text at the final-rule stage: the Commission should define "unmitigated consequence" in § 100.3, including the dispersion percentile and release-

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[55] *Id.* at 44,715–16 (proposed §§ 100.3, 100.10(c), 100.23(a); removal of Appendix A), 44,602–03.

[56] DG-4036 at 31–32.

[57] 91 Fed. Reg. at 44,604 (recognizing that "the seismic design basis for a nuclear facility often has a significant impact on cost and schedule").

[58] 91 Fed. Reg. at 44,604 ("Implementing guidance for these assessments will be developed."), 44,716 (proposed §§ 100.21(b)(1)(ii), (h)).

[59] *Id.* at 44,716 (footnote 1 to proposed § 100.21(h), enumerating "the ability to use existing infrastructure for a retired fossil fuel power plant" and "less environmental impact on undeveloped areas, wetlands or endangered species," alongside "better access to skilled labor for construction, better rail and highway access, [and] shorter transmission line requirements"); see Draft Environmental Assessment (ML26181A100) §§ 2–4 (containing no environmental-justice analysis).

fraction basis, so that the entry criterion is reproducible; retain codified seismic hazard characterization and SSE-determination requirements for all power reactors, graded but not eliminated; add a subpart A analogue to § 100.21(g) so that physical impediments to emergency planning must be identified for Tier 1 sites; and sever the population-density provisions and re-propose them with their implementing guidance. Question 42's own preface, "[g]iven the significance of this new graded approach to siting," cannot be reconciled with the draft environmental assessment's treatment of the same sections, discussed below.[60]

Tables S-3 and S-4, the single-failure carve-outs, and § 50.46a. The Table S-3 amendment extends the fuel-cycle table to 20 weight percent enrichment for four front-end steps only; the back end, comprising reprocessing, waste management, and waste transportation, where higher enrichment and burnup have their most predictable consequences, is left unaddressed, and the burnup argument reasons from assembly count rather than from the natural-uranium feed and separative work that actually drive the table's quantities.[61] NRDC does not dispute the environmental benefit that the Commission identifies, for higher burnup means fewer assemblies fabricated, transported, and stored per unit of electricity, and the notice is correct that this would reduce the number of spent-fuel assemblies removed and the annual fuel needs to support refueling.[62] That benefit is real and consistent with responsible decarbonization; it is, however, a back-end, waste-volume benefit, whereas Table S-3's preclusive quantities are driven by the front-end separative work and uranium feed that rise steeply as enrichment approaches 20 weight percent. The notice extends the table by counting assemblies, and it never runs the feed-and-separative-work calculation that would show the envelope still bounds. Table S-4, by contrast, is extended only to 8.0 weight percent, because "[t]he maximum enrichment level in the supporting core analysis relied upon in NUREG-2266 went as high as 8.0 weight percent," a strict evidentiary limit applied in the same package that extends S-3 to 20 percent on a document addressing only the enrichment facility.[63] The Commission should not apply the two standards inconsistently. The new S-4 note's 133,000 MWd/MTU figure for TRISO fuel cites no supporting document and conflicts, on the rule's own face, with § 51.52(a)(2)–(3) as proposed, which still require sintered UO_2 pellets in zircaloy and cap irradiation at 80,000 MWd/MTU; and the amendment deletes, rather than updates, two codified environmental-impact values, namely the cumulative person-rem along transport routes and the accident property-damage figure.[64] NRDC recommends extending the tables only as far as the supporting analyses reach and updating, rather than deleting, the impact values.

On the accident framework, revised GDC 17, 35, 38, 41, and 44 provide that for breaks above the transition break size (TBS) "neither a single failure nor the unavailability of offsite power need be assumed," and new § 50.46a designates those loss-of-coolant accidents (LOCAs) as beyond-

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[60] *Id.* at 44,644 (Question 42).

[61] *Id.* at 44,615–16, 44,689–90 (Table S-3 note as amended).

[62] *Id.* at 44,616 (higher enrichment and burnup "would result in further reductions in the number of spent nuclear fuel assemblies removed during refueling operations" and would "reduce the annual nuclear fuel needs to support refueling to below the figures that were used in the analysis supporting Table S-3").

[63] *Id.*

[64] *Id.* at 44,616, 44,690–92 (proposed § 51.52 and Table S-4). NRDC notes that Table S-4 as proposed appears in the Federal Register only as graphics, so its revised entries are not in the machine-readable text.

design-basis, even as the same notice justifies the continued adequacy of the 25 rem siting reference value by reciting, among its embedded conservatisms, "a postulated single failure of any of the fission product cleanup systems, such as the containment sprays."[65] GDC 41 is precisely that criterion. The notice also concedes that fuel fragmentation, relocation, and dispersal (FFRD), a phenomenon driven by the very burnup and enrichment increases that this rule enables, is addressed by demonstrating "no fuel dispersal occurs" for above-TBS breaks "until more data or analyses are developed," and that enabled changes such as power uprates "could increase the overall risk of inadvertent release of radioactive material."[66] FFRD has been documented in the Commission's own research program since 2012, and NRDC recognizes that the NRC has approved methodologies through which applicants can address it on a plant- and fuel-specific basis.[67] That recognition is, in fact, the point: FFRD is manageable today only through case-by-case, design- and burnup-specific demonstrations, which is why categorical reclassification, and categorical single-failure carve-outs, are the wrong vehicles. NRDC recommends that above-TBS LOCAs not be designated beyond-design-basis except upon a plant-specific FFRD demonstration under an approved methodology, and that the single-failure and offsite-power assumptions be retained. NRDC further notes that § 50.67(b)(3) would let a licensee set its own control-room dose limit up to 25 rem TEDE on an undefined showing of consistency with "the plant risk profile"; the Commission should codify the demonstration criteria and require NRC approval, or else delete (b)(3) and retain the 10 rem limit.[68]

The draft environmental assessment and proposed finding of no significant impact (FONSI). The notice concludes that the package is "administrative in application or matters of procedure or provide[s] an equivalent level of safety," and the draft EA disposes of every rule task either by categorical exclusion or with the formula that the amendments "would not result in physical changes in the environment."[69] The document contains no affected-environment description, no resource-area analysis, and no cumulative-impacts analysis, and the words "environmental justice," "FEMA," and "Tribal" appear nowhere in it, in an EA for a rule that eliminates submission of Tribal response plans and removes FEMA findings.[70] Two internal contradictions are, in NRDC's view, dispositive. First, the EA categorically excludes the Part 100 changes, including §§ 100.3 and 100.23, as "administrative, corrective, or of a minor nature" that "do not substantially modify an existing regulation," while Question 42 in the same package solicits

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[65] *Id.* at 44,684–86 (GDC 17, 35, 38, 41, 44 as revised; GDC 50 "realistically calculated" conditions), at 44,618 (quoting 61 Fed. Reg. 65,157).

[66] *Id.* at 44,619–20.

[67] NRC, Higher Burnup, https://www.nrc.gov/reactors/power/atf/technologies/burnup (last updated May 14, 2026) (Framatome topical report ANP-10358P; EPRI Alternative Licensing Strategy); NRC, NUREG-2121, Fuel Fragmentation, Relocation, and Dispersal During the Loss-of-Coolant Accident (2012); NRC, RIL 2021-13, Interpretation of Research on Fuel Fragmentation, Relocation, and Dispersal (FFRD) at High Burnup (2021).

[68] 91 Fed. Reg. at 44,617–18, 44,679–80 (proposed § 50.67(b)(2)(iii), (b)(3)), 44,686 (footnote to revised GDC 19, drafted in whole-body terms against a TEDE criterion and relying on planning standard (b)(11), which § 50.54(q)(3) simultaneously removes from the risk-significant standards).

[69] *Id.* at 44,648 (§ XLIII); Draft Environmental Assessment (ML26181A100) Table 2-3.

[70] Draft Environmental Assessment §§ 2–4.

comment "[g]iven the significance of this new graded approach to siting."[71] The rule thus describes the change as significant while its EA describes it as minor. The Part 54 amendments, including the doubling of the renewed license term, with decades of additional thermal discharge, water withdrawal, and spent-fuel generation beyond the codified environmental analysis, are excluded as procedural and recordkeeping changes, and the narrowed construction definition is excluded as a change in filing "timing," although it removes whole categories of ground-disturbing work from federal-action status.[72] Second, the EA declines Endangered Species Act § 7 and National Historic Preservation Act § 106 consultation on the ground that the rule "do[es] not involve any ground-disturbing activities," a premise contradicted by the general license to construct that the rule creates.[73] The EA's "Agencies and Persons Consulted" section identifies no agencies at all, neither FEMA, EPA, DOE, the States, nor the Tribes.[74] And the "equivalent level of safety" premise is circular, because equivalence is the very conclusion that the rule's own §§ 50.220 and 50.221 require applicants to demonstrate case by case. NRDC recommends that the Commission withdraw the proposed finding of no significant impact and prepare an environmental assessment that analyzes the provisions actually proposed, or, given the breadth of the package, an environmental impact statement (EIS), and that it re-examine each categorical-exclusion determination, beginning with Parts 100 and 54.

In response to Question 31, NRDC submits that the draft regulatory analysis cannot support the rule, because it never identifies a category in which a safety or environmental cost could be recorded. The analysis states that its inventory of affected attributes was developed "using the list in NUREG/BR-0058, draft Revision 5," yet the inventory contains only five attributes, every one of them economic; public health, both accident and routine, occupational health, offsite property, and environmental considerations appear nowhere.[75] The conclusion that there are "nonquantified benefits and no nonquantified costs" therefore reflects the inventory rather than any independent finding. Its supporting footnote, which reasons that because Part 20 exposure limits are unchanged "there will be no increase in radiation exposure," confuses a regulatory ceiling with an expected value, since actual exposure is determined by design, siting, source term, and accident probability, all of which this rule alters. And the analysis monetizes the benefits of power uprates enabled by § 50.46a even as the same notice states that such changes "could increase the overall risk of inadvertent release of radioactive material."[76] NRDC recommends that the regulatory analysis be revised to include the omitted attributes and reissued for comment.

5. Measured against its own objective, the package trades durable safeguards for modest schedule relief. Measured against the Proposed Rule's own objective of adding zero-carbon generation to the grid, the correct question is not whether a provision streamlines, but whether it makes deployment at once faster and more durable, and the Commission should ask whether this

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[71] *Id.* Table 2-2; 91 Fed. Reg. at 44,644 (Question 42).

[72] Draft Environmental Assessment Table 2-2 (Tasks 5, 6); *compare* 91 Fed. Reg. at 44,566, 44,600.

[73] Draft Environmental Assessment § 4; 91 Fed. Reg. at 44,668–69 (proposed § 50.10(h)).

[74] Draft Environmental Assessment § 4.

[75] Draft Regulatory Analysis (ML26181A099) § 3.1, Table ES-1 & n.1.

[76] 91 Fed. Reg. at 44,620, 44,642 (Question 31).

package serves that objective. Some of its provisions could accelerate deployment: technology-inclusive application content, early operational-program review, broader § 50.55a(z) alternatives, graded QA, accident tolerant fuel, graded site characterization, and reduced exemption churn are all real and incremental efficiencies. The Commission's own analysis values the whole package at a net $802.1 million over 30 years at a 7 percent discount rate, a figure that is a fraction of the cost of one large unit and that reflects averted regulatory cost rather than construction cost.[77]

A closer question is whether the package would instead create uncertainty that delays deployment. A framework whose operative criteria live in guidance that the agency can revise or withdraw without rulemaking, as it withdrew one document in this package mid-comment-period, is not regulatory certainty, whatever the section headings may say. Per-plant alternative acceptance criteria fragment the standardized licensing basis whose economies the rule's own deployment case assumes, even as the rule deletes every regulatory mechanism that operationalized standardization.[78] Nor is optionality a sufficient answer. Many of these provisions are framed as alternatives that no applicant is forced to elect; but optionality for applicants is not protection for the public, who do not choose which pathway their neighboring reactor's owner elects, and in a competitive market the least protective lawful option tends to become the default. An applicant relying on the population-density pathway, whose method is concededly unwritten, is a test case by construction, and a first mover under the § 50.10(h) general license or the proposed FONSI assumes litigation risk that prices into capital.

A graver possibility is that the package could seed the very accident that would create harms and set the enterprise back. The candidate provisions are those identified above: self-approved methods changes, the vendor-oversight retreat, EPZ contraction and ingestion-pathway elimination, seismic characterization relocated to guidance, and large-break LOCAs reclassified as beyond-design-basis categorically rather than upon the plant-specific fuel-dispersal demonstrations that the NRC has approved. The Proposed Rule itself concedes that enabled changes "could increase the overall risk of inadvertent release of radioactive material."[79] One serious accident would compromise the deployment case for the package, and the rule's own objective therefore argues for conservatism where uncertainty is greatest: in the novel, data-poor designs that it appears to favor the most.

A final question is whether regulatory requirements are even the binding constraint on deployment. Capital cost, the availability of high-assay low-enriched uranium fuel, engineering-procurement-construction capacity, demand contracts, and skilled labor all pace deployment. The Proposed Rule itself acknowledges as much, for its own new siting footnote lists "better access to skilled labor for construction" among the societal benefits that could justify siting closer to population centers.[80] A rule that trades durable safeguards for modest schedule relief thus spends public trust on the constraint that binds least.

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[77] Draft Regulatory Analysis, Table ES-1.

[78] 91 Fed. Reg. at 44,585–86 (deleting the standardization criteria of §§ 52.63(a)(1)(vii), (a)(4)(ii), and related provisions).

[79] *Id.* at 44,620.

[80] *Id.* at 44,716 (footnote 1 to proposed § 100.21(h)).

Requested Action and Conclusion

NRDC requests that the Commission: (1) extend the comment period to not less than 120 days from completion of the corrected package and re-notice provisions lacking implementing methodology; (2) withdraw the proposed FONSI and prepare an environmental assessment that analyzes what is actually proposed, or an EIS, re-examining each categorical exclusion, beginning with Parts 100 and 54; (3) relocate operative safety criteria from guidance into rule text across the six instances identified and codify every safeguard now asserted only in the preamble; (4) revise and reissue the draft regulatory analysis with the omitted safety and environmental attributes (Question 31); (5) sever the Part 100 population-density provisions (§§ 100.10(b), (e), 100.11(a)(3)(i)(B), 100.21(b)(1)(ii), 100.21(h)) and re-propose them with their implementing guidance, confining the enumerated societal benefits to factors bearing on public health, safety, and the environment; (6) withdraw the categorical site-boundary EPZ for reactors under 300 MWt in favor of the case-by-case pathway, docketing and re-noticing the supporting analyses (Questions 16, 17); (7) retain the 50-mile ingestion-pathway EPZ or replace it with a defined, analysis-supported planning distance; (8) not designate above-TBS LOCAs as beyond-design-basis except upon a plant-specific FFRD demonstration under an approved methodology, and retain the single-failure and loss-of-offsite-power assumptions in GDC 17, 35, 38, 41, and 44; (9) re-propose § 50.220 with an express approval finding, a codified scope limit, submitted analyses, a corrected Appendix A amendment, and GDC 28 alternatives routed through a § 50.220(b)-equivalent showing (Question 41: no); (10) codify the § 50.59(e) screening thresholds, cumulative-effects tracking, and NRC concurrence in § 50.221 risk-tier assignments (Question 4: confine (e) to criteria (i)–(ii); Question 11: only with these conditions, and not during construction); (11) retain the 20-year maximum renewal term beyond 80 total years until updated aging-management guidance exists and the environmental analysis is codified, and codify the § 54.21(a)(4) limits (Question 25: yes; Question 24: conditions enforceable from issuance); (12) codify the design-basis-event quantitative thresholds and require submission of non-credible-event justifications; (13) retain codified seismic hazard characterization and SSE-determination requirements for all power reactors, and define "unmitigated consequence" in § 100.3 (Question 42); (14) codify the § 50.67(b)(3) demonstration criteria or delete (b)(3); (15) condition the § 50.10(h) general license on an NRC acceptance determination and site-specific environmental review, retaining the operating-reference-plant predicate (Questions 1, 3); (16) add training and drills/exercises to the risk-significant planning standards, require submission of § 50.54(q)(3) analyses, extend § 50.47(g)'s agreement standard to initial EPZ determinations, conform § 50.160(c)(3) to include Tribal authorities, and add a § 100.21(g) analogue to subpart A (Questions 13, 15: retain the biennial exercise cycle); (17) disavow or bound the Appendix T vendor-oversight statement and condition NOAK eligibility on a minimum reference-plant operating period (Question 39: no first-of-a-kind extension; Question 40: retain prior approval); (18) extend Tables S-3 and S-4 only as far as their supporting analyses reach, address the fuel-cycle back end, identify the basis for the TRISO burnup figure, and update rather than delete the impact values; (19) confine Tier 1 construction-phase departure flexibility to designs with completed U.S. construction experience, without issue finality for self-approved departures (Question 8: no); (20) require updated time-sensitive site information from applicants referencing lapsed-finality early site permits (Question 21: yes, retain the 20-year limit); and (21) codify NRC approval of design-specific decommissioning cost estimates, with periodic revalidation.

NRDC does not ask the Commission to abandon modernization; it asks the Commission to do as a whole what several provisions of this package do, namely, to pair each potential efficiency with its safeguard, to place operative criteria where they bind, and to analyze the consequences of what is actually proposed. A rule built on self-certification, on guidance that may be withdrawn mid-stream, and on an environmental assessment that does not engage its own contents will deliver neither regulatory certainty, nor public protection, nor durability in the courts. NRDC respectfully urges the Commission to extend the comment period, to correct and complete the package, and to re-propose the provisions identified above.

Respectfully submitted,

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