



# ADVANCE ACT Environmental Review Efficiency

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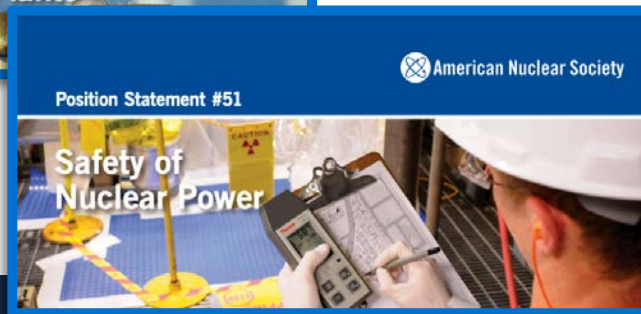
March 4, 2025



# Disclaimer(s)



# American Nuclear Society Recommendations



**PS 25:** “High capital costs and long timelines for regulatory approval are unique barriers for new nuclear technologies”

**PS 35:** ANS “Support[s] the prompt development of a **technology-neutral, risk informed, and performance-based** licensing framework that will provide effective and efficient regulation of advanced reactor designs.”

**PS 46:** “The regulatory framework has proven to be effective in protecting public health and safety, but it is cumbersome and **does not take full advantage of technological developments and experience gained from decades of reactor operations.**”

**PS 51:** “When compared with generally accepted risks posed by other energy industries, the risk from nuclear power is low. Furthermore, use of nuclear power has saved and continues to save lives through avoided emissions. Decisions concerning the use of nuclear energy should appropriately balance risks and benefits, and regulators should **adopt a holistic approach to regulation that aligns how we treat risk across various hazards.**”

**PS 51:** State of the art safety requires: “**well-staffed, well-funded safety regulatory authorities,** which are responsible for independently assuring operational safety and protection of the environment by utilizing performance-based goals and risk insights derived from analysis and experience”

# American Nuclear Society Recommendations



American Nuclear Society  
Position Statement #25  
Small Modular Reactors

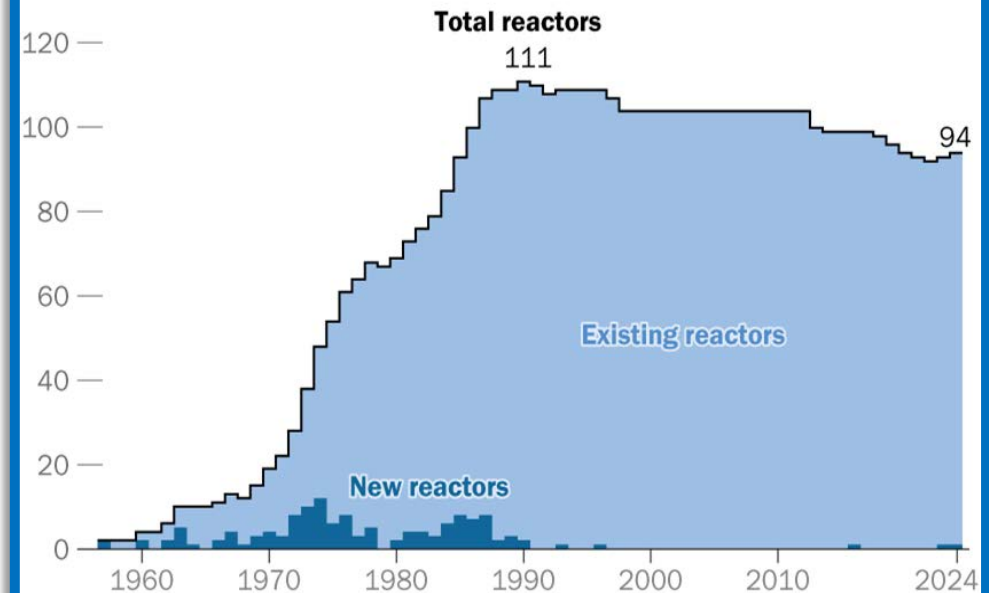
American Nuclear Society  
Position Statement #35  
Advanced Reactors

American Nuclear Society  
Position Statement #46  
Risk-Informed and Performance-Based Regulations for Nuclear Power Plants

American Nuclear Society  
Position Statement #51  
Safety of Nuclear Power

## Number of U.S. nuclear power reactors gradually declined in past 3 decades

*Operational nuclear power reactors in the United States, by year*



Note: Data as of Aug. 5, 2024. The IAEA's PRIS database classifies a reactor as "operational" from the date of its first electrical grid connection to the date of its permanent shutdown. If a reactor is temporarily not generating electricity because of outages, the reactor is still categorized as operational. Annual totals exclude reactors that closed that year.

Source: Pew Research Center analysis of data from the International Atomic Energy Agency's (IAEA) Power Reactor Information System (PRIS).

# Bowen & Ponangi Recommendations

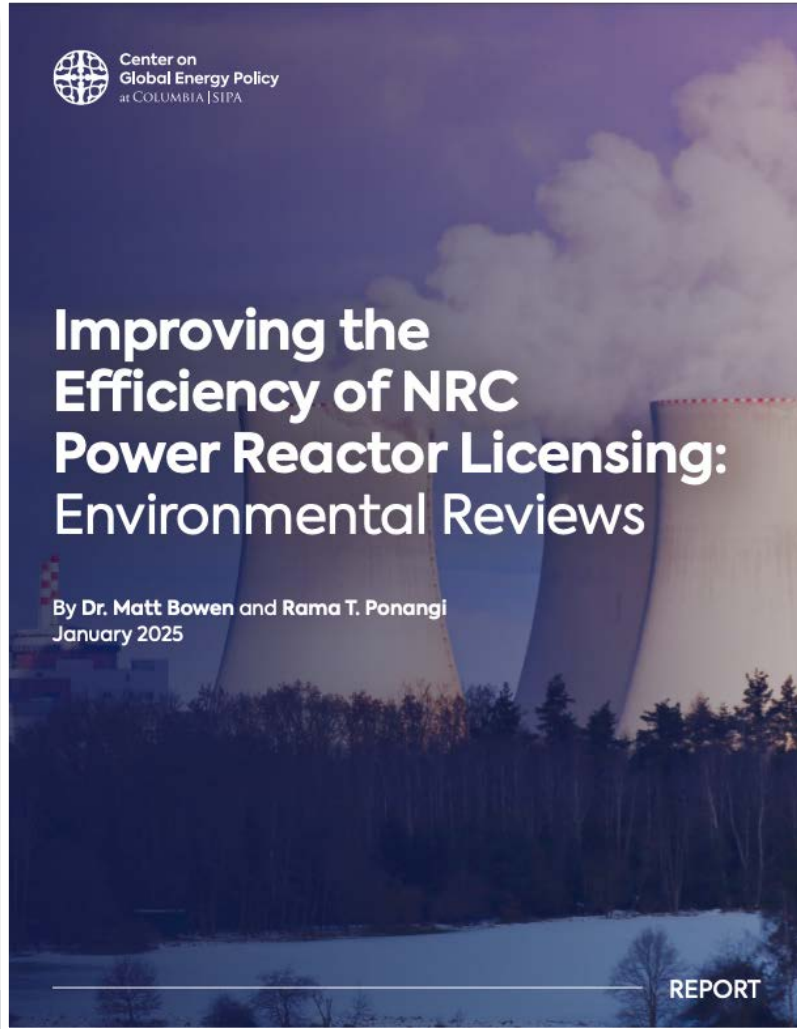


Pare down two analytical sections of the EIS—the need for power and alternatives chapters—which are not currently adding much value, especially commensurate with their length.

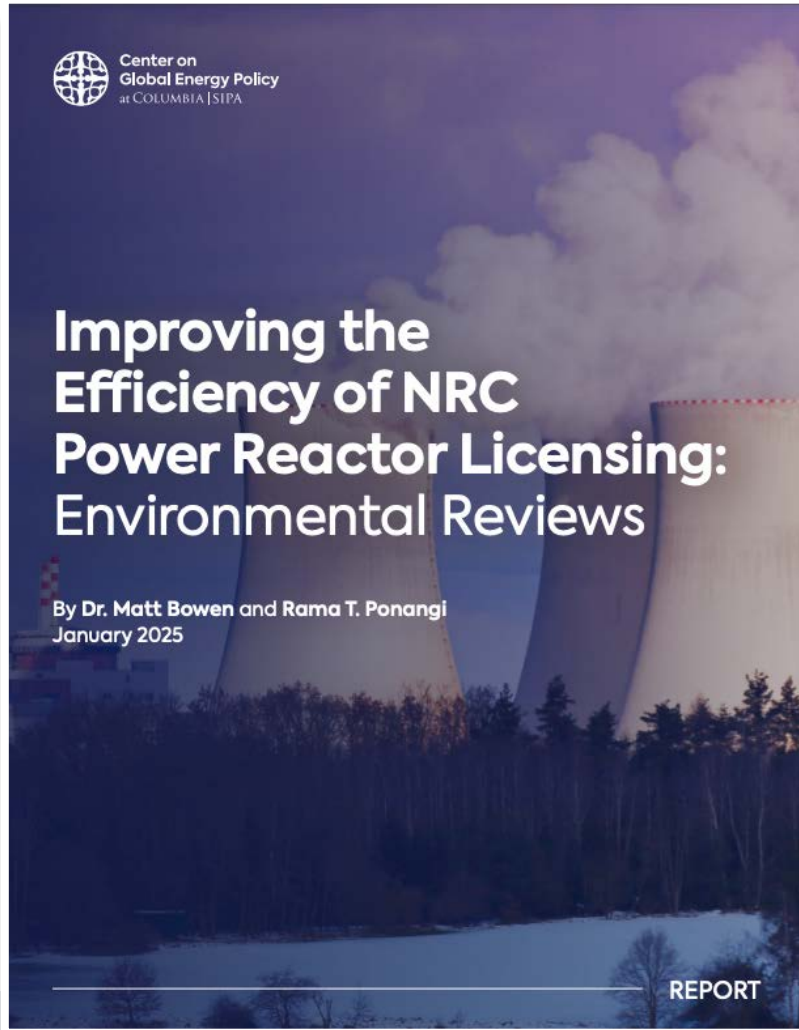
Use a generic environmental impact statement (GEIS) approach—which has been effective for reactor license renewals and involves dividing the environmental review into issues that are expected to be generic for new reactor projects and therefore can be examined in a simplified manner and issues that need more in-depth, project-specific evaluations—for new reactor licensing.

Use the more concise environmental assessment (EA) review instrument instead of an EIS for subsequent deployments of a reactor at the same site or to sites with operating reactors or retiring coal plants, as well as for micro-reactor deployments.

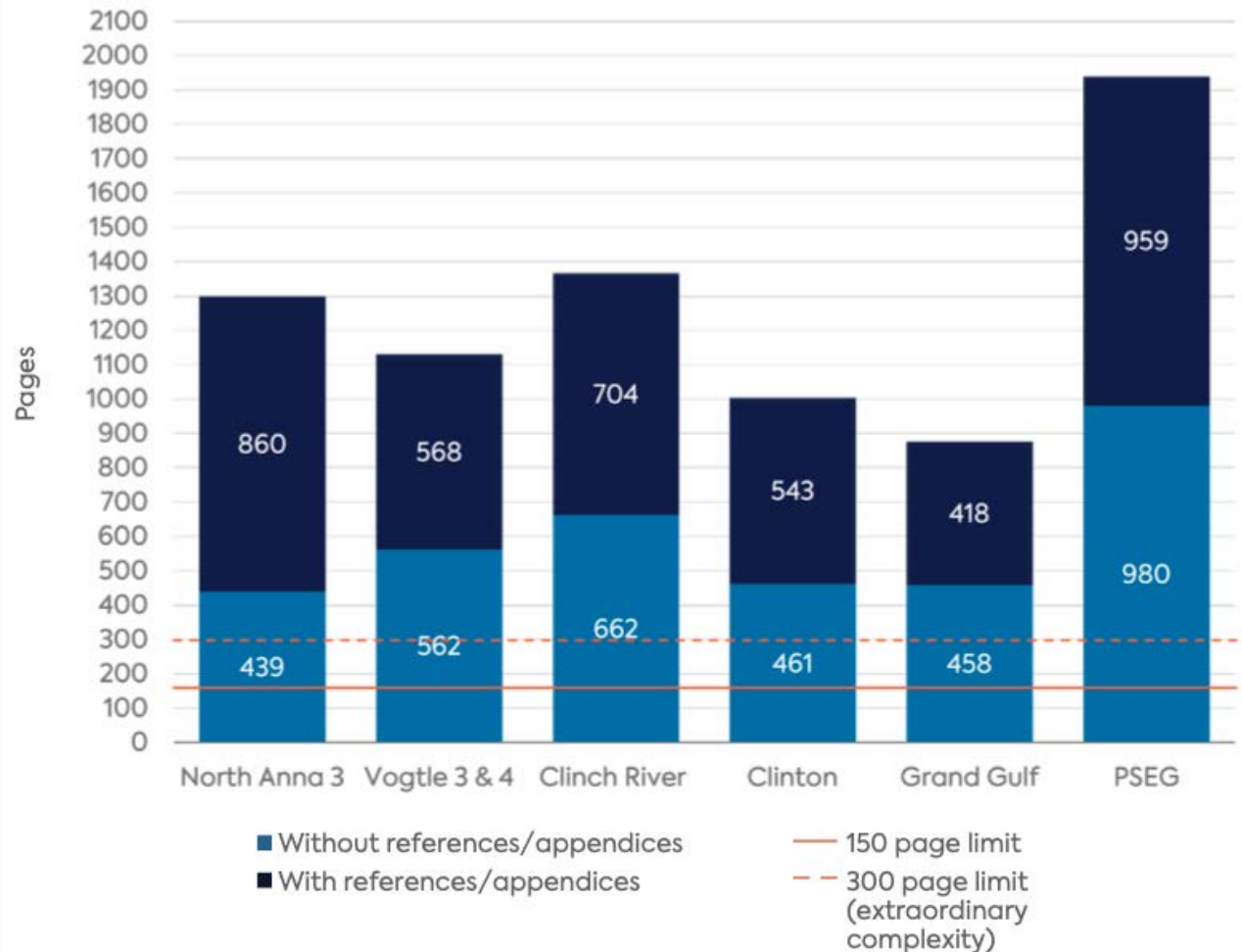
Remove the EIS requirement for every new reactor licensing from its Part 51 regulations, which would give the NRC more flexibility to tailor its reviews to the specifics of a given reactor project, better enabling, in particular, use of an EA instead of an EIS.



# Bowen & Ponangi Recommendations

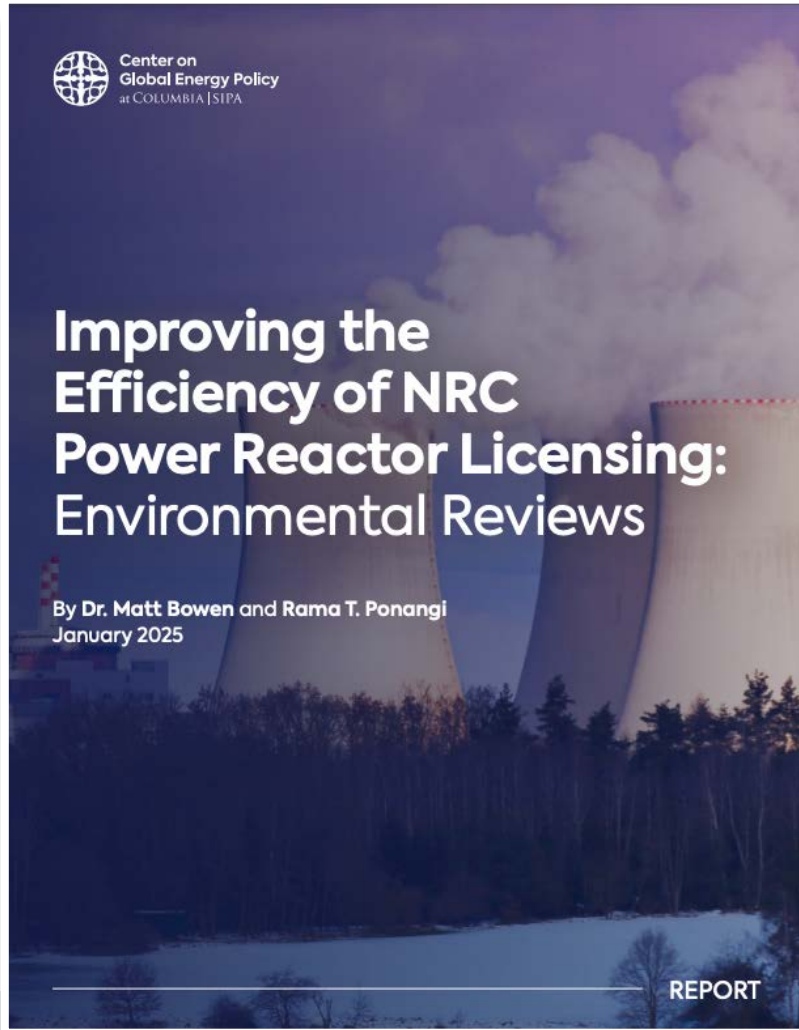


**Figure 4:** Page count for each ESP EIS compared to FRA-mandated page limits

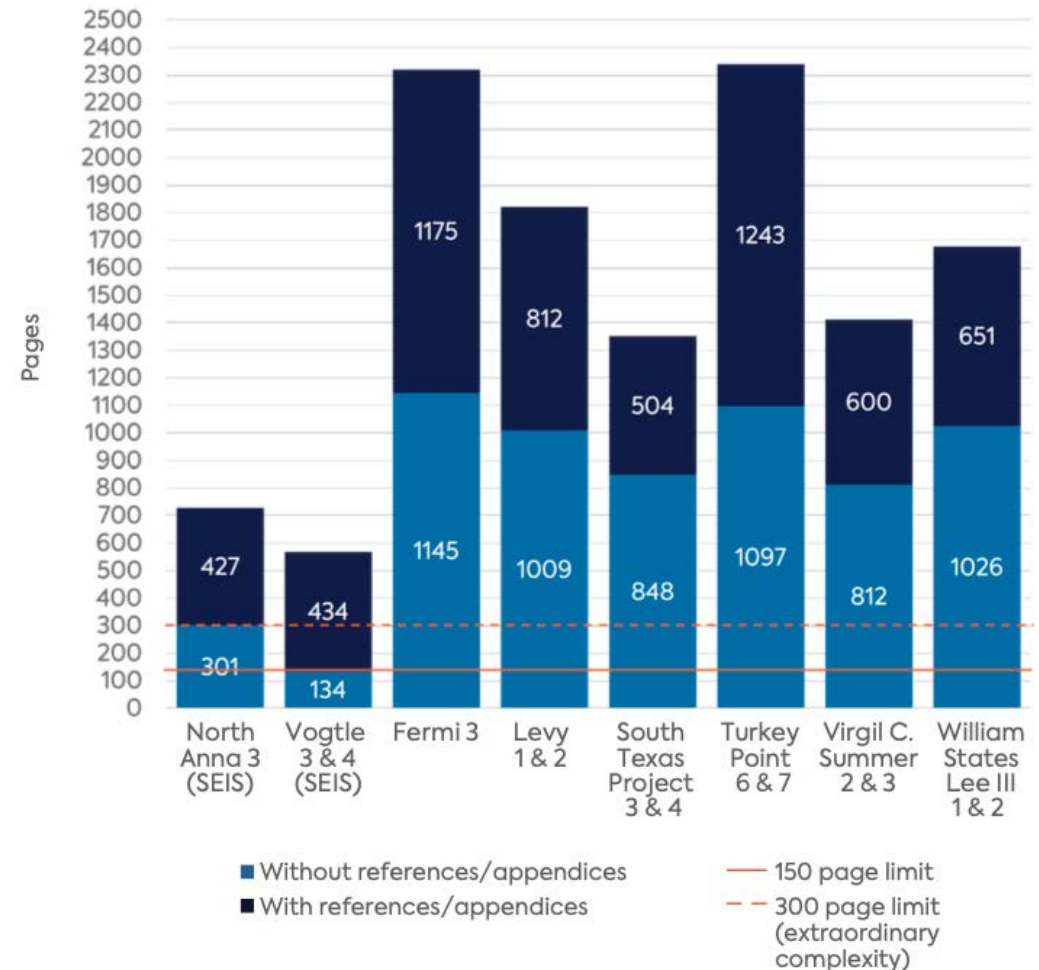


Source: NRC ESP EIS documents.

# Bowen & Ponangi Recommendations

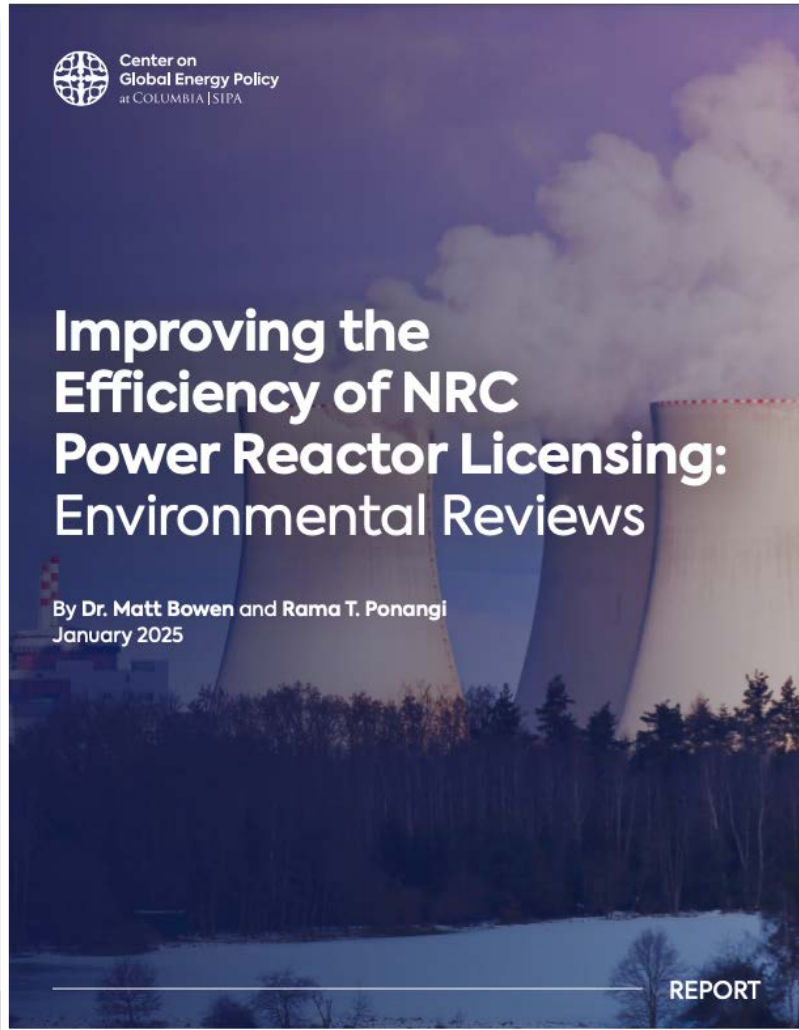


**Figure 6:** Page count for each COL project EIS compared with the FRA-mandated page limits

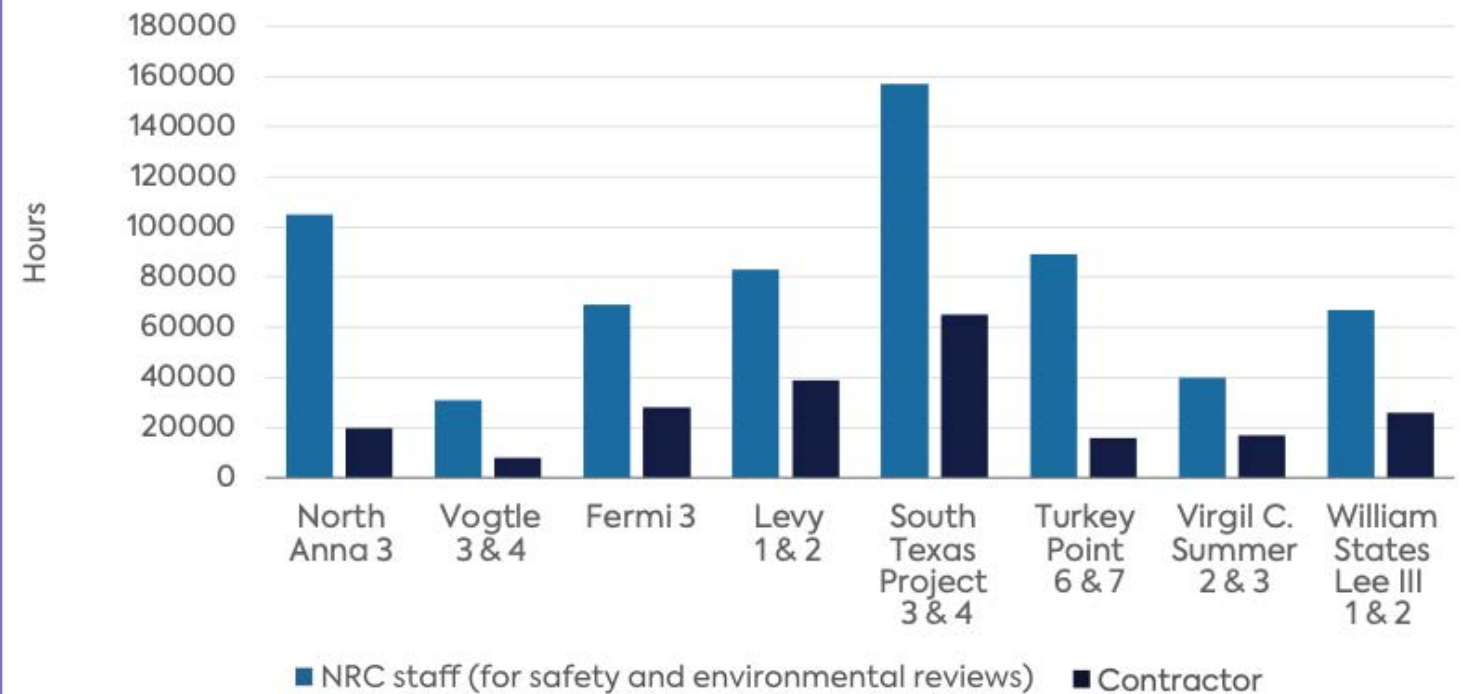


Source: NRC COL EIS documents.

# Bowen & Ponangi Recommendations



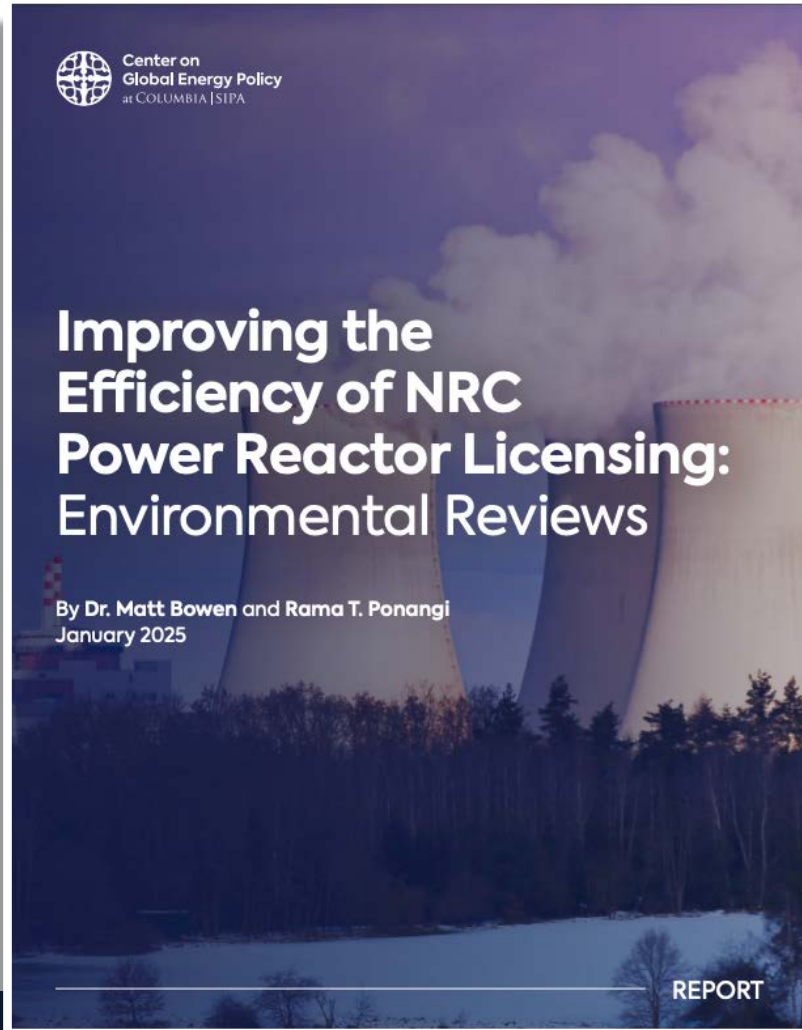
**Figure 7:** Approximate NRC staff hours for safety and environmental reviews and contractor hours for each project



Source: FOIA-2024-000044, <https://www.nrc.gov/docs/ML2404/ML24040A032.pdf>



# Bowen & Ponangi Recommendations




**Table A-1:** Environmental impacts to resource categories (Vogtle, Fermi, V.C. Summer, Levy)

Resource Category	Vogtle 3 & 4		Fermi 3		V.C. Summer 2 & 3		Levy 1 & 2	
	Pre-construction & Construction	Operation	Pre-construction & Construction	Operation	Pre-construction & Construction	Operation	Pre-construction & Construction	Operation
<b>Land Use</b>								
Site and Vicinity	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	MODERATE	SMALL
Transmission Lines and Offsite Areas	MODERATE	SMALL	SMALL	SMALL	MODERATE	SMALL	MODERATE	SMALL
Water - Related	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL
<b>Ecology</b>								
Terrestrial Ecosystems	SMALL to MODERATE	SMALL	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE	SMALL	MODERATE	SMALL to MODERATE
Aquatic Ecosystems	SMALL to MODERATE	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL
<b>Socioeconomics</b>								
Physical	SMALL to MODERATE	SMALL to MODERATE	SMALL	SMALL	SMALL	SMALL	SMALL to MODERATE	SMALL
Demography	SMALL to MODERATE	SMALL	SMALL (beneficial)	SMALL (beneficial)	SMALL	SMALL	SMALL	SMALL
Economic Impacts on Community	SMALL to MODERATE (beneficial)	SMALL to LARGE (beneficial)	SMALL to LARGE (beneficial)	SMALL to LARGE (beneficial)	SMALL (beneficial)	LARGE (beneficial)	SMALL to MODERATE (beneficial)	SMALL to LARGE (beneficial)
Infrastructure & Community Services	SMALL to MODERATE	SMALL	SMALL to MODERATE	SMALL to MODERATE	SMALL to MODERATE	SMALL	SMALL to MODERATE	SMALL
Environmental Justice	SMALL	SMALL	SMALL	SMALL	SMALL to MODERATE	SMALL	SMALL	SMALL
Historical and Cultural Resources	MODERATE	SMALL	MODERATE	SMALL	MODERATE	SMALL	SMALL	SMALL
Air Quality	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL
Nonradiological Health	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL
Radiological Health	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL
Nonradioactive Waste	n/a	n/a	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL
Postulated Accidents	n/a	SMALL	n/a	SMALL	n/a	SMALL	n/a	SMALL

# NRC Staff Recommendations (SECY-24-0046)





**POLICY ISSUE**  
(Notation Vote)

May 30, 2024 SECY-24-0046

**FOR:** The Commissioners

**FROM:** Raymond V. Furstenau  
Acting Executive Director for Operations

**SUBJECT:** IMPLEMENTATION OF THE FISCAL RESPONSIBILITY ACT OF 2023  
NATIONAL ENVIRONMENTAL POLICY ACT AMENDMENTS

**PURPOSE:**

This paper provides the staff's review of the amendments to the National Environmental Policy Act of 1969 (NEPA) in section 321 of the Fiscal Responsibility Act of 2023 (FRA) and recommendations for future actions to enhance the U.S. Nuclear Regulatory Commission's (NRC's) NEPA implementing procedures. The NRC is in compliance with the requirements of the NEPA amendments, which took effect immediately upon the FRA's enactment. Nevertheless, in accordance with the Principles of Good Regulation, the staff has identified opportunities to enhance clarity, reliability, efficiency, and transparency in NRC's regulations and procedures, as well as to streamline environmental reviews while balancing meaningful public engagement. Accordingly, the staff is providing the Commission with recommendations on options to revise the NRC's implementing regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions" and update NRC guidance and policies. Given that several of the recommendations involve rulemaking, this paper includes a rulemaking plan that consolidates such recommendations.

Enclosure 8 and enclosure 9 transmitted herewith contain Official Use Only—Sensitive Internal Information. When separated from enclosure 8 and enclosure 9, this transmittal document is decontrolled.

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301-415-0352

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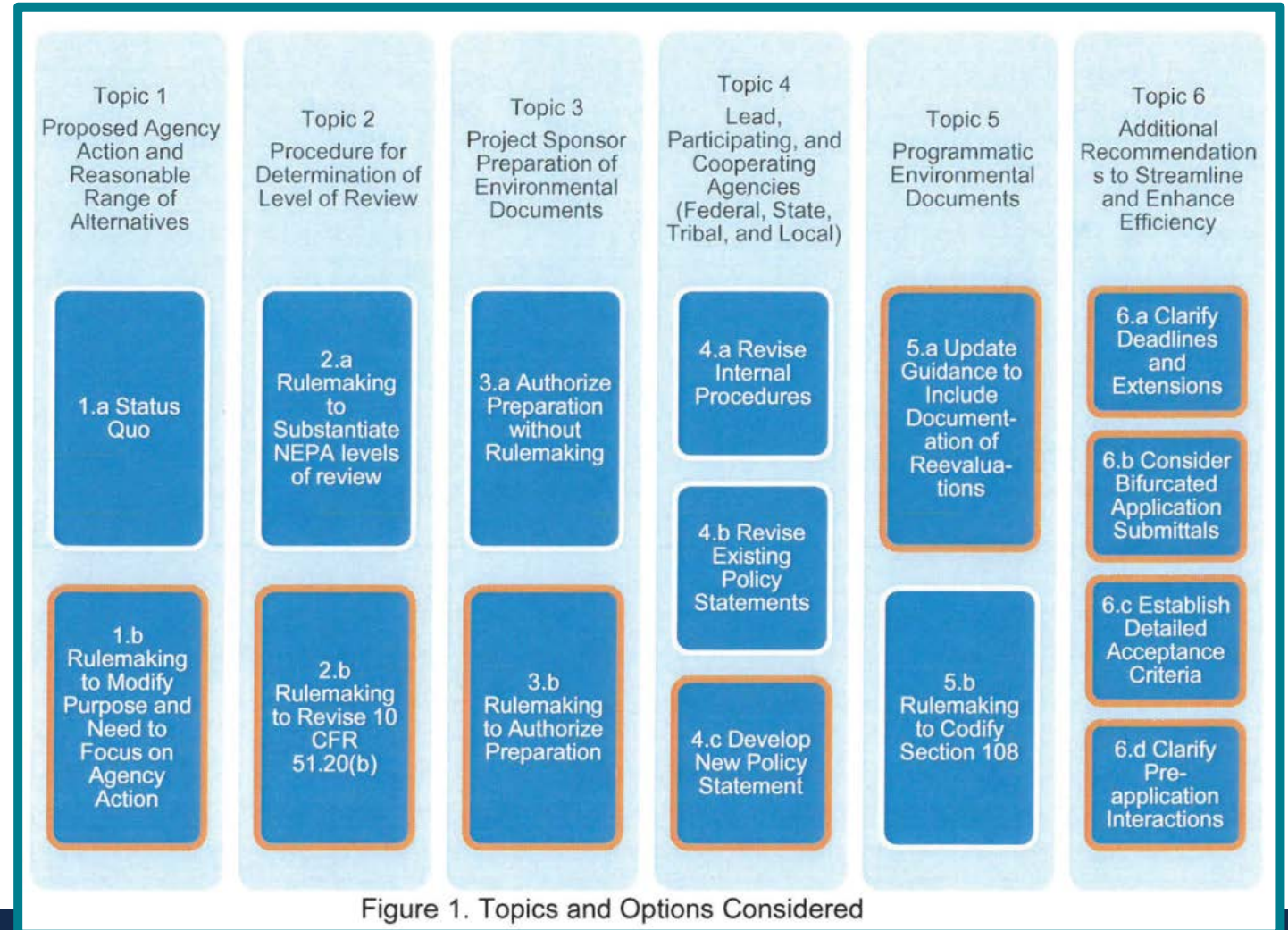
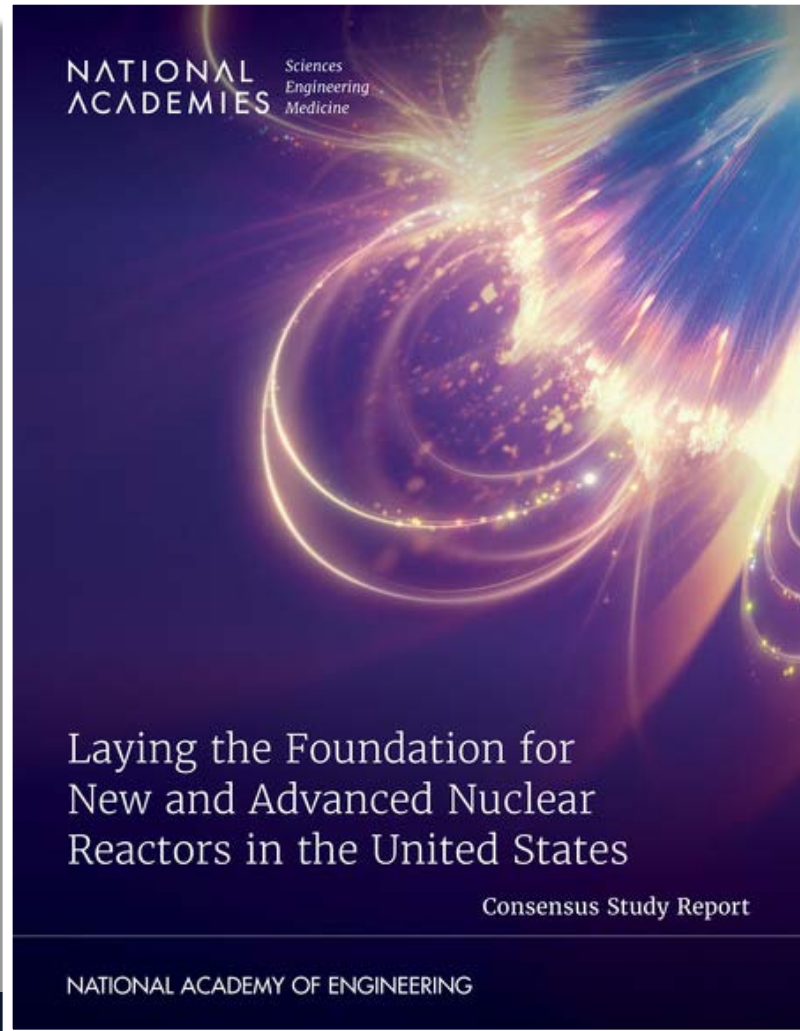


Figure 1. Topics and Options Considered

# NAE Recommendation



**Recommendation 7-4: The U.S. Nuclear Regulatory Commission should expedite the requirements and guidance governing siting and emergency planning zones to enable vendors to determine the restrictions that will govern the deployment of their reactors.**

**I** ILLINOIS