

Engaging Wyoming Communities in an Environmental Justice Approach for Advanced Nuclear Energy Facility Siting: Legal and Regulatory Analysis Report

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Introduction: Legal and Regulatory Analysis Report

United States policy currently envisions a rapid expansion of its nuclear energy generation capacity. Although various facilities have generated nuclear energy since 1958 across the country,¹ growth of the United States nuclear generation sector began to plateau in the 1980s² owing to numerous factors including controversy,³ slower electricity demand growth, rising construction costs, and new regulations following the 1979 Three Mile Island Accident.⁴ Over the subsequent decades, these factors and policy concerns regarding radioactive waste generation, power plant safety, and proliferation of nuclear materials for weapons use⁵ slowed the expansion of conventional nuclear power.⁶

In recent years, however, policy-makers have increasingly called for policy to support the urgent deployment of advanced nuclear energy facilities.⁷ This intensified focus on advanced nuclear energy is emerging amid impending decommissioning of many coal-fired power plants across the nation⁸ and the accelerating energy needs for large datacenters.⁹ The U.S. Department of Energy (DOE) and Idaho National Laboratory promise that advanced nuclear energy technologies have the potential to address past challenges with conventional nuclear energy,¹⁰ while Congress simultaneously claims the adoption of these technologies will reduce emissions and enhance local economic development opportunities.¹¹ Research indicates that meeting emissions reduction goals without nuclear energy

¹ *Nuclear explained*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/energyexplained/nuclear/us-nuclear-industry.php> (last updated Aug. 24, 2023). J.S. Walker & TR Wellock, A Short History of Nuclear Regulation, Nuc. Regul. Com. NUREG/BG-00175 (Oct. 2010).

² REBECCA MCNERNY, CHANGING STRUCTURE OF THE ELECTRIC POWER INDUSTRY: AN UPDATE (1996).

³ Nelkin, D. (1981). Dorothy Nelkin, *Some Social and Political Dimensions of Nuclear Power: Examples from Three Mile Island*, 75 THE AM. POL. SCI. REV. 132 (2014); Herbert P. Kitschelt. *Political Opportunity and Political Protest: Anti-Nuclear Movements in Four Democracies*, 16 BRIT. J. OF POL. SCI. 1, 71 (1986).

⁴ *Id.*; Philip Eash-Gates, et al., *Sources of Cost Overrun in Nuclear Power Plant Construction Call for a New Approach to Engineering Design*, 4 JOULE 11, 2348 (2020); Nathan Hultman, Jonathan Koomey, and Daniel Kammen, *What History Can Teach Us about the Future Costs of U.S. Nuclear Power*, 41 ENV'T SCI. & TECH. 7, 2088 (2007).

⁵ CONG. RES. SERV. NUCLEAR ENERGY: OVERVIEW OF CONGRESSIONAL ISSUES, 8 (Nov. 14, 2019); J. Samuel Walker, *Nuclear Power and Nonproliferation: The Controversy over Nuclear Exports, 1974-1980*, 25 DIPLOMATIC HIST. 2, 215 (2001); Albert Wohlstetter, *Spreading the Bomb Without Quite Breaking the Rules*, 25 FOREIGN POL'Y 2, 88 (1976); V. Gilinsky and W. Hoehn, *Nonproliferation Treaty Safeguards and the Spread of Nuclear Technology*, RAND CORP. R-501 (May 1970).

⁶ Richard Williamson, *The Clinton Administration's New Energy Policies*, 2 TULSA J. COMP. & INT'L L. 115 (1994).

⁷ What they are saying, support for the Bipartisan ADVANCE Act, U.S. SENATE COM. ON ENV'T. & PUB. WORKS, (April 17, 2023), <https://www.epw.senate.gov/public/index.cfm/2023/4/what-they-are-saying-support-for-the-bipartisan-advance-act>.

⁸ Mark Holt & Phillip Brown, *U.S. Nuclear Plant Shutdowns, State Interventions, and Policy Concerns*, CONG. RES. SERV. (June 10, 2021), <https://crsreports.congress.gov/product/pdf/R/R46820>.

⁹ Ryan Browne, *Why Big Tech is turning to nuclear to power its energy-intensive AI ambitions*, CNBC (Oct. 16, 2024), <https://www.cnbc.com/2024/10/15/big-tech-turns-to-nuclear-energy-to-fuel-power-intensive-ai-ambitions.html>; Wylie Wong, *Going Nuclear: A Guide to SMRs and Nuclear-Power Data Centers*, DATACENTER KNOWLEDGE, (Nov. 29, 2023), <https://www.datacenterknowledge.com/energy-power-supply/going-nuclear-a-guide-to-smrs-and-nuclear-powered-data-centers>.

¹⁰ John Wagner, *Urgent Imperative: The Crucial Role of Near-Term Nuclear Deployment*, Idaho National Laboratory, <https://inl.gov/urgent-imperative-the-crucial-role-of-near-term-nuclear-deployment/>; *Benefits of Small Modular Reactors (SMRs)*, DEP'T OF ENERGY – OFF. OF NUCLEAR ENERGY, <https://www.energy.gov/ne/benefits-small-modular-reactors-smrs> (last visited Oct. 21, 2024); *See, e.g., Plant-Specific Safety Enhancements After Fukushima*, U.S. NUCLEAR REG. COMM'N (Dec. 7, 2021), <https://www.nrc.gov/reactors/operating/ops-experience/fukushima.html>.

¹¹ Energy Act of 2020, Pub. L. No. 116-260, 134 Stat. 1182 (2020) (codified as amended at 42 U.S.C. § 16272(b)).

will be challenging and expensive.¹² As a result of these and other geopolitical and economic factors,¹³ net-zero models forecast a need for an increase in nuclear energy generation.¹⁴ Consistent with these projections, during the 29th Conference of the Parties of the United Nations Framework Convention on Climate Change (COP29), the United States committed to tripling nuclear energy with 200 GW of domestic capacity by 2050.¹⁵ Advanced nuclear energy facilities¹⁶ now feature prominently in the United States’ plans to meet climate change mitigation goals.¹⁷

To accelerate deployment of new nuclear technologies, recognizing that initial construction costs of first-of-a-kind advanced reactors are likely to be high, Congress authorized the Advanced Reactor Demonstration Program (ARDP) to support private industry advanced reactor demonstration development in 2020.¹⁸ Appropriations and awards under the ARDP will provide billions of dollars in public investment support towards the development of advanced reactors.¹⁹ This program,

¹² Ejeong Baik, Kiran P. Chawla, Jesse D. Jenkins, Clea Kolster, Neha Patankar, Arne Olson, Sally M. Benson, & Jane C.S. Long, *What is different about different net-zero carbon electricity systems?* 2 ENERGY AND CLIMATE CHANGE 100046 (2021).

¹³ Dipka Bhambhani, *U.S. Government Helps Nuclear Energy Allies Catch Up to Russia, China*, FORBES, <https://www.forbes.com/sites/dipkabhambhani/2024/07/03/us-government-helps-nuclear-energy-allies-catch-up-to-russia-china/> (last visited Oct. 21, 2024).

¹⁴ DEP’T OF ENERGY, *PATHWAYS TO COMMERCIAL LIFTOFF: ADVANCED NUCLEAR*, 12 (Sept. 2024); In its 2023 update to the Net Zero Roadmap, the International Energy Agency revised upwards its estimates for new nuclear power. *See* INTERNATIONAL ENERGY AGENCY, *NET ZERO ROADMAP: A GLOBAL PATHWAY TO KEEP THE 1.5 DEGREE C GOAL IN REACH*, 2023 Update (2023), https://iea.blob.core.windows.net/assets/9a698da4-4002-4e53-8ef3-631d8971bf84/NetZeroRoadmap_AGlobalPathwaytoKeepthe1.5CGoalinReach-2023Update.pdf.

¹⁵ THE WHITE HOUSE, *Biden-Harris Administration Establishes Bold U.S. Government Targets for Safely and Responsibly Expanding U.S. Nuclear Energy and Announces Framework for Action to Achieve these Targets*, <https://www.whitehouse.gov/ostp/news-updates/2024/11/12/biden-%E2%81%A0harris-administration-establishes-bold-u-s-government-targets-for-safely-and-responsibly-expanding-u-s-nuclear-energy-and-announces-framework-for-action-to-achieve-these-targets/> (last visited Nov. 12, 2024).

¹⁶ Advanced nuclear reactors primarily differ from current light or heavy water reactor designs in terms of fuel type, the speed of neutrons in the reactor after fission, the coolant used to manage and transfer heat within the reactor system, and in some cases, smaller designs. *See* INTERNATIONAL ATOMIC ENERGY AGENCY, *ADVANCES IN SMALL MODULAR REACTOR TECHNOLOGY DEVELOPMENTS* (2018), https://aris.iaea.org/publications/smr_book_2020.pdf.

¹⁷ DEP’T OF ENERGY, *supra* note 14; Stacy Davis, *NDC Snapshot: Advanced low-emission energy and climate technologies in national climate commitments*, CLEAN AIR TASK FORCE (Apr. 28, 2022), <https://www.catf.us/2022/04/ndc-snapshot-advanced-low-emission-energy-climate-technologies-national-climate-commitments/>; UN FRAMEWORK CONVENTION ON CLIMATE CHANGE, *THE UNITED STATES OF AMERICA NATIONALLY DETERMINED CONTRIBUTION*, <https://unfccc.int/sites/default/files/NDC/2022-06/United%20States%20NDC%20April%2021%202021%20Final.pdf>.

¹⁸ Energy and Water Development and Related Agencies Appropriations Act of 2020, Pub. L. No. 116-94, 133 Stat. 2534 (2019); Energy Act of 2020, Pub. L. No. 116-260 (codified as amended at 42 U.S.C. 16279a). Originally housed under the Office of Nuclear Energy, the ARDP moved under the Office of Clean Energy Demonstrations (OCED) in 2022.

¹⁹ CONG. RSCH. SERV., *ENERGY AND WATER DEVELOPMENT: FY2025 APPROPRIATIONS*, 9 (Sept. 27, 2024) <https://crsreports.congress.gov/product/pdf/R/R48097>. Only facilities meeting the legal definition of an advanced reactor are eligible for funding under this program. This definition was adopted as part of legislation establishing national energy policies and programs and setting forth research and development priorities. In the Nuclear Energy Innovation Capabilities Act of 2017, Congress defines an Advanced Nuclear Reactor as “[a] nuclear fission reactor with significant improvements over the most recent generation of nuclear fission reactors, which may include: inherent safety features; lower waste yields; greater fuel utilization; superior reliability; resistance to proliferation; increased thermal efficiency; and the ability to integrate into electric and nonelectric applications. Or, a nuclear fusion reactor.” 42 U.S.C. § 16271(b)(1) (2024).

combined with tax credits²⁰ and private sector investments, has resulted in increased attention to advanced nuclear energy facility siting and development activities.²¹

In 2020, the DOE solicited applications for three categories of projects: Demonstrations, Risk Reduction, and Advanced Reactor Concepts.²² The advanced nuclear reactor developer, TerraPower, responded to this funding opportunity announcement (FOA) and, in October 2020, became one of two applicants awarded funding for an advanced nuclear reactor demonstration project.²³ Following a selection process during which four Wyoming communities with retiring coal power plants were considered,²⁴ TerraPower, alongside regional electric utility PacifiCorp, announced Kemmerer, Wyoming as the location for the demonstration project.²⁵ This project marks the first commercial advanced nuclear energy facility to begin construction in the United States.²⁶

TerraPower and other decision-makers have publicly framed the Sodium reactor siting decision as an informed response to the anticipated economic crisis that would accompany the phase-out of two of Kemmerer's primary industries: coal mining and coal-fired power plant electricity generation.²⁷ Kemmerer, population 2,415,²⁸ is the seat of Lincoln County and is home to many employees of the nearby Naughton Power Plant and Kemmerer Coal Mine. Historically, the Naughton Plant has burned coal from the Kemmerer Mine as its primary fuel source; however, the plant is scheduled to convert fully to natural gas by 2025 and is scheduled for retirement in 2036.²⁹ With decreasing coal

²⁰ STEVEN AUMEIER ET. AL., TECHNICAL REPORT: MICROREACTOR APPLICATIONS IN U.S. MARKETS: EVALUATION OF STATE-LEVEL LEGAL, REGULATORY, ECONOMIC AND TECHNOLOGY IMPLICATIONS 35 (2023).

²¹ *Are Civil Nuclear Credits still relevant? DOE is asking nuclear operators for input*, AM. NUCLEAR SOC. (Oct. 21, 2024), <https://www.ans.org/news/article-6502/are-civil-nuclear-credits-still-relevant-doe-is-asking-nuclear-operators-for-input/#:~:text=DOE%20is%20asking%20nuclear%20operators%20for%20input,-Mon%2C%20Oct%202021&text=Interest%20in%20new%20reactor%20deployments,electricity%20demand%20from%20tech%20companies..>

²² H.R. 1865; Sec. 959A – Energy Act of 2020 (division Z of 2020 appropriations act); US DEP'T OF ENERGY OFF. OF NUCLEAR ENERGY, *Reactor Fleet and Advanced Reactor Deployment*, DE-FOA-0002271, *Amendment 000003, Advanced Reactor Demonstration; Financial Assistance Funding Opportunity Announcement 6* (issued May 14, 2020, as amended Aug. 12, 2020), <https://www.grants.gov/search-results-detail/326997>; see also 42 U.S.C. § 16271(a); Further Consolidation Appropriations Act, 2020 (H.R. 1865); 42 U.S.C. 13525; 165 Cong. Rec. H11246 (daily ed. Dec. 17, 2019) (Explanatory Statement regarding H.R. 1865, Further Consolidated Appropriations Act 2020).

²³ U.S. Department of Energy Announces \$160 Million in First Awards under Advanced Reactor Demonstration Program, OFF. OF NUCLEAR ENERGY (Oct. 13, 2020), <https://www.energy.gov/ne/articles/us-department-energy-announces-160-million-first-awards-under-advanced-reactor>.

²⁴ Clarissa Nord, *Wyoming Sodium Reactor Demonstration Project*, WYO. LEG. SERV. OFF. (Aug. 2021), <https://wyoleg.gov/LSOResearch/2021/21RM020%20-%20Wyoming%20Sodium%20Reactor%20Demonstration%20Project-FINAL.pdf>.

²⁵ *TerraPower selects Kemmerer, Wyoming as the preferred site for advanced reactor demonstration plant*, TERRAPOWERS (Nov. 16, 2021), <https://www.terrapower.com/natrium-demo-kemmererwyoming/>.

²⁶ Sonal Patel, *Kemmerer 1 Breaks Ground: A Look at TerraPower's Sodium Fast Reactor Nuclear Power Plant*, POWER (June 13, 2024), <https://www.powermag.com/kemmerer-1-breaks-ground-a-look-at-terrapowers-natrium-fast-reactor-nuclear-power-plant/>.

²⁷ *TerraPower, Wyoming Governor and PacifiCorp Announce Efforts to Advance Nuclear Technology in Wyoming*, PACIFICORP (June 2, 2021), <https://www.pacificorp.com/about/newsroom/news-releases/pc-tp-announce-advanced-nuclear-technology-wyoming.html>.

²⁸ *Kemmerer City, Wyoming*, U.S. CENSUS BUREAU, https://data.census.gov/profile/Kemmerer_city,_Wyoming?g=160XX00US5642005 (last visited Oct. 15, 2024).

²⁹ *2023 Integrated Resource Plan*, PACIFICORP (Mar. 31, 2023), https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2023-irp/2023_IRP_Volume_I.pdf.

demand and the loss of the Naughton Plant as its primary customer, the Kemmerer Coal Mine is expected to end its mining operations by 2031.³⁰

Federal climate programs, such as the energy community tax enhancement,³¹ encourage the location of new “clean” energy industrial facilities in communities like Kemmerer, while distributional environmental justice³² (i.e., how environmental and industrial harms and benefits are distributed across communities and social groups, often inequitably) initiatives like Justice40³³ intend to assure that some of the benefits are localized.³⁴ Notwithstanding economic development potential, new industrial developments also have the potential to increase environmental burdens. Accordingly, following the announcement of Justice40, the White House’s own Environmental Justice Advisory Council promptly urged for assurance that these programs would not increase burdens on frontline communities.³⁵

Our DOE-Nuclear Energy University Program project, *Engaging Wyoming Communities in an Environmental Justice Approach for Advanced Nuclear Energy Facility Siting*, explores the Natrium project in Kemmerer, Wyoming as a case to assess opportunities for potentially integrating environmental justice findings as recommendations for this facility’s development process.³⁶ Beyond context-specific findings, our broader aim is to inform an adaptable, justice-based, community engagement process for advanced nuclear energy siting and development amid efforts to accelerate these facilities’ deployment. This aspect of our broader project, the Legal and Regulatory Analysis Report, specifically analyzes the laws and regulations pertinent to siting the Natrium facility. It investigates

³⁰ *Id.*

³¹ U.S. DEPT. OF TREASURY, NOTICE 2024-30, ENERGY COMMUNITY BONUS CREDIT AMOUNTS UNDER THE INFLATION REDUCTION ACT OF 2022 (May 22, 2024).

³² Alex Kaufman, *Distributive Justice, Theories Of*, in ENCYCLOPEDIA OF APPLIED ETHICS 842–50 (2d. ed. 2012); Carolyn Stephens and Chris Church, *Environmental Justice and Health*, in INT’L ENCYCLOPEDIA OF PUB. HEALTH (2d. ed. 2017).

³³ Justice40 is Biden Administration initiative which requires “40 percent of the overall benefits [from certain federal investments] flow to disadvantaged communities.” *Tackling the Climate Crisis at Home and Abroad*, Exec. Order 14008, 86 Fed. Reg. 7619 (Jan. 27, 2021).

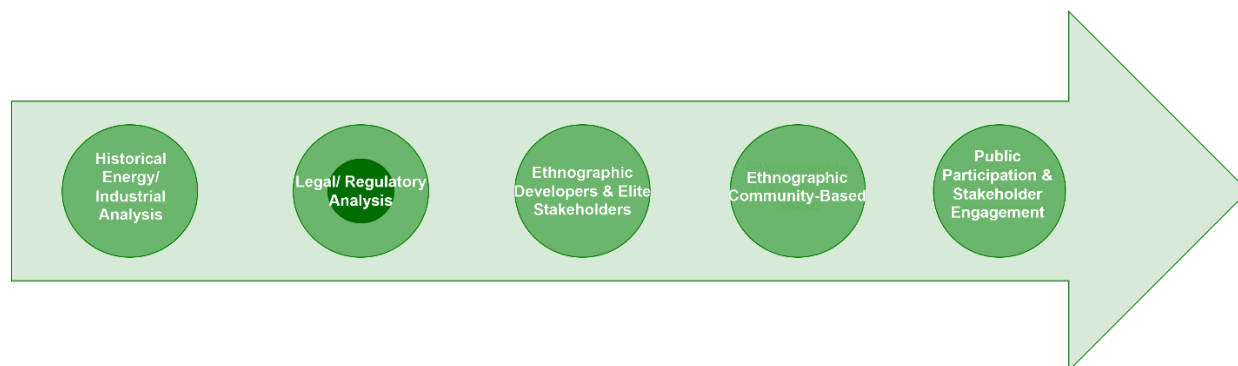
³⁴ *Justice40: A Whole-of-Government Initiative*, THE WHITE HOUSE, <https://www.whitehouse.gov/environmentaljustice/justice40/> (last visited Nov. 6, 2024). The distributional environmental justice concerns associated with nuclear energy generation and its related mining, processing, and waste facilities are well documented. Nuclear facilities have historically increased environmental and health risks and consequences in poor, historically marginalized, and—especially—Indigenous communities while failing to convey its economic benefits to those communities. See Eric Jantz, *Environmental Racism with a Faint Green Glow*, 58 NAT. RES. J. 2 (2018); VALERIE KULETZ, *THE TAINTED DESERT: ENVIRONMENTAL RUIN IN THE AMERICAN WEST* (Routledge 1st ed. 1998); John R. Parkins and Randolph Haluza-DeLay, *Social and Ethical Considerations of Nuclear Power Development*, UNIV. OF ALBERTA RURAL ECONOMY STAFF PAPER 11-01 (Apr. 2011).

³⁵ WHITE HOUSE ENV’T JUSTICE ADVISORY COUNCIL, REPORT TO COUNCIL ON ENV’T QUALITY (May 21, 2021), https://www.epa.gov/sites/default/files/2021-05/documents/white_house_environmental_justice_advisory_council_final_recommendations_cover_letter_may_21_2021.pdf. The National Oceanic and Atmospheric Administration defines frontline communities as “those communities who are the most vulnerable to and will be the most adversely affected by climate change and inequitable actions because of systemic and historical socioeconomic disparities, environmental injustice, or other forms of injustice.” *Climate Adaptation Partnerships Program in the Justice40 Initiative*, NOAA CLIMATE PROGRAM OFF., <https://cpo.noaa.gov/divisions-programs/climate-and-societal-interactions/cap-risa/justice40-initiative/#:~:text=Program%20Definition%20of%20Disadvantaged%20Communities,Stakeholder%20Engagement> (last visited Nov. 4, 2024).

³⁶ See Rachael Budowle, Denia Djokić, Aditi Verma, Tara Righetti, L Steven Smutko, Matthew Henry, and Temple Stoellinger. *Engaging Wyoming Communities in an Environmental Justice Approach for Advanced Nuclear Energy Facility Siting*, NUCLEAR ENERGY UNIV. PROGRAM (Accessed Sept. 23, 2024).

whether and how formal siting processes currently incorporate environmental justice and to what extent they provide opportunities for stakeholders to meaningfully participate. This analysis aims to enhance our contextual understanding prior to community-based participatory, ethnographic, and public participation research with community members and other stakeholders in future phases of this project (see Figure i.1).

Figure i.1
Legal and Regulatory Analysis within Broader Project Trajectory



Legal literature on environmental justice is primarily theoretical, evaluating what social and environmental attributes are necessary for a system to be just. Scholars across this space argue that legal changes are needed to promote transparency and inclusivity³⁷ and that governments, industry, and academia are not giving enough attention to “the legal and regulatory context in which issues of energy justice emerge.”³⁸ Both chapters of this analysis attempt to fill this gap. In keeping with our broader research goals to provide both context-specific findings and adaptable processes for future siting, we examine Kemmerer, Wyoming, and the Natrium project within it, as a rich, first-of-its-kind empirical case through which to evaluate the environmental and procedural justice requirements applicable to nuclear facility siting.

Chapter 1 begins with a review of the theoretical legal literature on environmental justice and examines the extent to which environmental justice has been formally incorporated into federal law. It examines federal executive orders on environmental justice dating back to the Clinton administration. These executive orders require (1) assessments of whether new projects will increase disproportionate burdens on vulnerable communities—often through the National Environmental Policy Act (NEPA) process—and (2) recipients of federal funding to illustrate how a share of that spending will benefit disadvantaged communities. We also examine how these directives have been implemented within federal agencies. We focus on the two primary federal agencies involved in siting the Natrium project: the DOE and the Nuclear Regulatory Commission (NRC). We conclude that, consistent with the requirements of the executive orders, implementation within these agencies is focused primarily on procedural and distributional justice, but that new tools and programs also incorporate attributes that align with scholarly definitions of recognition justice. We observe that the

³⁷ Benjamin K. Sovacool, Matthew Burke, Lucy Baker, Chaitanya Kumar Kotikalapudi, Holle Wlokas, *New Frontiers and Conceptual Frameworks for Energy Justice* 105 ENERGY POLY 677, 689 (2017).

³⁸ Kirsten Jenkins, Darren McCauley, & Charles R. Warren, *Attributing Responsibility for Energy Justice: A Case Study of the Hinkley Point Nuclear Complex*, 108 ENERGY POLY 836, 632 (2017).

agencies' approaches to responding to congressional and executive direction related to environmental justice are adapted to their structure, primary missions, and responsibilities.

Chapter 2 assesses procedural protections in the Natrium project siting process, drawing from the subset of environmental justice literature focused on procedural justice. This includes a detailed review of applicable laws and regulations at every jurisdictional level that may be implicated by the Natrium project in Kemmerer, Wyoming, including NRC licensing requirements, industrial siting, county-level land planning, and ARDP program administration. Since our study is limited to laws applicable to the initial siting and construction of the Natrium facility, it does not evaluate the role of stakeholders in the rulemaking process or in other proceedings before the NRC, including design certification, licensing amendments, or decommissioning. Chapter 2 finds that while the nuclear facility siting process includes greater procedural protections than those that exist for many other industrial projects, these protections do not result in substantive rights for Wyoming stakeholders to forestall development on environmental justice grounds. It concludes by identifying opportunities for lawmakers to better align administrative processes related to the siting of advanced nuclear energy facilities with theoretical environmental justice frameworks.

The law in this area continues to evolve and, accordingly, the case-study level approach of this project includes some inherent limitations. This is especially true for Chapter 1, which describes the framework for environmental justice implementation within the DOE and NRC as of the date of this report. While DOE's approach to environmental justice, including its administration of the ARDP program, has expanded significantly under the Biden Administration, these DOE programs apply almost exclusively to project selection and not to project administration. Accordingly, many of the environmental justice aspects described here were not in place when the Funding Opportunity Announcement for the first round of ARDP projects (including the ultimately selected TerraPower Natrium project) was issued. While any subsequent applications for DOE funding under programs authorized by the Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA) would be subject to those requirements, they are not applied retroactively to existing project cooperative agreements. Accordingly, given the timing of its project, TerraPower's legal obligations with respect to environmental justice will be limited to those created as part of the NRC licensing process and by state law. Similarly, the processes described in this report may not apply to projects selected under future FOAs issued through the ARDP. While thus far, environmental justice executive orders have withstood changes in administration, agency direction can shift significantly between presidential administrations.

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Chapter 1

Analyzing Environmental Justice within Federal Agencies Relevant to Advanced Nuclear Energy Facility Siting

Madeleine J. Lewis, Scarlett Forrest, Iva Reckling, & Tara Righetti

I. Introduction

This chapter evaluates the landscape of legal literature on environmental justice and how concepts of environmental justice have been implemented in the federal agencies with a significant role in advancing and authorizing new nuclear energy facilities. The chapter begins by surveying the prevailing theories of environmental justice as assessed by leading legal and sociolegal scholars. It illustrates that environmental justice comprises numerous core tenets that together address a combination of social, economic, and environmental issues relevant to energy and industrial projects. This review focuses on the three types of justice most clearly represented in federal policy: Procedural, Distributional, and Recognition. Section III then analyzes whether and how environmental justice theories are integrated into law through presidential executive orders and Council on Environmental Quality (CEQ) guidance related to implementation of the National Environmental Policy Act (NEPA). Section IV reviews the resulting implementation of federal environmental justice policy within the Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC). Section V concludes with the observation that until very recently, most agencies' implementation of federal environmental justice executive orders was limited to NEPA and, therefore, focused primarily on procedural justice by requiring agencies to consider the environmental justice implications of federal decision-making. While the NRC still maintains this approach as an independent agency, recently the DOE has implemented new programs that also incorporate aspects of distributional and recognition justice consistent with Justice40 program directives.

II. Conceptions and Definitions of Environmental Justice

The origin of the modern environmental justice movement is frequently traced to Warren County, North Carolina in 1982, when the state elected to site a waste facility for polychlorinated biphenyl (PCB)-laced soil in the predominantly African American and highly impoverished community of Afton. Warren County community members launched widespread protests, generating backlash on a national scale against the state's proposal. They also filed litigation against the state of North Carolina and the Environmental Protection Agency (EPA), challenging the sufficiency of the project's Environmental Impact Statement (EIS) under NEPA, asserting a nuisance claim, and alleging violations of the Toxic Substances Control Act of 1976.¹

Throughout the rest of the 1980s and into the early 1990s, several landmark studies began to examine and demonstrate the pervasiveness of similar practices. Around the same time that the U.S.

¹ *Warren County v. North Carolina*, No. 79-560-CIV-5 (528 F. Supp. 276, 16 ERC 2047) (E.D.N.C. Nov. 5, 1981).

Court for the Eastern District of North Carolina dismissed Warren County’s suit, Dr. Robert Bullard demonstrated the statistical likelihood for waste sites and other polluting facilities to be sited in black communities across the southern part of the country.² With that and subsequent research, Bullard unpacked the political, social, and legal structures that systematically and disproportionately burdened minority and impoverished communities with environmentally hazardous infrastructure.³ He proposed an environmental justice framework measured by five essential targets or objectives, which became the roadmap for future environmental justice work.⁴ These targets include: (1) the protection of all persons from environmental degradation; (2) the adoption of a public health prevention of harm approach; (3) the placement of burdens of proof on polluters; (4) the obviation of the requirement to prove intent to discriminate; and (5) the targeting of action and resources to redress of existing inequities.⁵

In subsequent decades, legal scholarship has integrated environmental justice as a framework through which to critically examine law and legal systems. Legal scholars have introduced novel theoretical frameworks that approach environmental justice through constituent lenses, often drawing on formulations derived from the fields of criminal justice and social justice.⁶ Professor Robert Kuehn made the first hallmark contributions in this area, conceptualizing environmental justice through a four-part taxonomy including distributive justice, procedural justice, corrective justice,⁷ and social justice.⁸ Nearly two and a half decades after its publication, Kuehn’s framework remains highly influential among legal scholars in the field of environmental justice.⁹ In 2007, Professor David Schlosberg proposed expanding on Kuehn’s framework to include “recognitional justice” which is frequently referred to as “recognition justice” in other scholarship.¹⁰ In the subsequent sections we focus on three of these tenets—distributive, recognition, and procedural justice—which are most clearly represented in federal environmental justice policies applicable to administrative regulation of the energy sector.¹¹

² Robert D. Bullard, *Blacks and the New South: Challenge of the Eighties*, 15 J. OF INTERGROUP RELATIONS 25 (1987).

³ Robert D. Bullard, *Race and Environmental Justice in the United States*, 18 YALE J. INT’L L. 319 (1993); Robert D. Bullard & B.H. Wright, *The Politics of Pollution: Implications for the Black Community*, 47 PHYLON 71 (1986); Robert D. Bullard, *Solid Waste Sites and the Black Houston Community*, 53 SOCIOLOGICAL INQUIRY 273 (1983).

⁴ Robert Kuehn, *A Taxonomy of Environmental Justice*, 30 ENVTL. L. REP. 10681, 10684, 10688 (2000).

⁵ Robert D. Bullard, *Environmental Justice for All*, in UNEQUAL PROTECTION: ENVIRONMENTAL JUSTICE & COMMUNITIES OF COLOR 3,10-1 (Robert D. Bullard ed., 1996).

⁶ See Carmen G. Gonzalez, *Environmental Justice and International Environmental Law*, 1, 6 in ROUTLEDGE, HANDBOOK OF INT’L ENVTL. LAW (Shawkat Alam, Jahid Hossain Bhuiyan, Tareq M.R. Chowdhury, Erika Techera, eds., 2012).

⁷ See Kuehn, *supra* note 4, at 10684, 10688. Corrective justice relates to the mechanisms of compensation and reparation used to deter and punish wrongdoers (embodied, for instance, in the polluter pays principle).

⁸ Social justice relates to environmental justice in a more holistic and interrelated way, “as part of larger problems of racial, social, and economic justice and helps illustrate the influence of politics, race, and class on an area’s quality of life.” See Kuehn, *supra* note 4 at 10684, 10688.

⁹ See Clifford J. Villa, *No “Box to Be Checked”*: *Environmental Justice in Modern Legal Practice*, 30 N.Y.U. ENVTL. L. J. 157, n. 34 (2022) (detailing Kuehn’s influence across scholarship including, e.g., Rachael E. Salcido, *Retooling Environmental Justice*, 39 UCLA J. ENVTL. L. 1, 7 (2021) (recognizing “Kuehn’s helpful taxonomy”); Hannah Lustman, *Sick Uncertainty: How Executive Threats to EPA Programs for the U.S.-Mexico Border Threaten Environmental Justice*, 10 ARIZ. J. ENV’T L. & POL’Y 465, 465 (2020); Clifford J. Villa, *Remaking Environmental Justice*, 66 LOYOLA L. REV. 469, 487–505 (2020)).

¹⁰ DAVID SCHLOSBERG, *DEFINING ENVIRONMENTAL JUSTICE: THEORIES, MOVEMENTS, AND NATURE* (2007). Scholar Charles Lee summarizes Schlosberg as describing recognitional justice as speaking “to the social norms, language, and mores that mediate our relations with those who are denigrated and less well-off.” See Charles Lee, *Confronting Disproportionate Impacts and Systemic Racism in Environmental Policy*, 51 ENVTL. L. REP. (ELI) 10207, 10209 (2021).

¹¹ Other scholars, primarily in the field of energy justice (which relates to environmental justice), have suggested an additional concept of “restorative justice”. See Darren McCauley & Raphael J. Heffron, *Just Transition: Integrating Climate*,

A. Distributive Justice

Distributive justice,¹² a concept rooted strongly in Bullard’s early scholarship, calls attention to the unequal distribution of polluting facilities in racially and economically marginalized communities.¹³ Distributive justice addresses inequity within the socio-spatial distribution of resources, risks, and environmental benefits and detriments based on factors including proximity, race, gender, and class.¹⁴ It provides a framework through which to evaluate why allocation of environmental harms are disproportionate and what decision-making principles lead to this result.¹⁵ In Bullard’s words, distributive justice is ultimately a question of “*who gets what, why and how much.*”¹⁶

Focusing on whether the distribution of outcomes following a decision is fair, rather than on the processes behind the decisions themselves, Kuehn defines distributive justice as “the right to equal treatment, that is, to the same distribution of goods and opportunities as anyone else has or is given.”¹⁷ Distributive justice focuses on the disproportionate distribution of facilities and industrial activities that directly cause environmental and public health burdens and risks within racially, ethnically, and/or economically marginalized communities.¹⁸ However, beyond considering the distribution of burdens, distributive justice also includes “equitable access to environmental goods and services, such as clean air, clean water, and healthy and nutritious food.”¹⁹ Collectively, these objectives reflect a goal of increasing access to environmental benefits and decreasing the risk of environmental burdens—particularly for socially or economically marginalized communities.²⁰

Energy, and Environmental Justice, 119 ENERGY POL’Y 1 (2018). Restorative justice functions similarly to recognition justice in that it advocates for the acknowledgement of past harms. However, restorative justice additionally calls for the remediation of past harms and the proactive prevention of future harms. See Raphael J. Heffron & Darren McCauley, *The Concept of Energy Justice Across the Disciplines*, 105 ENERGY POL’Y 658 (2017).

¹² Some scholars use the term “distributional justice” instead of “distributive justice,” but for the purposes of this report, these terms are interchangeable.

¹³ See Paul Mohai, David Pellow, & Timmons Roberts, *Environmental Justice*, 34 ANN. REV. ENVTL. RES. 405 (2009); Ulibarri, et al., *Barriers and Opportunities to Incorporating Environmental Justice into the National Environmental Policy Act*, 97 ENVTL. IMPACT ASSESSMENT REV. 106880 (2022).

¹⁴ See Stefan Bouzarovski & Neil Simcock, *Spatializing Energy Justice* 107 ENERGY POL’Y 640 (2017); Kirsten Jenkins, Darren McCauley, & Raphael J. Heffron, *Energy Justice: A Conceptual Review*, 11 ENERGY RESEARCH & SOCIAL SCIENCE 174 (2016) [HEREINAFTER “Energy Justice”]; Dean Kyne & Bob Bolin, *Emerging Environmental Justice Issues in Nuclear Power and Radioactive Contamination*, 13 INT’L J. OF ENV’T. RSCH. AND PUB. HEALTH 2 (2016).

¹⁵ See Michael C. Labelle, *In Pursuit of Energy Justice*, 107 ENERGY POL’Y 615 (2017); Dayna Nadine Scott & Adrian A. Smith, “*Sacrifice Zones*” in the Green Energy Economy: *Toward an Environmental Justice Framework*, 62 MCGILL L.J. 861 (2017); Benjamin K. Sovacool & Michael H. Dworkin, *Energy Justice: Conceptual Insights and Practical Applications*, 142 APPLIED ENERGY 435 (2015).

¹⁶ Robert D. Bullard, *Environmental Justice for All: It’s the Right Thing to Do*, 9 J. ENVTL. L. & LITIG. 281, 307 (1994) [HEREINAFTER “Right Thing to Do”].

¹⁷ Kuehn, *supra* note 4, at 10683 (2000) (quoting Ronald Dworkin, *TAKING RIGHTS SERIOUSLY* 273 (1977)).

¹⁸ See *Right Thing to Do*, *supra* note 16 at 287–88.

¹⁹ Carmen G. Gonzalez & Sumudu Atapattu, *International Environmental Law, Environmental Justice, and the Global South*, 26 TRANSNAT’L L. & CONTEMP. PROBS. 229, 234 (2017).

²⁰ *Id.*

B. Procedural Justice

Kuehn defines procedural justice as “the right to treatment as an equal.”²¹ This right is realized through fair, accessible, and inclusive decision-making processes to determine the distribution of outcomes.²² Ensuring procedural environmental justice requires that formal legal mechanisms provide communities with both an opportunity to participate in decision-making processes that affect them and a substantive right to do so in a way that yields meaningful results.²³ Assessments of procedures through a justice lens, therefore, interrogate how a process is designed and whether or not that design is conducive to fair and just outcomes.²⁴ Considerations include whether concerns from the public are properly acknowledged and addressed when appropriate and whether the public has access to any technical assistance needed to meaningfully engage in the process.²⁵ Just procedures facilitate democratic accountability and judicial review by requiring that those with more decision-making power (such as state or corporate actors) be open, transparent, and accountable regarding their decisions.²⁶ When the decision-making process is unfair, procedural justice necessitates access to judicial and administrative systems for complaint, hearing, and remedy.²⁷

C. Recognition Justice

Recognition justice gives importance to recognizing and respecting differences in the lived experiences and cultural history of other groups and individuals.²⁸ It “includes calls to acknowledge the divergent perspectives rooted in social, cultural, ethnic, racial, and gender differences,” and interrogate the degrees of respect and autonomy given to different sociocultural identities within decision-making processes.²⁹ Recognition justice applies to sections of society who are burdened by environmental harms and also requires attention to the sections of society who experience environmental benefits.³⁰

The injustice of misrecognition and non-recognition of marginalized populations often stems from social prejudice and discrimination and is exacerbated by institutional legacies and processes that provide certain groups with more recognition than others.³¹ Recognition justice therefore not only acknowledges which sections of society are misrepresented and/or ignored within environmental, energy, and climate-related decision-making processes, but also interrogates the systemic and

²¹ Kuehn, *supra* note 4, at 10688.

²² *Id.* at 10688–92.

²³ Jonathan Skinner-Thompson, *Procedural Environmental Justice*, 97 WASH. L. REV. 399, 402 (2022).

²⁴ *Id.*; see also Nicola Ulibarri et al., *supra* note 13; Sanne Ackerboom & Robin Kundis Craig, *How Law Structures Public Participation in Environmental Decision Making: A Comparative Law Approach*, 32(3) ENV'T. POL'Y & GOV'T 232 (2022).

²⁵ Skinner-Thompson, *supra* note 23 at 399.

²⁶ Gonzalez & Atapattu, *supra* note 19.

²⁷ Benjamin J. Richardson & 13 Razzaque, *Public Participation in Environmental Decision Making*, 6 ENVTL. L. FOR SUSTAINABILITY 165 (2006) (discussing the procedural differences in various types of public participation and acknowledging the role of law in making participation accessible).

²⁸ Stephen Williams & Andréanne Doyon, *Justice in Energy Transitions*, 31 ENVTL. INNOVATION AND SOCIETAL TRANSITION 144, 147 (2019); Ulibarri et al., *supra* note 13, at 2.

²⁹ Energy Justice, *supra* note 14, at 177.

³⁰ *Id.* at 175; see also Bouzarovski & Simcock, *supra* note 14; Schlosberg, *supra* note 10.

³¹ Williams & Doyon, *supra* note 28 at 147.

institutional structures at the root of these disparities.³² Freedom from physical threats, access to fair representation, and having equal, complete political rights are all goals under the pillar of recognition justice.³³

III. Federal Agency Obligations Relative to Environmental Justice

A. Environmental Justice by Executive Order

Following early environmental justice scholarship and action throughout the 1980s and 1990s, federal agencies began to respond to demands to consider and implement environmental justice. Following the 1990 Conference on Race and the Incidence of Environmental Hazards at the University of Michigan, the EPA became the first federal agency to make formal efforts to incorporate environmental justice into policy and practice.³⁴ Catalyzed to do so by a growing public awareness of unjust environmental siting practices that disenfranchised and disproportionately burdened minority and low-income populations, it conducted its own examination of the environmental justice movement's foundational sociological evidence.³⁵ In 1992, the EPA's Environmental Equity Workgroup released a report summarizing its findings and recommendations.³⁶ The report was the "the first official acknowledgment by the federal government of the existence of environmental inequalities and the importance of addressing them."³⁷ The report gave "further weight and increased public attention to environmental justice concerns," contributing to the George H.W. Bush administration's decision to establish the Office of Environmental Equity—later renamed the Office of Environmental Justice.³⁸

In 1994, President Clinton formalized a commitment to environmental justice across *all* federal agencies. On February 11, 1994, President Clinton issued Executive Order (EO) 12898, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The order directed all federal agencies to "identify[] and address[], as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."³⁹ A separate memorandum accompanying the order directed to agency heads instructed that "each Federal agency shall analyze the environmental effects, including human health, economic, and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by [NEPA]," emphasizing that "each federal agency shall provide opportunities for community input in the NEPA process...."⁴⁰ EO 12898 is still widely regarded as the first explicit

³² Jenkins, McCauley & Heffron, *supra* note 14, at 77–78.

³³ *Id.*

³⁴ Mohai, Pellow & Roberts, *supra* note 13 at 410.

³⁵ *Id.*

³⁶ See *Environmental Equity: Reducing Risks for All Communities*, U.S. ENVTL. PROT. AGENCY, EPA-230-R-92-008 (1992), <https://www.epa.gov/nscep> (type "Environmental Equity: Reducing Risks for All Communities" in search bar; then click search; then click first hyperlink option).

³⁷ *Environmental Justice Guidance Under the National Environmental Policy Act*, COUNCIL OF ENVTL. QUALITY (Dec. 10, 2007), https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf.

³⁸ See ENVIRONMENTAL JUSTICE RENEWAL ACT SENATE REPORT 110-498 (Sept. 24, 2008).

³⁹ Exec. Order No. 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994).

⁴⁰ Memorandum from The White House to the Heads of All Departments and Agencies, Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (Feb. 11, 1994) (Presidential Memorandum).

federal policy response to the then-emerging environmental justice movement. Although it has become common practice for incoming presidents to categorically rescind the EOs of their predecessors, EO 12898 has remarkably endured three decades across the subsequent Bush, Obama, Trump, and Biden administrations.

Recently, Biden Administration policies have moved the needle beyond “identifying and addressing” environmental justice concerns. In 2021, President Biden issued EO 14008, “Tackling the Climate Crisis at Home and Abroad,” another landmark order for environmental justice, taking a whole-of-government approach to require all federal agencies to address environmental justice as part of their missions. The EO also introduced the Administration’s Justice40 Initiative, under which 40% of benefits from certain federal funding must flow to disadvantaged communities.⁴¹ EO 14008 also designated the White House CEQ as the lead agency for coordinating a government-wide approach to environmental justice, with most agencies required to establish a specific office for environmental justice.⁴²

In 2023, President Biden issued EO 14096, “Revitalizing Our Nation's Commitment to Environmental Justice for All.”⁴³ This EO supplemented EO 14008 with more concrete requirements, including that agencies must submit an “Environmental Justice Strategic Plan” every four years.⁴⁴ President Biden’s issuance of EO 14096 also expanded the requirements for identifying and addressing disproportionate impacts to include climate change and cumulative impacts and suggests agencies “consider adopting or requiring measures to avoid, minimize, or mitigate any disproportionate adverse human health and environmental effects” stemming from federal action.⁴⁵ It also instructed CEQ to enhance its consideration of environmental justice within NEPA reviews.⁴⁶

B. Environmental Justice and the National Environmental Policy Act

Though NEPA predates the era that most scholars understand as the beginning of the modern environmental justice movement, most federal policies creating actionable agency obligations in relation to environmental justice relate to implementation of this act. NEPA, ratified in 1969 under the authority of President Nixon, was passed to “encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the [U.S.]”⁴⁷ Historically, NEPA has fulfilled this function via the imposition of procedural requirements that agencies must

⁴¹ The DOE used 36 indicators to measure disadvantage and defines a disadvantaged community for implementation of the Justice40 program as a census tract that “has at least 30% low-income households and disadvantage scores higher than “ of those in their state.” *See*, U.S. DEPT. OF ENERGY, Justice40 Initiative Fact Sheet (Aug. 2022).

⁴² Exec. Order No. 14008, 86 Fed. Reg. 7619 (Jan. 27, 2021).

⁴³ Exec. Order No 14096, 88 Fed. Reg. 25251, 25254 (Apr. 21, 2023).

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

observe in the course of their decision-making processes.⁴⁸ NEPA’s procedural requirements include the completion of an initial environmental assessment (EA) to determine whether the agency’s proposed action will have significant effects on the quality of the human environment. If this question is answered in the affirmative, the agency must also complete a longer Environmental Impact Statement (EIS) through a process that includes public notice requirements, invites public comment and participation, and requires the agency to respond to any substantive comments. NEPA also provides an accountability mechanism by which concerned parties can challenge an EIS or final agency decision on procedural grounds.

Executive Order 14096 tasked CEQ with overseeing a government-wide approach to environmental justice.⁴⁹ Its 2024 rule issued pursuant to this authority provides a definition for environmental justice as “just treatment and meaningful involvement of all people... in agency decision making and other Federal activities that affect human health and the environment so that people: (1) [a]re fully protected from disproportionate and adverse . . . impacts. . . including . . . climate change; and (2) [h]ave equitable access to a healthy, sustainable . . . environment.”⁵⁰ As part of this objective, the new regulations require agencies implementing NEPA to identify, amongst the alternatives considered, which will “maximiz[e] environmental benefits such as addressing climate change-related effects or disproportionate and adverse effects on communities with environmental justice concerns. . . .”⁵¹ Even with these changes, however, the agency is not required to select the environmentally preferable alternative it identifies. As noted by the D.C. Circuit in 2017, an agency preparing an EIS “is not required to select the course of action that best serves environmental justice, only to take a ‘hard look’ at environmental justice issues.”⁵²

IV. Implementing Environmental Justice Executive Orders in Federal Agencies

To date, there is still no express statutory basis for environmental justice at the federal level. Rather, EO 12898 and subsequent executive orders have continued instructing all agencies to revisit and improve their individual strategies for measuring and achieving environmental justice and to incorporate environmental justice as a consideration in the NEPA process. The following section explains the continued role of executive orders in expanding environmental justice within the NRC and DOE, both of which have prominent roles in siting the Natrium facility. We then describe how these federal agencies have sought to incorporate environmental justice analyses within the NEPA process, as directed through EO 12898 and other orders.

⁴⁸ Indeed, the U.S. Supreme Court has interpreted NEPA as procedural in nature, only imposing requirements as to the process an agency must observe in reaching a decision. As summarized by Chief Justice Roberts, “NEPA imposes only procedural requirements to ‘ensur[e] that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts.’” *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 23 (2008) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)).

⁴⁹ Exec. Order No. 14096, 88 Fed. Reg. 25251 (Apr. 21, 2023).

⁵⁰ 40 C.F.R. § 1508.1(m) (2024).

⁵¹ 40 C.F.R. § 1502.14(f) (2024).

⁵² *Sierra Club v. FERC*, 867 F.3d 1357, 1368 (D.C. Cir. 2017).

A. Implementation in the Nuclear Regulatory Commission

Despite government-wide efforts to elevate environmental justice within agencies, the NRC has remained largely exempt from the environmental justice mandates that bind other agencies. The NRC is an agency independent from the executive branch, meaning that it is not required to comply with the mandates of EOs in the same way as agencies under the executive federal departments such as the Departments of Energy, Interior, and Agriculture.⁵³ The NRC may, however, comply with executive orders if it voluntarily chooses to do so. Indeed, following the issuance of EO 12898, the NRC determined that it would “endeavor to carry out the measures set forth in the EO . . . as part of the NRC’s efforts to comply with the requirements of NEPA.”⁵⁴ The NRC has long maintained, however, that it is not subject to CEQ’s NEPA-implementing regulations,⁵⁵ including CEQ’s more rigorous 2024 rules.⁵⁶

In the agency’s most current policy statement on environmental justice (published in 2004), the NRC addresses the directive of President Clinton’s 1994 Executive Order to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low- income populations.”⁵⁷ However, the NRC policy makes clear that within its regulatory framework, “EO 12898 does not establish new substantive or procedural requirements applicable to NRC regulatory or licensing activities.”⁵⁸ It states: “[b]y its terms, the EO is ‘intended only to improve the internal management of the executive branch and is not intended to, nor does it create any right [or] benefit.’”⁵⁹

Though EO 12898 did not establish new substantive rights within NRC’s regulations, the NRC acknowledges its duty to address environmental justice to the extent required under the agency’s NEPA obligations.⁶⁰ The NRC sees environmental justice as “a tool, within the normal NEPA context, to identify communities that might otherwise be overlooked and identify impacts due to their uniqueness as part of the NRC’s NEPA review process.”⁶¹ Though NEPA requires agencies to “look at the socioeconomic impacts that have a nexus to the physical environment,” the NRC clearly stipulates that “[r]acial motivation and fairness or equity issues are not cognizable under NEPA,” and considering these issues would contradict the EO’s statement acknowledging no

⁵³ 5 U.S.C. § 101 (designating executive departments); 5 U.S.C. § 104 (defining “independent establishment” as “an establishment in the executive branch . . . which is not an Executive department, military department, Government corporation, or part thereof, or part of an independent establishment”); *see also* 5 U.S.C.S § 105 (establishing the definition of “executive agency” to include “an Executive department, a Government corporation, and an independent establishment.”).

⁵⁴ 69 Fed. Reg. 52040, 52041 (Aug. 24, 2004).

⁵⁵ Ryan K. Lighty & Patrick R. Pennella, *NRC Staff Proposes Rulemaking to Update Environmental Regulations*, MORGAN LEWIS (Jan. 21, 2021), <https://www.morganlewis.com/blogs/updatom/2021/01/nrc-staff-proposes-rulemaking-to-update-environmental-regulations>.

⁵⁶ In contrast to the CEQ, the NRC defines environmental justice in a way that closely mirrors the language of EO 12898. It states that environmental justice “involves identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of an agency’s programs, policies, and activities on minority and low-income populations.” *See Environmental Justice Assessment*, NUCLEAR REG. COMM’N, <https://www.nrc.gov/about-nrc/regulatory/licensing/nepa/environmental-justice/assessment.html> (last updated Apr. 2022).

⁵⁷ 69 Fed. Reg. 52040 (Aug. 24, 2004) (quoting Exec. Order No. 12898, 59 Fed. Reg. 7629 (Feb. 11, 1994)).

⁵⁸ *Id.* at 52046.

⁵⁹ *Id.* (quoting Exec. Order No. 12898, 59 Fed. Reg. 7629, 32-33 (Feb. 11, 1994)).

⁶⁰ *Id.* at 52046-47.

⁶¹ *Id.* at 52047.

creation of new rights.⁶² While emphasizing that an environmental justice review is “not a broad-ranging or even limited review of racial or economic discrimination,” the NRC identifies the duty of an environmental justice evaluation to “disclose whether low-income or minority populations are disproportionately impacted by the proposed action.”⁶³ In terms of judicial and administrative review, the NRC states the following:

[Environmental justice] per se is not a litigable issue in NRC proceedings. Rather the NRC’s obligation is to assess the proposed action for significant impacts to the physical or human environment. Contentions must be made in the NEPA context, must focus on compliance with NEPA, and must be adequately supported as required by 10 CFR Part 2 to be admitted for litigation.⁶⁴

Absent special circumstances, the NRC identifies that EAs which result in a “Finding of No Significant Impact,” do not require an environmental justice review because of the low risk of offsite impacts.⁶⁵ In addition, the NRC explains that environmental justice analysis is not included within generic and programmatic impact statements due to the variation of environmental justice-related issues between different sites.⁶⁶ The agency clarifies that “[environmental justice] assessments would be performed as necessary in the underlying licensing action for each particular facility.”⁶⁷ Where agency action has a high likelihood of significant impact to human health or the environment, the NRC states that the agency should use “published demographic data [and] community interviews and public input through well-noticed public scoping meetings” to “identify[] minority and low-income communities [in general] that may be subject to adverse environmental impacts.”⁶⁸

In 2022, the NRC conducted a systematic assessment of the agency’s approach to environmental justice in its programs, policies, and activities.⁶⁹ The review resulted in several recommendations, many of which have not been acted on. For instance, the report recommended the NRC revise its 2004 Environmental Justice Policy Statement and its 1995 Environmental Justice Strategy, enhance outreach, and implement formal mechanisms to address environmental justice.⁷⁰ However, the NRC does not appear to have provided updates on its progress toward these recommendations.

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.* at 52048.

⁶⁵ *Id.* at 52047.

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.* at 52048. The NRC’s scoping process is described in further detail in Chapter 2. In the Scoping meeting for the TerraPower facility NRC Staff stated that it would “actually send team members to the local area. We talk to a number of social services agencies, such as the United Way. We go to women’s shelters. We go to men’s shelters. We talk to religious leaders that serve the poor, just to get a very good picture of what the impact is going to be on the actual community.” U.S. NUCLEAR REG. COMM’N, Official Transcript of Proceedings, Scoping Meeting Related to the Proposed Kemmerer Unit One Power Plant, 18 (July 16, 2024).

⁶⁹ *Supra* note 56.

⁷⁰ *Id.*

B. Implementation in the Department of Energy Office of Clean Energy Development

Unlike the NRC, the DOE is subject to authority of the executive branch and, therefore, required to comply with executive orders related to environmental justice as well as CEQ's NEPA-implementing regulations. The Office of Clean Energy Development (OCED)⁷¹ is a division within DOE that assists the private sector with developing at-scale demonstration projects for clean energy technologies.⁷² The OCED website claims fidelity to environmental justice principles through its association with and implementation of justice aligned federal initiatives including Justice40 and the through a collaborative initiative with the EPA to create Environmental Justice Thriving Communities Technical Assistance Centers (EJ TCTACs).⁷³ EJ TCTACs are federally funded learning and resource hubs that provide technical assistance and capacity-building resources for communities with environmental justice concerns.⁷⁴

The DOE has also developed multiple tools to help identify disadvantaged communities and to “illustrate and evaluate” energy policies and practices with regard to environmental justice.⁷⁵ These tools, including the Energy Justice Dashboard (BETA), Justice40 Energy Burden Optimization Model Decision Support Tool, and the Energy Justice Mapping Tool – Disadvantaged Communities reporter, identify disadvantaged communities.⁷⁶ Similar to tools like EPA's EJScreen,⁷⁷ and in accordance with Justice40 the DOE uses “thirty-six (36) burden indicators that reflect fossil dependence, energy burden, environmental and climate hazards, and socio-economic vulnerabilities.”⁷⁸ Federally recognized tribal lands, United States Territories, and census tracts with cumulative scores of 80% or higher for burden indicators and which have at least 30% low-income households are classified as disadvantaged communities.⁷⁹ The DOE uses these tools for Justice40 implementation and to create transparency regarding the distribution of DOE funding and investments.⁸⁰

OCED has also created substantive requirements for community engagement as part of its implementation of funding programs. As a public partner to private projects, OCED has requirements for project applicants, and it chooses the projects it supports and funds at its discretion. Among these requirements is the applicant's creation of a Community Benefits Plan (CBP), a new application criterion developed under the Biden Administration, which generally

⁷¹ When the Natrium facility was selected via the ARDP, the program was administered by the DOE. The program has subsequently moved into OCED, which is currently responsible for administering ARDP cooperative agreements.

⁷² 42 U.S.C.A. § 18861 (2024); *About Us*, OFF. OF CLEAN ENERGY DEMONSTRATIONS, <https://www.energy.gov/oced/about-us> (last visited Nov. 11, 2024).

⁷³ *Communities, Jobs, and Justice*, OFF. OF CLEAN ENERGY DEMONSTRATIONS <https://www.energy.gov/oced/communities-jobs-and-justice> (last visited Oct. 28, 2024).

⁷⁴ *The Environmental Justice Thriving Communities Technical Assistance Centers Program*, ENVTL. PROT. AGENCY, <https://www.epa.gov/environmentaljustice/environmental-justice-thriving-communities-technical-assistance-centers#Overview%20of%20the%20EJ%20TCTACs> (last updated Aug. 13, 2024).

⁷⁵ *Tools*, U.S. DEP'T. OF ENERGY, OFFICE OF ENERGY JUSTICE AND EQUITY, <https://www.energy.gov/justice/tools> (last visited Nov. 13, 2024).

⁷⁶ *Energy Justice Dashboard (BETA)*, U.S. DEP'T. OF ENERGY, <https://www.energy.gov/justice/energy-justice-dashboard-beta> (last visited Oct. 26, 2024).

⁷⁷ *EJScreen: Environmental Justice Screening and Mapping Tool*, ENV'T. PROT. AGENCY, <https://www.epa.gov/ejscreen> (last visited Oct. 26, 2024).

⁷⁸ *See supra*, note 41.

⁷⁹ The DOE recognizes as disadvantaged communities identified by the White House Climate and Economic Justice Screening Tool (CEJST) and the Office of Management and Budget (OMB) guidance M-23-09 (Jan. 27, 2023).

⁸⁰ *Supra* note 75.

includes four discrete but interrelated plans.⁸¹ First, in a community and labor engagement plan, the applicant must outline a strategy for ensuring the engagement of local stakeholders in the project area,⁸² as well as relevant unions, demonstrating any existing support for the project with letters of support from relevant entities.⁸³ DOE, including OCED, often urges applicants to fulfill this requirement by way of a community benefit agreement (CBA), through which the applicant covenants to fulfill certain conditions throughout the life of the project, including, potentially, direct investment in community facilities or adherence to heightened notice or remediation requirements.⁸⁴ At least one scholar has questioned the legal enforceability of CBAs, however, given that such arrangements typically do not ask for communities to pay consideration in exchange for the developer's promises, potentially rendering the agreement unenforceable under general principles of contract law.⁸⁵

In addition to community and stakeholder engagement planning, CBPs also address planning for workforce engagement and the localization of job growth and other benefits. First, they must include a plan from the applicant to show how the project will deliver prevailing-wage jobs to the American workforce (i.e., a "Quality Jobs Plan"). Second, they must include a diversity, equity, inclusion, and accessibility plan ("DEIA Plan") to demonstrate the applicant's commitment to ensuring the project is carried out in an inclusive way that incorporates input from many voices and that the technology as a whole is poised to benefit diverse groups in terms of job opportunities and other benefits at a commercial scale.⁸⁶ Finally, OCED requires a "Justice40 Plan," in which applicants must demonstrate their strategy for ensuring that 40% of benefits created by the project (whether job growth, emissions reduction, or direct funding) will benefit disadvantaged populations.⁸⁷ According to OCED guidance, strong CBPs will include mechanisms for accountability and transparency with communities, will result in the reduction of harms and negative impacts, and meet the needs and priorities of impacted communities.⁸⁸

⁸¹ *About Community Benefits Plans*, U.S. DEPT. OF ENERGY, <https://www.energy.gov/infrastructure/about-community-benefits-plans> (last visited Oct. 15, 2024) [HEREINAFTER "About Community Benefit Plans"]; *Community Benefits Plans Overview*, OFF. OF CLEAN ENERGY DEMONSTRATIONS, <https://www.energy.gov/sites/default/files/2023-08/OCED%20CBP%20101%20Factsheet.pdf> (last visited Oct. 28, 2024) [hereinafter "Community Benefits Plans Overview."].

⁸² OCED has defined stakeholders as "underserved, overburdened, or disadvantaged communities and members of those communities; host communities; and labor unions representing workers or trades that will be needed for both construction and ongoing operations/production activities associated with the project. Other groups with which to engage for project success include community-based organizations representing local residents and businesses, economic and workforce development orgs, local and tribal governments, and emergency responders, but such engagement should be in addition to that targeted to worker organizations and the most vulnerable communities." GUIDANCE FOR CREATING A COMMUNITY BENEFITS PLAN FOR ENERGY IMPROVEMENTS IN RURAL OR REMOTE AREAS, OFF. OF CLEAN ENERGY DEMONSTRATIONS 3, n.2 (Feb. 28, 2023).

⁸³ Community Benefits Plans Overview, *supra* note 81.

⁸⁴ Community Benefit Agreement (CBA) Toolkit, U.S. DEPT. OF ENERGY, <https://www.energy.gov/justice/community-benefit-agreement-cba-toolkit> (last visited Oct. 29, 2024). Tallgrass Energy, for instance, recently made public a CBA it entered with a coalition of landowners and community groups in relation to the development of a CO₂ pipeline. Although OCED did not administer funding for that project, the CBA is representative of the scope of possible terms to which a project developer and community could agree. Jane Kleeb, *Tallgrass, Bold Alliance, and Key Agricultural and First Responder Organizations Announce a Community Benefits Agreement*, BOLD NEBRASKA (Apr. 9, 2024) <https://boldnebraska.org/tallgrass-bold-alliance-and-key-agricultural-and-first-responder-organizations-announce-a-community-benefits-agreement/>.

⁸⁵ Amy Lavine, 32 No. 6 ZONING AND PLANNING LAW REPORT 1 (2009).

⁸⁶ About Community Benefits Plans, *supra* note 81.

⁸⁷ *Id.*

⁸⁸ Community Benefits Plans Overview, *supra* note 81.

V. Conclusion

Environmental justice has gained momentum in legal and regulatory contexts over the past several decades. Since the issuance of EO 12898 in 1994, which marked the first formal attempt to institutionalize environmental justice at the federal level, federal agencies have developed new strategies and tools and received more funding to address environmental justice. These initiatives represent a general trend toward a more holistic and rigorous approach to environmental justice. The manner and extent of implementation, however, varies depending on the agency's role and jurisdiction.

Under the Biden Administration, the DOE has expanded its implementation of environmental justice in manners that align with a broader conception of environmental justice—one which emphasizes the need for engagement beyond public comment and outside the NEPA process and for federal agencies to work to ensure more proactively a fair distribution of environmental benefits and burdens. Procedurally, the introduction of community benefit planning also creates new engagement opportunities for communities and stakeholders. The Biden Administration's DOE has conditioned the receipt of direct investment stemming from any Infrastructure Investment and Jobs Act (IIJA) or Inflation Reduction Act (IRA) funds upon the demonstrated commitment of project developers to conduct two-way engagement with communities and to meaningfully implement their feedback.⁸⁹ Within OCED, CBPs appear to reflect an agencywide commitment to procedural justice by requiring the incorporation of community partnerships and input in the development of projects.⁹⁰ The creation of Technical Assistance Centers may also advance procedural justice goals, by providing capacity-building support that will allow more robust participation in formal siting procedures by communities with environmental justice concerns.

The Justice40 Initiative under President Biden has also reflected a clear intent to better ensure distributive justice by conditioning the receipt of certain federal funds for energy development on project developers' ability to demonstrate what populations will reap the benefits of federal funding. Nearly every recipient of IIJA or IRA funding allocated for energy development must submit a proposal describing the communities expected to benefit from the funding, and they must track the distribution of benefits, such as job growth and direct investment throughout the course of the project. This appears to reflect a commitment to distributive justice by requiring the recipients of federal funds to illustrate how benefits will flow to communities.

Finally, the growing suite of tools like the Energy Justice Dashboard also represents a potentially significant shift to incorporate a more recognitional approach—one that acknowledges and seeks to remediate present-day disadvantages that owe to past harms. This aligns with academic conceptions of recognition justice, which acknowledges that racial, cultural, social, and other factors contribute to environmental injustices, including a disproportionate distribution of benefits and burdens, and disenfranchisement from participation in decision-making processes. The emphasis on screening tools that help agencies and project developers to identify communities that are currently overburdened, as well as communities that demonstrate a high prevalence of other demographic indicators associated with disadvantage, creates a data-driven path to account for the demographic

⁸⁹ About Community Benefits Plans, *supra* note 81 (stating “[t]he Department of Energy (DOE) requires Community Benefits Plans (CBPs) for nearly all Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) funding opportunity announcements (FOAs) and loan applications.”).

⁹⁰ *Id.*

factors underlying many injustices. The acknowledgement itself of the social and environmental contributors to geographic disparities in environmental burdens is a form of recognition justice.

In contrast, the NRC’s approach to environmental justice remains limited to the procedural requirements of “meaningful engagement” in EO 12898. As an independent agency, the NRC inhabits a unique space within the federal government. While other agencies or agency subdivisions, such as OCED, are required to embed environmental justice practices more deeply within their processes and procedures, the NRC’s environmental justice obligations stem almost exclusively from NEPA. Its implementation of the environmental justice EOs is wholly voluntarily. While the NRC initiated an assessment of opportunities to improve its approach to environmental justice in 2022, we did not find documentation indicating that it had either implemented the recommendations from its 2022 assessment or incorporated the screening measures adopted by other agencies. Its approach to environmental justice only reflects a small segment of the full spectrum of environmental justice approaches in legal scholarship, such as those advocated for by Kuehn, Schlosberg, and others, which also encompass restorative, social, and corrective justice. This more limited approach to government-wide environmental justice objectives, however, aligns with its narrow mission and structure, which are intended to insulate it from political drivers in its decision-making. Unlike the DOE, which administers a voluntary program within the broad mission of the OCED and the ARDP, the NRC’s jurisdiction until very recently⁹¹ was limited to exclusively assuring the safety and security of nuclear facilities, an objective which supersedes any other federal energy policy objective.

⁹¹ Section 501 of the Advance Act, passed in 2024, requires the NRC to update its mission to “specify that licensing and regulation of the civilian use of radioactive materials and nuclear energy will be conducted in a manner that is efficient and does not unnecessarily limit the civilian use of radioactive materials.” ADVANCE Act of 2023, Pub. L. 118-67 §501 (2024) (to be codified at 42 U.S.C. 2133).

Chapter 2

Beyond Public Comment: Toward Just Advanced Nuclear Energy Facility Siting Regulatory Procedures

Tara Righetti, Scarlett Forrest, Madeleine J. Lewis, Iva Reckling, Alyssa W. Duba, Nicholas Stubblefield, Denia Djokić, & Rachael Budowle

I. Introduction

With new federal spending encouraging location of advanced nuclear energy facilities in transitioning energy communities, attention to procedural justice is necessary to ensure that stakeholders have adequate opportunities to participate in facility siting processes. Nuclear energy has posed procedural justice challenges related to fairness, accessibility, and equitable citizen inclusion in environmental decision-making processes,¹ largely through top-down “decide-announce-defend” siting approaches that have failed to fully capture and address communities’ concerns (e.g., the Yucca Mountain Nuclear Waste Repository siting process).² Additional nuclear energy facility siting procedures that are independent from federal tax credit programs can help mitigate potential environmental justice issues by ensuring equity, public participation in decision-making processes, and risk allocation.³

The TerraPower Natrium project marks the first commercial, advanced nuclear energy facility to commence construction in the United States.⁴ It, therefore, provides an opportunity to observe and evaluate the siting processes that will be applicable to these facilities. This chapter evaluates the extent to which legal and regulatory mechanisms applicable to the Natrium facility siting and development process support procedural justice. Following a general review of procedural environmental justice literature, we apply a procedural justice analytic framework to evaluate each level of decision-making relative to the Natrium project: the Nuclear Regulatory Commission (NRC) licensing process, the procedures of the Industrial Siting Division (ISD) within the Wyoming Department of Environmental Quality (WDEQ), county-level land use planning, and Advanced Reactor Demonstration Program (ARDP) project selection and implementation.

¹ Carolyn Stephens & Chris Church, *Environmental Justice and Health*, INT’L ENCYCLOPEDIA OF PUBLIC HEALTH 499 (2d ed. 2017).

² Danielle Endres, *From Wasteland to Waste Site: The Role of Discourse in Nuclear Power’s Environmental Injustices*, 14 LOCAL ENV’T 10, 917 (2009); Jennifer Richter, *Energopolitics and Nuclear Waste: Containing the Treat of Radioactivity*, ENERGY RSCH. & SOC. SCI. 30, 61 (2017).

³ Dean Kyne, & Bob Bolin, *Emerging Environmental Justice Issues in Nuclear Power and Radioactive Contamination*, 13 INT’L J. OF ENV’T RSCH. AND PUB. HEALTH 7, 700 (2016).

⁴ Sonal Patel, *Kemmerer 1 Breaks Ground: A Look at TerraPower’s Natrium Fast Reactor Nuclear Power Plant*, POWER (June 13, 2024), <https://www.powermag.com/kemmerer-1-breaks-ground-a-look-at-terrapowers-natrium-fast-reactor-nuclear-power-plant/>.

II. Procedural Justice and Nuclear Energy

Procedural justice is a key tenet of environmental and energy justice.⁵ Rooted in the United States civil rights movement, procedural justice, broadly, is “the right to treatment as an equal.”⁶ This right is realized through fair, accessible, and inclusive decision-making processes through which “decisions are made regarding the impositions of environmental risk on people and places.”⁷ The scholarship on legal and regulatory aspects of procedural justice emphasizes good governance and due process which “minimize corruption and in the siting of energy projects” and assure “fair representation in energy decision-making.”⁸ Where effective, just processes should prioritize high-quality and high-impact community participation and information sharing in energy decision-making processes that empower people and communicate the extent of their influence.⁹

Beyond merely allowing community members’ participation in decision-making processes that affect them, procedural justice scholarship interrogates how the process is designed and asks whether or not that design is conducive to fair and just outcomes.¹⁰ This implies a substantive right of community members to engage in a way that yields meaningful results.¹¹ Accordingly, assessing procedural justice requires an examination of who is involved and influential in decision-making processes in addition to addressing how decisions are made.¹² This includes evaluation mechanisms that assure transparency and accountability among decision-makers, including access to judicial and administrative procedures for complaint, hearing, and remedy.¹³

In the nuclear energy context, most scholarship on procedural justice has focused on international processes for siting radioactive waste storage or disposal facilities.¹⁴ This research shows that procedural fairness matters deeply to potential host communities—and to successful siting

⁵ Kirsten Jenkins, Darren McCauley, & Raphael J. Heffron, *Energy Justice: A Conceptual Review*, 11 ENERGY RESEARCH & SOCIAL SCIENCE 174 (2016) [HEREINAFTER “Energy Justice”]; Raphael J. Heffron & Darren McCauley, *The Concept of Energy Justice Across the Disciplines*, 105 ENERGY POL’Y 658 (2017).

⁶ Energy Justice, *supra* note 5; Heffron & McCauley, *supra* note 5.

⁷ Robert R. Kuehn, *A Taxonomy of Environmental Justice*, 30 ENV’T L. REP. 10681, 88 (2000); Kyne & Bolin, *supra* note 3.

⁸ Benjamin K. Sovacool & Michael H. Dworkin, *Energy Justice: Conceptual Insights and Practical Applications*, 142 APPLIED ENERGY 435, 438 (2015).

⁹ *Id.*; Energy Justice, *supra* note 5; Sovacool & Dworkin, *supra* note 8.

¹⁰ Kuehn, *supra* note 7; see also Nicola Ulibarri et al., *Barriers and Opportunities to Incorporating Environmental Justice into the National Environmental Policy Act*, 97 ENV’T IMPACT ASSESSMENT REV. 106880 (2022); Sanne Ackerboom & Robin Kundis Craig, *How Law Structures Public Participation in Environmental Decision Making: A Comparative Law Approach*, 32 ENV’T POL’Y AND GOV’T 3, 232 (2022).

¹¹ Jonathan Skinner-Thompson, *Procedural Environmental Justice*, 97 WASH. L. REV. 399, 402 (2022).

¹² See Paul Mohai, David Pellow, & Timmons Roberts, *Environmental Justice*, 34 ANN. REV. ENV’T. RSCH. 405 (2009); Ulibarri et al., *supra* note 10.

¹³ Kuehn, *supra* note 7; see also Benjamin J. Richardson & Jona Razzaque, *Public Participation in Environmental Decision Making*, 6 ENV’T L. FOR SUSTAINABILITY 165 (2006) (discussing the procedural differences in various types of public participation and acknowledging the role of law in making participation accessible); Carmen G. Gonzalez & Sumudu Atapattu, *International Environmental Law, Environmental Justice, and the Global South*, 26 TRANSNAT’L L. & CONTEMP. PROBS. 229 (2016–2017).

¹⁴ See Thomas Webler & Seth Tuler, *Unpacking the Idea of Democratic Community Consent-Based Siting for Energy Infrastructure*, 24 J. OF RISK RSCH. 1, 94 (2020). Early scholarship on community participation in such siting did not explicitly recognize or label such participation as related to procedural justice, through procedural justice was already a broadly existing and defined concept. See Brian Wynne, *Sheepfarming after Chernobyl: A Case Study in Communicating Scientific Information*, 31 ENV’T 2, 10 (1989); John Thibaut and Laurens Walker, *PROCEDURAL JUSTICE: A PSYCHOLOGICAL ANALYSIS* (1975).

processes.¹⁵ For example, case studies of hypothetical waste siting scenarios and engagement with real potential waste repository host communities in Finland show that people are more accepting of nuclear waste facilities when the processes around their siting display transparency, availability of options, and sufficient involvement of concerned groups.¹⁶ Researchers examining waste siting procedures in Canada found that community members perceived that participation mechanisms had a bias toward nuclear waste siting acceptance and excluded marginalized groups.¹⁷ To address these concerns, scholars have advocated for greater consideration of siting procedures in local contexts (including allowing for confidentiality and critique).¹⁸ In some places, failures of traditional siting approaches have also contributed to procedural changes. For example, in the United Kingdom, previous nuclear waste siting approaches that dismissed communities' perspectives ultimately failed, leading to the Managing Radioactive Waste Safely process that instead emphasizes public participation.¹⁹

In the United States, legal and regulatory efforts to intentionally incorporate procedural justice in nuclear energy have similarly focused on nuclear waste facility siting. Most recently, the Department of Energy (DOE) Office of Nuclear Energy's (NE) Consent-Based Siting (CBS) program for nuclear waste has incorporated elements of procedural justice during the 21st century.²⁰ Following the shutdown of the Yucca Mountain Project in 2010, the Obama administration created the Blue Ribbon Commission for America's Nuclear Future (BRC). The BRC was charged with finding a new approach for disposing of commercial nuclear waste and rebuilding trust between the DOE and the American public following the Yucca Mountain project's failures.²¹ The BRC's 2012 report provided several recommendations for a more participatory siting process, including decision-making processes that are flexible, adaptive, and responsive and open and transparent decision-making with broad public participation.²²

Aligning with these goals, the DOE partnered with the Expert and Citizen Assessment of Science and Technology in 2013 to co-create a consent-based siting framework with the public rooted in procedural justice and, therefore, antithetical to past "top-down" approaches.²³ After the Trump administration halted this effort in 2017, the Biden administration relaunched it. In 2021, the DOE-NE then published a Request for Information (RFI), asking for public input on: 1) the consent-based siting process, 2) removing barriers for meaningful participation, especially for groups and communities who have not historically been well-represented in these projects, and 3) the role of

¹⁵ Pius Krütli, Michael Stauffacher, Dario Pedolin, Corinne Moser, & Roland W. Scholz, *The Process Matters: Fairness in Repository Siting For Nuclear Waste*, 25 SOC. JUST. RSCH. 1, 79 (2012).

¹⁶ Krütli, et al., *supra* note 15; Tuuli Vilhunen, Matti Kojo, Tapio Litmanen, & Behnam Taebi, *Perceptions of justice influencing community acceptance of spent nuclear fuel disposal. A case study in two Finnish nuclear communities*, 25 J. OF RISK RSCH 8, 1023 (2022).

¹⁷ Marissa Z. Bell, *Spatialising Procedural Justice: Fairness and Local Knowledge Mobilisation in Nuclear Waste Siting*, 26 INT'L J. OF JUST. AND SUSTAINABILITY 1, 165 (2021).

¹⁸ *Id.*

¹⁹ Matthew Cotton, *Environmental Justice as Scalar Parity: Lesson from Nuclear Waste Management*, 31 SOC. JUST. RSCH. 3 (2018).

²⁰ Office of Nuclear Energy, *Consent-Based Siting*, DEP'T. OF ENERGY, <https://www.energy.gov/ne/consent-based-siting> (last visited Oct. 15, 2024).

²¹ Blue Ribbon Commission on America's Nuclear Future, REPORT TO THE SECRETARY OF ENERGY (2012) [HEREINAFTER "Blue Ribbon Report"]; Jennifer Richter, Michael J. Bernstein, & Mahmud Farooque, *The process to find a process for governance: Nuclear waste management and consent-based siting in the United States*, 87 ENERGY RSCH. & SOC. SCI. 102473 (2022).

²² Blue Ribbon Report, *supra* note 21 at 122-23.

²³ Richter, *supra* note 21.

interim storage as a part of the nation's waste management system.²⁴ The DOE integrated these public comments into efforts to design a consent-based siting process for a consolidated interim waste storage facility. Presently, the Consent-Based Siting Process for Federal Consolidated Interim Storage of Spent Nuclear Fuel includes values and guiding principles of “Value Relationships with Tribal Nations,” “Environmental Justice,” “Informed Participation,” “Equal Treatment and Full Consideration of Impacts,” “Community Well-Being,” “Right to Volunteer and Withdraw,” “Transparency,” and “Stepwise and Collaborative Decision-Making.”²⁵

There has been less attention, however, to procedural justice as it pertains to the siting of nuclear energy generation facilities. In this analysis, we focus on evaluating the extent to which procedural justice is codified into law and regulations relevant to advanced nuclear energy facility siting in Wyoming (i.e., excluding non-regulatory elements of procedural justice). To do so, we condense several of the overlapping principles found in the literature that are most relevant to regulatory elements of procedural justice²⁶ into three evaluative principles, all of which we further review and define below: Transparency, Public Participation, and Accountability.

A. Transparency

Transparency is core to the concept of procedural justice. Transparency promotes good governance by enabling accountability and communicating the impact of community voices in energy project decision-making.²⁷ By providing visibility to the decision-making process, transparency facilitates government accountability thereby advancing democratic values.²⁸ To be transparent, procedures should provide public access to information throughout all stages of the process and at every level of decision-making,²⁹ allow interested parties to “find out what is going on inside a [government agency],”³⁰ create “visibility regarding who is responsible for what risks,”³¹ and require decision-makers to clearly communicate their reasoning to interested parties.³²

Transparent processes empower participation by disseminating information on both the project and the decision-making processes in an appropriate form and within an appropriate timeframe to allow

²⁴ Notice of Request for Information (RFI) on Using a Consent-Based Siting Process To Identify Federal Interim Storage Facilities, 86 Fed. Reg. 68244 (Dec. 1, 2021). =

²⁵ CONSENT-BASED SITING PROCESS FOR FEDERAL CONSOLIDATED INTERIM STORAGE OF SPENT NUCLEAR FUEL, DEP'T. OF ENERGY OFF. OF NUCLEAR ENERGY (Apr. 2023); CONSENT-BASED SITING ROADMAP, DEP'T. OF ENERGY OFF. OF NUCLEAR ENERGY (2023), <https://www.energy.gov/sites/default/files/2023-05/CBSRoadmap-2023.pdf>.

²⁶ Energy justice literature describes procedural justice as including both regulatory and non-regulatory strategies that hinge on crucial concepts of transparency, accountability, due process, public participation, and good governance. See Energy Justice, *supra* note 5, at 175.

²⁷ Sovacool & Dworkin, *supra* note 8.

²⁸ Sanne Ackerboom & Robin Kundis Craig, *How Law Structures Public Participation in Environmental Decision Making: A Comparative Law Approach*, 32(3) ENV'T. POL'Y AND GOV'T. 123, 235 (2022).

²⁹ EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE, PROGRESS REPORT (2022); Cristina Ruano-Chamorro, Georgina Gurney, and Joshua Cinner, *Advancing Procedural Justice in Conservation*, 15 J. OF THE SOC. FOR CONSERVATION BIOLOGY 3, e12861 (2022); Sovacool, et al., *Energy decisions reframed as justice and ethical concerns*, 1 NAT. ENERGY 16024 (2016).

³⁰ Sanne Ackerboom & Robin Kundis Craig, *How Law Structures Public Participation in Environmental Decision Making: A Comparative Law Approach*, 32(3) ENV'T. POL'Y AND GOV'T. 123, 235 (2022).

³¹ Kirsten Jenkins, Darren McCauley, & Charles R. Warren, *Attributing Responsibility for Energy Justice: A Case Study of the Hinkley Point Nuclear Complex*, 108 ENERGY POL'Y 836 (2017).

³² Ruano-Chamorro et al., *supra* note 29.

for meaningful participation. Information should be communicated in a manner that the public can easily use and understand.³³ This may run counter to the requirements of transparency laws and regulations which typically require disclosure of information without regard for the target audience or their needs.³⁴ Highly technical, complex, assumption-laden, and extraordinarily lengthy data disclosures may make it difficult for the public to locate the pertinent information and the actual decisions made by government officials.³⁵ Thus, true transparency efforts should ensure that information is available in a digestible and accessible form.³⁶

B. Public Participation

Public participation assures stakeholders meaningful, accessible, nondiscriminatory opportunities for participation and involvement.³⁷ As a result, “many governments put public consultation at the cent[er] of energy strategy and environmental decision-making.”³⁸ During these processes, governments provide stakeholders with a platform to voice their concerns, opinions, needs, and ideas and engage in constructive dialogue with others. As such, public participation supplements “traditional forms of public engagement (such as voting, demonstrating, and lobbying)” and can “improve the quality, legitimacy, and capacity of environmental assessments and decisions.”³⁹

Public participation requires “organized processes adopted by elected officials, government agencies, or other public- or private-sector organizations to engage the public in environmental assessment, planning, decision-making, management, monitoring, and evaluation.”⁴⁰ This can take several forms. The International Association for Public Participation created a spectrum of participation that ranges from *informing*, where the decision-makers share access to “balanced and objective information” with the public, to *empowering*, which “place[s] the final decision-making in the hands of the public.”⁴¹ For effective participation, government agencies should be clear about the type of participation they are seeking to elicit.⁴²

³³ Margaret Kwoka & Bridget DuPey, *Targeted Transparency as Regulation*, 48 FLA. ST. U. L. REV. 385, 420-24 (2021) (citing WENDY WAGNER & WILL WALKER, *INCOMPREHENSIBLE!: A STUDY OF HOW OUR LEGAL SYSTEM ENCOURAGES INCOMPREHENSIBILITY, WHY IT MATTERS, AND WHAT WE CAN DO ABOUT IT* 7, 189 (2019)).

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ Sovacool & Dworkin, *supra* note 8; Giuseppe Pellegrini-Masini, Alberto Pirni, Stefano Maran, Christian A. Klöckner, *Delivering a Timely and Just Energy Transition: Which policy research priorities?* ENV'T POL'Y AND GOVERNANCE (2020); Sovacool et al., *supra* note 28.

³⁸ Energy Justice, *supra* note 5, at 178.

³⁹ Pacific Northwest National Labs, *Public Participation in Environmental Assessment and Decisionmaking* (Sept. 1, 2008).

⁴⁰ NATIONAL RESEARCH COUNCIL (U.S.) ET AL., *PUBLIC PARTICIPATION IN ENVIRONMENTAL ASSESSMENT AND DECISION MAKING I* (Thomas Dietz, Paul C. Stern eds., 2008).

⁴¹ INTERNATIONAL ASSOCIATION FOR PUBLIC PARTICIPATION (IAP2), *IAP2 SPECTRUM OF PUBLIC PARTICIPATION 20181112_v1* (2018) https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf

⁴² Sanne Ackerboom, Robin Kundis Craig, *How Law Structures Public Participation in Environmental Decision Making: A Comparative Law Approach*, 32(3) ENV'T POL'Y AND GOV'T. 123, 235 (2022).

C. Accountability

Mechanisms of accountability must accompany transparency and public participation to achieve procedural justice. Accountability refers to “holding responsibility for the decisions made and being answerable to the people affected by those decisions.”⁴³ This may include the ability to appeal unjust decisions⁴⁴ and to assure that administrative procedures are followed. In some cases, courts have reviewed agency actions to determine whether public participation requirements in statute have been met. For example, in a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) case, the Eighth Circuit Court of Appeals found the relevant agency was required to provide the public with “a meaningful opportunity to participate in selection of the appropriate response action.”⁴⁵ A California court found that a local government body failed to provide a meaningful opportunity for public participation when it “did not attempt any type of community outreach; nor did it ever develop, much less implement, any community relations plan at any point, much less prior to beginning field work for the remedial investigation.”⁴⁶

Accountability can occur through implementation of many different mechanisms, including elections, information dissemination, monitoring by a third-party, and sanctioning.⁴⁷ For administrative actions, like permitting and siting projects, accountability occurs by way of judicial review through federal and state administrative procedure acts.⁴⁸ In general, courts review agency decisions against an arbitrariness standard, which in turn can force political accountability by ensuring the public understands “not only what the government has done, but why.”⁴⁹

III. Procedural Justice Relevant to Advanced Nuclear Energy Facility Permitting in Wyoming

Both federal and state agencies along with local governments have played critical roles in permitting and siting the TerraPower Natrium project. These include the NRC, which Congress has empowered with “exclusive authority” over the construction and safety of nuclear facilities; the ISD within the WDEQ which assesses and mitigates the potential socio-economic and environmental impacts of large facilities; local governments which can influence siting via the implementation of land-use plans; and the DOE which, through the Office of Clean Energy Demonstrations (OCED), selects projects for award funding under the ARDP. This section evaluates the procedures of each of these agencies or entities using the procedural justice analytic framework of Transparency, Public Participation, and Accountability described in Section II.

⁴³ Ruano-Chamorro et al., *supra* note 29.

⁴⁴ Sovacool & Dworkin, *supra* note 8; Pellegrini-Masini et al., *supra* note 37.

⁴⁵ *Union Pacific R.R. Co. v. Reilly Indus., Inc.*, 215 F.3d 830, 835 (8th Cir. 2000).

⁴⁶ *Waste Mgmt. of Alameda Cty. v. East Bay Regional Park*, 135 F. Supp. 2d 1071, 1101-02 (N.D. Cal. 2001).

⁴⁷ Ruano-Chamorro et al., *supra* note 29.

⁴⁸ Benjamin Eidelson, *Reasoned Explanation and Political Accountability in the Roberts Court*, 130 YALE L. J. 1748, 1758 (2021).

⁴⁹ *Id.*

A. The Nuclear Regulatory Commission

The NRC is the federal agency responsible for approving site licenses for advanced nuclear reactors and other facilities used for nuclear energy production, utilization, and waste storage.⁵⁰

i. Transparency

Given public skepticism surrounding nuclear facilities, the NRC has long acknowledged the need for transparency in its decision-making processes.⁵¹ In the agency's own words, it "views nuclear regulation as the public's business and, as such, believes it should be transacted as openly and candidly as possible to maintain and enhance the public's confidence."⁵² In 2010, at the instruction of President Obama under his administration's Open Government Initiative requiring all federal agencies to "improve transparency and integrate public participation and collaboration into [their] activities," the NRC formally outlined its approach to transparency in a report entitled "U.S. Nuclear Regulatory Commission Open Government Plan."⁵³ The plan summarized the NRC's initial strategy for promoting transparency, including its decision to publicize new categories of data, publish documents and rulemaking dockets to an online database, and increase social media engagement.⁵⁴

As part of its strategy for improving transparency, the NRC launched its web-based Agencywide Document Access and Management System (ADAMS) in 2010.⁵⁵ ADAMS is an online search engine which purports to enable "easy" searching of NRC documents including NRC regulatory guides, NUREG-series reports, licensing details and filings, inspection reports, and other documents and correspondence written by NRC staff, contractors, and licensees. Documents deemed appropriate for public release are typically uploaded to ADAMS on the same day that they are published.⁵⁶

However, despite the NRC's claims about ADAMS' effectiveness in ensuring transparency, ADAMS has received critique for being exceedingly difficult to navigate.⁵⁷ Indeed, in 2015 the NRC's Office

⁵⁰ See 10 C.F.R. § 1.1 (2023); 42 U.S.C.S §§ 5801 *et seq.*; 42 U.S.C.S. §§ 2011 *et seq.*

⁵¹ See, e.g., Dale E. Klein, Chairman, *Remarks to the U.S. Department of Commerce Nuclear Energy Summit: Promoting Public Confidence in Nuclear Safety through High Standards*, U.S. NUCLEAR REG. COMM'N (Oct. 8, 2008), <http://www.nrc.gov/reading-rm/doc-collections/commission/speeches/2008/s-08-040.html>.

⁵² *Open Government, Philosophy, Plan, and News*, U.S. NUCLEAR REG. COMM'N, <https://www.nrc.gov/public-involve/open/philosophy.html> (last updated Oct. 18, 2022).

⁵³ U.S. NUCLEAR REG. COMM'N, OPEN GOVERNMENT PLAN INITIAL RELEASE (April 7, 2010). The plan was most recently updated in 2021.

⁵⁴ *Id.*

⁵⁵ ADAMS is a recordkeeping system that has been in existence at the NRC since 1999, but 2010 marked the release of the web version. U.S. NUCLEAR REG. COMM'N, *ADAMS Public Documents* (Sept. 30, 2024), <https://www.nrc.gov/reading-rm/adams.html>.

⁵⁶ *Id.*

⁵⁷ As inventoried by one legal article, issues with ADAMS include that "the link to ADAMS from its official NRC webpage is a different database homepage than the one that clearly shows SLR dockets; to access any adjudicatory filings, a potential interested party must Google 'NRC ADAMS EHD' to even find the ADAMS version with the 'Electronic Hearing Docket' containing docket folders. From either the EHD or the regular ADAMS homepage, one must already know exactly what they are looking for to find it: the EHD is organized only by application name, not type of proceeding, and from either homepage a petitioner must search by 'ML number,' the internal reference number, rather than any common-sense terms." Cameron Hughes, *Life After Sixty: Subsequent License Renewals and Criticisms of N.R.C. Licensing*, 8 OIL & GAS, NAT. RES. & ENERGY J. 571, 598 (2023).

of Inspector General conducted a formal evaluation of ADAMS, observing that ADAMS failed to comply with numerous federal guidelines for the management and accessibility of public records.⁵⁸ Recognizing the difficulty of locating data within the web enabled ADAMS, the NRC recently solicited feedback on how the user interface could be improved.⁵⁹

ii. Public Participation

With a policy on public participation since 1978, the NRC represents that it has a “longstanding practice. . . to provide the public with substantial information on its activities, to conduct business in an open manner, and to balance openness and transparency with the need to exercise regulatory and safety responsibilities without undue administrative burden.”⁶⁰ The NRC provides several mechanisms by which the public can participate in NRC proceedings and decision-making related to siting, including public meetings, petitioning the NRC to conduct a hearing, and NEPA processes.

a. Nuclear Regulatory Commission Public Meetings

Most NRC meetings are required to be open to the public. In fact, the NRC’s regulations allow closed meetings only in limited circumstances, such as where opening the meeting might create an unwarranted invasion of privacy, reveal confidential information or trade secrets, or result in the premature disclosure of information that would frustrate NRC purposes.⁶¹ The most recent 2021 version of the NRC’s policy on public participation introduces three categories of public meetings, each defined “based on the level of participation offered to attendees.”⁶² Ranging from the meetings that enable the least amount of public input to the most, the agency defines these as: (1) observation meetings, (2) information meetings with a question-and-answer session, and (3) comment-gathering meetings.⁶³

Observation meetings allow the public to “sit-in” on meetings between the regulators and the regulated community. Licensees, vendors, non-government organizations, industry groups, and public interest groups often meet to “discuss regulatory issues regarding a specific facility (or facilities), certificates of compliance, licenses, or license applications.”⁶⁴ The NRC’s open meeting policy assures that regulatory and technical issues are discussed in an open and transparent matter, thereby allowing the public to “understand the applicable regulatory issues and NRC actions.”⁶⁵ At designated points on the agenda, members of the public are invited to “discuss regulatory issues

⁵⁸ OFFICE OF THE INSPECTOR GENERAL, EVALUATION OF NRC’S AGENCYWIDE DOCUMENTS ACCESS AND MANAGEMENT SYSTEM (ADAMS) FUNCTIONAL AND OPERATIONAL CAPABILITIES (2015), <https://www.oversight.gov/sites/default/files/oig-reports/ML15334A112.pdf>.

⁵⁹ American Nuclear Society, *A better search: Improving public access to the NRC’s ADAMS document database*, NUCLEAR NEWSWIRE (May 22, 2024, 2:00PM), <https://www.ans.org/news/article-6067/a-better-search-improving-public-access-to-the-nrcs-adams-document-database/>.

⁶⁰ 86 Fed. Reg. 14964-14968 (March 19, 2021).

⁶¹ 10 C.F.R. § 9.104 (2023).

⁶² 86 Fed. Reg. at 14965.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.* at 14966.

with, and pose questions to, the NRC representatives.”⁶⁶ This adds to the transparency function of observation meetings, however, NRC policy is clear that the agency is not soliciting comments during observational meetings and that staff and licensees are not required to respond.⁶⁷

Information meetings invite greater levels of participation and have information-sharing and discussion as a primary objective.⁶⁸ These meetings are “designed to provide information to the public and “help them understand the applicable regulatory issues and NRC actions through NRC presentations and discussions with NRC staff.”⁶⁹ Information meetings are often “held with interested parties, including representatives of non-government organizations, private citizens, or various businesses or industries, to engage them in a discussion of regulatory issues.”⁷⁰ Formats for this type of meeting include “town hall and roundtable discussions, and open house meetings.”⁷¹ In its policy statement, the NRC urges staff members to “ensure sufficient time is allotted for . . . a Question and Answer Session,” and “emphasize ways members of the public can ask questions outside the meeting.”⁷²

The comment-gathering meeting is the third type described in the NRC Policy on Public Participation.⁷³ During comment-gathering meetings, the NRC typically explains a particular regulatory issue or action taken and solicits public feedback “to support actions such as licensing and rulemaking activities.”⁷⁴ This type of meeting encourages the most participation from members of the public and other attendees, and “focus[es] on allowing attendees to provide opinions, perspectives, and feedback.”⁷⁵ Comment-gathering meetings are “held with a broad range of interested parties, including representatives of non-government organizations, private citizens, or various businesses or industries, to fully engage them in a discussion of a specific regulatory issue.”⁷⁶ Examples of this type of meeting include “town hall and roundtable discussions, environmental impact statement scoping meetings, and workshops.”⁷⁷

According to records in the ADAMS database, the NRC has hosted numerous meetings regarding the TerraPower facility, beginning in approximately 2019. A search for document titles including both the words “meeting” and “TerraPower” returned 140 results. These meetings include open meetings, closed meetings, and partially closed meetings, as well as observation meetings and information meetings. Notably, at least one of these meeting was conducted in Kemmerer

⁶⁶ The 2021 policy regarding public participation clarified that the public can ask questions during an observation meeting. However, addressing the specific regulatory and technical matters with the particular individual or group whom the NRC is meeting with is the priority within observational meetings. Thus, public participation in these meetings is geared toward allowing the public the opportunity to ask questions to the NRC directly once participants gain an understanding of the issues by observing the meeting. The NRC does not have to respond or answer all questions, however, “NRC staff should emphasize ways members of the public can ask questions outside the meeting” and “licensees or other parties are not precluded from responding to questions during Observation Meetings.” *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Id.*

Wyoming, on November 7, 2023, when the NRC held an “Information Meeting with Question and Answer Session” at the South Lincoln Training and Event Center in Kemmerer to discuss regulatory and technical issues.⁷⁸ A key topic of the meeting was “how and when the public [could] participate in the NRC’s review process” of TerraPower’s Construction Permit Application.⁷⁹

b. Commenting at Advisory Committee on Reactor Safeguards Committee Meetings

The Atomic Energy Act⁸⁰ mandates review of all licensing applications by the Advisory Committee on Reactor Safeguards (ACRS), an independent committee that reports directly to the Commission.⁸¹ The committee advises the NRC on potential hazards and the adequacy of safety standards. It must review all licensing requests and prepare a report which is made available to the public. The ACRS is governed by the Federal Advisory Committee Act.⁸² As a result, most meetings are open to the public and any member of the public may request the opportunity to make an oral statement.⁸³

c. Participation in Nuclear Regulatory Commission Hearings

The NRC licensing process provides opportunities for interested persons to request and participate in hearings related to requests for construction or operation licenses or for facilities pursuing a combined operating license, prior to loading of fuel in the facility. The hearing process is initiated by the filing of a written petition specifying the petition’s arguments for standing as well as the “contentions which the person seeks to have litigated.”⁸⁴

The right to be a party to an NRC proceeding is limited to interested persons. The Energy Reorganization Act of 1974, as amended, requires the NRC to “grant a hearing upon the request of any person whose interest may be affected by the proceeding.”⁸⁵ Accordingly, when “ruling on a request for hearing,” the NRC must determine “whether the petitioner has an interest affected by the proceeding.”⁸⁶ The petition must therefore include the petitioners arguments for standing, the

⁷⁸ Public Outreach Meeting on the Forthcoming TerraPower Construction Permit Application, U.S. NUC. REG. COMM., ML23306A210 (Nov. 2, 2023).

⁷⁹ *Id.*

⁸⁰ 42 U.S.C. §§ 2011–2259. The Atomic Energy Act was initially passed in 1954 with a purpose “to assure the proper management of source, special nuclear, and byproduct material. The AEA and the statutes that amended it delegate the control of nuclear energy primarily to DOE, the Nuclear Regulatory Commission (NRC), and the Environmental Protection Agency (EPA).” *Atomic Energy Act and Related Legislation*, U.S. DEP’T. OF ENERGY, <https://www.energy.gov/chss/atomic-energy-act-and-related-legislation> (last visited Nov. 12, 2024).

⁸¹ 42 U.S.C. § 2232 (2024).

⁸² U.S. NUCLEAR REGUL. COMM’N, BYLAWS: ADVISORY COMMITTEE ON REACTOR SAFEGUARDS APPROVED AT THE ACRS MEETING (2021), <https://www.nrc.gov/docs/ML2121/ML21217A060.pdf>.

⁸³ *Id.*

⁸⁴ 10 C.F.R. § 2.309 (2023).

⁸⁵ 42 U.S.C.S. § 2339(a)(1)(A) (2023); *see also* 42 U.S.C. § 2133 (2023) (definition of “commercial facility”).

⁸⁶ 10 C.F.R. § 2.309(d)(2) (2023).

nature of its interest in the proceeding, and the potential effect of the decision on its interest.⁸⁷ If the petition is granted, the petitioner is admitted as a party to the proceeding.⁸⁸

NRC regulations also limit the subject matter of hearings to specific issues of law or fact. For licensing hearings, this limits the scope of hearings to disputes regarding specific portions of the application, or omissions therefrom.⁸⁹ For hearings related to operations under a combined operating license (COL), hearings are limited to whether the facility complies with the acceptance criteria in the COL.⁹⁰ The specific contention must be clearly set forth in the petition, including a statement of the issue, explanation, showing that the issue is “material to findings the NRC must make to support the action that is involved in the proceeding,” and a statement of facts and supporting sources and documents.⁹¹ For hearings related to a COL, the petitioner must also make a prima facie showing that at least one of the criteria required for a licensing application, called Inspection, Tests, Analyses, and Acceptance Criteria, were not met and that the consequences of nonconformance implicate public health and safety.⁹² As part of this showing, the petitioner must provide specific information “which the requestor believes is inaccurate, incorrect, and/or incomplete.”⁹³

If the Commission determines that the requestor has standing and has proposed at least one admissible contention, it will grant the request for a hearing.⁹⁴ The rules require the presiding officer to provide state, local government bodies, and federally recognized Indian Tribes “reasonable opportunity to participate in the hearing,” even if they have not been admitted as a party.⁹⁵ Participation rights of non-parties are more limited. The right to participate by non-party individuals is at the discretion of the presiding officer, who can “establish limits and conditions for participation.”⁹⁶

Administrative judges “from the NRC’s Atomic Safety and Licensing Board Panel (ASLBP)” generally conduct hearings on civilian nuclear matters.⁹⁷ The NRC can designate one or more Atomic Safety and Licensing Board(s) (ASLB) that have the same duties; “may exercise the powers of a presiding officer”; and “perform[s] the adjudicatory functions that the [NRC] determines are

⁸⁷ 10 C.F.R. § 2.309(d)(1) (2023).

⁸⁸ If the NRC determines that the individual requesting hearing (petitioner) does not have an interest affected by the proceeding, the NRC can deny the request for hearing. *Public Involvement In Hearings*, U.S. NUCLEAR REGUL. COMM’N, <https://www.nrc.gov/about-nrc/regulatory/adjudicatory/hearing.html> (last updated Apr. 14, 2021); 10 C.F.R. § 2.309(j) (2024).

⁸⁹ 10 C.F.R. § 2.309(f)(1)(vi).

⁹⁰ See 10 C.F.R. § 52.103 (2023).

⁹¹ 10 C.F.R. § 2.309(f)(1).

⁹² 10 C.F.R. § 52.103(b) (2023); 10 C.F.R. § 2.309(f)(1)(i) (2023).

⁹³ 10 C.F.R. § 2.309(f)(1)(vii) (2023) (“If the requestor identifies a specific portion of the [ITAAC] report as incomplete and the requestor contends that the incomplete portion prevents the requestor from making the necessary prima facie showing, then the requestor must explain why this deficiency prevents the requestor from making the prima facie showing.”); 10 C.F.R. § 52.99(c) (2023) (setting out the requirements for the ITAAC).

⁹⁴ 10 C.F.R. § 2.309(a) (2023).

⁹⁵ 10 C.F.R. § 2.315(c) (2023).

⁹⁶ 10 C.F.R. § 2.315(a) (2023).

⁹⁷ According to the NRC’s website: “On rare occasions the Commission itself may preside at a hearing. The ASLBP’s judges are employees of the NRC; however, under NRC rules and under the Administrative Procedure Act, they are independent from the NRC staff. The judges have no stake in the outcome of a proceeding, and reach objective decisions based on the record.” *The Hearing Process*, U.S. NUCLEAR REGUL. COMM’N, <https://www.nrc.gov/about-nrc/regulatory/adjudicatory/hearing-pro.html> (last updated Sept. 25, 2024).

appropriate.”⁹⁸ In this capacity, the ASLB conducts proceedings for “granting, suspending, revoking, or amending licenses or authorizations as the [NRC] may designate[.]”⁹⁹ The process for appealing an ASLB decision is the same as that for appealing a presiding officer’s order.¹⁰⁰

In July 2024, the NRC approved the use of simplified procedures for mandatory hearings.¹⁰¹ Under the new procedures, all hearings except those for uranium enrichment facilities will no longer include an oral component.¹⁰² The time period for hearings will also be shorter, moving from an average of eight weeks to four months.¹⁰³

d. Participation in the Nuclear Regulatory Commission Environmental Review under the National Environmental Policy Act

The majority of formal opportunities for public participation that occur during the licensing process occur through NEPA. NEPA imposes procedural requirements that require agencies to consider impacts to the environment as part of their decision-making processes.¹⁰⁴ As illustrated in Figure 2.1,¹⁰⁵ most opportunities for public participation in the pre-application phase of licensing occur during the “environmental review” process.

10 C.F.R. part 51 governs the implementation of “environmental protection regulations applicable to NRC’s domestic licensing and regulatory functions.”¹⁰⁶ Part 51 defines the criteria and identification of licensing and regulatory actions requiring environmental impact statements (EIS),¹⁰⁷ environmental assessments (EA),¹⁰⁸ and those eligible for a categorical exclusion.¹⁰⁹ Certain regulatory actions, including the issuance of permits to construct or operate a new nuclear energy facility, always require an EIS.¹¹⁰

⁹⁸ 10 C.F.R. § 2.321(a), (c) (2024).

⁹⁹ 10 C.F.R. § 2.321(a).

¹⁰⁰ See 10 C.F.R. § 2.309(a), (b)(i); see 10 C.F.R. § 2.314(a) (2024).

¹⁰¹ Memorandum from Sec’y of U.S. Nuclear Regul. Comm’n to Comm’n General Counsel on Staff Requirements – SECY-24-0032– Revisiting the Mandatory Hearings Process at the U.S. Nuclear Regulatory Commission (July 18, 2024), <https://www.nrc.gov/docs/ML2420/ML24200A044.pdf>.

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ Indeed, the U.S. Supreme Court has interpreted NEPA as procedural in nature, only imposing requirements as to the process an agency must observe in reaching a decision. As summarized by Chief Justice Roberts, “NEPA imposes only procedural requirements to ‘ensur[e] that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts.’” *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 23 (2008) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)).

¹⁰⁵ NRC *Licensing Process*, U.S. NUCLEAR REGUL. COMM’N,

<https://www.nrc.gov/reactors/new-reactors/new-licensing-files/new-rx-license-process.pdf> (last visited Oct. 29, 2024).

¹⁰⁶ 10 C.F.R. § 51.1 (2023); see also 42 U.S.C. § 4332 (2024) (NEPA and agency cooperation).

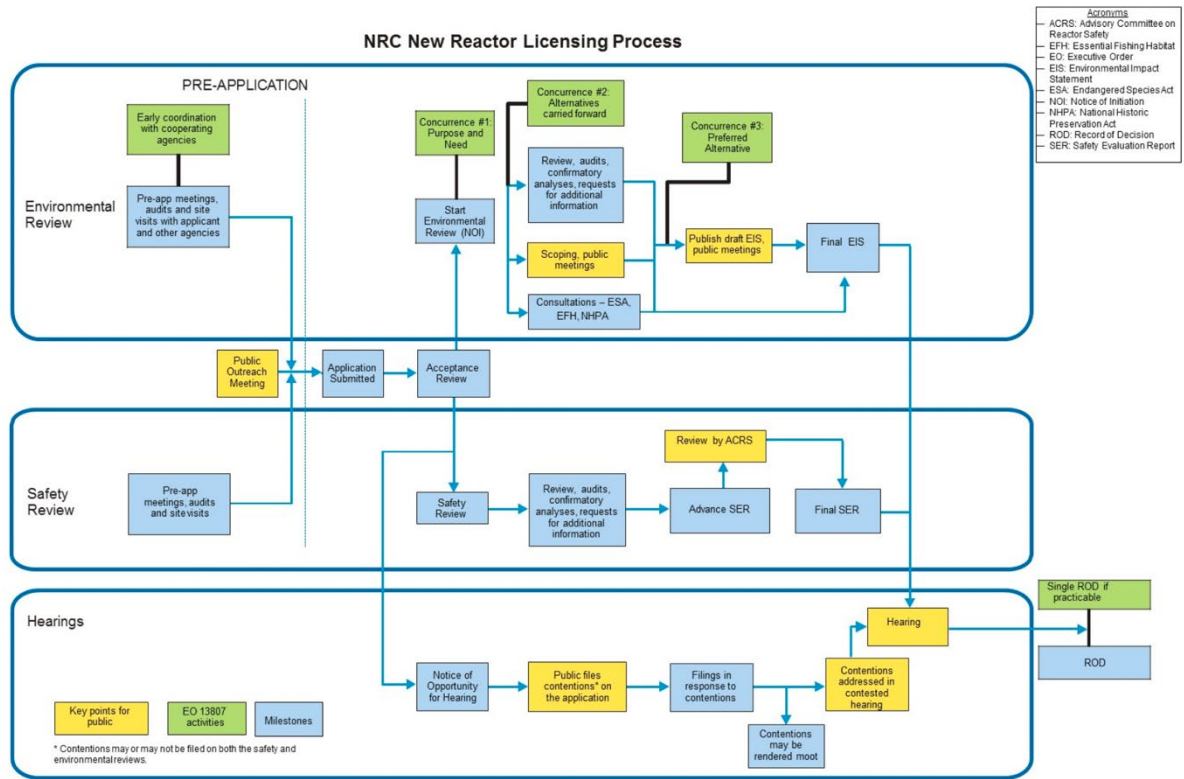
¹⁰⁷ See 10 C.F.R. § 51.20 (2023).

¹⁰⁸ See 10 C.F.R. § 51.21 (2023).

¹⁰⁹ See 10 C.F.R. § 51.22 (2023).

¹¹⁰ 10 C.F.R. § 51.20(b) (2023).

Figure 2.1
Nuclear Regulatory Commission New Reactor Licensing Process



The EIS process includes the most opportunity for public participation. This process begins with the publication of a “notice of intent” in the Federal Register.¹¹¹ The notice of intent preceding an EIS on NRC action must contain the following information:

- (1) State that an environmental impact statement will be prepared;
- (2) Describe the proposed action and, to the extent sufficient information is available, possible alternatives;
- (3) State whether the applicant or petitioner for rulemaking has filed an environmental report, and, if so, where copies are available for public inspection;
- (4) Describe the proposed scoping process, including the role of participants, whether written comments will be accepted, the last date for submitting comments and where comments should be sent, whether a public scoping meeting will be held, the time and place of any scoping meeting or when the time and place of the meeting will be announced; and
- (5) State the name, address and telephone number of an individual in NRC who can provide information about the proposed action, the scoping process, and the environmental impact statement.¹¹²

¹¹¹ See 10 C.F.R. § 51.116 (2023) (requirements for Federal Register notice publication).

¹¹² 10 C.F.R. § 51.27(a) (2023).

After publishing the notice of intent, the NRC may begin the scoping process. During the scoping process, the NRC “define[s] the proposed action,” creates boundaries regarding the content and scope of the EIS, and identifies key issues to address in depth within the statement.¹¹³ In conducting the scoping process, the NRC must invite the participation of the following persons and entities:

- (1) The applicant or the petitioner for rulemaking;
- (2) Any person who has petitioned for leave to intervene in the proceeding or who has been admitted as a party to the proceeding;
- (3) Any other Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved or which is authorized to develop and enforce relevant environmental standards;
- (4) Affected State and local agencies, including those authorized to develop and enforce relevant environmental standards;
- (5) Any affected Indian Tribe; and
- (6) Any person who has requested an opportunity to participate in the scoping process.

The appropriate NRC staff director may also invite any other appropriate person to participate in the scoping process.¹¹⁴

While anyone can request the opportunity to participate by contacting the NRC staff member listed on the notice of intent to perform an EIS, scoping meetings are not necessarily open to the public.¹¹⁵ The NRC’s notice of intent must: “Describe the proposed scoping process, including the role of participants, whether written comments will be accepted, the last date for submitting comments and where comments should be sent, whether a public scoping meeting will be held, the time and place of any scoping meeting or when the time and place of the meeting will be announced[.]”¹¹⁶ However, these regulations clarify that “[p]articipation in the scoping process for an environmental impact statement does not entitle the participant to become a party to the proceeding to which the environmental impact statement relates.”¹¹⁷ The NRC has discretion over the type of meetings and public involvement in the scoping stage.¹¹⁸ Notably, the NRC also has complete discretion over determining which tribal, state, or local government agencies are “affected.”¹¹⁹ All federal agencies, including the NRC, use the NEPA scoping process to determine the “affected” governments on a case-by-case basis for every proposed action to which NEPA applies.¹²⁰ As such, the NRC will first engage with anyone, (government representatives, individuals, or otherwise) who the NRC determines “may be interested or affected” by the proposed action.¹²¹ Next, the NRC will use the information it received from the initial engagement to ultimately determine which parties will actually be affected.¹²² The NRC then has the option to grant

¹¹³ 10 C.F.R. § 51.29(a) (2023) (other considerations include determining how to prepare the EIS, identifying cooperating agencies, and creating a timeline for the statement’s completion).

¹¹⁴ 10 C.F.R. § 51.28(a), (b) (2023).

¹¹⁵ 10 C.F.R. § 51.27 (2024); 10 C.F.R. § 51.28(a)(6) (2024).

¹¹⁶ 10 C.F.R. § 51.27(a)(4).

¹¹⁷ 10 C.F.R. § 51.28(c).

¹¹⁸ *See* 10 C.F.R. § 51.21 (2023).

¹¹⁹ *See* 40 C.F.R. § 1501.9(a), (b) (2024). “Affected” is not explicitly defined in regulation or guidance.

¹²⁰ *Id.* at § 1501.9(b), (c)(1).

¹²¹ 40 C.F.R. § 1502.4(b) (2024).

¹²² *See* 40 C.F.R. § 1501.9(a), (b).

cooperating agency status via agreement to the affected governments or agencies.¹²³ After the NRC concludes its scoping process, the agency must provide each participant in the scoping process with “a concise summary of the determinations and conclusions reached, including the significant issues identified.”¹²⁴

Becoming a non-federal cooperating agency allows for designated opportunities to provide input to the NRC while it complies with NEPA processes, including further participation in the scoping process, “developing information and preparing environmental analyses” within the cooperating agency’s special expertise, providing support staff to enhance the NRC’s interdisciplinary capability, and consulting with the NRC to develop an efficient and expeditious schedule for NEPA compliance, among others.¹²⁵ The NRC, just like any federal agency, is not required to grant cooperative agency status to state and local governmental entities, as that decision is wholly within the NRC’s discretion.¹²⁶ Since there are no guidelines in statute or regulation as to when cooperating agency status must be granted, there are no standards to apply when reviewing a decision to grant or deny a request.¹²⁷

The Council on Environmental Quality (CEQ) provides the regulations that the NRC must follow for granting cooperating agency to non-federal government entities.¹²⁸ A 2011 Tenth Circuit decision, *Wyoming v. United States Department of Agriculture*, clarified these CEQ regulations by identifying why federal agencies are not obligated to grant cooperating agency status for qualifying state and local governments.¹²⁹ In this case, Wyoming sued the Forest Service for not granting it cooperating agency status, among other things, even though the proposed action would “affect” areas within Wyoming’s border.¹³⁰ The court ruled that “the Forest Service’s decision to grant or deny a request for cooperating-agency status is committed solely to the agency’s discretion and not

¹²³ 40 C.F.R. § 1501.8(a) (2024); 10 C.F.R. § 51.29(a)(7).

¹²⁴ 10 C.F.R. § 51.29(b) (2023).

¹²⁵ The specific role of the cooperating agency will depend on the terms in the cooperating agreement. *Id.* at 40 C.F.R. § 1501.8(b); 40 C.F.R. § 1501.10 (2024).

¹²⁶ *Jarita Mesa Livestock Grazing Ass’n v. U.S. Forest Serv.*, 140 F. Supp. 3d 1123, 1208 (D.N.M. 2015) (citing *Wyoming v. U.S. Dep’t of Agric.*, 661 F.3d 1209, 1242 (10th Cir. 2011) (“The Tenth Circuit [found] that Congress committed the decision whether to grant a State ‘cooperating agency’ status to the federal agency’s discretion and therefore it was not subject to judicial review.”)). *See also*, 89 Fed. Reg. 35442, 35482 (May 1, 2024) (“CEQ declines to make it a requirement for the lead agency to invite or grant cooperating agency status to a State, Tribal, or local agency. Section 107(a)(3) of NEPA permits but does not require lead agencies to designate Federal, State, Tribal, or local agencies that have jurisdiction by law or special expertise as cooperating agencies. *See* 42 U.S.C. 4336a(a)(3). Because agency authorities and obligations can vary dramatically, CEQ considers it important to maintain flexibility for the lead agency to determine on a case-by-case basis whether a State, Tribal, or local agency should serve as a cooperating agency.”).

¹²⁷ *Wyoming v. U.S. Dep’t of Agric.*, 661 F.3d 1209, 1242 (10th Cir. 2011); *see generally*, 10 C.F.R. § 51.14(a) (2024) (“Cooperating Agency means any Federal agency other than the NRC which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. By agreement with the Commission, a State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may become a cooperating agency.”).

¹²⁸ The NRC’s regulations on NEPA compliance state the NRC will “[f]ollow the provisions of 40 CFR 1501.5 and 1501.6 relating to lead agencies and cooperating agencies,” 10 C.F.R. § 51.10(b)(2) (2024).

¹²⁹ *See Wyoming v. U.S. Dep’t of Agric.*, 661 F.3d at 1240-43.

¹³⁰ *Id.* at 1241-42.

subject to judicial review under the Administrative Procedure Act (APA).¹³¹ The court reasoned that the Forest Service had complete discretion over choosing its non-federal government partners because “nothing in the [CEQ] regulations mandates or requires that the Forest Service grant such a request” and “the applicable regulations provide no standard for a court to apply in reviewing the Forest Service’s denial of such a request, and are likewise devoid of any standards or directives that would guide the Forest Service in granting or denying such a request. In other words, there is simply no law to apply.”¹³²

Once the EIS has been completed, Part 51 requires that it be made available to interested parties and the public. Interested parties and specified federal, state, local, and tribal governments, are sent a copy directly.¹³³ In addition, the NRC is also required to publish “a notice of availability” in the Federal Register and provide local newspapers with “[n]ews releases stating the availability for [public] comment and place for obtaining or inspecting a draft environmental statement.”¹³⁴ This provides the public with notice of the availability of draft EIS and opportunities for public comment, including “where comments should be submitted,” and “the date on which the comment period closes.”¹³⁵

Like other NEPA processes, Part 51 requires the NRC to provide opportunities for public comment. Public comment periods range from 45 to 60 days.¹³⁶ In the final EIS, the NRC is required to address each comment on the draft EIS and discuss the agency’s response.¹³⁷ The NRC may respond in any of the following ways:

- (i) Modification of alternatives, including the proposed action;
- (ii) Development and evaluation of alternatives not previously given serious consideration;
- (iii) Supplementation or modification of analyses;
- (iv) Factual corrections; and
- (v) Explanation of why comments do not warrant further response, citing sources, authorities or reasons which support this conclusion.¹³⁸

¹³¹ The Administrative Procedure Act establishes how federal agencies establish rules, adjudicate disputes, and interact with the public. It also specifies which agency actions are subject to judicial review. 5 U.S.C. §151. While an agency’s actions are presumed reviewable under the APA, judicial review is precluded “if the statute is drawn so that a court would have no meaningful standard against which to judge the agency’s exercise of discretion.” *Id.* at 1242 (internal citations omitted). Here, the court ascertained there were no “meaningful standards” to judge an agency’s decision against because of the permissive language found in CEQ’s regulations for cooperating agencies in 40 C.F.R. § 1501.8. Section 1501.8 states that non-federal agencies “*may* request that the lead agency designate it a cooperating agency” and “*may* become a cooperating agency by agreement with the lead agency.” 40 C.F.R. § 1501.8(a) (2024) (emphasis added). Accordingly, the court held that these CEQ regulations only permit a state to request cooperating-agency status and authorize the applicable federal agency to grant that status. However, the court found nothing in the CEQ regulations that requires a federal agency to grant cooperating-agency status nor provides a standard for a court to review a denial of a request. *Wyoming v. U.S. Dep’t of Agric.*, F.3d at 1242-43.

¹³² *Id.*

¹³³ 10 C.F.R. § 51.74(a) (2023).

¹³⁴ 10 C.F.R. § 51.74(d), (e) (2023).

¹³⁵ 10 C.F.R. § 51.73 (2023).

¹³⁶ *Id.*

¹³⁷ 10 C.F.R. § 51.91(a) (2023).

¹³⁸ *Id.*

The final EIS, including the record of decision, are made widely available including through publication on the NRC website, publication of a notice of availability in the federal register, and distribution to copies to key parties such as Environmental Protection Agency (EPA), applicant, state agencies, and each commenter.¹³⁹ The draft EIS and all comments become part of the record for the adjudicatory or rulemaking proceeding at issue.¹⁴⁰

The NRC published the Notice of Intent to Conduct Scoping Process and Prepare Environmental Impact Statement for the Kemmerer Unit One Power Plant (TerraPower’s Natrium Project) in the Federal Register on June 12, 2024.¹⁴¹ The NRC received 35 written comments on the scoping notice from individuals and groups including Breakthrough Institute and Wyoming Game and Fish.¹⁴² As set forth in the notice, the NRC held the scoping meeting on July 16, 2024.¹⁴³ The meeting was held at the South Lincoln Training and Events Center in Kemmerer Wyoming.¹⁴⁴ According to the transcript, in addition to NRC staff, seven individuals attended the scoping meeting.¹⁴⁵ Joe O’ Hara, Environmental manager for the NRC, stated during the hearing that the NRC would be the lead agency with the DOE as a potential cooperating agency.¹⁴⁶

iii. Accountability

a. Review of Nuclear Regulatory Commission Orders

The NRC has a review process for rulings on requests for hearings regarding whether to allow a petitioner to become a party.¹⁴⁷ As mentioned previously, the NRC will name a presiding officer and will delegate to that officer the final authority over hearing matters.¹⁴⁸ Accordingly, if a presiding officer issues an order *denying* a petition to be a party, the petitioner can appeal “the question as to whether the . . . petition should have been granted.”¹⁴⁹ However, if a presiding officer issues an order *granting* a petition to be a party, any party other than the petitioner can appeal whether the petition “should have been wholly denied.”¹⁵⁰ Lastly, these decisions only can be appealed internally to the NRC, and NRC regulations prohibit any other appeals from rulings on these requests and petitions.¹⁵¹

¹³⁹ 10 C.F.R. § 51.93(a) (2023).

¹⁴⁰ 10 C.F.R. § 51.120 (2023).

¹⁴¹ 89 F.R. 49917 (Jun. 12, 2024).

¹⁴² Based on a November 13, 2024 search of documents in the ADAMS database including both the words “Kemmerer” and “scoping” in the document title.

¹⁴³ Official transcript of Proceedings, Scoping Meeting Related to the Proposed Kemmerer Unit One Power Plant (July 16, 2024).

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ 10 C.F.R. § 2.311 (2024).

¹⁴⁸ 10 C.F.R. § 2.313 (2024).

¹⁴⁹ 10 C.F.R. § 2.311(c).

¹⁵⁰ 10 C.F.R. § 2.311(d).

¹⁵¹ 10 C.F.R. §§ 2.311(b).

b. *Judicial Review of Nuclear Regulatory Commission Licensing Decisions*

Unless otherwise authorized by law, parties must file a petition for NRC review before seeking judicial review of the decision or action.¹⁵² The NRC also provides parties the option to enter a settlement with the NRC or pursue other alternative dispute resolution methods on issues proposed for litigation, expressly encouraging settlement.¹⁵³ If a party enters a settlement agreement with the NRC, it waives all rights to seek judicial review or otherwise contest the validity of the consent order.¹⁵⁴

Final NRC orders regarding a licensing decision on a construction permit, operating license, or COL are subject to judicial review.¹⁵⁵ Requests for judicial review are limited to parties to the applicable proceeding.¹⁵⁶ As with most administrative appeals, judicial review can only be requested after the NRC has conducted its review.¹⁵⁷ As described by the D.C. Circuit Court of Appeals, “participating in the appropriate and available administrative procedure [] is the statutorily prescribed prerequisite for this court's jurisdiction to entertain [the appellant’s] petition for review.”¹⁵⁸ If the petition is granted, the court reviews the decision according to the APA. Consistent with that statute, the court can “compel agency action unlawfully withheld or unreasonably delayed; and hold unlawful and set aside agency action, findings, and conclusions found to be—arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.”¹⁵⁹

The Hobbs Act, 28 U.S.C. § 2342, gives federal courts of appeals exclusive jurisdiction over certain final orders of the NRC and “permits ‘[a]ny party aggrieved’ by a final order to petition a court of appeal for review of the order.”¹⁶⁰ The U.S. Supreme Court has accepted review of a circuit split interpreting the Hobbs Act.¹⁶¹ The Tenth and D.C. circuits have determined that only those who qualify as a “party aggrieved” under the Hobbs Act may intervene in NRC licensing decisions.¹⁶² However, the Fifth Circuit decided in *Texas v. NRC*, under its *American Trucking Associations, Inc. v. I.C.C.*, precedent, that a person is not required to be a party to the underlying agency proceeding if the petition challenges the agency action as *ultra vires*, or that the action exceeded the agency’s authority.¹⁶³ In reaching that conclusion, the *Texas v. NRC* court acknowledged that four other

¹⁵² 10 C.F.R. § 2.341(b) (2024).

¹⁵³ 10 C.F.R. § 2.338 (2024).

¹⁵⁴ *Id.* at § 2.338(h)(2).

¹⁵⁵ 42 U.S.C. § 2239(b).

¹⁵⁶ 5 U.S.C. 504(c)(2) (2024).

¹⁵⁷ 10 C.F.R. § 2.341(b) (2023).

¹⁵⁸ *Gage v. United States Atomic Energy Com.*, 479 F.2d 1214, 1217 (D.C. Cir. 1973) (the rules for the AEC transferred to the NRC with the Energy Reorganization Act of 1974).

¹⁵⁹ 5 U.S.C.S. § 706(1), (2)(A).

¹⁶⁰ JASON O. HEFLIN, CONG. RSCH. SERV., LSB11199, CONSOLIDATED INTERIM STORAGE OF SPENT NUCLEAR FUEL: RECENT LICENSING DECISIONS 3 (2024) [HEREINAFTER “HEFLIN CONG. RSCH. SERV.”] (citing 28 U.S.C. §§ 2342, 2344).

¹⁶¹ *Id.*

¹⁶² *State ex rel. Balderas v. United States Nuclear Reg. Comm’n*, 59 F.4th 1112, 1116-1118 (10th Cir. 2023); *Don’t Waste Mich. v. U.S. Nuclear Reg. Comm’n*, No. 21-1048, 2023 WL 395030, at *2-3 (Jan. 25, 2023) (per curiam). The Tenth Circuit ruled in *Balderas v. NRC*, that parties who could have intervened in the NRC licensing proceeding but chose not to do so qualify as a “party aggrieved” and that merely submitting comments was insufficient to achieve “aggrieved party” status. *Balderas*, 59 F.4th at 1123-1124.

¹⁶³ The Fifth Circuit also decided that that a party submitting comments in an NRC proceeding likely does qualify as a “party aggrieved.” *State of Texas v. Nuclear Regul. Comm’n*, 78 F.4th 827, 837 (5th Cir. 2023) (citing *American Trucking Associations, Inc. v. I.C.C.*, 673 F.2d 82, 85 n. 4 (5th Cir. 1982)).

courts of appeals “have refused to adopt” an *ultra vires* exception to the Hobbs Act’s party-aggrieved requirement.¹⁶⁴

c. Judicial Review of the Nuclear Regulatory Commission’s National Environmental Policy Act Decisions

NEPA decisions are subject to review both internally through the NRC hearing processes and externally through judicial review. NEPA matters may be raised in the hearing for the proposed action. During the hearing, parties to the proceeding are invited to “take a position and offer evidence on the aspects of the proposed action within the scope of NEPA.”¹⁶⁵ This applies regardless of whether the NRC has determined that an EIS is not required for the proposed action.¹⁶⁶ During the hearing, the presiding officer will determine all matters of controversy.¹⁶⁷

Final agency actions under NEPA are reviewed under the APA.¹⁶⁸ After completing the NEPA process and making a final decision on the proposed action, an agency “then must publish a record of its decision, showing how its final decision-making process incorporated the findings.”¹⁶⁹ NEPA does not “impose substantive limits on agency conduct.”¹⁷⁰ Accordingly, the “role of the courts in reviewing compliance with NEPA is simply to ensure that the agency has adequately considered and disclosed the environmental impact of its actions[.]”¹⁷¹ The process for judicial review of NEPA mirrors that for licensing decisions or other final NRC actions appealable under the APA.¹⁷²

B. The Industrial Siting Division within the Wyoming Department of Environmental Quality

The Wyoming Industrial Development and Siting Act requires developers to apply for and obtain a permit prior to constructing an industrial facility in Wyoming, such as the TerraPower Sodium reactor.¹⁷³ Permits are issued by the Industrial Siting Council (ISC), a seven-person panel appointed by the governor.¹⁷⁴ The ISC is a quasi-judicial body that operates in coordination with the WDEQ’s ISD, which “assesses socio-economic and environmental impacts for companies planning major industrial developments” and helps developers navigate the application process.¹⁷⁵ The ISC then “reviews the socio-economic and environmental impacts of industrial facilities before issuing a permit for construction[.]”¹⁷⁶

¹⁶⁴ *Id.*

¹⁶⁵ 10 C.F.R. § 51.104 (2023).

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ 5 U.S.C. §§ 551–59.

¹⁶⁹ *BioDiversity Conservation Alliance v. Bureau of Land Mgmt.*, 608 F.3d 709, 712 (10th Cir. 2010) (citing 23 C.F.R. § 771.127).

¹⁷⁰ *See, e.g., Utah Envtl. Cong. v. Russell*, 518 F.3d 817, 821 (10th Cir. 2008).

¹⁷¹ *Citizens’ Comm. to Save Our Canyons v. Krueger*, 513 F.3d 1169, 1178 (10th Cir. 2008).

¹⁷² *See Morris v. U.S. Nuclear Reg. Comm’n*, 598 F.3d 677, 684, 690-91 (10th Cir. 2010).

¹⁷³ Wyo. Stat. Ann. § 35-12-106 et seq. (2023).

¹⁷⁴ Wyo. Stat. Ann. § 35-12-106(a) (2023).

¹⁷⁵ *Industrial Siting Division*, WYOMING DEP’T OF ENV’T QUALITY, <https://deq.wyoming.gov/industrial-siting-2/> (last visited Oct. 29, 2024); *Industrial Siting Council*, WYOMING DEP’T OF ENV’T QUALITY, <https://deq.wyoming.gov/industrial-siting-2/council/> (last visited Oct. 29, 2024).

¹⁷⁶ *Id.*

The ISC will only approve permit applications for industrial facilities that demonstrate that they do not pose significant social, economic, and environmental burdens on nearby communities.¹⁷⁷ Upon receiving the permit application, the director of the WDEQ “conduct[s] a review of the application to determine if it contains all the information required by . . . the rules and regulations.”¹⁷⁸

Applications must include information including but not limited to the number and type of jobs generated; the applicant’s financial capabilities to decommission and reclaim the facilities; chemical inventories and waste management plans; and an analysis and proposal for environmental impacts on “scenic resources, recreational resources, archaeological and historical resources, land use patterns, economic base, housing, transportation, sewer and water facilities, solid waste facilities, police and fire facilities, educational facilities, health and hospital facilities, water supply, agriculture, terrestrial and aquatic wildlife, threatened and endangered species, and other relevant areas.”¹⁷⁹ For applications that fulfill all these informational requirements, the ISC may issue approval only upon finding that (1) “the facility will not pose a threat of serious injury to the environment nor to the social and economic condition or inhabitants or expected inhabitants in the affected area;” (2) “the facility will not substantially impair the health, safety or welfare of the inhabitants; and (3) “[t]he applicant has financial resources to decommission and reclaim the facility.”¹⁸⁰

i. Transparency

The Wyoming Industrial Siting Act requires the ISD to make information regarding the application available to interested parties and the public. Within 10 days, the ISD director must share a copy of the application with “the bodies of local government which will be primarily affected by the proposed facility.”¹⁸¹ The ISD director also must file the application with the county clerk where the proposed project would be located and publish a summary of the permit application in at least one newspaper “of general circulation within the area to be primarily affected by the proposed facility.”¹⁸² While not stated in the regulations, the ISD website also states that a “copy of the application is filed with the local library.”¹⁸³ Individuals can also sign up to receive email notifications of ISD public notices.¹⁸⁴

ISC decisions and records are made available to the public online on their website homepage (<https://deq.wyoming.gov/industrial-siting-2/council/#743586811>) under the “Applications and Permits” tab. The “Applications and Permits” tab houses all permits that have been or are currently under review by year and all supporting documentation. Hearings are livestreamed and can be accessed via the meeting agenda posted on the same webpage linked above. The Kemmerer Power Station Unit 1 Section 109 Permit Application was posted on October 13, 2024.

¹⁷⁷ Wyo. Stat. Ann. § 35-12-113 (2023).

¹⁷⁸ Wyo. Stat. Ann. § 35-12-110(d) (2023).

¹⁷⁹ Wyo. Stat. Ann. § 35-12-109(a) (2023).

¹⁸⁰ Wyo. Stat. Ann. § 35-12-113 (2023).

¹⁸¹ Wyo. Stat. Ann. § 35-12-110(a)(i) (2023) (Notice to “affected land owners” is only required for wind and solar facility permit applications. *Id.*; see also Wyo. Stat. Ann. § 35-12-102(a)(vii)(E)-(G) (2023); Wyo. Stat. Ann. § 18-5-502 (2023) (exceptions to county regulation of wind and solar energy projects); Wyo. Stat. Ann. § 18-5-509 (2023))

¹⁸² Wyo. Stat. Ann. § 35-12-110(a)(ii), (iii) (2023).

¹⁸³ *Industrial Siting Division Permit Process*, WYOMING DEP’T OF ENV’T QUALITY, <https://deq.wyoming.gov/industrial-siting-2/permitting-process/> (last visited Nov. 5, 2024).

¹⁸⁴ *Industrial Siting Division Public Notices*, WYOMING DEP’T OF ENV’T QUALITY, <https://deq.wyoming.gov/industrial-siting-2/isd/> (last visited Nov. 5, 2024).

ii. Public Participation

Public participation in the industrial siting process occurs primarily through a public hearing. Within 90 days of receiving the application, the ISD director is required to “schedule and conduct a public hearing,” “notify the applicant and local governments of the hearing,” publish notice of the hearing in a newspaper of general circulation, and “hold the hearing at a community as close as practicable to the proposed facility.”¹⁸⁵ For example, public notice for a hearing regarding the ISC’s review of the TerraPower Natrium facility was posted on October 23, 2024, with the hearing set for January 13th and 14th 2025 at the South Lincoln Training and events center in Kemmerer, Wyoming.¹⁸⁶ The statute does not set a limit for the number of days before a hearing that the ISC director must give that notice.¹⁸⁷

Participation in the industrial siting process is limited by statute. Parties to the public hearing include: (1) the applicant, (2) “the governing bodies of local governments which will be primarily affected by the proposed facility,” and (3) “[a]ny person residing in a local government” that qualifies as a party and certain nonprofit organizations.¹⁸⁸ The third category of parties to the hearing includes “any person holding record title to lands directly affected by construction of the facility.” This allows nonresident-landowners who otherwise might not be a party to the proceeding to participate. Unless they hold record title to land that is directly impacted, these limitations preclude participation by individuals outside the local community, other commercial entities, and national nonprofit organizations that do not have chapters in Wyoming, ensuring that the process is focused locally, primarily.

The right to participate in the hearing is not automatic. In order to be included as a party to the proceeding, a person or organization must “file[] a notice of intent . . . [at least] twenty (20) days before the date set for the hearing.”¹⁸⁹ The notice of intent requirement applies to relevant bodies of local government, individuals, and non-profits.¹⁹⁰ If the notice of intent is not filed within this timeframe, the entity waives their right to be a party to the proceeding.¹⁹¹ Additionally, affected local landowners and nonprofits with Wyoming chapters waive their right to be party after the hearing if they “[do] not participate orally at the hearing.”¹⁹² As a result, while nonprofits, local governments, and landowners have the right to be parties, they must either substantially participate or file a notice within the designated timeframe in order to be parties.

¹⁸⁵ Wyo. Stat. Ann. § 35-12-111(a)(i)-(iii) (2023); Wyo. Stat. Ann. § 35-12-110(f)(i)-(iv) (2023).

¹⁸⁶ Public Notice of Application for Permit for the Kemmerer Power Station Unit I Before the Wyoming Industrial Siting Council - Docket Number DEQ/ISC 24-03, WYOMING DEP’T OF ENV’T QUALITY, <https://content.govdelivery.com/accounts/WYDEQ/bulletins/3bde57e>.

¹⁸⁷ See Wyo. Stat. Ann. § 35-12-110(f)(i)-(iv) (2023).

¹⁸⁸ Wyo. Stat. Ann. § 35-12-111(a); Nonprofit participants are limited to “any nonprofit organization with a Wyoming chapter, concerned in whole or in part to promote conservation or natural beauty, to protect the environment, personal health or other biological values, to preserve historical sites, to promote consumer interests, to represent commercial, agricultural and industrial groups, or to promote the orderly development of the areas in which the facility is to be located.” Wyo. Stat. Ann. § 35-12-111(a)(iii) (2023).

¹⁸⁹ *Id.*; Wyo. Stat. Ann. § 35-12-111(b) (2023).

¹⁹⁰ Wyo. Stat. Ann. § 35-12-111(a)(iii) (2023); Wyo. Stat. Ann. § 35-12-111(b) (2023).

¹⁹¹ Wyo. Stat. Ann. § 35-12-111(b) (2023).

¹⁹² *Id.*

Although state agencies outside of the ISD and individuals (who do not qualify for party status under statute) cannot be a party to the hearings,¹⁹³ they are permitted to offer written comments. Wyoming law prohibits state agencies apart from the ISD from being party to any ISC hearings.¹⁹⁴ Though they may not join as parties, “[m]embers and employees of all other state agencies and departments may file written comments prior to adjournment of the hearing.”¹⁹⁵ Additionally, Wyoming law requires the ISD to engage in a consultation process with specified state agencies for any proposed industrial project.¹⁹⁶ The purpose of the consultation is for the ISD to obtain information and recommendations from the consulted agencies’ areas of expertise about the impact of the proposed project.¹⁹⁷ For individuals who do not qualify for party status, the Wyoming Industrial Siting Act specifies that “[a]ny person may make a limited appearance in the proceeding by filing a statement in writing with the council prior to adjournment of the hearing.”¹⁹⁸ While making a limited appearance does not make someone a party to the proceeding,¹⁹⁹ the filed statement becomes “part of the record and shall be made available to the public.”²⁰⁰

After the public hearing is completed, the ISC has 45 days to “make complete findings, issue an opinion and render a decision upon the record.”²⁰¹ The ISC can grant or deny the application as it was filed or grant the application “upon terms, conditions or modifications of the construction, operation or maintenance of the facility as the council deems appropriate.”²⁰² In its decision, the ISC must issue an opinion “stating in detail its reasons for the decision,” and serve a copy to each party.²⁰³

iii. Accountability

The appeals process from an ISC decision on a permit application depends on whether the project applicant followed the traditional application provisions under Wyoming law or requested a waiver of those provisions.²⁰⁴

Under Wyoming law, applicants have the option to request a waiver of application requirements.²⁰⁵ After the waiver procedure is initiated, the ISC ultimately decides whether to waive all or some of

¹⁹³ Further, state agency members and employees may testify at the hearing “at the request of the [ISC], [ISD], or any party.” *See* Wyo. Stat. Ann. § 35-12-111(d) (2023).

¹⁹⁴ Wyo. Stat. Ann. § 35-12-111(d) (2023).

¹⁹⁵ *Id.*

¹⁹⁶ Wyo. Stat. Ann. § 35-12-110(b) (2023). As of October 2024, the ISD must consult with the following state agencies under this provision: Wyoming department of transportation; Public service commission; Game and fish department; Department of health; Department of education; Office of state engineer; Wyoming state geologist; Wyoming department of agriculture; Department of environmental quality; The University of Wyoming; Department of revenue; The Wyoming business council; Department of workforce services; Department of state parks and cultural resources; Department of fire prevention and electrical safety; Department of family services; Oil and gas conservation commission.

¹⁹⁷ *Id.*

¹⁹⁸ Wyo. Stat. Ann. § 35-12-111(c) (2023).

¹⁹⁹ Wyo. Stat. Ann. § 35-12-111(c) (2023).

²⁰⁰ *Id.*

²⁰¹ Wyo. Stat. Ann. § 35-12-113(a) (2023).

²⁰² *Id.*

²⁰³ Wyo. Stat. Ann. § 35-12-113(d) (2023).

²⁰⁴ *See* Wyo. Stat. Ann. § 35-12-112 (2023); Wyo. Stat. Ann. § 35-12-114 (2023).

²⁰⁵ Wyo. Stat. Ann. § 35-12-107(a) (2023).

the application requirements and can issue a permit if it decides to waive all requirements.²⁰⁶ The ISC must grant the waiver if it finds:

- (i) The facility would not produce an unacceptable environmental, social and economic impact;
- (ii) The applicant has discussed the proposed facility with all local governments potentially affected by the project;
- (iii) The proposed facility is in compliance with all local ordinances and land use plans; and
- (iv) The applicant has financial resources to decommission and reclaim the facility.²⁰⁷

Those who qualify as parties to the public hearing and who are “aggrieved by the final decision of the council” can appeal these ISC waiver decisions.²⁰⁸ Petitioners in this scenario “may obtain judicial review by the filing of a petition in any state district court in which the major portion of the proposed facility is to be located within thirty (30) days after the issuance of a final decision.”²⁰⁹ Petitioners for appeal “must include an express assumption of the cost of preparation of the complete written transcripts and record for the court.”²¹⁰ When the ISD receives a petition, the ISD must “deliver to the court a copy of the complete written transcript of the record of the proceeding before it and a copy of the council’s decision and opinion entered therein which shall constitute the record on judicial review.”²¹¹ The petitioner must pay for the ISD’s costs for preparing the written transcript and record for the court, and a “copy of the transcript, decision and opinion shall remain on file with the division and shall be available for public inspection.”²¹² The reviewing district court will not disturb the ISC’s decision on whether to grant a waiver so long as the ISC’s decision is supported by “substantial evidence.”²¹³

In a typical procedure, where the applicant does not request waiver and follows the application provisions, the ISC issues a decision to grant or deny a permit after a hearing on the permit application.²¹⁴ This ISC decision is considered final for the purposes of judicial review, and the procedure “shall be the same as that for contested cases under the Wyoming Administrative Procedure Act” (the Wyoming APA).²¹⁵ Additionally, those that qualify as a party to the ISC permitting hearing must participate orally in the hearing to be able to appeal the permitting decision.²¹⁶ Thus, this “participate orally” requirement is designed to ensure the ISC has an opportunity to consider feedback from parties in its permitting decision before allowing those parties to appeal the decision.

²⁰⁶ Wyo. Stat. Ann. § 35-12-107(a), (m) (2023).

²⁰⁷ Wyo. Stat. Ann. § 35-12-107(j) (2023).

²⁰⁸ Wyo. Stat. Ann. § 35-12-114(a) (2023).

²⁰⁹ *Id.*

²¹⁰ *Id.*

²¹¹ *Id.*

²¹² *Id.*

²¹³ *Laramie River Cons. Council v. Industrial Siting Council*, 588 P.2d 1241, 1249 (Wyo. 1978) (defining “substantial evidence” as evidence that “may be less than the weight of the evidence,” but not “clearly contrary the overwhelming weight of evidence,” requires more than a mere scintilla of evidence,” and would lead “a reasonable mind could have come to the same conclusion as the agency.”).

²¹⁴ See Wyo. Stat. Ann. § 35-12-114(b) (2023).

²¹⁵ *Id.*

²¹⁶ Wyo. Stat. Ann. § 35-12-111(b) (2023).

A contested case under the Wyoming APA is initiated by serving a notice on all parties to the ISC permitting hearing, with such notice stating all matters asserted or issues involved in the contested case.²¹⁷ During the contested case, all parties have the opportunity “to respond and present evidence and argument on all issues involved.”²¹⁸ At the contested case hearing, the parties have the right to appear at the hearing “in person or by or with counsel or other duly qualified representative in any agency proceeding” in accordance with the agency’s and Wyoming Supreme Court’s rules.²¹⁹ The contested case hearing can be overseen by a decision-making body, a member of the decision-making body, or by a presiding officer.²²⁰ A presiding officer can be either an employee of the decision-making agency or the decision-making agency may designate another agency’s employee to act as the presiding officer.²²¹ Procedural mechanisms protect the integrity of the hearing and prevent conflicts of interest; a party who is serving as the presiding officer or part of the decision-making body cannot also represent an agency at the hearing in a contested case.²²²

The outcome of the contested case hearing can be further appealed to the relevant Wyoming state district court.²²³ The district court will apply the “substantial evidence” standard of review for the ISC’s evidentiary determinations and review conclusions of law *de novo*.²²⁴ Aggrieved parties have one last opportunity to appeal and can obtain review of the district’s court final judgement in the Wyoming Supreme Court.²²⁵

C. Local Governments via County Level Land Use Planning

With the exception of wind and solar projects,²²⁶ the industrial siting process preempts local governments from requiring additional permits or authorizations for large industrial facilities, including advanced nuclear energy facilities. However, local governments still have the opportunity to influence siting through enactment of local land use plans.²²⁷ Wyoming Statute § 35-12-109(a)(xvi) requires an applicant for an Industrial Siting Permit to illustrate the project is in conformity with local land use plans. The land use planning process provides counties authority to designate which areas are open for industrial use.²²⁸ For example, Lincoln County designates specific areas for “heavy industrial use,” defined to include “coal mines, coke plants, stacking of oil rigs, refining and petroleum and other oil products, manufacturing of poisonous, explosive or toxic material, railroads,

²¹⁷ Wyo. Stat. Ann. § 16-3-107 (2023).

²¹⁸ *Id.* at § 16-3-107(j).

²¹⁹ *Id.* at § 16-3-107(k).

²²⁰ Wyo. Stat. Ann. § 16-3-112 (2023).

²²¹ *Id.* at § 16-3-112(a).

²²² Wyo. Stat. Ann. § 16-3-107(k) (2023).

²²³ Wyo. Stat. Ann. § 16-3-114 (2023).

²²⁴ *N. Laramie Range Found. v. Converse Cnty. Bd. of Cnty. Comm’rs*, 2012 WY 158, ¶ 19-20, 290 P.3d 1063, 1072-73 (Wyo. 2012).

²²⁵ Wyo. Stat. Ann. § 16-3-115 (2023).

²²⁶ Wyo. Stat. Ann. § 18-5-502 (2023).

²²⁷ Cities and towns may also have limited zoning authority, including the ability to prohibit many industrial uses within city limits, *See, e.g.,* Kemmerer Land Use Zone District Ordinance § 23-70, <https://www.kemmerer.org/wp-content/uploads/2019/09/Chapter-23-Land-Use-Zone-District-Ordinance..pdf> (2019).

²²⁸ Counties are considered entities of the state that may not enact ordinances beyond the scope of power that the legislature has expressly provided and generally cannot zone for or against specific users. *See Bd. Of Teton County Comm’rs v. Mackay Invs. LLC*, 2018 WY 34, ¶ 10, 413 P.3d 1120, 1123 (Wyo. 2018).

haul roads, and other similar uses.”²²⁹ Land use plans are adopted by the county commissioners based on recommendations provided by an appointed planning and zoning commission.²³⁰ The land use planning processes for Wyoming counties are set forth in statute, which assures transparency and participation in the land planning process.²³¹

i. Transparency

Transparency in the county-level land use planning process occurs primarily through public meetings and records requirements, which equally apply to the Industrial Siting Division and Council. Chapter 4 of Title 16 creates uniform requirements for public records, documents, and meetings—including the Wyoming Public Records Act and the Wyoming Open Meetings Law.²³² The Wyoming Open Meetings Law specifies that “agencies of Wyoming exist to conduct public business” and, with very limited exceptions, requires deliberations and actions to be taken openly.²³³ The law creates several requirements with regard to transparency and accessibility. It requires all meetings to be open to the public at all times, excepting during executive sessions, and limits the rights of a governing body to have communications outside a meeting.²³⁴ The agency is required to provide notice of upcoming meetings to anyone who requests it and allows parties to make ongoing requests for notice on an annual basis.²³⁵ It further prohibits the governing body from conducting meetings “by electronic means or any other form of communication that does not permit the public to hear, read or otherwise discern meeting discussion contemporaneously.”²³⁶ Finally, it requires the agency to take minutes at any meetings where an action is taken. Wyoming’s Public Records Law requires that these minutes and any other “information in a physical form” be available for public inspection during business hours and upon written request.²³⁷ Unless good cause exists to withhold the record or delay its release, the agency must provide it within 30 days.²³⁸

ii. Public Participation

The public can influence and participate in the land use planning process either by petitioning the local county planning and zoning commission to amend an existing land use plan or through participation at public meetings.²³⁹ Land use planning proceedings have additional requirements for notice and public participation, in addition to the requirements of the Wyoming Open Meetings Law. Land use planning happens at two levels: First, through the county planning and zoning

²²⁹ LINCOLN COUNTY, WYOMING, LAND USE REGULATIONS: CHAPTER 7 – LAND USE DEFINITIONS 8 (2020), https://cms5.revize.com/revize/lincoln/Document_center/Government/Planning%20&%20Engineering/Planning%20document%20&%20forms/Land%20Use%20Regulations/CHAPTER%207%20-%20LAND%20USE%20DEFINITIONS%20Updated%207-2020.pdf.

²³⁰ Wyo. Stat. Ann. § 18-5-202 (2023).

²³¹ Wyo. Stat. Ann. § 18-5-201 (2023).

²³² Wyo. Stat. Ann. § 16-4-201 (2023).

²³³ Wyo. Stat. Ann. § 16-4-401 (2023).

²³⁴ Wyo. Stat. Ann. § 16-4-403(a) (2023).

²³⁵ Wyo. Stat. Ann. § 16-4-404 (2023).

²³⁶ Wyo. Stat. Ann. § 16-4-402(d) (2023).

²³⁷ Wyo. Stat. Ann. § 16-4-202(a) (2023).

²³⁸ Wyo. Stat. Ann. § 16-4-201 (2023).

²³⁹ *Id.*

commission and, second, through the local board of county commissioners.²⁴⁰ The county planning and zoning commission must hold at least one public hearing before certifying its plan or amendments.²⁴¹ Notice of the meeting must be published in a newspaper of general circulation at least 30 days prior to the meeting.²⁴² Once the county planning and zoning commission certifies its plan, the plan must be delivered to the board of county commissioners.²⁴³ The board must also hold a public meeting before voting, which must be noticed through publication at least 14 days prior to the meeting.²⁴⁴ Other than meetings to do with internal business, any meetings, records and accounts of either the county planning and zoning commission meetings or the board of county commissioners must be available to the public. The county may not require registration or impose other conditions on participation or attendance.²⁴⁵

The public can also influence the land use planning process by petitioning the planning and zoning commission to amend an existing land use plan.²⁴⁶ The statute does not provide further guidance on the process for making a petition.

iii. Accountability

County actions, like those of state agencies, are subject to judicial review pursuant to the Wyoming APA.²⁴⁷ Accordingly, as with the ISC, an aggrieved person can petition the appropriate district court for judicial review.²⁴⁸

In addition to the rights applicable to all agencies, the Wyoming Public Records Law creates a separate procedure for mediating disputes regarding the availability of public records. Disputes are mediated by an “ombudsman,” appointed by the governor.²⁴⁹ Applicants for public records can file complaints with the ombudsman if the applicant cannot agree with the custodian of the records regarding the custodian’s decision to withhold documents, to defer the date of release for good cause beyond 30 days, or for failing to produce a record.²⁵⁰ The ombudsman can review the documents in camera and determine whether the document could be released, also waive fees, and prescribe timelines for release.²⁵¹ Notwithstanding the opportunity to mediate through an ombudsman, an applicant for public records can still file for judicial review of the custodians decision.²⁵²

²⁴⁰ Wyo. Stat. Ann. 18-5-202 (2023).

²⁴¹ *Id.*

²⁴² *Id.*

²⁴³ *Id.*

²⁴⁴ *Id.*

²⁴⁵ Wyo. Stat. Ann. §16-4-403(b)(2023).

²⁴⁶ Wyo. Stat. Ann. §18-5-202 (2023).

²⁴⁷ Wyo. Stat. Ann. §16-3-101(b)(i)(2023)(defining a county as an “agency” for purposes of the Wyoming Administrative Procedure Act).

²⁴⁸ Wyo. Stat. Ann. §16-3-114(a) (2023).

²⁴⁹ Wyo. Stat. Ann. §16-4-20(a)(xiv)1(2023).

²⁵⁰ Wyo. Stat. Ann. §16-4-202-203(2023).

²⁵¹ Wyo. Stat. Ann. §16-4-202(v) (2023).

²⁵² *Id.*

D. The Department of Energy’s Administration of the Advanced Reactor Demonstration Program

The ARDP program is administrated by the DOE.²⁵³ It provides cost-share support with the private sector for advanced reactor demonstration projects through cooperative agreements.²⁵⁴ According to the 2020 funding opportunity announcement (FOA),²⁵⁵ to qualify as a demonstration project “the advanced reactor must be designed, sited, licensed by the NRC, constructed and operational within 5-7 years from the date of award of the cooperative agreement.”²⁵⁶ The 2020 FOA required applicants to “describe [their] approach to addressing the environmental requirements in 10 CFR [Part] 51,” and provide discussion on site selection.²⁵⁷

i. Transparency

FOAs innately function as transparency mechanisms, as they publicly announce the availability and requirements of federal funding opportunities.²⁵⁸ Under federal regulations, the DOE must “post synopses of its FOAs and modifications to the announcements at the Grants.gov Internet site,” and “must use the government-wide standard format to publish program announcements of funding opportunities.”²⁵⁹ The DOE must provide prompt notice in writing to unsuccessful applicants²⁶⁰ but is not required to provide a public rationale for its choice of awardees. Additionally, DOE funding decisions can trigger NEPA, which in turn triggers public notification and public reporting requirements, discussed further in the subsequent section.

ii. Public Participation

Award decisions are made by the DOE and do not include input from the public;²⁶¹ however, the public has an opportunity to comment on DOE’s administration of the ARDP program through the NEPA process. Selected applicants are awarded funding through cooperative agreements.²⁶²

²⁵³ Congress gave the DOE the authority to establish the ARDP Program in the Energy Act of 2020. Subsequent to the award to TerraPower, administration of the program was moved into OCED following its establishment in 2021 pursuant to the Bipartisan Infrastructure Law.

²⁵⁴ A cooperative agreement “is a legal instrument reflecting a relationship between a federal agency and a non-federal recipient, made in accordance with the Federal Grant and Cooperative Agreement Act of 1977.” *See* 31 U.S.C. § 6301.

²⁵⁵ TerraPower’s Natrium project was selected as a demonstration program in response to DE-FOA-0002271. *See* US DEP’T OF ENERGY OFF OF NUCLEAR ENERGY, *Reactor Fleet and Advanced Reactor Deployment, DE-FOA-0002271, Amendment 000003, Advanced Reactor Demonstration; Financial Assistance Funding Opportunity Announcement 6* (issued May 14, 2020, as amended Aug. 12, 2020) <https://www.grants.gov/search-results-detail/326997> [HEREINAFTER “2020 FOA”]; *see also* 42 U.S.C. § 16271(a); Further Consolidation Appropriations Act, 2020 (H.R. 1865); 42 U.S.C. 13525; 165 Cong. Rec. H11246 (daily ed. Dec. 17, 2019) (Explanatory Statement regarding H.R. 1865, Further Consolidated Appropriations Act 2020).

²⁵⁶ 2020 FOA, *supra* note 255.

²⁵⁷ *Id.*

²⁵⁸ 10 C.F.R. § 600.8 (2024).

²⁵⁹ “Announcements of funding opportunities for awards less than \$25,000 for which 100 percent of eligible applicants live outside of the United States” and “[s]ingle source announcements of funding opportunities which are specifically directed to a known recipient” are exempted from the synopses requirement. 10 C.F.R. § 600.8(a)(2), (c).

²⁶⁰ 10 C.F.R. § 600.19 (2009).

²⁶¹ 2020 FOA, *supra* note 255.

²⁶² *Id.* at 7.

Funding provisions of cooperative agreements can trigger NEPA review for the DOE's decisions regarding "whether to provide federal funding through financial assistance agreements" to private industry projects that "could cause adverse impacts to human health or the environment."²⁶³ Per the EA for the Test and Fill Facility, NEPA will apply three different parts of the TerraPower Sodium Demonstration Project proposed in Kemmerer, Wyoming: 1) a Fuel Fabrication Facility, 2) the Sodium reactor (Kemmerer Unit 1), and 3) the Sodium Test and Fill Facility (TFF).²⁶⁴ The Fuel Fabrication Facility is a proposed expansion of an existing facility under a current NRC license, and to comply with NEPA, the existing facility has submitted an Environmental Report Supplement to the NRC's EA prepared in 2009.²⁶⁵

For Kemmerer Unit 1, NEPA applies to actions that both the DOE and the NRC must take for the construction and operation of the Unit.²⁶⁶ The DOE will undergo NEPA review to "evaluate the potential impacts to the human environment that would result from authorizing the expenditure of federal funds" for preconstruction activities.²⁶⁷ "Preconstruction activities" generally include: "Preparation of a site for construction of a facility"; "Erection of fences and other access control measures that are not safety or security related"; Excavation; "Erection of support buildings (e.g., construction equipment storage sheds)"; and the "Building of service facilities (e.g., paved roads, parking lots)".²⁶⁸ The DOE determined that an EA is required to inform its decision for "whether to provide federal funding to TerraPower in support of the Kemmerer Unit 1 Project" in July of 2024.²⁶⁹ The DOE is currently in the process of conducting this EA and will accept comments on the draft from October 21, 2024 to November 20, 2024.²⁷⁰ For the NRC's NEPA compliance, the NRC's regulations mandate evaluating "the potential impacts to the human environment associated with construction and operation of Kemmerer Unit 1 in an EIS."²⁷¹

For the TFF portion of the Sodium project, the DOE completed an EA under NEPA before deciding whether to expend "federal funds to support the construction and operation, of a sodium test and fill facility" in May 2024.²⁷² This process allowed the DOE to consider their proposed action: in this case, authorizing TerraPower to use federal funds for the TFF, and alternatives to that action, namely the "No-Action Alternative."²⁷³ Under the "No-Action Alternative," the DOE "would not authorize the expenditure of federal funds by TerraPower in support of the Proposed Project."²⁷⁴

²⁶³ See U.S. DEP'T OF ENERGY OFF. OF CLEAN ENERGY DEMONSTRATIONS, FINAL ENVIRONMENTAL ASSESSMENT: TEST AND FILL FACILITY KEMMERER, LINCOLN COUNTY, WYOMING, DOE/EA-2217, 1 (2024), <https://www.energy.gov/sites/default/files/2024-05/final-ea-2217-tff-05-16-2024.pdf> [HEREINAFTER "The Final EA"].

²⁶⁴ *Id.* at 2.

²⁶⁵ *Id.* at 4.

²⁶⁶ *Id.* at 3.

²⁶⁷ *Id.* at 3-4.

²⁶⁸ *Id.*

²⁶⁹ DOE/EA-2264: TerraPower, LLC's Kemmerer Unit 1 Preliminary Activities, Lincoln County, WY, OFF. OF NEPA POLY AND COMPLIANCE, <https://www.energy.gov/nepa/doeea-2264-terrapower-llcs-kemmerer-unit-1-preliminary-activities-lincoln-county-wy> (last visited Nov. 5, 2024).

²⁷⁰ *Id.*

²⁷¹ The Final EA, *supra* note 263 at 4; *see also* 10 C.F.R. Part 51.

²⁷² U.S. DEP'T OF ENERGY OFF. OF CLEAN ENERGY DEMONSTRATIONS, DRAFT ENVIRONMENTAL ASSESSMENT: TEST AND FILL FACILITY KEMMERER, LINCOLN COUNTY, WYOMING, DOE/EA-2217, iii (2024), <https://www.energy.gov/sites/default/files/2023-11/draft-ea-2217-terrapower-test-fill-2023-11.pdf> [HEREINAFTER "The Draft EA"].

²⁷³ *Id.* at 7, 18.

²⁷⁴ *Id.* at 18.

During the course of conducting the EA for the TFF, the DOE requested public input for the scoping process and on the draft EA.²⁷⁵ The public provided comments on the Scoping Notice, which allowed commenters to suggest more alternatives for the DOE to consider.²⁷⁶ For this EA, the DOE received two additional alternatives in the scoping comments where the DOE was asked to consider granting reduced funding to TerraPower and to consider a renewable energy alternative.²⁷⁷ However, these alternatives were eliminated from further analysis in the EA draft, because they were outside the scope of the NEPA document and were not pertinent to the purpose and need of the ARDP.²⁷⁸ Commenters on the EA draft asked for certain information to be updated or included and voiced concerns over certain processes that had occurred, among other things, to which the DOE responded by updating and adjusting the draft EA in accordance with the comments or by explaining their position in response to the concerns.²⁷⁹ Because the DOE has broad discretion to impose requirements in its cooperative agreement and is not compelled to require public participation, the NEPA process provides the most assured avenue for the public to participate in the ARDP process.

iii. Accountability

Only the recipient of DOE financial assistance has standing to dispute DOE's award or administration of financial assistance.²⁸⁰ The Part 600 regulations authorize the DOE to suspend or terminate an award for cause and to take other enforcement actions for non-compliance.²⁸¹ While alternative dispute resolution is encouraged, once the DOE has reached a final determination regarding the dispute, the decision can be appealed to the Senior Procurement Executive for the DOE.²⁸² In addition, the recipient can appeal findings of noncompliance, termination of awards, and disallowance of costs, among other actions authorized by the program or terms of the award, to the Civilian Board of Contract Appeals.²⁸³ The DOE's special contract requirements expressly disclaim availability of claims by third party beneficiaries.²⁸⁴ Courts have been similarly wary to recognize third party beneficiaries of government contracts,²⁸⁵ and, therefore, members of the public cannot sue to enforce the terms of financial assistance awards or claim consequential damages from nonperformance.

²⁷⁵ *Id.* at iii, 5.

²⁷⁶ *See id.* at 19.

²⁷⁷ *Id.*

²⁷⁸ *Id.*

²⁷⁹ *Id.* at App B.

²⁸⁰ The regulations do not specify whether an unsuccessful applicant for a DOE award of financial assistance can be appealed, however, the authors believe it would most likely be appealable as a final agency action pursuant to the APA if the unsuccessful applicant could demonstrate standing and redressability.

²⁸¹ 10 C.F.R. § 600.25 (2009).

²⁸² 10 C.F.R. § 600.22 (2009).

²⁸³ 41C.F.R. § 105-53.132 (2013).

²⁸⁴ PART I, SECTION H, SPECIAL CONTRACT REQUIREMENTS, U.S. DEPT. OF ENERGY, H.2 DOE-H-2002 (2020) <https://www.emcbc.doe.gov/SEB/Files/OSMS/FinalRFP/OSMS%20FRFP%20Section%20H.pdf>.

²⁸⁵ Gabe Chess, *Third-Party Beneficiaries of Government Contracts: Imagining an Equitable Approach and Applying It to Broken Promises in Detroit*, 121 MICH. L. REV. 291, 296 (2022) (citing RESTATEMENT (FIRST) OF CONTRACTS § 145 (AM. L. INST. 1932)); RESTATEMENT (SECOND) OF CONTRACTS § 313 (AM. L. INST. 1981).

The public only has rights to appeal DOE decisions with respect to ARDP awards and administration based on potential violations of NEPA. As with any other NEPA decision, individuals who participated in the NEPA process as commenters have the right to appeal the agency's final decision to the district court.²⁸⁶ The court reviews the agency's decisions either about the type or level of environmental review (e.g. EA or EIS) as well as the adequacy of the NEPA review, including its review of impacts to environmental justice communities.²⁸⁷ If the challenge is successful, a court may remand the decision back to the agency to cure any procedural deficits, including by requiring supplemental environmental analysis.²⁸⁸

IV. Procedural Justice Assessment of Regulatory Siting Procedures Applicable to the Natrium Project

As illustrated in Table 2.1, each of the primary state and federal procedures for siting the Natrium facility include legal requirements related to procedural justice concepts of access to information (i.e., transparency), public participation, and judicial review (i.e., accountability). In general, the public is provided with information about projects through publication and notice requirements, however participation in formal proceedings is limited to government entities and persons with specific interests in the project, provided they go through administrative formalities. At the federal level, stakeholders who do not have the right to participate in hearings or other proceedings can introduce their perspectives and any new information through the NEPA processes applicable to the NRC and the DOE. In the ISC process, stakeholders who are not entitled to join as a party, and, therefore, have no rights of appeal, can submit written comments. Both Wyoming state and federal administrative procedure statutes allow stakeholders who participated in public comment processes or hearings to ask a court to review the agency's processes following a final decision. These accountability mechanisms are intended to assure that agencies are following their formal procedures and acting within the scope of their authority. They do not allow parties to demand substantive outcomes.

²⁸⁶ Judicial relief from a final agency action arising from the NEPA process is afforded under the Administrative Procedure Act. See 5 U.S.C. § 702. Daniel R. Mandelker, et al., NEPA LAW AND LITIG. § 3:4 (2024).

²⁸⁷ *Sierra Club v. FERC*, 867 F.3d 1357, 1368 (D.C. Cir. 2017).

²⁸⁸ Marianne Engelman Lado & Kenneth Rumelt, *Pipeline Struggles: Case Studies in Ground Up Lawyering*, 45 HARV. ENV'T. L. REV. 377, 408 (2021) (“the judiciary's willingness to remand NEPA violations without vacatur or injunctive relief has arguably softened the blow of violating NEPA”).

Table 2.1*Procedural Justice Assessment of Siting Processes in the Sodium Advanced Nuclear Reactor Demonstration Project*

Oversight Level	Transparency	Public Participation	Accountability
Nuclear Regulatory Commission (NRC)	Public: Agencywide Document Access and Management System (ADAMS) database, open meetings, notices and draft decisions posted in the Federal Register, interested parties may subscribe to information and updates directly. Agency must respond to all comments and provide reasons for decisions.	Public: National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) scoping process, public comments on draft EIS. Agency hosts information meeting; comment gathering meeting; observational meeting.	Parties to Proceeding; government entities: Hearings conducted by independent licensing board within NRC for specific contentions. NEPA Commenters & Parties: Judicial review of final agency action such as NRC ruling on contentions or NEPA environmental analysis.
Wyoming Industrial Siting Division (ISD)	Public: Industrial siting applications are posted online, published in newspapers and with the county clerk's office; hearings are livestreamed. Agency must detail reasons for decisions. Subject to Wyoming's Open Meetings Law and Public Records Law.	State government entities; local governments impacted by facility; residents and non-profits of impacted local government; record title owners affected by facility: Hearing	Participants in Hearing; Judicial review pursuant to Wyoming Administrative Procedure Act.
Local Governments via County Level Land Use Planning	Public: Meetings must adhere to Wyoming Open Meetings Law which requires meetings to be open to the	Petition of the local county planning and zoning commission to amend an existing land use plan; participation at public meetings.	District Court judicial review; direct complaints against county actions via petition to district court for judicial

Oversight Level	Transparency	Public Participation	Accountability
	public, restricts communication outside public meeting spaces, and requires minutes be taken at meetings. Wyoming’s Public Records Law requires that these minutes be available for public inspection during business hours and upon written request.		review; registration of complaint with appointed ombudsman for disputes regarding the availability of public records.
Department of Energy’s Administration of the Advanced Reactor Demonstration Program (ARDP)	Public: Funding opportunity announcement and Merit review criteria are publicly available, awards are publicly announced	Public: NEPA review and public comment for major funding decisions. [No relevant mechanisms identified]	NEPA Commenters; Judicial review of final agency action. ARDP Applicants: Judicial review of award decision process; Review by Special Procurement Executive

Just procedures require not only that transparency, public participation, and accountability exist across numerous levels of decision-making, but also that these procedures are accessible.²⁸⁹ Stakeholders must, therefore, be aware of and have the capability to access these processes. This requires an evaluation of whether requirements designed to assure constructive notice result in actual notice to affected parties. For example, the NRC and Wyoming Industrial Siting processes are required by law to include specified government entities in certain parts of their decision processes, thereby assuring that local bodies have actual notice of potential projects and their right to participate in formal procedures. In contrast, unless they affirmatively request notice through administrative proceedings, individuals and other stakeholders receive passive notice. They either must rely on these government actors to make them aware of the project or monitor agency websites, local newspapers, and the Federal Register.

Procedural justice also requires attention to whether the opportunities to participate in formal procedures provide opportunities to meaningfully influence decision outcomes.²⁹⁰ The NRC has substantial power as a gatekeeper to determine who can participate and to what extent. For example, the NRC has near complete discretion regarding which groups would be “affected” and therefore entitled to participate in the NEPA scoping process.²⁹¹ The participation of non-party groups and individuals is limited to making public comments either through the NEPA process or during

²⁸⁹ Exec. Order No. 12898, 59 Fed. Reg. 629 (Feb. 11, 1994) (reprinted at 3 C.F.R. § 859).

²⁹⁰ Skinner-Thompson, *supra* note 11, at 406.

²⁹¹ *See id.*; see 40 C.F.R. § 1502.4(b) (2024); see 40 C.F.R. § 1501.9(a), (b) (2024).

rulemaking.²⁹² Given the highly technical nature of agency reports and releases, members of the public may lack the technical expertise to evaluate the proposed action and introduce substantive comments.²⁹³ Moreover, while the decision-making agency will be required to respond to such comments, commenting largely only triggers procedural requirements and not substantive changes to the outcome.²⁹⁴

In addition to assuring that transparency and participation processes are accessible and inclusive, Congress, the DOE, and state legislatures all have opportunities to increase procedural protections related to nuclear energy facility siting and to improve substantive environmental justice outcomes. Since none of the agencies significantly involved in the siting process has authority to make decisions based on environmental justice concerns, stakeholders could not challenge substantive outcomes on that basis. In fact, based on current rules, were these agencies to go beyond their statutory authority and deny a permit specifically based on environmental justice, that decision would be vulnerable to challenge. While presidential executive orders require consideration of environmental justice as part of the NEPA analysis, to bring substantive challenges to decisions based on inadequate community engagement or potential disproportionate impacts to disadvantaged communities, those factors would need to be formally incorporated into an agency's decision-making criteria.

Recent legislation will require the NRC to consider these factors in future licensing decisions for certain reactors. The Accelerating Deployment of Versatile Advanced Nuclear for Clean Energy (ADVANCE) Act, passed by Congress in 2024, requires the NRC to develop strategies and initiate rulemaking that would accelerate “efficient, timely, and predictable” licensing reviews for advanced nuclear energy facilities located on brownfield sites and the sites of fossil fuel electric generation facilities that are retired or scheduled to retire.²⁹⁵ “Community engagement and historical experience with energy production” are among the factors that Congress now requires the NRC to consider.²⁹⁶ Congress' inclusion of this factor—not included in other NRC licensing rules—represents an acknowledgement that energy communities like Kemmerer have diverse and varied experiences with energy and should have an opportunity to participate in decisions about transitions to nuclear.

The rulemaking process that will be initiated by the ADVANCE Act provides an opportunity for the NRC—and commenters—to suggest opportunities to improve procedural justice protections within NRC processes. If community engagement is added as a criterion for NRC decision-making, it could provide future opportunities for parties to request judicial review of factual determinations on this issue. However, the requirements suggested by the ADVANCE Act are unnecessarily narrow and would not extend these protections to all communities nor even to all coal communities. For example, while the Natrium facility is being constructed within an energy community and will eventually replace generation from some coal-fired units, it is being constructed at a greenfield location. It is not being built on the site of the existing Naughton coal-fired power plant; therefore,

²⁹² See 10 C.F.R. § 51.1 *et seq.*

²⁹³ *Id.* at 433. The recommendations of the White House Environmental Justice Advisory Council suggest that the NEPA process for “large-scale pilots” should “provide capacity and funding for communities with environmental justice concerns to retain experts, including those with lived experience expertise.” See, Recommendation Report from The White House Environmental Justice Advisory Council to the Council on Environmental Quality, *Recommendation Report 2: Carbon Management*, 58 (Oct. 4, 2024).

²⁹⁴ *Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 558 (1978).

²⁹⁵ Skinner-Thompson, *supra* note 11, at 433.

²⁹⁶ ADVANCE Act of 2023, Pub. L. 118–67 §206(c)(2)(F) (2024) (to be codified at 42 U.S.C. 2133).

rules likely to be promulgated by the NRC for brownfield projects would not apply. This takes an unnecessarily narrow view of coal-to-nuclear transitions by focusing on the physical boundaries of the facility and not community-wide impacts. The ADVANCE Act illustrates, however, that Congress could require community engagement to be incorporated more broadly into the licensing process for new advanced nuclear energy facilities.

While the DOE administration of the ARDP includes few direct requirements related to transparency, public participation or accountability with respect to the selection and administration of awards, the DOE can require applicants to take actions that would advance procedural justice goals. The DOE has already taken steps to do this by including community benefit planning as part of its Evaluation and Selection Criteria, including through Program Policy Factors.²⁹⁷ Program Policy Factors are factors that are not indicators of the application’s merit but which “maximize the effectiveness of available Government funding and [] best achieve DOE program objectives.”²⁹⁸ These factors may include things like “geographic distribution, diverse approaches, or complementary efforts.”²⁹⁹ Given the directives of the Justice40 program and other federal environmental justice directives, the DOE could include community support—potentially indicated by letters of support—for the project as a Program Policy Factor within its merit criteria.

The DOE could further require additional substantive requirements for community engagement or public participation through its cooperative agreements. Cooperative agreements are one type of award instrument that DOE uses to form relationships with nonfederal entities and accomplish “a public purpose of support or stimulation authorized by Federal statute” by transferring money or property.³⁰⁰ The DOE must use cooperative agreements when the contemplated activity or project is anticipated to require substantial involvement between the DOE and the award recipient.³⁰¹ Federal regulations grant some adjudicatory power to agencies administering cooperative agreement, including the right to intervene in the conduct or performance of project activities for programmatic reasons, including the “interruption or modification of the conduct or performance of project activities.”³⁰² ARDP awards pursuant to the 2020 FOA were made using cooperative agreements.³⁰³

Federal regulations provide the DOE with flexibility to establish the requirements of awards to meet program goals. The DOE has adopted the Office of Management and Budget’s guidance for administering federal awards in 2 C.F.R. part 200.³⁰⁴ Part 200 authorizes federal agencies to impose

²⁹⁷ 2 C.F.R. 1402.204.

²⁹⁸ DOE Guide to Financial Assistance 2.4.3. (June 2008).

²⁹⁹ *Id.*

³⁰⁰ *See* 10 C.F.R. § 600.5(a).

³⁰¹ *Id.* at § 600.5(b). “Substantial involvement” exists in this context when the responsibility for performing the project or the management, control, or direction of the project is shared by DOE and the recipient. Generally, providing technical assistance or guidance of a programmatic nature to a recipient does not constitute substantial involvement unless the recipient is required to follow the guidance or the technical assistance or guidance is expected to result in continuing DOE involvement with performing the project. *Id.* at § 600.5(c).

³⁰² *Id.* at § 600.5(d).

³⁰³ US DEP’T OF ENERGY OFF. OF NUCLEAR ENERGY, *Reactor Fleet and Advanced Reactor Deployment, DE-FOA-0002271, Amendment 000003, Advanced Reactor Demonstration; Financial Assistance Funding Opportunity Announcement 6* (issued May 14, 2020, as amended Aug. 12, 2020), <https://www.grants.gov/search-results-detail/326997> (“All awards will be executed using financial assistance procedures in 2 Code of Federal Regulations (CFR) 200 and 2 CFR 910, and awarded as cooperative agreements”).

³⁰⁴ 2 C.F.R. § 910.120. DOE also supplements this guidance to include for-profit entities as eligible recipients of federal awards. *Id.*

wide-ranging requirements on award recipients so long as the requirements are used to effectuate a federal funding program's goals and objectives.³⁰⁵ Requirements such as reporting and milestones are designed to ensure the program will provide meaningful results that are consistent with the Federal authorizing legislation.³⁰⁶ Requirements could also apply to measuring the recipient's performance in achieving the program's goals and objectives and assuring recipient and research integrity, project and program safety, responsible use of federal funds and property, and compliance with applicable federal laws.³⁰⁷ Title 2 provides agencies with broad discretion regarding how to draft milestones and requirements in cooperative agreements to assure that program objectives, as established by Congress or through executive order, are achieved.

The goal of the ARDP is to help commercialize new, advanced nuclear technologies. In so doing, OCED can impose requirements which help achieve this objective, thereby protecting the taxpayer from potential loss. Since the ARDP is a voluntary program, meaning that the developers of advanced nuclear energy facilities are not obligated to apply or participate, OCED can put conditions on the receipt of federal funds to ensure that stakeholders have robust opportunities to participate in decision-making and that justice-informed site selection processes are followed. These could be adapted to the three stages of ARDP funding to provide opportunities for technologies to be informed by stakeholders and communities. While the inclusion of procedural justice milestones in cooperative agreements issued pursuant to the ARDP would not apply to most nuclear energy facilities, a higher standard for procedural justice is appropriate given that ARDP projects involve undemonstrated new technologies and receive public money for their development and construction.

Notwithstanding the opportunities for improvement, opportunities for public participation and accountability for nuclear facilities are more robust than almost any other industrial facility built in the United States. Since almost all states have primary enforcement authority for administration of the Clean Air Act and Clean Water Act, most energy generation facilities (with the exception of hydroelectric facilities which are licensed by the Federal Energy Regulatory Commission)³⁰⁸ do not require federal permits and therefore no NEPA review is required.³⁰⁹ However, since the NRC has responsibility for the safety review of every nuclear facility built in the United States, *every* siting decision must comply with NEPA including opportunities for public comment, contested hearings, and judicial review. To the extent that these requirements do not provide adequate opportunities for public participation and substantive influence on administrative decision-making, those critiques apply to United States administrative processes at large.³¹⁰

These limitations, however, emphasize the importance of multi-layer governance structures. The federal processes in place today are not intended to create substantive requirements related to

³⁰⁵ See 2 C.F.R. § 200.202; *see generally*, Federal Grant and Cooperative Agreement Act of 1977, Pub. L. No. 95-224, 92 Stat. 3 (1978).

³⁰⁶ See *id.*

³⁰⁷ 2 C.F.R. § 200.211; 2 C.F.R. § 910.132(a); 2 C.F.R. § 200.324(a); 2 C.F.R. Pt. 200, App. II; see 2 C.F.R. § 183.30. 2 C.F.R. § 200.211; 2 C.F.R. § 200.301.

³⁰⁸ 16 U.S.C. § 797(e).

³⁰⁹ See, Steven Ferrey, *Article: Eminent Domain and Serrated Power*, 39 HAWAII L. REV. 171, 175 (2016); *Upsetting the Balance: Environmental Protection Agency Has Power to "Veto" State Permit Determinations Under the Clean Air Act*, 25 J. LAND RESOURCES & ENVTL. L. 73 (2005).

³¹⁰ Shalanda Baker, *Anti-Resilience: A Roadmap for Transformational Justice within the Energy System*, 54 HARV. C.R.-C.L. L. REV. 1, 47 (2019) (arguing that anti-oppressive energy policies must be procedural and substantive).

environmental justice nor to establish consent-based processes. To the extent that agencies have opportunities for public participation, those opportunities are oriented towards gathering information related to the agencies' primary functions—safety, for the NRC, and technology demonstration, for OCED—both items of national or interstate concern. In contrast, land use decisions, like siting, are a state function. State legislatures have authority to enact laws to assure public participation opportunities and to create substantive requirements mandating that community and stakeholder voices are sufficiently incorporated into decision processes.

State legislatures have ample authority to pass legislation that would increase the power and participation of stakeholders in siting processes and to take specific action to protect environmental justice within communities. Numerous state legislatures, including California,³¹¹ Colorado,³¹² New Jersey,³¹³ Massachusetts,³¹⁴ Washington,³¹⁵ and New York,³¹⁶ have enacted environmental justice legislation. These vary in their requirements, with some creating new agencies and procedural requirements related to environmental justice analyses³¹⁷ and others, such as those in New Jersey³¹⁸ and New York,³¹⁹ imposing substantive requirements restricting the right to issue permits in disadvantaged communities. Other states have reserved the right to require legislative or voter approval prior to authorizing construction of new nuclear facilities.³²⁰

In Wyoming, the Industrial Siting and Development Act imposes procedural requirements related to siting large facilities. The act assures state agencies, local governments, residents, and locally based nonprofit organizations opportunities to participate in the permitting process, requires socioeconomic assessments, and assesses impact fees for anticipated burdens.³²¹ These requirements only necessarily apply, however, where local governments are not in full agreement regarding the project. The industrial siting process allows project developers to request waivers if the applicant can demonstrate that the facility is in accordance with local ordinances and land use plans and that it has discussed the facility with local governments that are potentially impacted and reached agreements with those governments for mitigation of impacts. While local governments have a central role in the waiver process, in the absence of a waiver, local governments are precluded from requiring additional permits after the ISC permit has been issued.³²² This diminishes local say in project requirements and limits the opportunity for community members to participate in county or city level permitting processes.

Wyoming, however, has precedent for greater integration of county- and city-level permitting processes through its siting procedures for wind energy. All wind energy projects are required to obtain a permit from the board of county commissioners in the county where the facility is

³¹¹ Cal. Gov't Code § 65040.12 (West) (2024).

³¹² Colo. Rev. Stat. Ann. § 25-1-133.5 (West) (2024).

³¹³ N.J. Stat. Ann. § 13:1D-157 (West) (2024).

³¹⁴ Mass. Gen. Laws Ann. ch. 30, § 62K (West) (2024).

³¹⁵ Wash. Rev. Code Ann. § 70A.02.110 (West) (2024).

³¹⁶ N.Y. Env't Conserv. Law § 48-0111 (McKinney 2024).

³¹⁷ See, e.g., Cal. Gov't Code § 65040.12 (West) (2024).

³¹⁸ N.J.A.C. 7:1C.

³¹⁹ Michael B. Gerrard & Edward McTiernan, *New York Adopts Nation's Strongest Environmental Justice Law*, N.Y.L.J. (2023).

³²⁰ See, e.g., Haw. Const. art. 11 and 30 V.S.A. § 248 (requiring legislative approval in Hawaii and Vermont); § 8 35-A M.R.S.A. § 4302 and M.G.L.A. 164 App. § 3-3 (requiring voter approval in Maine and Massachusetts).

³²¹ While the law requires the applicant to estimate local revenue in the application, impact fees are not intended to address distributional justice concerns about how benefits of projects are localized.

³²² Wyo. Stat. Ann. § 35-12-115(a) (2023).

proposed to be located.³²³ The Wyoming Industrial Siting and Development Act imposes minimum requirements for notice to landowners, and setbacks, and requires development of emergency management, reclamation, and decommissioning plans, among others.³²⁴ The act also requires a separate hearing and public comment period. The county can only deny the permit where the application fails to meet the statutory requirements and any local requirements for “property adopted by the board of county commissioners.” Those that qualify as large facilities subject to the industrial siting process are also required to obtain a permit from the ISD. While local governments will still be limited in the types of land use regulations they can enact, the dual permit process provides greater control to county governments and opportunities for local public participation for wind and solar facilities than it does for other facilities subject to the industrial siting process.

The absence of more robust state and local siting procedures for nuclear energy facilities and the election of representatives that support expedited development of those facilities, however, may indicate implicit consent among Wyoming residents and community members in Kemmerer. Given the lack of consolidated interim long-term storage facilities or a permanent repository for nuclear waste in the United States, nuclear facilities are de facto distributed storage facilities for spent nuclear fuel.³²⁵ Limits on the right to store spent fuel onsite, therefore, function as a ban on construction of new nuclear facilities.³²⁶ The Wyoming legislature has enacted legislation explicitly allowing interim storage of spent fuel at nuclear power plants.³²⁷ This legislation was supported by Representative Heiner and State Senator Baldwin, the elected officials in the districts including Kemmerer, Frontier, and Diamondville.³²⁸ In 2024, the house Minerals, Business, and Economic Development Committee, of which Heiner is a member, also introduced a bill that would modify the requirements for consolidated interim storage facilities.³²⁹ These and other new statutes³³⁰ smooth the path to construction of advanced nuclear energy facilities in Wyoming. Similarly, the Board of County Commissioners for Lincoln County has not amended its land use plan, notwithstanding that the industrial siting process provides it with the opportunity to more specifically designate the areas where nuclear facilities could be sited.³³¹ If citizens believed that current procedural justice requirements were inadequate, they could demand new procedural or substantive protections from their elected representatives.

³²³ Wyo. Stat. Ann. § 18-5-502 (2023).

³²⁴ Wyo. Stat. Ann. § 18-5-503 (2023).

³²⁵ Blue Ribbon Report, *supra* note 21 at 39-40; Matthew James Braquet, Comment, *Stop Kicking the Can Down the Road: An Urgent Call to Save the United States From Nuclear Disposal*, 7 L.S.U. J. OF ENERGY L. AND RES. 245, 263 (2019).

³²⁶ Braquet, *supra* note 325325 at 251.

³²⁷ Nuclear Power Generation and Storage Amendments, HB0131, 66th Leg. (2022), codified at Wyo. Stat. Ann. §35-11-1506 (2023).

³²⁸ *See*, Votes, HB0131, 66th Leg. (2022), <https://wyoleg.gov/Legislation/2022/HB0131>. While Baldwin did not seek reelection in 2024, Heiner’s seat was uncontested and he received 99.99% of votes cast in his district. *See*, Wyoming Sec. of State, 2024 General Election, House Candidates Summary, https://sos.wyo.gov/Elections/Docs/2024/Results/General/2024_General_Statewide_House_Candidates_Summary.pdf.

³²⁹ Used Nuclear Fuel Storage-Amendments, 25LSO-0253, 68th Leg. (2024).

³³⁰ Wyo. Stat. Ann. §§ 35-11-2101; 39-23-105; 37-3-117 (2023).

³³¹ *See supra* Chapter 2, § III, E.