Hearing to examine proposed legislation entitled, "Build Nuclear with Local Materials Act", "RECHARGE Act," and "Enrichment Licensing Modernization Act."

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My name is Nick Loris, and I am the President of the Conservative Coalition for Climate Solutions (C3 Solutions) and an Energy Fellow at the Abundance Institute. Thank you for this opportunity to appear before the subcommittee to discuss the Build Nuclear with Local Materials Act, RECHARGE Act, and the Enrichment Licensing Modernization Act.

My written testimony consists of the following sections:

- How nuclear energy can help boost economic growth and revitalize communities.
- Why the attributes of nuclear energy make it an attractive energy source to meet America's rising energy needs.
- How outdated policy and regulatory frameworks increase the price tag of nuclear.
- Why the Build Nuclear with Local Materials Act, RECHARGE Act, and Enrichment Licensing and Modernization Act can help reduce costs and delays and uphold the Nuclear Regulatory Commission's mandate of protecting public health, safety, and the environment.

Nuclear Energy as an Engine for Economic Growth, Revitalization, and Environmental Progress

Affordable, dependable energy is essential to Americans' quality of life and to the U.S. economy. Reliable power keeps families cool in the summer and warm in the winter, and provides the necessary input for manufacturing, agriculture, and technological innovation. Critically, access to cost-competitive energy can serve as an anchor for long-term economic revitalization in communities that have lost industry, jobs, and population.

Nuclear energy can be the hub of that economic growth. Nuclear plants create thousands of high-paying construction jobs, hundreds of permanent skilled positions, and decades of stable tax revenue that support schools, infrastructure, and local services. Just as importantly, abundant, reliable power attracts other industries that depend on affordable electricity and long-term certainty, including data centers, advanced manufacturing, chemical production, and high-tech supply chains. Communities can retain comparative advantages and attract industry rather than face economic decline. Consequently, those investments in communities provide jobs, economic activity, and tax revenue. Loudon County, Virginia, provides evidence of what growth looks like: data centers, higher county staff salaries, robust investments in schools, roads, and public services, and a lower tax burden on residents.[1]

With reliability needs at a premium and environmental targets in mind, the private sector, most notably hyperscalers, is making big bets on nuclear. Microsoft, Google, Amazon, and Meta have collectively backed more than twenty gigawatts of small modular reactor development to date. These investments provide several reasons to be optimistic about the future of nuclear power. First, in addition to signing power purchase agreements, several companies are more financially invested. Amazon committed to a $500 million funding round for X-energy, an advanced reactor and nuclear fuel design company. Meta announced 6.6 gigawatts in nuclear deals, spanning existing plants and next-generation advanced reactors, which is the largest corporate nuclear procurement in U.S. history. The deal includes a prepayment structure to fund the project early. For nuclear to play a meaningful role in America's future energy landscape, it is essential to move beyond pledges and commitments, which will require substantial private sector investment and a willingness to take on risk.

Moreover, the private sector is investing in companies with diverse technologies, creating more opportunities for nuclear technologies to become cost-competitive. Importantly, these companies can afford the premium required to invest in first-of-a-kind technologies and, ideally, help reduce cost curves and achieve economies of scale, enabling wider deployment of these reactors.

Such a model can be replicated in other parts of the country. For instance, TerraPower's Natrium reactor in Kemmerer, Wyoming, demonstrates how advanced nuclear can help retain skilled workers, spur private investment, strengthen local businesses, and position rural and industrial communities as hubs for the next generation of American energy and technological leadership. The Natrium design is a sodium-cooled reactor paired with molten-salt energy storage, capable of producing 345 megawatts of electricity and ramping up to roughly 500 megawatts during demand spikes. The molten salt battery gives the plant the flexibility to ramp up as needed. In a welcome sign, the Nuclear Regulatory Commission recently issued the construction permit for the reactor, 9 months ahead of schedule and 11 percent under budget.[2]

The Potential for Nuclear Energy to Meet Rising Power Demand

After roughly two decades of flat power consumption in the United States, demand is on the rise. Artificial intelligence, data centers, manufacturing growth, and broader electrification have increased power demand, and that demand is only going to grow. Grid Strategies forecasts that electricity usage will grow by an average of

[1] Judge Glock, "The Surprising Heart of the Data-Center Boom," *City Journal*, April 26, 2026, https://www.city-journal.org/article/loudoun-county-virginia-data-centers-construction

[2] U.S. Department of Energy, "NRC Issues Construction Permit to TerraPower's Natrium Advanced Reactor Demonstration Project," last modified May 10, 2024, https://www.energy.gov/ne/articles/nrc-issues-construction-permit-terrapowers-natrium-advanced-reactor

5.7 percent over the next five years, and peak load could increase by 166 gigawatts (GW), equivalent to 15 times New York City's[3] peak load. Lawrence Berkeley National Laboratory projects that data center electricity use alone will rise from roughly 4.4 percent of total electricity consumption in 2023 to between 6.7 and 12.0 percent in 2028, possibly tripling over five years.[4]

At the same time, electricity prices have become a top concern among American families and businesses as electricity prices are rising faster than inflation.[5] In a rare Level 3 alert, the North American Electric Reliability Corporation (NERC) has issued several grid stability warnings, primarily driven by large load growth and the inability of energy generation and infrastructure supply to keep pace with demand.[6] With rising electricity prices and mounting pressure on the grid, the need for more energy supply is obvious. Nuclear energy is well placed to help meet that demand. Nuclear energy offers several qualities and advantages that make it desirable for meeting rising energy needs. These attributes include:

- **Dependable.** The Department of Energy reports that the U.S. nuclear fleet operated at a capacity factor of 92.3 percent in 2024. As a result, nuclear accounts for only 8 percent of total U.S. installed capacity but contributes about 18 percent of the total electricity generated. AI infrastructure runs continuously, and operators of hyperscale facilities have been open about the need for reliable, dispatchable power and are willing to commit to long-term contracts to secure it.
- **Innovative and scalable.** A wide range of new nuclear technologies is available to meet increasing energy needs. Small modular light-water nuclear plants (SMRs) provide enhanced safety features and lower initial capital risks compared to larger light-water plants. Advanced reactors (Generation III+ and IV) are non-light-water technologies with passive safety systems and high fuel efficiency. Both SMRs and advanced reactors have distinct advantages: they can be manufactured in factories and deployed in smaller units, reducing construction costs and timelines while offering greater flexibility. Smaller footprints, reduced cooling water needs, and factory fabrication also allow these reactors to be in areas that may not support traditional plants and may be a more appropriate power supply for smaller communities.
- **Safe and clean.** Nuclear power is a clean source, providing emission-free electricity nearly all the time, and is highly safe. Advances in next-generation reactors have further reduced both actual and perceived risks. When comparing death rates per terawatt-hour across energy sources, nuclear power ranks among the safest options.[7] Despite radiation concerns, eating a banana or taking a long flight exposes you to more radiation than working at or living near a nuclear plant.[8] Innovative companies are developing next-generation nuclear reactors that pose even fewer safety and proliferation risks than present ones. Technologies such as advanced water-cooled reactors, sodium-cooled reactors, molten-salt reactors, and

[3] John D. Wilson, Sophie Meyer, Zach Zimmerman, and Rob Gramlich, Power Demand Forecasts Revised Up for Third Year Running, Led by Data Centers (Washington, DC: Grid Strategies LLC, November 2025), accessed May 14, 2026, https://gridstrategiesllc.com/wp-content/uploads/Grid-Strategies-National-Load-Growth-Report-2025.pdf
[4] Lawrence Berkeley National Laboratory, *Tracking Data Center Electricity Use in the United States* (Berkeley, CA: Lawrence Berkeley National Laboratory, 2024), https://eta-publications.lbl.gov/sites/default/files/data_center_energy_use_2024.pdf
[5] U.S. Energy Information Administration, "Commercial Electricity Sales Have Soared in Virginia, Driven by Data Centers," *Today in Energy*, April 21, 2025, https://www.eia.gov/todayinenergy/detail.php?id=65284
[6] North American Electric Reliability Corporation, "NERC Issues Level 3 Alert, Reliability Guideline Focused on Large Load Challenges," news release, May 4, 2026, https://www.nerc.com/newsroom/nerc-issues-level-3-alert-reliability-guideline-focused-on-large-load-challenges
[7] Hannah Ritchie and Pablo Rosado, "Nuclear Energy," *Our World in Data*, 2020, https://ourworldindata.org/nuclear-energy
[8] U.S. Department of Energy, Office of Nuclear Energy, "5 Radioactive Products We Use Every Day," September 12, 2023, https://www.energy.gov/ne/articles/5-radioactive-products-we-use-every-day

fusion reactors could make an industry already known for safety even safer. Moreover, even as commercial nuclear power expands to nearly 450 plants worldwide[9], there is scant evidence that increased nuclear energy use promotes proliferation. In fact, international cooperation among nuclear operators can strengthen nonproliferation efforts. While every energy source has environmental tradeoffs, nuclear energy's advantages are notable. Its lifecycle emissions are comparable to or lower than wind and solar, and it requires much less land.[10]

Outdated Policy and Regulatory Frameworks Increase Nuclear Energy's Price Tag

Even though nuclear power is safe, clean, and reliable, policymakers and ratepayers alike have a concern: whether it makes economic sense. While that question should be one for free, competitive energy markets to answer, there are reasons to be hopeful about technological advances and economies of scale that could make nuclear energy more cost-effective relative to other resources. Critically, one cannot overlook the government-imposed regulatory burdens that raise costs and slow the deployment of new plants, large and small.

Elevated inflation has driven up prices for nearly everything in the U.S. and global economy. This is especially true for capital-intensive energy infrastructure, where higher material and labor costs lead to budget overruns and project delays. Even so, evidence shows that regulatory costs are a significant driver *of* rising nuclear energy costs. Most technologies that experience cost declines and economies of scale, building nuclear plants has become more expensive even as the technology has improved.[11] While the need for specialized labor contributed to cost increases, several studies point to increased regulation as a factor.[12] The bills and discussion drafts under consideration for this hearing would help two of the government-imposed cost drivers.

Costly materials. The concrete, steel, and rebar used in nuclear power plants must meet strict quality assurance standards to be considered "nuclear-grade." These components can cost considerably more than alternatives even when they are identical in performance and composition because approval requires extensive analysis, testing, and documentation. Those requirements drive up costs, constrain supply chains, reduce the number of eligible suppliers, and slow construction timelines. A 2022 paper estimated the cost of nuclear concrete at a 50 percent increase over non-nuclear concrete, and in some cases, nuclear components can be 50 *times* more expensive.[13] A 2017 analysis by the Idaho National Laboratory found that quality control requirements and documentation account for 41 percent of the cost of steel and rebar and 23 percent of the cost of concrete. Even minor components can require extensive documentation, testing, and certification that dramatically increase costs without necessarily improving safety outcomes in non-safety-related applications.

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[9] World Nuclear Association, "Nuclear Power in the World Today," January 2026, https://world-nuclear.org/information-library/current-and-future-generation/nuclear-power-in-the-world-today

[10] World Nuclear Association, "How Can Nuclear Combat Climate Change?," May 1, 2024, https://world-nuclear.org/nuclear-essentials/how-can-nuclear-combat-climate-change

[11] Brian Potter, "Why Does Nuclear Power Plant Construction Cost So Much?," *Institute for Progress*, May 1, 2023, https://ifp.org/nuclear-power-plant-construction-costs/

[12] Ibid.

[13] Brian Potter, "Why Does Nuclear Power Plant Construction Cost So Much?," *Institute for Progress*, May 1, 2023, https://ifp.org/nuclear-power-plant-construction-costs/ and Benjamin T. Starkey, "Cost Estimation Model for U.S. Pressurized Water Reactor Construction Through Multiple Regression" (D.Eng. diss., George Washington University, 2022), https://scholarspace.library.gwu.edu/downloads/08612p390?disposition=inline&locale=en

Another reason for the higher costs is the shortage of suppliers and less competition. Brian Potter of the Institute for Progress noted that, "Because these requirements are difficult for manufacturers to implement, many simply don't bother to manufacture nuclear-grade components. Combined with the fact that the US spent a long period of time not building new nuclear plants, this limits the pool of potential nuclear component suppliers, making it harder to obtain components and further increasing their price."[14] Further, those limited suppliers who incur higher costs to manage stringent quality assurance programs can not only pass these costs on, but also exploit a captive customer with limited choices. While it is understandable that the suppliers, workforce, and technical expertise atrophied as the U.S. built fewer plants, nuclear developers should not have to use nuclear-grade materials when equally safe non-nuclear-grade components perform just as well.

The 2024 Advanced Nuclear for Clean Energy (ADVANCE) Act directed the NRC to produce a report on whether standard, commercially available materials would be adequate and safe. The NRC's report to Congress indicated that current regulations technically permit the use of such standard materials and components, but the approval pathways are complex, costly, and applied inconsistently.[15]

- **Burdensome and duplicative environmental reviews.** Compliance with the National Environmental Policy Act (NEPA) has historically required Environmental Impact Statements at the NRC, which take three to five years to complete.[16] That burden is harder to justify today than when NEPA was enacted. Since 1970, environmental law has expanded significantly, and NEPA now operates alongside a wide range of other federal and state permitting, consultation, and review requirements. In practice, that often makes NEPA duplicative of analyses already required elsewhere.

  At the NRC, the problem is compounded by a legacy regulatory approach shaped by the existing fleet: reactor applications are generally routed through the most burdensome environmental review pathway on the assumption that nuclear projects require full Environmental Impact Statements even when impacts are well understood, site conditions are familiar, or the project involves a smaller reactor or a repeat deployment. [17] As a result, reviews spend considerable time on issues such as "need for power," "alternatives," and other procedural questions that rarely affect the final decision and add little substantive environmental value. [18] This is especially true of brownfield sites.

  Opportunities also exist to improve permitting efficiency for enrichment services while preserving NRC's core mission of protecting public health, safety, and the environment. Natural uranium contains only about 0.7 percent uranium-235, but most reactors require fuel enriched to roughly 3 to 5 percent. Advanced reactors can require uranium enriched between 5 and 20 percent. The U.S. imports roughly 80 percent of its enriched uranium (as of 2024). While most of these imports come from allied nations, 20 percent come

[14] Ibid.
[15] U.S. Nuclear Regulatory Commission, *Report to Congress on Advanced Nuclear Reactor Manufacturing and Construction* (Washington, DC: U.S. Nuclear Regulatory Commission, 2025), https://www.nrc.gov/docs/ML2429/ML24292A171.pdf
[16] Matt Bowen and Rama T. Ponangi, *Improving the Efficiency of NRC Power Reactor Licensing: Environmental Reviews* (New York: Center on Global Energy Policy at Columbia University SIPA, January 2025), https://www.energypolicy.columbia.edu/wp-content/uploads/2025/01/NEPA-CGEP_Report_012225-2.pdf
[17] Ibid.
[18] Ibid.

from Russia, even as Washington moves toward a full ban on Russian uranium imports by 2028. Under current law, uranium enrichment facilities are treated differently from many other parts of the nuclear fuel supply chain. Fuel fabrication plants and uranium conversion facilities can begin certain construction activities before the NRC completes the entire licensing process. Enrichment facilities, however, generally must wait until the agency completes a full environmental review, holds a mandatory adjudicatory hearing, and issues the license before construction can meaningfully proceed. That sequencing can create substantial financing risk, uncertainty, and delay. In an industry where projects already face long timelines and high capital costs, forcing companies to wait years before undertaking site work or beginning construction can discourage investment altogether.

Environmental review is a major schedule driver for new nuclear projects, not only because NEPA can be slow, but because the current framework is often duplicative and disproportionately onerous. When the NRC defaults reactor applications to full EIS treatment, even where impacts are already well-characterized, it adds years of process, increases litigation exposure, and raises development risk without environmental benefits. A more tailored NEPA framework and expanded use of categorical exclusions would reduce delay and shorten the path to deployment while maintaining core environmental protections.

Opportunities for Reform: Building on Momentum

Despite the cumulative time, cost, and uncertainty created by decades of regulatory red tape and risk aversion, innovation in the nuclear industry has not stopped. Advanced reactor companies are attracting serious private capital, major tech firms are signing nuclear power agreements and directly investing in advanced nuclear, and policymakers on both sides of the aisle recognize the value that nuclear can play in America's energy future. Public support is at or near record highs.[19]

Encouragingly, bipartisan, bicameral support has emerged in recent years. President Trump signed the Nuclear Energy Innovation and Modernization Act in 2019, and President Biden signed the ADVANCE Act in 2024. This is a consensus built across party lines, across generations, and across the ideological spectrum. Both laws contain many important statutory fixes to address an overarching challenge: the pace of policy and regulation has not kept up to enable nuclear to scale at its full potential. The regulations are not based on the technology's performance or risk, which is unnecessarily delaying deployment and increasing costs.

Currently, the NRC has 65 active rules before it, 21 of which stem from President Trump's Executive Order 14300.[20] In the next several months, the NRC will finalize several critical rules to help reduce the time and cost of deploying nuclear power.

The bill and discussion drafts discussed at this hearing will build on that momentum. Importantly, they would continue the transition of nuclear policy and regulations toward a more risk-informed, performance-based

[19] Megan Brenan, "Nuclear Energy Support Near Record High in U.S.," Gallup, April 9, 2025, https://news.gallup.com/poll/659180/nuclear-energy-support-near-record-high.aspx
[20] The Breakthrough Institute, "NRC Rulemaking Tracker," March 26, 2026, https://thebreakthrough.org/issues/nuclear-energy-innovation/nrc-rulemaking-tracker

framework that upholds the highest standards where they matter most while reducing unnecessary costs elsewhere.

- **The Build Nuclear with Local Materials Act** would help reduce unnecessary costs and delays in nuclear construction by modernizing the regulation of materials for non-safety-related portions of nuclear power plants. The bill addresses the excessive use of nuclear-grade requirements in areas where they provide little or no safety or performance value.

  The legislation would require the Nuclear Regulatory Commission to begin a rulemaking within 90 days, directing the agency to authorize the use of commercial-grade steel and concrete in non-safety-related structures at nuclear power plants. In practice, that means developers could use conventional construction materials for buildings, structures, and components that are not tied to core reactor safety functions, unless the NRC determines stricter standards are necessary to address a specific safety concern.

  The bill would add common sense and clarity to the process. Importantly, it does not weaken reactor safety standards for systems critical to protecting public health and safety. In fact, the legislation explicitly preserves the NRC's authority to require stricter standards whenever the NRC determines that they are necessary for adequate protection or national security.

  By expanding the use of commercial-grade materials, the legislation could help broaden the supplier base, increase competition, and allow more local manufacturers and construction firms to participate in nuclear projects. Nuclear construction has historically relied on highly specialized supply chains concentrated among a relatively small number of approved vendors. Allowing greater use of commercial-grade materials opens the door for more domestic steel producers, concrete suppliers, fabricators, and skilled construction workers to participate in projects without unnecessarily navigating burdensome nuclear certification requirements.

  If the United States wants to scale conventional and advanced nuclear energy, policymakers and regulators must address not only licensing timelines but also the underlying drivers of nuclear construction costs. Countries that build nuclear energy more affordably often use more standardized construction practices and narrower definitions of what truly requires nuclear-grade treatment.

- **The "Revitalizing Energy Communities by Hosting Advanced Reactors and Generating Energy (RECHARGE) Act** is an important step toward modernizing America's energy permitting framework and accelerating the deployment of advanced nuclear technology where it makes the most economic and environmental sense: at retired fossil fuel and brownfield sites. In many ways, the discussion draft recognizes a simple reality that policymakers too often overlook. America already has industrial sites with existing grid connections, energy infrastructure, skilled workforces, transportation access, and communities familiar with energy development. Instead of forcing developers to endure years of duplicative environmental reviews to repurpose those sites, Congress should create a more predictable pathway to build the next generation of reliable energy infrastructure. The RECHARGE Act helps accomplish that objective.

  More specifically, the draft would categorically exclude certain advanced nuclear reactor projects from NEPA review when built on "covered sites," defined as retired fossil fuel facilities, brownfields, or locations that qualify as both. Specifically, the legislation applies to the siting, construction, and

operation of advanced reactors on those sites, as well as associated grid interconnection upgrades and transmission improvements that remain within existing rights-of-way.

The legislation does not waive nuclear safety oversight. In fact, the language explicitly preserves the NRC's licensing authority and all applicable requirements under the Atomic Energy Act. Developers would still need to demonstrate that the reactor design sufficiently reduces the risk of off-site consequences, that radioactive waste and spent fuel can be safely managed, and that transmission upgrades remain within existing industrial footprints.

The RECHARGE Act eliminates redundant processes where the environmental tradeoffs are already well understood. Repowering retired coal plants with advanced reactors can preserve jobs, strengthen local tax bases, and leverage billions of dollars in existing infrastructure. These sites have hosted large-scale energy production for decades. In many cases, they are precisely the types of locations policymakers should prioritize for clean, reliable generation.

The RECHARGE Act will not solve every challenge facing advanced nuclear energy, nor does it address other modernizations of environmental statutes needed to further reduce costs and delays. The U.S. permitting and regulatory system is complex, redundant, and prone to litigation, discouraging investment and innovation. While reform of the National Environmental Policy Act receives the most attention, improvements to the Clean Water Act, the Clean Air Act, the Endangered Species Act, and the National Historic Preservation Act will ensure that permitting reform is substantial and meaningful.[21] Nevertheless, the RECHARGE Act is a practical, pro-growth reform that can help strengthen American energy security, revitalize industrial communities, and restore much-needed common sense to the federal permitting process.

- **The Enrichment Licensing Modernization Act** would modernize the NRC's licensing process for uranium enrichment facilities. The discussion draft would allow "at-risk" construction before the NRC issues an operating license. Developers could begin certain construction activities while regulatory reviews continue, provided they comply with all applicable federal, state, and local laws.

  Importantly, the draft does not weaken NRC authority or predetermine the outcome of the licensing process. The NRC retains full oversight of safety, security, environmental protection, and operational performance. It also explicitly preserves the NRC's authority to deny an application if a facility fails to meet regulatory requirements. Companies can and should proceed entirely at their own risk rather than subjecting taxpayers to any costs of investment or remediation.

  Another important aspect of the draft is that it moves away from automatically requiring a full Environmental Impact Statement as the default pathway for every enrichment facility. Not every project presents the broad, significant environmental effects that justify the years-long timeline and litigation exposure associated with an EIS. In many cases, a more tailored Environmental Assessment can appropriately evaluate impacts while still preserving environmental protections and public transparency. The draft keeps NEPA review in place and preserves the authority to conduct an EIS when necessary,

[21] Nick Loris, "Permitting Reform Is Back On. What Should It Include?," C3 Solutions, April 2026, accessed May 14, 2026, https://c3solutions.org/policy-paper/permitting-reform-is-back-on-what-should-it-include/

giving regulators greater flexibility to match the scope of review to the project's actual risk profile rather than defaulting to the most burdensome process.

The draft also modernizes the hearing process. Rather than requiring mandatory hearings even when no outside party seeks to participate, the draft would require a hearing only if an affected party requests one. Uncontested mandatory hearings often cause months of delay without improving safety outcomes or public accountability.

The Enrichment Licensing Modernization Act is a pragmatic effort to reduce unnecessary delays, improve efficiency, and preserve rigorous oversight, all while safeguarding the NRC’s core mission to protect public health, safety, and the environment.

A Path to Competitive Nuclear Deployment

The United States has long led in nuclear energy, home to many innovative companies and technologies. The industry has a strong opportunity to grow by meeting rising demand driven by AI and the need for reliable, abundant power. The ongoing challenge is the regulatory environment in which these technologies must operate; it increases costs, extends timelines, heightens uncertainty, and discourages investment.

The Build Nuclear with Local Materials Act, the RECHARGE Act, and the Enrichment Licensing Modernization Act would better enable the industry to deliver safe, clean power to the U.S. economy. None of these bills eliminates the need for rigorous nuclear safety oversight to protect people and the environment. Rather, they represent a continued and welcome shift away from increasingly prescriptive requirements, excessive paperwork, and conservative assumptions that have little, if anything, to do with the performance or risk of the technology and the materials used in construction. These commonsense reforms are essential if the U.S. hopes to reduce nuclear construction costs, accelerate licensing timelines, deliver affordable, clean power, and compete globally in nuclear deployment.