Current Federal Policy Tools to Support New Nuclear

Over the past several decades, U.S. government support for nuclear energy has expanded from a concentrated emphasis on early-stage technology development to a broader strategy aimed at successful commercial deployment. That progress reflects years of congressional leadership, across both parties and multiple administrations, to strengthen the legal, regulatory, and financial framework for nuclear energy. The bipartisan effort to pass the ADVANCE Act is one of the clearest recent examples of that sustained commitment and underscores Congress's continued role in positioning new nuclear as a strategic national priority. At the same time, many states have advanced complementary policies that further strengthen the deployment landscape for new nuclear projects. The Department of Energy's (DOE) Office of Nuclear Energy has not only increased its investments in fundamental research but also design development, licensing, demonstration, and deployment activities. Beyond DOE, expanded support now also includes Department of War (DOW) initiatives for resilient power and early microreactor applications, Nuclear Regulatory Commission (NRC) modernization of licensing frameworks, and federal policies such as investment and production tax credits that improve the economic landscape for new nuclear projects. The relevant programs and policies are outlined below, providing an overview of the federal ecosystem now working to drive successful commercialization of advanced nuclear energy.

At the foundation of this broader federal support are programs that continue to advance the scientific and technological underpinnings of next-generation reactors. DOE's Advanced Reactor Technologies (ART) program remains central to this effort, supporting high-impact research on core reactor technologies such as thermal-hydraulics, modeling and simulation, and key concepts including high-temperature gas-cooled, molten-salt, and fast reactors. Complementing ART, DOE's Advanced Materials and Manufacturing Technologies program now leads work on next-generation materials and advanced manufacturing methods ranging from additive manufacturing and digital engineering to the development and qualification of novel alloys, aimed at lowering costs and improving performance. Further, DOE's fuels research programs, such as accident-tolerant fuel development and advanced fuel-cycle analysis, are designed to address fuel performance, availability, and long-term fuel-cycle considerations for emerging reactor designs.

Building on this foundational R&D, federal efforts also support the design and engineering maturation needed to prepare advanced reactors for future licensing and deployment. The Advanced Reactor Concept and Risk Reduction projects, selected under DOE's Advanced Reactor Development funding opportunity in 2020, provide cost-shared support for companies to refine designs, complete key engineering milestones, and conduct the analyses necessary to reduce regulatory and technical uncertainty before entering formal licensing. The Gateway for Accelerated Innovation in Nuclear (GAIN) program further accelerates development by providing vouchers on a rolling basis that grant private developers access to national laboratory expertise and facilities, helping resolve technical challenges that could otherwise delay progress. Federal support also extends to non-electric applications of advanced reactors, such as industrial heat, hydrogen production, and integrated energy systems, which are explored through programs like DOE's Integrated Energy Systems program. In addition, authorizations contained in legislation such as the CHIPS and Science Act would bolster the broader innovation ecosystem by supporting demonstration planning, community engagement, workforce development, and supply-chain capacity, laying essential groundwork for licensing and deployment activities.

In recent years, federal efforts have advanced into full demonstration activities, reflected most clearly in

DOE's selection of two reactor demonstration projects through the Advanced Reactor Demonstration Program (ARDP) in 2020 to deliver first-of-a-kind reactors on an accelerated timeline. In 2025, DOE launched its Generation III+ Light-Water SMR program, which provides "first-mover" and "fast-follower" awards to help commercially ready designs become the next reactors built in the United States. These activities are supported by the National Reactor Innovation Center (NRIC), which offers vendors access to capabilities to test their fueled experiments, such as the Demonstration of Microreactor Experiments (DOME) test bed and the Laboratory for Operations and Testing in the United States (LOTUS), enabling performance and safety experiments under real operating conditions. NRIC also provides virtual test beds that allow developers to validate reactor physics, thermal-hydraulic models, and safety analyses against high-quality experimental data, helping bridge the gap between design maturity and regulatory readiness.

As advanced reactor developers move from design into deployment, they now have three distinct federal licensing pathways available: the traditional NRC licensing process, the DOE authorization and DOW authorization. The NRC has been working to make its regulations more efficient and risk-informed, reflected in its updated mission emphasizing safety, security, and environmental protection while enabling the benefits of nuclear technology to be realized more effectively. In parallel, DOE has modernized its own authorization framework and established new Reactor and Fuel Pilot Programs to provide a streamlined process and regulatory authority for demonstration reactors and advanced fuel production within the United States. DOW has also formalized its role through the designation of an Executive Agent for defense-related nuclear energy and the creation of the Janus Program, which aims to streamline and coordinate the deployment of defense microreactor and advanced reactor technologies. For developers utilizing NRC licensing for their commercial deployments, DOE launched the Advanced Nuclear Energy Licensing Cost-Share Grant Program, offering funding to offset a portion of commission fees for both pre-application interactions and formal license application reviews. Together, these licensing pathways and associated support programs form the regulatory foundation enabling advanced reactor developers to move efficiently toward commercialization.

As developers move towards commercialization, additional opportunities and policies have been put in place to offset portions of first-of-a-kind (FOAK) reactor costs and help developers build early orderbooks. The Department of Defense's Advanced Nuclear Technologies Transition Working Group is working to identify practical pathways for incorporating advanced reactors into mission-critical energy systems, while DOW's ability to designate nuclear energy as a critical technology makes these projects eligible for Office of Strategic Capital investment mechanisms. On the civilian side, recent DOE solicitations in artificial intelligence and power generation explicitly highlight advanced nuclear as a priority technology area, signaling continued federal interest in near-term deployment. Financial tools also play an important role: the technology-neutral production and investment tax credits, at $30/megawatt-hours (MWh) or 30% with potential for bonuses of up to 20%, improve project economics for early reactors, and the Office of Energy Dominance Financing's $250 billion in remaining loan authority offers developers access to favorable financing structures that can lower FOAK risk and support the scale-up of advanced nuclear projects.

As we look across this expanding landscape of federal policy support, it's clear that nuclear energy is benefiting from an unprecedented alignment of policy tools, investment signals, and national priorities. This momentum has already translated into nearly $2 billion in private investment and more than 80 planned projects as of the end of 2025. It has also been reinforced by durable bipartisan support in

Congress, helping create a more stable policy foundation for advanced nuclear deployment. Yet despite that progress, important policy gaps remain to enable final investment decisions through preventing cost escalation and ensuring project completion. There is appetite with policy makers for more support, for example the recent Accelerating Reliable Capacity (ARC) Act and Nuclear Rate Stabilization Act (NRSA) that were introduced with the intention of addressing these remaining gaps. Crossing the finish line will require sustained commitment and the final pieces of policy support needed to turn these opportunities into projects on the ground and build out a durable nuclear orderbook.

List of Policies and Programs in Place to Support New Nuclear

Technology Development, Testing, and Demonstration

These programs support reactor and fuel technology maturation, access to testing infrastructure, and first-of-a-kind demonstrations needed to move designs toward commercial readiness.

1. *Advanced Reactor Demonstration Funding Opportunity Announcement*

Description: In 2020, DOE selected 10 cost-shared private-public partnership projects through the Advanced Reactor Demonstration (ARD) Funding Opportunity Announcement (FOA) to support domestic private industry demonstrate advanced nuclear reactors in the United States. The ARD FOA consists of three tiers: Demonstration projects, Risk Reduction for Future Demonstration projects, and Advanced Reactor Concepts (ARC) Projects. The two demonstration projects selected were the TerraPower Natrium reactor and the X-energy Xe-100 reactor. These two reactors are now anticipated to begin operations in the early 2030s. The five Risk Reduction projects selected were the Holtec SMR 300 reactor, the Kairos Power Hermes reactor, the BWXT BANR reactor, the Westinghouse eVinci reactor, and the TerraPower Molten Chloride Reactor Experiment (MCRE) reactor. The last tier selected three projects, the Advanced Reactor Concepts, LLC, the Massachusetts Institute of Technology's MIGHTR concept, and the General Atomics fast modular concept.

Agency: Department of Energy Office of Nuclear Energy

Availability: This solicitation is no longer accepting proposals for additional awards. All three pathways of the ARD solicitation were funded through both annual appropriations and one time appropriations through the Bipartisan Infrastructure Law passed in 2021 for a total allotment of approximately $3.8 billion (B). Most recently, the FY26 appropriations provided an additional $3.1B for the ARD Demonstration and Risk Reduction and the Generation 3+ SMR demonstration awardees.

More Information:
https://www.energy.gov/ne/articles/energy-departments-advanced-reactor-demonstration-program-awards-20-million-advanced

2. *CHIPS and Science Act*

Description: The CHIPS and Science Act of 2022included three nuclear-related provisions:

1. Section 10743, University Nuclear Infrastructure Collaboration, revises and expands DOE's existing university nuclear science and engineering support program to revitalize and upgrade

nuclear research infrastructure at universities. It authorizes funding to support collaboration between higher education institutions, national laboratories, industry, and others to maintain and modernize critical facilities that underpin advanced nuclear technology development and education.

2. Section 10744, Advanced Nuclear Research Infrastructure Enhancement, directs DOE to create a program intended to support demonstrations of advanced nuclear and microreactor concepts, construction up to four new university research reactors, specialized facilities, and other infrastructure that advances DOE's nuclear research mission and workforce training capacity.

3. Section 10781, Fission for the Future, directs the Department of Energy to establish a federal financial assistance program to accelerate the research, development, and demonstration of advanced nuclear reactor technologies. The program authorizes DOE to provide competitive, merit-based support to a broad range of eligible entities, including states, Tribes, local governments, utilities, national laboratories, universities, and private companies, to advance innovative nuclear projects, with priority given to those located at or near retired or retiring fossil fuel power plants, those supporting nonelectric applications such as industrial heat, hydrogen production, or desalination, and those that include workforce training or retraining components.

Agency: Department of Energy

Availability: The CHIPS and Science Act authorizes up to $275M for Section 10743, up to $390M for Section 10744, and up to $800M for Section 10781 through FY27. To date, appropriations have not been directly provided for the implementation of these programs.

More Information: https://www.congress.gov/117/plaws/publ167/PLAW-117publ167.pdf

3. Fuel Pilot Program

Description: The DOE Fuel Line Pilot Program is intended to rapidly close a key deployment gap for advanced reactors by enabling domestic, pilot-scale production of advanced nuclear fuels needed for first-of-a-kind and test reactors. Like the Reactor Pilot Program, it relies on DOE's Atomic Energy Act authorization authorities and a streamlined, DOE-managed approval framework to move quickly, generate qualification data, and create a bridge to future commercial licensing and scale-up.

Participating companies are expected to demonstrate mature fuel plans, execution readiness, and the ability to safely fabricate and manage fuel within DOE's oversight structure. DOE has conditionally selected four companies—Oklo, Terrestrial Energy, TRISO-X, and Valar Atomics—to develop and operate these fuel lines to meet near-term pilot and demonstration needs. The program does not include DOE financial assistance; companies will fund and execute their projects privately under DOE's pilot framework.

Agency: Department of Energy Office of Nuclear Energy

Availability: Initial applications were due August 15, 2025. Future applications will be accepted through the Launch Pad program.

More information:
https://www.fedconnect.net/FedConnect/default.aspx?ReturnUrl=%2fFedConnect%2f%3fdoc%3dDE-FOA-0003569%26agency%3dDOE&doc=DE-FOA-0003569&agency=DOE
https://www.energy.gov/ne/energy-department-fuel-line-pilot-program

4. Gateway for Accelerated Innovation in Nuclear (GAIN) Vouchers

Description: In support of nuclear energy innovation, GAIN administers a DOE Office of Nuclear Energy voucher program that provides funds to assist applicants seeking access to the world class expertise and capabilities available across the DOE Complex. The funding goes to a national laboratory for work agreed to by both parties. The maximum dollar amount is typically $500 thousand and an in-kind contribution from the company is typically required. In the past, most vouchers have been provided to advanced reactor developers or other companies focused on technology development. However, other studies could be performed by national laboratories associated with deployment scenarios. For example, Eastman Chemical used a voucher for assistance in the conceptual design and analysis of an integrated nuclear hybrid energy system to replace the existing energy production infrastructure at their Kingsport, Tennessee site. The goal of the NE Voucher program is to accelerate commercialization of innovative nuclear energy technologies.

Historically, voucher selections were dependent on the annual contributions from the Office of Nuclear Energy research and development programs to ensure selected vouchers supported the mission of the respective programs. DOE's FY25 budget request establishes GAIN as an independent program rather than an initiative which should provide it more flexibility in selecting new vouchers.

Agency: Department of Energy Office of Nuclear Energy

Availability: Quarterly solicitation

More information: https://gain.inl.gov/SitePages/Nuclear%20Energy%20Vouchers.aspx

5. Generation III+ Light Water Reactor Small Modular Reactor Program

Description: The Generation III+ Small Modular Reactor (Gen III+ SMR) Program is designed to bridge the gap between the existing large reactor fleet and future advanced reactor designs by supporting commercial viability and establishing a domestic SMR orderbook.

The FY24 Appropriations provided $900M to support the demonstration and deployment of Generation III+ nuclear reactor technologies. The funding was made available through a solicitation that was broken into two tiers: $800M is provided to support up to two first mover teams deploying light water reactor small modular reactors and $100M is provided to support multiple fast follower teams. In December 2025, DOE selected Holtec Government Services, LLC and Tennessee Valley Authority to receive $400M each to deploy two SMR-300 reactors at the Palisades Nuclear Generating Station in Covert, Michigan and a GE Vernova Hitachi BWRX-300 at the Clinch River site in Tennessee, respectively. DOE is expected to select awardees of the $100M Tier 2 funding in 2026. Most recently, the FY26 appropriations provided an additional $3.1B for the ARD Demonstration and Risk Reduction and the Generation 3+ SMR demonstration awardees.

Agency: Department of Energy Office of Nuclear Energy

Availability: Solicitation is closed.

More information:
https://www.energy.gov/ne/generation-iii-small-modular-reactor-program

6. Nuclear Energy Launch Pad

Description: The DOE Nuclear Energy Launch Pad program, led by the National Reactor Innovation Center (NRIC), is designed to accelerate the demonstration and commercialization of advanced nuclear technologies by providing developers with access to DOE sites, national laboratory infrastructure, technical expertise, and streamlined regulatory pathways. Building on DOE's Reactor Pilot Program and Fuel Line Pilot Program, Launch Pad supports a broad range of technologies, including advanced reactors, fuel fabrication, fuel enrichment, fuel recycling, and related nuclear infrastructure projects.

The program includes pathways for projects located at Idaho National Laboratory as well as other federal and non-federal sites across the country. By leveraging DOE authorization, testing capabilities, and operational support, the Launch Pad initiative is intended to help reduce deployment risks and speed the transition of first-of-a-kind nuclear technologies from demonstration to commercial operation.

Agency: Department of Energy

Availability: The DOE Nuclear Energy Launch Pad program is currently available to advanced nuclear technology developers through future application rounds administered by the National Reactor Innovation Center (NRIC). DOE selected its first four participants in 2026—Deployable Energy, General Matter, NuCube Energy in partnership with Idaho State University, and Radiant Industries—and plans to continue making additional selections through recurring application opportunities as the program expands support for advanced reactor, fuel cycle, and related nuclear infrastructure projects.

More information: https://nric.inl.gov/nuclear-energy-launch-pad-at-idaho-national-laboratory/

7. NASA Fission Surface Power Initiative

Description: NASA's Fission Surface Power Directive accelerates development of commercial microreactor-based nuclear surface power systems to meet lunar and Mars mission energy needs and strategic objectives, aligning with the White House's broader space policy under the "Ensuring American Space Superiority" Executive Order, signed December 18, 2025, which mandates deployment of nuclear reactors on the Moon and in orbit by 2030 as a core element of U.S. space leadership, exploration, and security strategy.

Agency: National Aeronautics and Space Administration (NASA)

Availability: NASA issued a second draft Announcement for Partnership Proposals on December 5, 2025, to reflect industry feedback from the first draft, Requests for Information, and industry days. The final announcement for partnership proposals is anticipated in 2026. A due date for proposals from industry is not available at the time of publishing this document.

More information:
https://sam.gov/workspace/contract/opp/f653f35bd344451d990625943861caa0/view

8. National Reactor Innovation Center Test Beds

Description: The National Reactor Innovation Center (NRIC), headquartered at INL, utilizes national laboratory infrastructure and expertise to accelerate the testing and commercialization of advanced nuclear reactor technologies from the private sector.

NRIC is constructing two primary physical test beds, both created by repurposing existing, historic nuclear infrastructure at the INL site. The Demonstration of Microreactor Experiments (DOME) test bed will provide a contained environment for private developers to test their fueled microreactor designs by taking them to initial criticality. The Laboratory for Operations and Testing in the United States (LOTUS) test bed will support unique and challenging advanced reactor experiments that require a high-security posture or different fuel or cooling types.

NRIC also supports a virtual test bed that allows developers to validate their reactor physics and safety calculations against real-world data, supporting the design and licensing efforts *before* moving to costly physical experimentation.

Agency: Department of Energy Office of Nuclear Energy

Availability: Annual Appropriations

More information: https://nric.inl.gov/

9. *Project Pele*

Description: Project Pele is a DOW initiative, led by the Strategic Capabilities Office, to design, build, and demonstrate a transportable nuclear microreactor that can provide resilient, reliable 24/7 power for remote military operations and other critical needs. In 2020, the Department of Defense selected BWXT Advanced Technologies, X-energy, and Westinghouse Government Services to develop initial microreactor designs under the program.

BWXT Advanced Technologies was later selected to build the Pele prototype reactor, a high-temperature gas-cooled microreactor designed to generate approximately 1–5 megawatts of electrical power and to be transportable in standard 20-foot shipping containers by truck, rail, air, or sea, enabling rapid deployment and rapid startup in the field. X-energy's work under Project Pele evolved into the company's commercial XENITH microreactor platform, while Westinghouse's participation helped advance development of its eVinci microreactor technology.

The Pele prototype reactor will be tested at INL, where it will undergo a safety review and demonstrate operations on a microgrid beginning later in the decade.

Agency: Department of Defense Strategic Capability Office

Availability: Solicitation is closed. Congress has provided a total of $661M from FY20 through FY24. Congress included $41M for Project Pele in the FY26 Conference bill.

More information: https://www.cto.mil/pele_eis/

10. *Reactor Pilot Program*

Description: The DOE's Reactor Pilot Program is a high-priority, industry-funded initiative launched in 2025 to dramatically accelerate the demonstration of advanced nuclear reactor designs by the private sector. The program's initial objective is to achieve criticality in at least three test reactors by July 4, 2026. By leveraging its authority under the Atomic Energy Act, the DOE has provided an updated, streamlined authorization pathway for these non-commercial test projects, which operate outside of the National Laboratories. The program is designed to generate crucial operational data, reduce investor risk, and provide a fast track for successful designs to move toward future commercial NRC

licensing.

In August 2025, DOE selected an initial 11 advanced reactor projects to move their technologies towards deployment. The companies selected in the initial round include: Aalo Atomics Inc., Antares Nuclear Inc., Atomic Alchemy Inc., Deep Fission Inc., Last Energy Inc., Oklo Inc., Natura Resources LLC, Radiant Industries Inc., Terrestrial Energy Inc., and Valar Atomics Inc.

Agency: Department of Energy Office of Nuclear Energy

Availability: Initial applications were due July 21, 2025. Future applications will be accepted through the Launch Pad program.

More information:
https://www.fedconnect.net/FedConnect/default.aspx?ReturnUrl=%2fFedConnect%2f%3fdoc%3dDE-FOA-0003569%26agency%3dDOE&doc=DE-FOA-0003569&agency=DOE

Licensing, Regulatory, and Liability Frameworks

These tools provide the legal, regulatory, and liability structures that enable advanced nuclear projects to move through authorization, licensing, and deployment with greater certainty.

11. Advanced Nuclear Energy Licensing Cost-Share Grant Program

Description: The Nuclear Energy Leadership Act authorized the Secretary to establish an Advanced Nuclear Energy Licensing Cost-Share Grant Program (Section 3 of S.97 in the 115th Congress or 42 USC 16280) that shall make cost-share grants to applicants for the purpose of funding a portion of the Commission fees of the applicant for pre-application review activities and application review activities. In executing the program, the Secretary shall seek out technology diversity in making grants. The grant funds can be used to cover Commission fees including:

- developing a licensing project plan;
- obtaining a statement of licensing feasibility;
- reviewing topical reports; and
- other-
  - pre-application review activities;
  - application review activities; and
  - interactions with the Commission.

Agency: Department of Energy Office of Nuclear Energy

Availability: The Department of Energy issued a Notice of Funding Opportunity (NOFO) in January 2025 to support cost-shared grants to fund a portion of NRC fees for pre-application review activities and application review activities for advanced nuclear reactors and supporting facilities. The NOFO anticipates up to $50 million (M) being made available over five years through the Regulatory Development program.

More Information:

https://uscode.house.gov/view.xhtml?req=advanced+nuclear+energy+licensing+cost-share&f=treesort&fq=true&num=1&hl=true&edition=prelim&granuleId=USC-prelim-title42- section16280

https://www.fedconnect.net/FedConnect/default.aspx?ReturnUrl=%2ffedconnect%2f%3fdoc%3dDE-FOA-00022575%26agency%3dDOE&doc=DE-FOA-0003339&agency=DOE

12. Executive Agent for Installation and Operational Nuclear Energy

Description: The NDAA for FY26 establishes a Department of Defense Executive Agent responsible for installation and operational nuclear energy. This governance framework complements the Janus program by coordinating siting, licensing, and deployment of commercial microreactors across military installations. The Executive Agent model aligns DOW, DOE, and NRC and enables streamlined permitting under Section 91b of the Atomic Energy Act.

Agency: Department of Defense

Availability: Additional appropriations are required to fully operationalize this structure. Congress provided the Army with $12 million per year from FY23 through FY24. At the time of publishing this document, the FY25 defense appropriations Conference bill included $25 million.

More Information: https://www.congress.gov/bill/119th-congress/house-bill/3838/text/rh?utm=

13. Price-Anderson Act Indemnification Authority

Description: The Price-Anderson Act authorizes the NRC and DOE to provide indemnification for public liability arising from nuclear incidents, helping ensure that adequate funds are available to compensate the public while providing the liability framework needed for private investment and deployment. For NRC-licensed reactors, the Act combines required financial protection with indemnification where applicable, and for DOE contractors it supports indemnification for activities that could result in public liability. In practice, this indemnification authority is a foundational federal policy tool for licensing, contracting, investment certainty, and commercialization of new nuclear technologies.

Agency: Nuclear Regulatory Commission and Department of Energy

Availability: The Price-Anderson Act was reauthorized on March 23, 2024, and the NRC and DOE now retain authority to enter into new indemnification agreements through December 31, 2065. As reauthorized, the framework remains available to support new reactor licensing, DOE contracting, and continued investment in advanced nuclear deployment.

More information:

https://www.congress.gov/crs-product/IF10821

NUREG/CR-7293 "The Price-Anderson Act: 2021 Report to Congress, Public Liability Insurance and Indemnity Requirements for an Evolving Commercial Nuclear Industry"

PAA Report January 2023_0.pdf

Project Finance, Tax Incentives, and Capital Support

These programs improve project economics and access to capital by lowering financing risk, reducing upfront costs, and creating more favorable conditions for investment.

14. Tax Credit - Clean Electricity Investment (48E)

Description: The Clean Electricity Investment Tax Credit is available to support the development of nuclear capacity in the United States. 48E allows eligible projects to claim a percentage of their qualified investment costs as a tax credit, helping to lower upfront capital expenses and improve project economics.

Agency: Department of Treasury

Availability: The investment tax credit allows for up to 30% of qualifying project costs, if projects meet prevailing wage and apprenticeship requirements. For projects beginning construction before or during 2033, 100% of the tax credit is allowed. The tax credit then begins to phase out with 75% of the credit for projects beginning construction during 2034, 50% of the credit for projects beginning construction during 2035, and 0% of the credit for projects beginning construction after December 31, 2035. The tax credit also includes bonus adders for projects that satisfy domestic content requirements or are sited in applicable energy communities. Each credit is worth an extra 10%, for a potential maximum 50% tax credit for a facility that meets the conditions of the bonuses. Credits can be sold if claimed once the plant is in operation. This credit cannot be claimed if the Clean Electricity Production Credit (45Y) is claimed.

More information:
https://www.ecfr.gov/current/title-26/chapter-I/subchapter-A/part-1/subject-group-ECFRe427f958a26c8f4/section-1.48E-1

15. Tax Credit - Clean Electricity Production (45Y)

Description: The clean electricity production tax credit, 26 USC 45Y, provides a credit for each megawatt-hour of electricity produced by new nuclear capacity for the first ten years of operation. The credit does not include a direct pay provision, so the owner will need to have offsetting taxable income to claim the credit or transfer the credit to an eligible project partner.

Agency: Department of Treasury

Availability: For energy projects that meet the prevailing wage and apprenticeship standards, the production tax credit provides approximately $30/MWh for ten years of operation. The value of the credit increases with inflation. The tax credit also includes 10% bonus adders each for projects that satisfy domestic content requirements or are sited in applicable energy communities. For projects beginning construction before or during 2033, 100% of the tax credit is allowed. The tax credit then begins to phase out with 75% of the credit for projects beginning construction during 2034, 50% of the credit for projects beginning construction during 2035, and 0% of the credit for projects beginning construction after December 31, 2035. Credits can be sold to a third party. This credit cannot be claimed if the Clean Electricity Investment Credit (48E) is claimed.

More information:

https://www.ecfr.gov/current/title-26/chapter-I/subchapter-A/part-1/subject-group-ECFRe427f958a26c8f4/section-1.45Y-2

16. Tax Credit – Advanced Nuclear Production (45J)

Description: The advanced nuclear production tax credit, 26 USC 45J, provides a per-kilowatt-hour tax credit for electricity generated by qualifying advanced nuclear facilities during the first eight years of operation, subject to a national capacity limitation allocated by the IRS. The credit was established to support deployment of new nuclear generation by improving project economics during early operations. Because the credit is claimed against federal tax liability, project owners must have sufficient taxable income to utilize the credit directly or structure financing arrangements that allow the value of the credit to be monetized through eligible tax partnerships or transfers, where permitted.

Agency: Department of Treasury

Availability: The tax credit provides 1.8 cents/kWh for electricity generated by qualifying advanced nuclear facilities during the first eight years of operation. The credit is available only to projects receiving an allocation from the IRS under the program's 6,000-megawatt national capacity cap. Once the full allocation is awarded, no additional projects may qualify for the credit. The credit can be transferred to project partners or claimed as a credit against federal tax liability..

More Information: https://uscode.ecfr.io/title/26/section/45j

17. Energy Dominance Financing

Description: The Department of Energy's Office of Energy Dominance Financing (EDF) supports the deployment of advanced energy technologies by providing loan guarantees and direct loans that help bridge financing gaps for first-of-a-kind projects. For nuclear energy, EDF plays a critical role in enabling new reactor construction, fuel cycle facilities, and uprates by reducing financial risk and accelerating commercial deployment of safe, reliable, zero-carbon power. Through its Title XVII authorities, EDF tailors support to different stages of nuclear energy deployment. Section 1703 focuses on enabling innovative, first-of-a-kind nuclear technologies by backing projects that deploy new or significantly improved reactors or fuel cycle capabilities, while Section 1706 (Energy Infrastructure Reinvestment) supports existing or retired nuclear assets through financing for restarts, uprates, and repowering of established facilities.

Agency: Department of Energy's Energy Dominance Financing

Availability: The FY25 budget reconciliation bill extended the DOE EDF's loan authority of $250 billion until 2028 for advanced nuclear projects. The loan guarantees can be for advanced nuclear reactors including small modular reactors, uprates and upgrades at existing facilities, and front-end of the fuel cycle projects (conversion, enrichment and fuel fabrication). EDF can offer 100% guarantee of U.S. Treasury's Federal Finance Bank (FFB) loans or partial guarantees of commercial loans. The FY26 appropriations provided $150 million in additional credit subsidy for nuclear projects.

More Information:

https://www.energy.gov/edf/edf-applicant-resources?utm_medium=email&utm_source=govdelivery

18. Nuclear Energy as a Critical Technology for OSC Investment

Description: The NDAA for FY26 authorizes DOW to include nuclear energy as a critical technology eligible for OSC investment. The amendment allows the OSC to provide financing, loan guarantees, and other credit support to advanced domestic nuclear energy capabilities relevant to national security and defense infrastructure.

Agency: Department of Defense Office of Strategic Capital

Availability: Execution will depend on future appropriations

More information: https://www.congress.gov/bill/119th-congress/senate-bill/2296/text/rs?utm

Fuel Security, Siting, and Deployment Readiness

These tools strengthen the enabling conditions for deployment by addressing fuel availability, site preparation, and other infrastructure needed to support reactor projects.

19. Infrastructure planning for micro and small modular nuclear reactors

Description: The Infrastructure Investment and Jobs Act enacted in November 2021 authorizes the Secretary of Energy to provide financial and technical assistance for the siting of micro-reactors, small modular reactors and advanced nuclear reactors (Sec. 40321 of H.R. 3684 in the 117th Congress or 42 USC 18751). The bill states that the Secretary shall offer financial and technical assistance to entities to conduct feasibility studies for the purpose of identifying suitable locations for the deployment of micro-reactors, small modular reactors, and advanced nuclear reactors in isolated communities. It is stipulated that prior to providing financial and technical assistance, the Secretary shall conduct robust community engagement and outreach for the purpose of identifying levels of interest in isolated communities. The bill does not specify the potential dollar amounts for financial assistance and does not provide details on potential technical assistance. In addition, to date appropriations have not been provided for the implementation of this program and DOE has not discussed executing the program.

Agency: Department of Energy

Availability: To date, appropriations have not been provided.

More Information:
https://uscode.house.gov/view.xhtml?req=Infrastructure+planning+for+micro+and+small+modular+nuclear+reactors&f=treesort&fq=true&num=2&hl=true&edition=prelim&granuleId=USC-prelim-title42-section18751

20. Nuclear Fuel Security Act

Description: The Nuclear Fuel Security Act of 2023, enacted as part of the FY24 NDAA, establishes a U.S. Nuclear Fuel Security Initiative to strengthen the domestic nuclear fuel supply chain for advanced reactors in the United States, building directly upon the foundational framework established in the Energy Act of 2020 (EPACT 2020). While EPACT 2020 created the HALEU Availability Program and the HALEU Consortium to study market demand and begin research-scale production, the 2023 Act transformed these efforts by requiring DOE immediately accelerate activities to make HALEU inventories or stockpiles available to Consortium members. It expresses Congress's intent that DOE's support increase domestic production of both low-enriched uranium (LEU) and high-assay low-enriched uranium (HALEU), accelerate U.S. enrichment capability, and ensure fuel availability in the event of a

disruption. The law directs DOE to establish a Nuclear Fuel Security Program to increase HALEU (and, if needed after market evaluation, LEU) production by U.S. companies; expand the American Assured Fuel Supply to maintain stocks of domestically produced, processed fuel; and create a HALEU for Advanced Nuclear Reactor Demonstration Projects Program to provide HALEU to developers until commercial supply capacity is sufficient. It also includes specific targets for the amount of HALEU to be made available over time and emphasizes partnering with allies if domestic options are impractical.

Agency: Department of Energy

Availability: Solicitation is closed. Congress appropriated $2.72 billion for this Initiative through the Consolidated Appropriations Act, 2024. DOE made these funds available through a Request for Proposal and selected four companies in October 2024; Centrus Energy subsidiary American Centrifuge Operation, Urenco USA, Orano USA, and General Matter.

More information: https://www.energy.gov/articles/us-department-energy-awards-27-billion-restore-american-uranium-enrichment

Defense and Strategic Demand

These programs create mission-driven opportunities for advanced nuclear deployment by aligning reactor development with defense, national security, and other strategic federal uses.

21. Advanced Nuclear Transition Working Group

Description: The National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2026 establishes the Advanced Nuclear Technologies Transition Working Group intended to be led by the Secretary of Defense and composed of senior DOW leaders and designees to develop and implement a departmental strategy for accelerating the procurement, demonstration, and transition of advanced nuclear technologies for defense applications. The working group will integrate advanced nuclear into the Planning, Programming, Budgeting, and Execution (PPBE) process, prioritize mission use cases such as installation resilience, directed energy, and AI, and direct near-term pilot deployments.

Agency: Department of Defense

Availability: Implementation will require follow-on appropriations.

More Information: https://www.congress.gov/bill/119th-congress/house-bill/3838/text/rh?utm=

22. Artificial Intelligence/Power Generation Solicitations

Description: The DOE's solicitations for AI power generation and data centers at Idaho National Laboratory (INL), Oak Ridge Reservation (ORNL), Savannah River Site (SRS), and Paducah Gaseous Diffusion Plant are a strategic move to accelerate U.S. leadership in AI by integrating high-performance computing with innovative energy solutions. The program invites private-sector partners to fully finance, build, and operate secure, scalable AI data centers, co-located with power generation. By offering long-term land leases on federal sites and leveraging existing infrastructure, the DOE aims to eliminate reliance on strained commercial grids and rapidly deploy the essential combination of AI computing power and reliable, clean energy required for national security and economic competitiveness.

This initiative directly implements executive orders, such as Deploying Advanced Nuclear Reactor Technologies for National Security, Accelerating Federal Permitting of Data Center Infrastructure, and Removing Barriers to American Leadership in Artificial Intelligence, which mandate the use of federal lands to expedite the buildout of both AI infrastructure and dedicated energy capacity.

Agency: Department of Energy

Availability: Applications and selections will be made on a rolling basis.

More information:

INL:
https://www.fedconnect.net/FedConnect/default.aspx?ReturnUrl=%2fFedConnect%2f%3fdoc%3dDE-FOA-0003578%26agency%3dDOE&doc=DE-FOA-0003578&agency=DOE
Oak Ridge Reservation:
https://sam.gov/workspace/contract/opp/7864e8f4d61f42dc811ba095a41c8368/view
Savannah River Site:
https://www.energy.gov/nnsa/articles/nnsa-seeks-proposals-ai-data-centers-energy-projects-savannah-river-site-0
Paducah Gaseous Diffusion Plant:
https://sam.gov/workspace/contract/opp/db37974bc9974d1f833da6da7cc93797/view

23. DOW Installation Energy Micro-Reactor Demonstration

Description: The FY19 National Defense Authorization Act requirement to identify potential locations to site, construct, and operate a microreactor. Additional drivers include the 2021 Executive Orders (EO) 13972 (Promoting Small Modular Reactors for National Defense and Space Exploration) and EO 14154 (Unleashing American Energy), as well as recent 2025 EOs including 14156 (Declaring a National Energy Emergency), and EO 14299 (Deploying Advanced Nuclear Reactor Technologies for National Security). The Air Force selected Eielson Air Force Base, near Fairbanks, AK as the pilot location.

Agency: Department of Defense, Air Force Energy Office

Availability: Air Force has selected Oklo as the awardee.

More Information: https://www.eielson.af.mil/microreactor/

24. Janus Program

Description: The Janus Program, led by the Department of the Army, aims to secure resilient and grid-independent power for critical defense missions by deploying commercial microreactors for installation and operational energy on domestic military installations and forward operating bases. The Army has identified nine installations for consideration for the initial domestic microreactor deployments, which are intended to be commercially owned and operated by private vendors. These sites represent a diverse range of critical defense infrastructure and high-priority energy needs, including Fort Benning (Georgia), Fort Bragg (North Carolina), Fort Campbell (Kentucky/Tennessee), Fort Drum (New York), Fort Hood (Texas), Fort Wainwright (Alaska), Holston Army Ammunition Plant (Tennessee), Joint Base Lewis-McChord (Washington), and Redstone Arsenal (Alabama). The program, which absorbs and expands upon the Defense Innovation Unit's "Advanced Nuclear Power for

Installations" program, uses a milestone-based contracting model with a primary objective of commencing operation of the first regulated reactor at one of these sites no later than September 30, 2028. Funding supports licensing, acquisition planning, and milestone-based deployment pathways under 10 U.S.C. § 2922a.

Agency: Department of the Army

Availability: Congress has not provided funding for the Janus or other DOW Installation Energy programs for nuclear technologies.

More Information: https://www.diu.mil/work-with-us/submit-solution/PROJ00632

25. Pilot Program on Navy Installation Nuclear Energy

Description: The NDAA for FY26 establishes a pilot program focused on Navy installation nuclear energy to evaluate the feasibility and strategic utility of deploying advanced nuclear energy systems, such as small modular reactors and microreactors, on Navy bases to enhance energy resilience. The provision directs the Department of Defense, in coordination with the Department of the Navy, to select one or more naval installations to participate in the program, with the objective of assessing how these nuclear technologies can support installation energy requirements and operational readiness while reducing reliance on vulnerable external energy supplies. The pilot is expected to span a defined multi-year period (approximately 10 years) to gather data on technical performance, regulatory challenges, safety and security considerations, cost implications, and integration with existing infrastructure.

Agency: Department of Defense

Availability: Execution will depend on additional guidance and potentially, future appropriations

More information: Not available at this time.