

# New Nuclear Reactors for Military Purposes

December 2025

# Purpose

- The United States has substantial efforts underway to develop new reactors for military purposes.
- This briefing outlines the federal policy framework as well as the projects, concepts, and solicitations in progress to translate statutory mandates and executive policy directives into operational capability.

# Federal Policy

The following slides outline the federal policy framework guiding advanced nuclear energy for military use. Recent executive orders, together with congressional mandates, establish a coordinated strategy that links national security with mission assurance. Executive Orders 14299 through 14302 direct federal agencies to accelerate and enable: the deployment of advanced reactors for defense and AI infrastructure, the reform of regulatory processes at the Nuclear Regulatory Commission, streamlined testing at Department of Energy laboratories, and rebuilding the nuclear industrial base to reduce reliance on foreign uranium conversion and enrichment. These directives are reinforced by provisions in the National Defense Authorization Acts, which require near-perfect energy reliability for critical missions and authorize new pathways for prototype deployment. Together, these policies provide the foundation for resilient and sustainable energy at military installations and for operational use.

# Executive Orders

- **EO 14299 - Deploying Advanced Nuclear Reactor Technologies for National Security**

Directs DoD and DOE to identify, prioritize, and accelerate pathways for deployment of advanced nuclear reactors to power AI/data centers and critical defense facilities.

- **EO 14300 - Reforming the Nuclear Regulatory Commission**

Orders NRC to modernize licensing, revise many of its rules, pursue fixed licensing timelines (12-18 months), and reduce regulatory barriers to expand domestic nuclear energy.

- **EO 14301 - Reforming Nuclear Reactor Testing at DOE**

Tasks DOE to streamline reactor testing at national labs and expedite approval pathways for qualified test reactors.

- **EO 14302 - Reinvigorating the Nuclear Industrial Base**

Directs DOE, DoD, and other agencies to rebuild nuclear fuel cycle infrastructure, promote recycling/reprocessing, and reduce reliance on foreign uranium.

# Other Direct Nuclear Energy Mandates

- **Proposed FY2026 National Defense Authorization Act provisions:**

- Section 318 - Establishes a DoD executive agent for installation and operational nuclear energy deployment.

- Section 321 - Establishes a 10-year Navy SMR pilot program to evaluate SMRs and microreactors for Navy energy needs.

- **P.L. 119-21:**

- Sect. 20005(a)(15) - Provides \$125M to advance small, portable military reactors.

- Sect. 20008(b)(7) - Provides \$120M for National Nuclear Security Administration enrichment services.

- **10 U.S.C. § 4022:**

- Allows DoD to use Other Transactional Authority/prototype authority for nuclear energy deployment.

- **10 U.S.C. § 2920 (FY2021 National Defense Authorization Act):**

- Requires 99.9% annual energy availability for critical missions at all DoD installations by 2030.

- **FY2019 NDAA - Advanced Reactor Mandate:**

- Directs DoD to pursue mobile/transportable nuclear reactors.

# Installation Energy Requirements

- **10 U.S.C. §§ 2667-2668:**

Enables land use and easements for on-base nuclear projects.

- **16 U.S.C. § 824o-1:**

Protects grid assets essential to national defense.

- **FY2022 National Defense Authorization Act:**

Expands requirements for resilient and diversified installation energy systems, including efficiency, on-site generation, and reduced operational risk.

- **DoD Installation Energy Resilience Policy (Ongoing):**

Implements statutory requirements under 10 U.S.C. § 2920 mandating  $\geq 99.9\%$  annual availability for critical mission energy by FY 2030, with higher standards for select missions; executed via Installation Energy Plans (IEPs), resilience exercises, and on-site generation.

# Projects, Concepts, and Solicitations

Translating Policy Direction & Statutory Authority into Operational Capability

# Overview of projects, concepts and solicitations

- The Department of Defense\* is pursuing multiple nuclear initiatives to achieve federal policy directives and mandates.
- Only a few projects have advanced beyond the concept stage.
- Oversight pathways and acquisition models vary across initiatives.

\*This brief uses the official designation "Department of Defense" to maintain consistency with statutory references and cited authorities.



# Comprehensive List of New Nuclear Reactor Concepts for Military Use

Dept. or Component	Project or Solicitation Title	Date Announced or Initiated	Objective or Mission Requirement	Target Operation Date	Anticipated Oversight Pathway	Commercial Grid Interface
Army	Janus Program	<i>RFI Issued: 18Nov2025</i> <i>RFI Closes: 15Dec2025</i>	Resilient installation energy & operational energy to support warfighter missions	2030	Army	Yes
<i>Army*</i> Air Force	Advanced Nuclear Power for Installations (ANPI)	Announced 2024	Resilient installation energy	2030	<i>Army*</i> or NRC	Undetermined
DoD Strategic Capabilities Office (SCO)	Project Pele	Initiated 2018	Mobile reactor for transient applications	N/A	DOE	No
Air Force	Eielson Air Force Base Microreactor Project	Initiated 2017	Resilient installation energy	2028	NRC	Yes; contractor owned & operated
Navy	<i>Solicitation for Innovative Energy Resilience Solutions to Power Navy and Marine Corps Installations</i>	<i>Solicitation Issued: 07Aug2025</i>	Resilient installation energy	Solicitation not made public, so target operation date & oversight pathway are unknown; press release specifies “execution-ready prototypes” and “minimal permitting”.		Yes; contractor owned and operated
The Department of the Navy and the Department of the Air Force issued the following sources-sought RFIs to solicit capability and interest information to inform future planning. As of this publication, no public announcements have been made regarding follow-on procurement actions. However, the above Navy solicitation supersedes the RFI below.						
Navy	<i>RFI: Identification of Potential Shore Installation Contractor Owned/Operated Nuclear Power Sites</i>	<i>RFI Issued: 7Oct2024</i> <i>RFI Closed: 7Nov2024</i>	Resilient installation energy	N/A	NRC	Yes; contractor owned & operated
Air Force	<i>RFI: Strategic Real Estate Opportunities at Joint Base San Antonio (JBSA), Opportunity 5a: Energy Resiliency</i>	<i>RFI Issued: 30Oct2024</i> <i>RFI Closed: 20Jan2025</i>	Improve resiliency, reduce/optimize demand, assure supply, and ensure security	N/A	NRC	Yes; contractor owned & operated

\*The Army has shifted primary focus to the Janus Program. The Air Force has previously stated intent to pursue NRC licensing.

# New Nuclear Reactor Initiatives Underway for Military Use

Dept. or Component	Project or Solicitation Title	Target Operation Date	Locations & Vendors	
The following initiatives have either secured funding, completed steps towards procurement action, or achieved technological advancement.				
Army	Janus Program	2030	Fort Benning Fort Bragg Fort Campbell Fort Drum Fort Hood	Fort Wainwright Holston Army Ammunition Plant Joint Base Lewis-McChord Redstone Arsenal Vendors TBD
Army Air Force	Advanced Nuclear Power for Installations (ANPI)	2030	The following companies are in Commercial Solutions Opening Phase 2. Their proposals are being evaluated for contract award. It is expected that 1 – 5 companies will be chosen. Locations not yet announced, but likely to be Air Bases.	
			Antares Nuclear, Inc. BWXT Advanced Technologies LLC General Atomics Electromagnetic Systems Kairos Power, LLC	Oklo Inc. Radiant Industries Inc. Westinghouse Government Services X-Energy, LLC
DoD SCO	Project Pele	N/A	Unknown. Awaiting partner to transition to an operational project.	BWXT Advanced Technologies LLC
Air Force	Eielson Air Force Base Microreactor Project	2028	Eielson Air Force Base, Alaska	Oklo Inc.

# Conclusion

- This briefing will be updated periodically to reflect:
  1. Updates to federal policy, executive direction, and statutes
  2. Implementation guidance and regulatory developments
  3. Project updates, announcements, acquisition milestones, and technical progress
  4. Budgetary actions, appropriations, and programmatic changes