

NATIONAL NUCLEAR SECURITY ADMINISTRATION



# STRATEGIC VISION

*Innovate. Collaborate. Deliver.*



# FROM THE NNSA LEADERSHIP TEAM



**Jill M. Hruby**

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for Nuclear Security  
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It is our privilege to serve as the Administrator and Principal Deputy Administrator of the National Nuclear Security Administration (NNSA). NNSA's mission is essential and enduring, and it is at the heart of our Nation's security. We are impressed every day with the commitment of the NNSA federal workforce and our partners at the laboratories, plants, and sites — collectively the Nuclear Security Enterprise (NSE). Together, we provide comprehensive nuclear security solutions that protect the American people, our allies, and our partners in a dynamic world.

The geopolitical environment is shifting, science and technology capabilities are advancing at an accelerated pace, and threats continue to evolve. This leads to increasing uncertainty about the future but also ushers in many opportunities. The NSE has a tremendous ability to shape the future and play an indispensable role in providing solutions to the range of national security challenges our Nation faces.

Our common goal across the NSE is to deliver on the NNSA mission, consistent with the vision in this document. We are proud of how the enterprise comes together to address nuclear security challenges, and it is the foundation of our success. Collaboration is vital to solving the issues we face today.

NNSA is the one place in government where the complementary missions of nuclear deterrence, arms control, and nonproliferation come together to meet our national security needs. This unique mission integration is NNSA's *Strategic Advantage*, and it is enabled by unparalleled science, technology, and engineering (ST&E) capabilities, an unrivaled workforce, an innovative spirit, and a commitment to delivering on our mission as efficiently and effectively as possible. We will nurture and draw on that advantage to bring our science, products, and infrastructure to the next level of maturity and make the world a safer place.

# OUR VISION

## Our Vision

To anticipate tomorrow's nuclear and national security challenges and deliver timely, innovative solutions

Our country faces a rapidly evolving nuclear security environment that brings new challenges to our mission and to our Nation's security. The successful history and current strength and diversity of our enterprise allows us to bring broad knowledge, experience, and expertise to these challenges. Our fundamental mission is enduring but dynamic, and our vision guides us as we implement it. The Nuclear Security Enterprise must, and will, adapt to evolving risks. Strengthening partnerships and adopting a renewed sense of urgency across the enterprise will be critical to this effort.

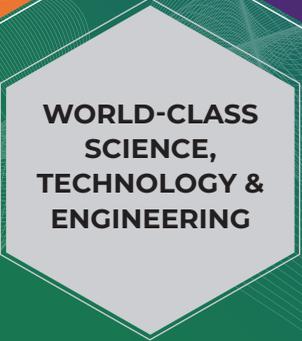
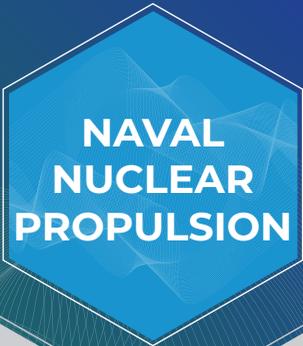
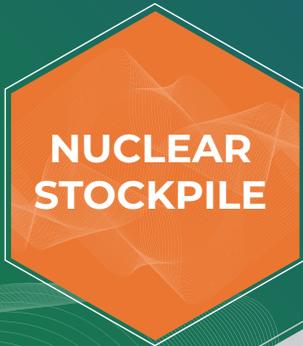
To realize our vision, NNSA will work with the laboratories, plants, and sites to develop and deliver the innovative solutions needed not only to advance our Nation's security but to anticipate future risks. We will do so in an integrated way that positions us to adapt promptly to evolving demands, geopolitical change, and technological advancement. While nuclear security will remain the foundation of this vision, we must also stand ready to support other national security imperatives, including efforts to develop clean energy, mitigate climate change, and protect against cyber, space, biological, and chemical threats.

### ***Innovate. Collaborate. Deliver.***

*We innovate* to create new solutions and approaches to a suite of national security challenges.

*We collaborate* with a range of partners to maximize impact and bolster mission success.

*We deliver* our unique products and infrastructure to address an evolving threat environment.



**The three Mission Enablers are the foundation that allows NNSA to achieve its four Mission Priorities.**

# OUR MISSION

## Our Mission

To protect the Nation, our allies, and our partners by providing a resilient and responsive Nuclear Security Enterprise

## NNSA Mission Priorities

NNSA prioritizes the protection of the American people, our allies, and our partners against an array of nuclear risks and challenges while working to improve global security and stability. In pursuing this mission, we must remain adaptive and responsible in our efforts to provide a resilient and responsive NSE.

**“As we endeavor to build America’s clean energy future, we know the Department’s nuclear security mission is essential to ensuring that future is safe and secure. It is a core focus of our daily work.”**

*– Secretary of Energy Jennifer M. Granholm*



*Secretary Granholm  
and NNSA Principal Deputy  
Administrator Frank Rose  
at Lawrence Livermore  
National Laboratory*

# OUR VISION

TO ANTICIPATE

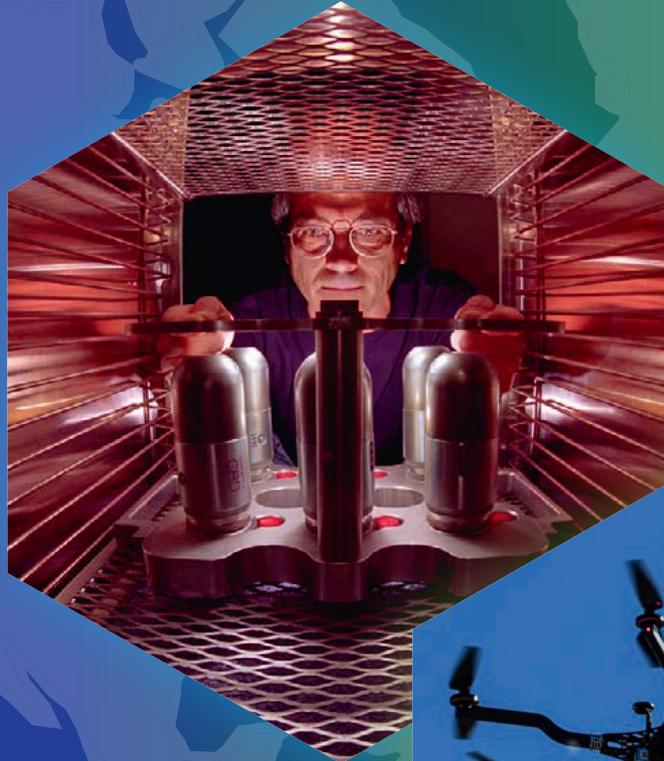
TOMORROW'S NUCLEAR

AND NATIONAL SECURITY

CHALLENGES AND DELIVER

TIMELY, INNOVATIVE

SOLUTIONS



# MISSION PRIORITIES

## NUCLEAR STOCKPILE

### **Mission Priority 1: Design and deliver the Nation's nuclear stockpile**

NNSA, in partnership with the laboratories, plants, and sites, has the responsibility to design, build, and deliver a safe, secure, reliable, and militarily-effective nuclear stockpile in support of the Nation's integrated deterrent. We will sustain the current stockpile, undertake comprehensive weapons modernization, recapitalize our nuclear weapons infrastructure, and strengthen our cutting-edge ST&E capabilities. The result will be a balanced, resilient, flexible, and effective stockpile capable of meeting this country's deterrence requirements.

Looking to the future, a mature and modern production enterprise will also offer new opportunities such as decreasing the number of non-deployed weapons in the stockpile. The unique and deliberate structure of the NSE laboratories, plants, and sites and their varied scientific and technological strengths allow for the secure and efficient delivery of the nuclear weapons stockpile.





**Mission Priority 2:  
Forge solutions  
that enable global  
security and  
stability**

Protecting the American people requires that we work towards a world with fewer nuclear risks. NNSA contributes to U.S. nuclear policy and prioritizes research, development, testing, and evaluation (RDT&E) to deliver technical solutions that strengthen current and future arms control and nonproliferation regimes, enhance strategic stability, counter the threat of nuclear proliferation and nuclear terrorism, and respond to nuclear and/or radiological incidents and accidents worldwide. The NSE plays a key role in supporting the safe, secure, and peaceful use of nuclear energy. We work with allies and partners to integrate nonproliferation measures as early as possible in nuclear power development, including advanced reactors with built-in safeguards, security, and remote monitoring capabilities as well as new fuels of less proliferation concern.

This mission priority adapts to technology advancements. NNSA will meet the opportunities to enhance nuclear threat reduction and mitigate the risks posed by emerging technologies. We must detect possible proliferation activities as early as possible and minimize pathways to attaining nuclear or radiological devices. We will also leverage the unique NSE, Department of Energy (DOE), and interagency ST&E expertise and assets to strengthen biosecurity and to counter cyber- and space-based threats that could impede our mission.





**Mission Priority 3:  
Harness the atom  
to power a global  
naval fleet**

NNSA's Naval Reactors (NR) programs safely, reliably, and affordably power a global naval fleet that enables unrivaled responsiveness, endurance, stealth, and warfighting capability. Environmentally sound nuclear power and propulsion plants play an essential role in the Navy's ability to conduct missions vital to our national security. NR is a joint DOE/Department of the Navy organization that provides militarily-effective nuclear propulsion plants and ensures their safe, reliable, and long-lived operation. NR draws on this unique dual-agency structure that assumes total responsibility for all aspects of naval nuclear propulsion.

To accomplish this mission, NR maintains robust research, development, and design efforts together with manufacturing capabilities to sustain its ability to support operational ships and to deliver new plants. It develops new technologies, methods, and materials to maintain preeminence in naval nuclear propulsion and seeks to maximize operational availability to meet assigned missions.





**Mission Priority 4:**  
**Leverage**  
**transformative**  
**technologies to**  
**address emerging**  
**challenges**

NNSA's investments in transformative technologies must be leveraged to meet new challenges such as mitigating climate change and supporting America's global economic competitiveness. We recognize these are companion contributions to national security.

NNSA directly supports scientific leadership and technology transition throughout the enterprise. NNSA plays a pivotal role in supporting the safe, peaceful use of nuclear energy as a clean energy source and will strengthen public-private and international partnerships to aid the adoption of next-generation nuclear power. We encourage DOE to draw on the NSE's proven capabilities and expertise to develop other clean energy sources — such as hydrogen and geothermal — to support climate imperatives, improve

national security, boost our economy, and protect the planet. NNSA also applies clean energy solutions throughout our complex.

NNSA values the application of the NSE's specialized RDT&E capabilities and capacity for solutions to hard challenges. Partnerships with DOE, other U.S. government agencies, as well as academia and industry are embraced to leverage expertise to provide solutions, advance capabilities, and improve the Nation's ability to anticipate and respond to emerging and non-traditional threats. Our work will continue to spur innovation that enhances American security and prosperity.



# OUR MISSION

TO PROTECT THE NATION,

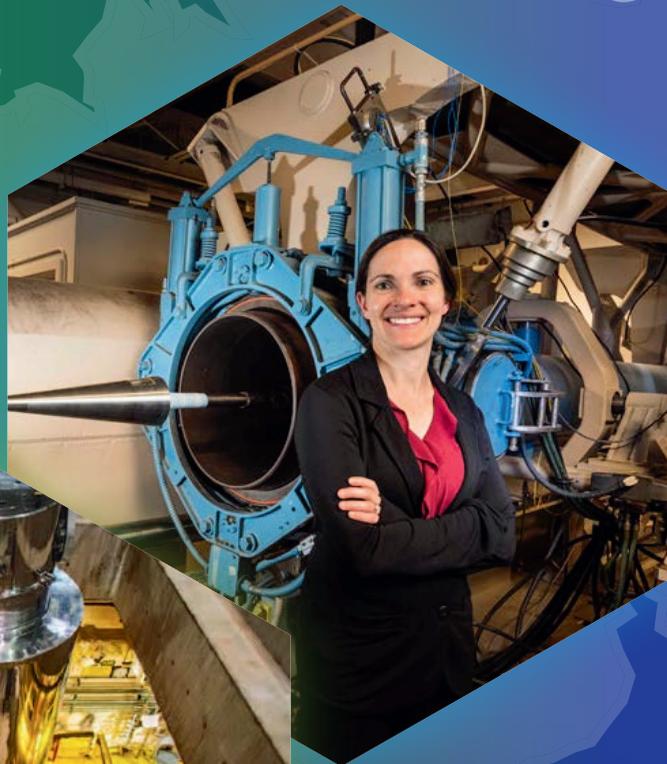
OUR ALLIES, AND OUR

PARTNERS BY PROVIDING A

RESILIENT AND RESPONSIVE

NUCLEAR SECURITY

ENTERPRISE



# MISSION ENABLERS

The NSE possesses expertise and a suite of assets that serve as our foundation and enable achievement of our four Mission Priorities.



## **WORLD-CLASS SCIENCE, TECHNOLOGY, AND ENGINEERING**

The preeminent ST&E capabilities at the laboratories, plants, and sites are essential tools for addressing the range of national security imperatives within our mission. We will build on our unparalleled science portfolio and accelerate the integration of leading-edge ST&E throughout our operations to enable our modernization goals and strengthen our ability to defend against new threats. NNSA will fully explore and utilize new technologies such as exascale, quantum, and other advanced computing; artificial intelligence, data fusion, and open-source data collection; and advanced and additive manufacturing and automation. We will continue to vigorously pursue activities with interagency, commercial, and university partners to push the boundaries of science and to foster and exercise the national technology base. As such, NNSA will work with DOE to leverage the capabilities of all laboratories, plants, and sites to spur the innovation life cycle, moving from RDT&E to demonstration and deployment. Together, we will nurture our ST&E assets and continue to field novel solutions for the American people.





## **ADAPTIVE WORKFORCE & RESILIENT INFRASTRUCTURE**

NNSA will recruit, invest in, and nourish a high-performing, diverse, and flexible workforce that can meet the unique policy, technical, and leadership needs of our mission today and well into the future. We champion all aspects of diversity, equity, inclusion, and accessibility so that NNSA and its enterprise benefit from the full range of America's talent. Efforts to minimize personnel attrition are a high priority, as is investing in university programs to support our future workforce.

We must also continue revitalizing our infrastructure, both by reestablishing capabilities lost after the Cold War and modernizing facilities that have degraded over the last 30 years. This infrastructure refurbishment is moving forward in sync with our weapons modernization and nuclear security programs and must leverage improvements in manufacturing and other technologies. A modern and flexible nuclear complex remains key to the resilience of the Nation's deterrence capabilities and ensures that NNSA remains responsive to evolving mission requirements.

Resilient infrastructure also requires investing in modern information technology and cybersecurity solutions to protect our assets against growing threats, safeguard our ability to deliver on the mission, and provide a state-of-the-art work environment for our workforce.



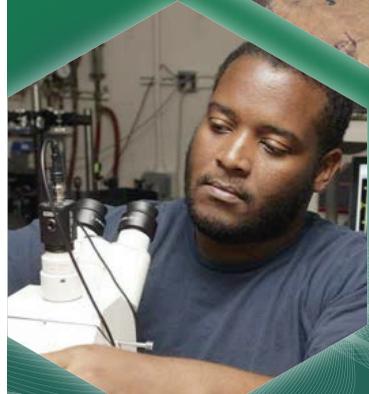
## **INTEGRATED ENTERPRISE MANAGEMENT & OPERATIONS**

Effective governance and management incorporates mission integration and efficient execution across the NSE. This collaborative approach among our federal, laboratory, plant, and site partners is critical to NNSA's success. We will continue to work together to assure schedule and technology alignment, improve efficiency, and accelerate delivery. We will harness the greatest capabilities that our Management and Operating partners offer, especially as they continue to share best practices from across the nuclear portfolio, industry, and academia. Embracing this flexibility allows each laboratory, plant, and site to optimize itself to both deliver for NNSA and contribute to vital national priorities.

# LOOKING TO THE FUTURE

NNSA is proud of its enduring and essential role in safeguarding America's nuclear security, in all aspects. As this Vision articulates, NNSA will continue to play this essential role long into the future. However, looking ahead as the world evolves, we must go beyond the frontiers we have known. We are an integrated, leading-edge, solutions-driven agency with world-class ST&E assets; this is our strategic advantage, and it will be at the forefront of everything we do. These capabilities undergird all of NNSA's efforts to address nuclear risks as well as evolving challenges in areas such as biosecurity, energy, cybersecurity, the use of space, and emerging technologies. NNSA will continue to lead in developing solutions that will keep our Nation secure. That is our absolute and immutable commitment to the American people.

*Jill Hruby and Frank Rose with  
Deputy Secretary David Turk  
and Admiral Charles Richard at  
U.S. Strategic Command*



# Nuclear Security Enterprise Laboratories, Plants, and Sites





U.S. Department of Energy  
National Nuclear Security Administration  
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