

Senate Armed Services Committee
Advance Policy Questions for Mr. Frank A. Rose,
Nominee to be Principal Deputy Administrator,
National Nuclear Security Administration

Qualification and Duties

Section 2403 of title 50, U.S. Code, provides that the Principal Deputy Administrator of the National Nuclear Security Administration (NNSA) shall be appointed “from among persons who have extensive background in organizational management and are well qualified to manage the nuclear weapons, nonproliferation, and materials disposition programs of the Administration in a manner that advances and protects the national security of the United States.”

What background, experience, and expertise do you possess that you believe qualifies you to perform these duties?

I have over 20 years of experience in positions at the U.S. Department of Defense, U.S. Congress, the U.S. State Department, and private sector working on nuclear strategy, deterrence, arms control, strategic stability, missile defense, outer space, and emerging security challenges. I currently am a senior fellow and the co-director of the Center for Security, Strategy, and Technology in the Foreign Policy program at the Brookings Institution. Prior to joining Brookings, I served as U.S. Assistant Secretary of State for Arms Control, Verification, and Compliance from 2014-17. From 2009-14, I served as the U.S. Deputy Assistant Secretary of State for Space and Defense Policy. Additionally, I previously served as a professional staff member on both the House Permanent Select Committee on Intelligence and the House Committee on Armed Services.

Do you believe that there are actions you need to take to enhance your ability to perform the duties of the Principal Deputy Administrator? Please explain your answer.

I believe my previous experience working in Congress and the U.S. Departments of State and Defense have prepared me to perform the duties of the Principal Deputy Administrator. However, I strongly believe in the value of continuous learning.

If confirmed, I would surround myself with a highly trained team from across NNSA and its nuclear security enterprise. I would also regularly engage with all elements of NNSA’s enterprise to further understand NNSA’s capabilities, requirements, and challenges in order to ensure NNSA can execute its vitally important missions.

Section 2403 further provides that the Principal Deputy Administrator “shall perform such duties and exercise such powers as the Administrator may prescribe, including the coordination of activities among the elements of the Administration.”

What is your understanding of the role you would play in the day-to-day administration of the NNSA, if confirmed?

If confirmed, I will be the alter ego of the Administrator, ensuring the Administrator's direction for the NNSA is carried out. As a practical matter, I would expect to be focused on the internal workings of the NNSA, the budget, and interactions with other Departmental organizations. This allows the Administrator to address the strategic challenges and outward facing interactions necessary to accomplish the NNSA mission.

If confirmed, what would be your approach to the coordination of activities among the Deputy Administrators, NNSA?

If confirmed as the Principal Deputy Administrator, I would assist the Administrator in overseeing the NNSA programs that are led by the Deputy Administrators. I see my role as the Principal Deputy Administrator to work closely with each of the Deputy Administrators to ensure they can effectively execute the missions under their cognizance. In particular, the role of Principal Deputy Administrator coordinates development and implementation of policy and guidance, strategic planning, program managements, budgeting, resource allocation, safeguards and security, emergency management, contracts, and hiring to be enablers for the primary mission programs of the NNSA.

How, if at all, might your coordinating role be different with regard to the Deputy Administrator for Naval Reactors?

The Deputy Administrator for Naval Reactors oversees the Naval Nuclear Enterprise and naval nuclear laboratories. If confirmed, I will have responsibilities in oversight of the nuclear security enterprise, comprised of the NNSA laboratories, plants, and sites. My role as the Principal Deputy Administrator for NNSA is to manage the NNSA support functions to enable the Deputy Administrator for Naval Reactors in executing his unique responsibilities in delivering nuclear propulsion that meets the U.S. Navy's operational requirements

Are there any special projects or tasks on which you would focus, if confirmed?

If confirmed, I will work to support the Administrator and whatever duties or initiatives she may seek to implement to improve the NNSA's nuclear security mission. I am ready and willing to take on any projects or tasks that will benefit our nation's nuclear security enterprise.

If confirmed, what additional duties and functions do you expect that the Administrator of the National Nuclear Security Administration (NNSA) would prescribe for you, particularly in light of the 2018 National Defense Strategy (NDS) and the 2018 Nuclear Posture Review (NPR)?

If confirmed, I look forward to working with the Administrator to determine what additional duties and functions I will be assigned. I stand ready to support the

Administrator in furthering the Administration's efforts to modernize and recapitalize our nation's nuclear security enterprise.

Challenges and Priorities

In your view, what are currently the broad organizational challenges and priorities for the NNSA?

If confirmed, I will support the Administrator's priorities to ensure NNSA meets our nation's national security requirements, and NNSA continues to ensure the safety, security, and reliability of Nation's nuclear weapon stockpile. The United States has not adequately invested the funds to sustain a modern, flexible, and responsive infrastructure. Most of NNSA's facilities are over 40 years old and nearly 30 percent date back to the Manhattan Project. If confirmed, I will work closely with the Administrator to execute the priorities that have been identified.

In your view, what are the currently the major challenges for the next Principal Deputy Administrator?

NNSA must modernize the nuclear weapons stockpile, associated infrastructure, and reestablish production capabilities. In addition, NNSA must also continue to prevent, counter, monitor, and respond to proliferation threats around the world. To be successful in all of NNSA's mission areas, we must recruit and retain a workforce that is second-to-none. I will work with the Administrator to support the NNSA Management and Operating (M&O) partners to attract and retain a top-notch workforce in the NNSA laboratories, plants, and sites while reestablishing the corporate knowledge necessary to modernize our stockpile.

If confirmed, how would you address these challenges, and on what timeline?

If confirmed, it will be important for me to work with the Administrator, the Secretary of Energy, the Deputy Secretary of Energy, each of the NNSA Deputy Administrators, and the leaders in other federal agencies to identify solutions to these challenges and then assist to develop appropriate plans and timelines to implement them.

In your view, what should be the main priorities for the next Principal Deputy Administrator specifically?

If confirmed, I will focus on the challenges and priorities outlined by the Administrator and assigned to me by the Administrator. It will require critical thinking and planning to address the challenges and tackle the priorities. I will need to develop close working relationships with people at NNSA, the laboratories, the plants, the sites, the Department of Energy, other federal agencies, Congress, and allies.

If confirmed, what steps would you take to effectuate progress in regard to these priorities?

I will engage with and empower NNSA leaders to coordinate with DOD, State Department, the National Security Council, and other executive branch agencies on defining NNSA requirements, and work closely with Congress to explain how NNSA will meet the requirements.

Relationships

Please describe your understanding of the legal and “in practice” relationship between the Principal Deputy Administrator and each of the following officials. Indicate also if there are any special considerations that, if confirmed, you would apply to your relationship with each such official(s):

A. The Secretary and Deputy Secretary of Energy

If confirmed, I will report through the Administrator to the Deputy Secretary of Energy and the Secretary of Energy. In the absence of the Administrator, I would represent NNSA.

B. The Administrator of the NNSA

If confirmed, I will report directly to the Administrator.

C. The Deputy Administrators of the NNSA

If confirmed, I will work with the NNSA’s Deputy Administrators to ensure each can execute their respective missions.

D. The Assistant Secretary of Energy for Environmental Management

If confirmed, I will interact with the Assistant Secretary of Energy for Environmental Management on environmental management issues that intersect with the needs of NNSA.

E. The Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense Programs

NNSA’s Deputy Administrator for Defense Programs is the primary interface with the Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense. If confirmed, I will support the priorities of the Administrator and NNSA with the Assistant Secretary, as appropriate.

F. The Chairman of the Nuclear Weapons Council

If confirmed, I will represent and support the priorities of the Administrator and NNSA to the Chairman of the Nuclear Weapons Council.

G. The Commander of United States Strategic Command

If confirmed, I will represent the priorities of the Administrator and NNSA with the Commander of the United States Strategic Command.

H. The nuclear directorates of the Air Force and Navy

If confirmed, I would represent the priorities of the Administrator and NNSA to the nuclear directorates of the Air Force and Navy.

I. The Associate Administrator of NNSA for Acquisition and Project Management

If confirmed, I will support the Administrator and NNSA in providing support and management oversight for the Associate Administrator for Acquisition and Project Management.

J. The Defense Nuclear Facilities Safety Board

If confirmed, I would represent the priorities of the Administrator and NNSA to the Defense Nuclear Facilities Safety Board.

Nuclear Posture Review

The Biden Administration is considering conducting a new Nuclear Posture Review (NPR). The last NPR, conducted in 2018 by the Trump Administration, emphasized the importance of modernizing our stockpile, NNSA facilities, and the workforce. Although the Secretary of Defense is the primary cabinet official responsible for policymaking regarding nuclear weapons, the support of the Secretary of Energy and the Administrator of NNSA are crucial to successful execution of the nuclear mission.

If confirmed, what would be your role in the conduct of the Biden Administration's NPR?

If confirmed as Principal Deputy Administrator for NNSA, I will support both the Administrator and the Secretary of Energy as they navigate the NPR process and represent Department equities. NNSA's responsibilities for ensuring the safety, security, and reliability of the nation's nuclear weapons, advancing nuclear nonproliferation, promoting international nuclear safety and security, and developing technologies to monitor arms control agreements mean we must be at the table for discussions of nuclear policy.

If confirmed, what changes to the 2018 NPR would you recommend the Biden Administration consider?

I am not currently involved in ongoing nuclear policy discussions within the Administration, but, if confirmed, I would urge the Biden administration to consider the importance of revitalizing and investing in the infrastructure and capabilities needed to support our nation's nuclear deterrent.

Should the upcoming NPR recommend enhancements in the U.S. nuclear posture, will you commit, if confirmed, to providing the full and timely support of NNSA to the work required to implement those enhancements?

Yes.

Should the upcoming NPR call for the development of additional nuclear capabilities, will you commit, if confirmed, to supporting those additions and ensuring that NNSA fully supports the new requirements?

Yes.

Overall Management

Section 4132(c)(3) of title 41, U.S. Code, establishes that the Administrator, NNSA “. . . shall be subject to the authority, direction, and control of the Secretary [of Energy]. Such authority, direction, and control may be delegated only to the Deputy Secretary of Energy, without re-delegation.”

What is your view on the relationship between the Secretary of Energy and the NNSA in statute and recent practice?

NNSA can only be successful if there is a positive and strong working relationship between the Secretary of Energy, Deputy Secretary of Energy, NNSA Administrator, and NNSA Principal Deputy Administrator. If confirmed, I will work hard to ensure DOE and NNSA have good working relations.

How is the “semi-autonomous” nature of the NNSA, as set forth in law, reflected in NNSA’s organizational structure? What makes NNSA different from other components of Department of Energy (DOE)—in both law and practice?

Under the NNSA Act, NNSA is designated as a semi-autonomous organization; the organizations led by other DOE undersecretaries are not structured in this way. This is a unique authority and responsibility that gives the NNSA Administrator authority over functions that also reside in DOE. If confirmed, I will prioritize building strong, mission-focused, and effective culture and processes across those functions, in close collaboration with the leadership of DOE.

With a view to improving organizational management and operational effectiveness, if confirmed, would you recommend any changes to the organizational structure of in NNSA?

If confirmed, my focus will be on continuing NNSA's recent progress in its approach to governance and management by strengthening communication and integration across the nuclear security enterprise to make sure we have effective partnerships between federal employees, the laboratories, plants, and sites, and our interagency mission partners. I will work with the Administrator and NNSA leadership to clearly define lines of authority, responsibility, and accountability and to consolidate NNSA's progress in strategic oversight and project management.

Relationship with the Department of Defense (DOD)

The Nuclear Weapons Council (NWC) sets requirements for nuclear forces, which form the basis of the core mission of the NNSA. DOD has been described as NNSA's primary customer, as well as its partner.

If confirmed, what would be your role in supporting the Administrator of the NNSA in executing their duties and functions as a member of the NWC?

If confirmed, I will support the Administrator in executing her duties as a member of the NWC by ensuring that there is a communication flow at the staff, management, and leadership levels to facilitate discussion and understanding on key issues including requirements, budget, and stockpile activities.

How would you describe the relationship between NNSA and the DOD?

From what I have observed, NNSA's relationship with DOD is healthy with dialogue and collaboration at both the working and senior levels.

What is your assessment of the health of that relationship at both senior- and working-levels?

From what I have observed, the relationship today is healthy and, if confirmed, I will work to support the Administrator in continuing to strengthen this relationship.

If confirmed, what might you recommend to improve this relationship?

If confirmed, I will commit to keeping an open mind on opportunities to further enhance this relationship. I will work collaboratively with the Administrator on these efforts.

NNSA Budget

In 2015, then-Secretary of Energy Ernest Moniz wrote to the Director of the Office of Management and Budget (OMB) regarding NNSA's budget allocation for the ensuing five years that "an additional \$5.2 billion over FY 2018-2021 [was] needed to establish a viable and sustainable program portfolio" and that "[f]ailure to address these requirements in the near term will put the NNSA budget in an untenable position

beginning in FY 2018.” Then-Secretary Moniz added that, if uncorrected, the budget proposal would “lack credibility.” The Consolidated Appropriations Act, 2021 included an additional \$3 billion above the President’s budget request.

Do you believe that the \$3 billion increase was adequate and sufficient to render the budget request “credible”, particularly in light of NNSA’s stockpile stewardship responsibilities and the recommendations of the 2018 NPR? Please explain your answer.

I believe the \$3 billion increase provided in FY 2021 is adequate for this fiscal year as it is the most robust funding in the history of NNSA. This is an area I will assess further if confirmed.

Section 1632 of the Fiscal Year (FY) 2020 National Defense Authorization Act (NDAA) requires the NWC to examine the NNSA budget before its submission to the Office of Management and Budget (OMB), to ensure it can meet DOD requirements.

If confirmed, how would you ensure compliance with this provision? How would you ensure the NWC is accorded adequate time to review the budget before its submission to OMB?

I do not know the specifics of how NNSA, the NWC, and OMB mechanically share budget information and comply with the provision. If confirmed, I am committed to making sure there is open, clear, and consistent communication regarding NNSA’s budget with the NWC.

Personnel

Do you believe that NNSA has the appropriate number of civilian employees to perform its mission? Please explain your answer.

If confirmed, one of my key priorities will be to work with the Administrator to review staffing needs and challenges across NNSA to ensure the appropriate skills mix and number of personnel are in place to accomplish its national security missions.

If not, what would be the appropriate size of the NNSA civilian workforce and what, in your view, would the additional personnel accomplish that NNSA is unable to accomplish today? If confirmed, which specific components within the NNSA would you recommend growing and how much growth would you recommend? Please explain your answer.

If confirmed, I will work with the Administrator to ensure that NNSA is equipped to accomplish its missions. I understand that NNSA’s mission has been steadily increasing, and I will work to ensure staffing levels are commensurate with the expanding workload.

In your view, does NNSA rely too heavily on contractors and a contractor workforce to accomplish its mission? Please explain your answer.

If confirmed, I would work with the Administrator and the M&O mission partners to ensure we maintain the correct mix of federal and contracting employees.

Do you believe that NNSA has the appropriate capabilities—in both its civilian employee and contractor workforces—to perform its mission? If so, please explain your rationale.

Ensuring NNSA has the appropriate capabilities to execute the mission is critical for the nuclear security enterprise. If confirmed, I will work closely with the Administrator to ensure that NNSA continues to recruit and retain the highly-skilled professionals needed to execute its missions.

If not, please explain what skill sets, areas of expertise, or other capabilities each such workforce requires to ensure that NNSA is fully mission capable?

If confirmed, what specific steps would you take to acquire the necessary capabilities in both the NNSA civilian and contractor workforces?

If confirmed, I would work with the Administrator to ensure NNSA is executing a hiring strategy, in partnership with NNSA's M&O partners, to bring the best and brightest into the nuclear security enterprise. This should include outreach to colleges and universities and participation in career fairs near NNSA labs, plants, and sites.

If confirmed, what specific steps would you recommend to retain critical nuclear weapons expertise, particularly design capabilities, in the NNSA federal civilian workforce, as well as at the labs and the plants?

If confirmed, I will work with the Administrator and the M&O mission partners to ensure we explore the most effective paths to recruit and retain the world's best engineers, scientists, and support personnel.

If confirmed, what specific steps would you recommend for the NNSA to ensure that adequate and appropriate technical skills are maintained in NNSA federal civilian workforce, as well as at the labs and the plants?

If confirmed, I would work with NNSA's human resources and training specialists to understand what is already in place and where there are opportunities for improvement. Where appropriate, I will make the necessary changes to ensure there is an adequate and appropriate technical workforce in place. I will also expand communications with the NNSA labs, plants, and site to understand how NNSA can best support their recruitment and training requirements.

In your view, does NNSA leadership need any additional authorities or personnel system flexibilities to build and maintain the federal civilian workforce the NNSA needs to accomplish its mission? Please explain your answer.

If confirmed, I would work with NNSA's human resources specialists to assess whether any additional authorities are required.

Construction and Project Management

NNSA has been plagued by cost overruns, schedule delays, and project cancellations related to the construction of nuclear facilities, including the Uranium Processing Facility, the Chemistry and Metallurgy Research Replacement project, the Mixed Oxide Fuel Fabrication Facility, and others.

In your opinion, what are the primary causes of these repeated failures in project management?

I understand that NNSA has made a concerted effort to address project management challenges over the last decade. Based on my understanding, these challenges included issues related to ill-defined project requirements and schedules, improper estimating, contractual problems, and lack of proper planning.

If confirmed, I will ensure NNSA continues to remain on a path toward improved project management.

In your view, are the changes in NNSA project management practices undertaken over the last few years sufficient to address these problems? Please explain your answer.

NNSA's decision to create the Office of Acquisition and Project Management in 2011 has led to significant improvements. More can always be done. If confirmed, I will continue to support the implementation of best business practices, as well as using lessons learned to improve early project planning and requirements development to prevent cost growth. If confirmed, I would also ensure there are sufficient qualified acquisition and project management specialists overseeing NNSA's growing portfolio.

If confirmed, what specific steps would you take to ensure that these systemic project management failures are not repeated in the future? What specific changes in policy, practice, organization, or regulation would you recommend in furtherance of this effort?

If confirmed, I am committed to ensuring improved contract and project management across NNSA. I would recommend rigorous project management practices and cost estimating, clarified lines of authority, holding federal and contractor personnel accountable, and providing independent dedicated acquisition, project management, and oversight.

In your view, does the Administrator, NNSA need any additional authorities or flexibilities to address the root causes of these project management failures? Please explain your answer.

If confirmed, I will review Departmental regulations that govern capital acquisition projects and how they apply to NNSA activities. Until then, I will ensure that NNSA staff have the resources needed to further projects while staying within Departmental regulations.

In 2014, largely in response to a string of systemic project management failures, Congress mandated the creation of the Office of Cost Estimation and Program Evaluation (CEPE), in the Department of Energy. CEPE was modeled on the DOD Office of Cost Assessment and Program Evaluation (CAPE). CEPE now reports directly to the Administrator, NNSA

In your view, is CEPE sufficiently staffed (in terms of billets allocated and billets encumbered by qualified personnel) to provide independent cost estimates and other additional costing and project management advice internal to NNSA?

If confirmed, I will work with the Administrator to determine if CEPE is sufficiently staffed.

Does CEPE have sufficient authority and access to DOE data and information to execute its statutory mission?

If confirmed, I will review CEPE's authority and access to understand if further improvements are needed.

If confirmed, specifically how would you undertake to support and sustain CEPE capabilities and independence? How will you balance these efforts with the mandate to be a responsible steward of taxpayer dollars?

CEPE's cost and resource analysis capabilities are valuable to NNSA. CEPE's independence is critical to providing both the Principal Deputy Administrator and the Administrator with independent, data driven analysis. If confirmed, I will ensure CEPE maintains its independence and review the resources available to it.

If confirmed, will you commit to facilitating CEPE personnel access to the Administrator and to you?

Yes.

Safeguards and Security

What is your understanding of the role of the Principal Deputy Administrator in ensuring safety and security in the nuclear weapons complex?

If confirmed, I will work with the Administrator to be engaged on initiatives to improve safety at NNSA's facilities including a healthy safety culture. This includes implementing a Governance and Management structure which emphasizes transparency, trust, and collaboration to address challenges. I will work with our Management and Operating partners to establish expectations for sustained safety performance with successful mission accomplishment. I will reinforce that sustained safety performance and mission accomplishments can mutually support each other to achieve mission success.

I will also work with the Administrator and the security program office to ensure that we have systems and processes in place to prevent security lapses. I also anticipate being engaged on all initiatives to improve the effectiveness and efficiency of security at NNSA's facilities. Additionally, I will work with NNSA's Management and Operating partners to make sure our governance and management works to achieve those objectives while emphasizing continuous improvement in both safety and security.

In your opinion, what are the biggest safety and security threats to the facilities and materials in the nuclear weapons complex?

I firmly believe that the safety and security of the NNSA's facilities and nuclear material are of the utmost importance and it is critical that the NNSA has the appropriate authorities and funding from Congress to mitigate these threats. As part of this, addressing the continued challenges of ageing infrastructure is critically important to ensure that NNSA is advancing the mission with state-of-the-art facilities, with modern safety designs. If confirmed, I will work with the Administrator to emphasize and address NNSA's commitment to operate safely while accomplishing the mission and mitigate security threats such as cyber, material, transportation, and physical threats to NNSA's operations.

If confirmed, what role, if any, would you have in NNSA's interactions with the Defense Nuclear Facilities Safety Board?

I understand and appreciate the importance of a healthy working relationship with the DNFSB and open lines of communication. While it is my understanding the Deputy Secretary of Energy manages the Department's overall interface with the DNFSB, if confirmed, I will work through the Administrator and Deputy Secretary of Energy on DNFSB's recommendations and advice regarding public health and safety issues at NNSA's facilities.

The Defense Nuclear Facilities Safety Board and NNSA's Office of Enterprise Assessments have reported on a number of accidents at the national laboratories in recent years. These accidents included explosions, exposure to radiation, and one incident that led to the partial shutdown of facilities at Los Alamos National Laboratory—placing both

personnel and mission execution at risk. Yet, while personnel safety is critically important, the nuclear mission by definition involves some of the most hazardous materials known to exist. Thus, if the labs' nuclear mission is to be accomplished, risk can never be eliminated completely.

In your view, what is the proper balance between safety, risk, and mission accomplishment at the national laboratories? How should this balancing be accomplished, in your view?

NNSA must have sustained, strong safety performance. Safety and mission success mutually support each other. This is balanced by properly assessing risk and controlling and managing that risk.

If confirmed as Principal Deputy Administrator, I will continue to focus on fostering our partnership between the labs and plants and emphasize continuous improvement in safely and successfully executing the NNSA mission. I will also be committed to empowering employees to anticipate, identify, report, and resolve safety issues.

If confirmed, what steps would you recommend to improve safety culture at the labs, while still meeting mission requirements?

The key to having a positive safety environment is establishing and reinforcing expectations by senior leadership which I will do with the Administrator through my interactions with Management and Operating partners' leadership. I will emphasize the long-term commitment to safe operations through the establishment of an effective governance and management culture. I will also emphasize the critical nature of effectively empowering and engaging with employees to give feedback while also stressing organizational learning. The reinforcement of these attributes provides the foundation to improve safety culture. I will also stress a strong safety conscious work environment so employees will feel comfortable in raising safety issues with leaders prepared to effectively address those issues. I will encourage and provide support to our leadership so they have all the necessary tools to effectively address any safety concerns.

Plutonium Strategy

NNSA has selected two sites for plutonium pit production: Los Alamos will produce approximately 30 pits per year and the former Mixed Oxide (MOX) Fuel Plant at the Savannah River Site will produce approximately 50 pits per year, for a projected two-site total of not less than 80 pits per year.

What are your views on the Los Alamos site and its ability to achieve its pits per year production target to support the demands of the ongoing stockpile program?

I believe work at Los Alamos is on track to achieve the goal of producing 30 pits per year in 2026, supporting the overall requirement for 80 pits per year. Moreover, I know that NNSA has to succeed in this effort. The United States currently does not produce any

war reserve pits and we must do so to maintain our nuclear deterrence in the future. If confirmed, I am committed to being focused on making sure Los Alamos does, in fact, get to 30 pits per year in 2026.

In your view, what changes are necessary to convert the former Mixed Oxide Fuel Plant at the Savannah River Site to achieve its pits-per-year production target to support the requirements of the ongoing stockpile program?

The former Mixed Oxide (MOX) Fuel Fabrication Facility, or MFFF, is a Security Category 1/Hazard Category 2 structure that provides an opportunity to achieve pit production in an existing facility designed to meet stringent security and safety requirements for plutonium operations. Initial modernization activities include repurposing and transitioning the MFFF into a safe, secure, compliant, and efficient pit production facility.

Uranium Strategy and Tritium Production

NNSA currently meets national security requirements for tritium production by providing low-enriched uranium (LEU) to the Tennessee Valley Authority (TVA) to irradiate in the Watts-Bar 1 Reactor. DOE has maintained a policy that only unobligated LEU can be used for national security purposes, meaning that neither the uranium nor the technology used to enrich it carries an “obligation” from a foreign country requiring that the material only be used for non-weapons purposes. Since the United States Enrichment Corporation (USEC) ceased enrichment operations in 2013, DOE has relied on down-blending recycled high-enriched uranium (HEU) to meet requirements for unobligated LEU, but the available supply of recycled HEU for down-blending is finite. NNSA is undergoing an Analysis of Alternatives for obtaining unobligated uranium.

Do you believe the United States should re-establish a domestic uranium enrichment capability to support NNSA needs?

Yes, the United States needs to re-establish a domestic uranium enrichment capability to ensure a reliable supply of enriched uranium to support U.S. national security needs. Since the closure of the Paducah Gaseous Diffusion Plant, near Paducah, Kentucky, in 2013, the United States has lacked the capability to produce enriched uranium free of peaceful use obligations, i.e., unobligated. Mission needs for enriched uranium are currently fulfilled via the United States’ remaining HEU stockpile (by downblending the HEU to produce LEU), which is a finite and currently irreplaceable source.

What are your ideas for the re-establishment of such a capability?

As I understand it, NNSA is currently implementing a long-term strategy that meets current needs and seeks to re-establish domestic uranium enrichment capabilities: Downblending HEU to LEU to extend the tritium fuel need date to 2044; developing enrichment technology options; and executing an acquisition process to deploy an

enrichment technology. An effective and cost-efficient solution for re-establishing enrichment capabilities will be identified through an ongoing Analysis of Alternatives.

Defense Nuclear Nonproliferation

What do you believe should be the highest priorities of NNSA nuclear nonproliferation programs?

NNSA's Defense Nuclear Nonproliferation program is the lead U.S. agency for reducing nuclear and radiological threats globally, including the threat of nuclear proliferation among hostile states and terrorist acquisition of nuclear weapons or materials. DNN must continue to provide a comprehensive defense-in-depth against proliferant states and non-state actors from obtaining, acquiring, and developing nuclear weapons, materials, and technology. NNSA must work in close cooperation with interagency and international partners to carry out its nuclear threat reduction programs and to anticipate and respond to technological advances that may threaten the nation's security. Finally, NNSA must sustain the unparalleled scientific and technical prowess at NNSA's national laboratories, plants, and sites, which is crucial to understanding this evolving threat environment, and we must maintain these capabilities, including the facilities and intellectual capital, to reduce global nuclear threats globally.

In your view, are any policy or management improvements needed in the NNSA nuclear nonproliferation programs? If so, what improvements would you envision?

While I would not term these as "needed improvements," necessarily, there are programmatic challenges facing NNSA's nuclear nonproliferation efforts, including:

- Increasingly rapid technological advancements lowering the bar to proliferation, including the diffusion of dual-use, emerging, and disruptive technologies;
- Eroding nuclear norms and regime cohesion, including the inability to reach consensus within key multilateral fora (e.g., Nuclear Nonproliferation Treaty);
- Hiring challenges posed by the continued attrition and retirements; and
- The ranging political will, practical capabilities, and absorption ability of international partners.

If confirmed, how would you assist the Administrator in implementing the improvements you envision?

If confirmed, I look forward to working with the Administrator, other Departmental elements, interagency, and laboratory colleagues to identify and enable the strategic, technical, human resource, and diplomatic tools to help address these challenges.

What improvements do you recommend to NNSA's efforts in verification and monitoring?

If confirmed, I will work with the Administrator and DNN to evaluate investing in efforts that advance innovative capabilities in industry, academia, and the national laboratories

to support and sustain solutions for the difficult challenges ahead. NNSA must continue its support for investments in research and development of technology to support detection and verification efforts for nonproliferation and arms control regimes and renew its commitment to harnessing the power of science to minimize nuclear threats around the world.

In your view, what are the three greatest unmet nuclear nonproliferation needs? How would you propose to address these needs if confirmed? What resources, authorities, flexibilities, or cooperation would NNSA require to meet such needs?

First, I believe there is an ongoing need to address the threats posed by North Korea and Iran, working with international partners. Second, there is an enduring need to secure vulnerable and excess nuclear and radioactive materials globally. Several countries retain inventories of separated plutonium and excess highly enriched uranium (HEU), which the United States is unable to remove, or confirm the disposition of, due to lack of a political path forward. Finally, we must keep pace with and regulate emerging technologies to mitigate their potential proliferation threat while making the greatest use of their promising opportunities.

What do you think are the five most significant lessons learned for NNSA from the mismanagement of the MOX project? How will these lessons learned be implemented in future NNSA projects such as those related to the dilution and disposal of plutonium?

I am aware NNSA experienced major project management challenges with the MOX project. If confirmed, I look forward to getting briefed on the project to learn more about the intricacies of the challenges associated with it. Further, I will ensure the lessons learned from it will be enforced and strengthened for NNSA's other capital acquisition projects.

Regulation and Oversight

Staff at NNSA's national laboratories often complain that they are overburdened by regulation and oversight, both internal and external, and that this contributes to the challenges in staying under cost and on schedule for major projects.

Do you believe that environmental, safety, and construction regulations are properly applied to NNSA projects and operations? Do you believe these regulations support effective performance by the labs and efficient mission execution overall?

If confirmed, I will be committed to the safe operation of all NNSA facilities. This is all-encompassing and includes the protection of the NNSA workforce, the public, and the environment. I will ensure that safety is properly incorporated into the design and construction of NNSA nuclear facilities. This is a cradle-to-grave approach encompassing safety expectations being communicated early in the conception of the

project in accordance with relevant directives and regulations, periodic review of projects and operations as they progress through important milestones, the selection of qualified design and construction firms to lead them, and the proper staffing of a technically qualified federal project team. I believe this holistic approach and effective engagement from conception to execution of projects will reduce rework and control costs.

I recognize the oversight challenges NNSA faces getting alignment with their partners regarding safety expectations through the application of directives which have been developed over time; and I believe there is room for improvement in the implementation of these directives. I support NNSA's approach to being a learning organization and learn from our past and leverage best practices. This includes NNSA's streamline of its directives and requirements, leverage general industry standards, and management of risk inherent in the construction of non-hazardous facilities.

I am committed to ensuring NNSA's projects and operations are conducted in a safe and effective manner and follow all applicable environmental, safety, and construction rules. I am also committed to using standard approaches to help streamline execution of NNSA's mission work in alignment with the complexity of the projects. Streamlining the construction of low-risk, non-nuclear, commercial-like construction projects is an area where NNSA (and the bidding community) can benefit the most.

Through data-informed, priority investment decisions in support of NNSA's current and future missions, the risk posed by aging infrastructure to NNSA's workforce, the environment, and its mission can be significantly reduced.

In your view, are the labs subject to an appropriate level of oversight from the NNSA, DOE, the Defense Nuclear Facilities Safety Board, the Government Accountability Office (GAO), and/or Congress? Are there certain oversight processes that are unnecessarily duplicative or purely bureaucratic, in your view?

Strong governance and management oversight by NNSA are key pillars in accomplishing the missions and goals of the entire nuclear security enterprise. If confirmed, I will work to ensure that a proper balance exists between oversight and mission execution. Additionally, if confirmed, I will work to build relationships across the complex with the Defense Nuclear Facilities Safety Board, the Government Accountability Office, and Congress to ensure that there exists a proper balance between oversight and mission execution. Clear roles and responsibilities are essential.

If confirmed, what changes in regulatory or oversight structures would you recommend, and why?

Making sure that NNSA's missions are executed in an effective, efficient manner is important. If confirmed, I will assess what changes are necessary to ensure mission execution with proper regulations and oversight.

Defense Programs

The Stockpile Stewardship Program has supported the annual nuclear weapons certification effort for the last 20 years.

Do you believe that the capabilities exist today to ensure that the stockpile is safe, secure, and reliable without nuclear weapons testing? Please explain your answer.

Yes. NNSA's Stockpile Stewardship Program uses a science-based assessment of the reliability of nuclear weapons to assess and certify the stockpile without nuclear explosive testing. For the last 23 years, the three NNSA Laboratory Directors have certified that the stockpile remains safe, secure, and effective, and that additional underground nuclear explosive testing is not required at this time.

The Nuclear Weapons Council has laid out a schedule for the next 20 years that includes the completion of four life extension programs (LEPs), as well as multiple refurbishment programs, the design of the W93 warhead, and the maintenance of the existing stockpile.

Do you have any concerns with this ambitious schedule and in particular concurrency between the plants and the laboratories?

If confirmed, I will work with the Administrator and the Programs to minimize risks to meeting schedule requirements.

Congress has authorized the Stockpile Responsiveness Program for the last several years in order to exercise design and engineering skills in support of the nuclear weapons mission, but this authority has not been fully utilized by NNSA.

If confirmed, how would you assist the Administrator in supporting the Stockpile Responsiveness Program and making full use of the authorities it provides NNSA?

I believe it is important to make investments in personnel, programs, and technologies that strengthen our ability to respond to emerging challenges. If confirmed, I will support the Stockpile Responsiveness Program and its goal to expand opportunities for young scientists and engineers to ensure we have a talented and capable array of nuclear security personnel across the enterprise.

In your view, what should be the long-term plan for the National Ignition Facility, and in particular, how would you assist the Administrator in the long term effort to achieve sustained ignition, which to date has not occurred?

If confirmed, I will work with the Administrator, NNSA subject matter experts, Lawrence Livermore National Laboratory, and Congress to best identify the long-term plan for NIF. I do know that NIF is essential for understanding the physical properties and characteristics of nuclear weapons performance.

What are your views of the Advanced Computing Program and what is your vision for the use of advanced computing in furtherance of NNSA missions?

NNSA's Advanced Simulation and Computing (ASC) Program, delivers leading-edge computer platforms, sophisticated physics and engineering codes, and uniquely qualified staff to support addressing a wide variety of stockpile issues for design, physics certification, engineering qualification, and production. While there is certainly a role for other activities that utilize the ASC program, its primary use should continue to support stockpile stewardship.

Facilities and Infrastructure

More than half of NNSA's infrastructure is more than 40 years old, and a quarter of it dates back to the Manhattan Project. As former Administrator Lisa Gordon-Hagerty testified in 2020, "[T]ime is of the essence to recapitalize our infrastructure throughout the entire NNSA. Long gone are the days where we would be able to just patch these facilities. We need to make sure that we have state of the art infrastructure, so we can recapitalize our enterprise and make sure that we can provide to the Department of Defense the requirements that they so sorely need to maintain our nuclear deterrent." This testimony post-dated by almost two years the FY 2018 NDAA directive to NNSA to establish the Infrastructure Modernization Initiative, with the objective of reducing the backlog of deferred maintenance and repair needs by at least 30% by 2025.

If confirmed, what factors would you consider in prioritizing work with the Associate Administrator for Safety, Infrastructure, and Operations to address the required maintenance of NNSA infrastructure?

If confirmed, I am committed to working with the Associate Administrator for Safety, Infrastructure, and Operations to modernize and sustain NNSA's infrastructure. NNSA must undertake a risk-informed infrastructure strategy (or management approach) to repair, maintain, and replace facilities across the nuclear security enterprise. Reducing deferred maintenance, disposing of process-contaminated facilities, and streamlining execution of non-nuclear construction projects will be a key piece of the priorities I set to meet Congressional direction.

If confirmed, what measures would you recommend to reduce risk in future major construction projects, such as those related to the lithium, tritium, and domestic uranium enrichment capabilities?

If confirmed, I will help NNSA ensure that future major projects are developed and executed utilizing well established program and project management principles including: ensuring that the project requirements are clearly defined and prioritized; proper cost estimates are completed and reviewed independently; sufficient design work and technological development is completed prior to commencing a project's construction; and monitoring progress to ensure projects remain on schedule and on budget.

Organizational Climate

If confirmed, what role would you establish for yourself in ensuring that the NNSA workplace, including that of NNSA's geographically-separated labs and other components promotes the dignity of and respect for all persons?

Respect is one of my core values, and one, if confirmed, I will ensure at NNSA. If confirmed, I will serve as a role model by treating each employee with dignity and respect and would ensure that all employees foster an inclusive environment where every perspective is recognized and diversity of thought is valued.

Sexual Harassment

What is your assessment of the current climate regarding sexual harassment and gender discrimination in the NNSA?

If confirmed, I am committed to creating a workplace that is safe and welcoming to all people. As the Principal Deputy Administrator, if confirmed, I welcome the opportunity to learn more about the current NNSA climate and taking steps to improve the environment.

If confirmed, what actions would you take were you to receive or become aware of a complaint of sexual harassment or discrimination from an employee of the DOE, NNSA, or a component thereof?

If confirmed, I will take complaints of sexual harassment or discrimination seriously. All employees have the right to feel safe in the workplace and must be treated fairly. I will work to ensure such complaints are reviewed and responded to quickly, including appropriate corrective action and discipline if warranted.

Notification of Congress

Will you commit that if confirmed, you would promptly notify this Committee of any significant issues in the safety, security, or reliability of the nuclear weapons stockpile?

Yes.

Congressional Oversight

In order to exercise legislative and oversight responsibilities, it is important that this committee, its subcommittees, and other appropriate committees of Congress receive timely testimony, briefings, reports, records—including documents and electronic communications, and other information from the executive branch.

Do you agree, without qualification, if confirmed, and on request, to appear and testify before this committee, its subcommittees, and other appropriate committees of Congress? Please answer with a simple yes or no.

Yes.

Do you agree, without qualification, if confirmed, to provide this committee, its subcommittees, other appropriate committees of Congress, and their respective staffs such witnesses and briefers, briefings, reports, records—including documents and electronic communications, and other information, as may be requested of you, and to do so in a timely manner? Please answer with a simple yes or no.

Yes.

Do you agree, without qualification, if confirmed, to consult with this committee, its subcommittees, other appropriate committees of Congress, and their respective staffs, regarding your basis for any delay or denial in providing testimony, briefings, reports, records—including documents and electronic communications, and other information requested of you? Please answer with a simple yes or no.

Yes.

Do you agree, without qualification, if confirmed, to keep this committee, its subcommittees, other appropriate committees of Congress, and their respective staffs apprised of new information that materially impacts the accuracy of testimony, briefings, reports, records—including documents and electronic communications, and other information you or your organization previously provided? Please answer with a simple yes or no.

Yes.

Do you agree, without qualification, if confirmed, and on request, to provide this committee and its subcommittees with records and other information within their oversight jurisdiction, even absent a formal Committee request? Please answer with a simple yes or no.

Yes.

Do you agree, without qualification, if confirmed, to respond timely to letters to, and/or inquiries and other requests of you or your organization from individual Senators who are members of this committee? Please answer with a simple yes or no.

Yes.

Do you agree, without qualification, if confirmed, to ensure that you and other members of your organization protect from retaliation any military member, federal employee, or contractor employee who testifies before, or communicates with this committee, its subcommittees, and any other appropriate committee of Congress? Please answer with a simple yes or no.

Yes.