

Strategic Partnerships and Engagement

Overview, Key Initiatives, and Strategic Role in the
NNSA

Njema J. Frazier, Ph.D.
June 6, 2024



Partnership focus since Day 1

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- “...my two top priorities as Administrator are mission delivery and partnerships.”
 - “My second priority, partnerships, spans both internal and external working relationships for the NNSA. The Secretary, Deputy Secretary, and I view DOE, NNSA, and its Labs/Plants/Sites, as well as the DOE labs and sites, as internal partners who have different roles and responsibilities but share common goals.”
 - “From an external partnership standpoint, I want us to remember that each of our partners depend on NNSA to listen and understand, be transparent and efficient in our interfaces, and deliver on our commitments. As Administrator, I intend to develop compelling and honest narratives to clearly and consistently communicate to our USG, National, and international partners.”



Jill Hruby

Under Secretary for Nuclear
Security & Administrator, NNSA



Secretary of Energy



Under Secretary for Nuclear Security & Administrator, NNSA



Director for the Office of Policy and Strategic Planning



Director, Strategic Partnerships & Engagement

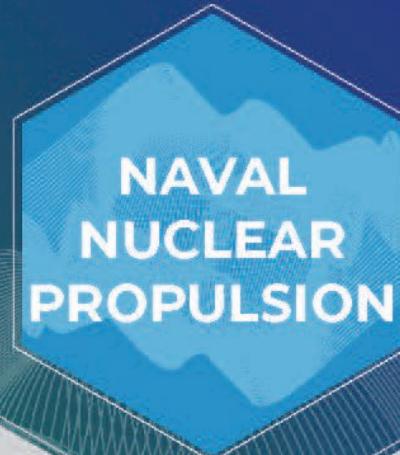
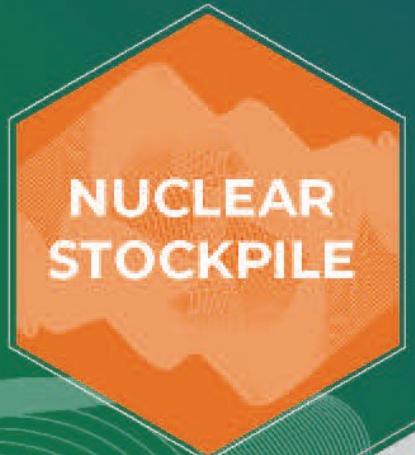
NATIONAL NUCLEAR SECURITY ADMINISTRATION

STRATEGIC VISION

Innovate. Collaborate. Deliver.



May 2, 2022



WORLD-CLASS
SCIENCE,
TECHNOLOGY &
ENGINEERING

ADAPTIVE
WORKFORCE &
RESILIENT
INFRASTRUCTURE

INTEGRATED
ENTERPRISE
MANAGEMENT &
OPERATIONS

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

Future of Nuclear Deterrence

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- NNSA is focused on
 - Identifying future nuclear deterrence needs beyond the mid-2030s
 - Building collaborative efforts to innovate and stay ahead of adversaries
 - Ensuring a robust and responsive deterrent
 - Positioning NNSA to be agile in the face of Emerging Threats

Modernizing the Nuclear Security Enterprise

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- Partnership with the Department of Defense and other agencies
- Collaborative efforts that contribute to the safety, security, and reliability of the nuclear stockpile

- Delivery of 200 modernized nuclear weapons to the DoD in the past year
- Concurrent execution of FIVE Nuclear Weapons Modernization Programs
 - W88 Alt 370, B61-12, W80-4, W87-1, W93
- Deep dive on future infrastructure and technology needs

Science & Production Needs for the Future

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- Plutonium Pit Production
 - Importance of re-establishing plutonium pit production
 - Two-site strategy involving Los Alamos and Savannah River
 - Collaboration with Congress and other stakeholders to achieve production goals
- Enterprise Blueprint
 - Developing a vision for the Nuclear Security Enterprise until 2050
 - Engaging a wide array of stakeholders have been involved in shaping this blueprint
- IT & Cybersecurity
 - Modernization of information technology (IT) and cybersecurity capabilities
- AI, ML, Digital Engineering, Scaled Agile Frameworks

International Collaboration and Coalition Building

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- NNSA supports work in over 120 countries
- Maintains active involvement in international organizations (i.e. IAEA)
- Collaborates with allies to counter proliferation threats

NA-1.1 | Policy & Strategic Planning

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- Supports NNSA leadership with cross-cutting policy, enterprise-wide strategic **partnerships** and planning, governance and management, and directives solutions that enable mission achievement in an evolving strategic environment.
 - Leads cross-organizational teams in integrated analytical studies of complex, crosscutting, enterprise-wide issues and supports implementation of identified resolutions.
 - Advances NNSA mission by taking longer term, strategic view of international and operational trends and communicating recommendations to executive leadership.
 - Coordinates with the labs, plants, and sites to develop long-term strategic plans and priorities.
 - Engages elements of the NSE to ensure enterprise-wide coordination and integration of policy and planning with agency objectives.
 - Liaises with external stakeholders (including academia, the think tank community, and the interagency) to exchange expert views on matters relevant to the NNSA mission.
 - **Partners with industry, academia, and the interagency to leverage NNSA capabilities and provide mutually-beneficial, whole-of-Government solutions nation wide.**

The Vision for SPE

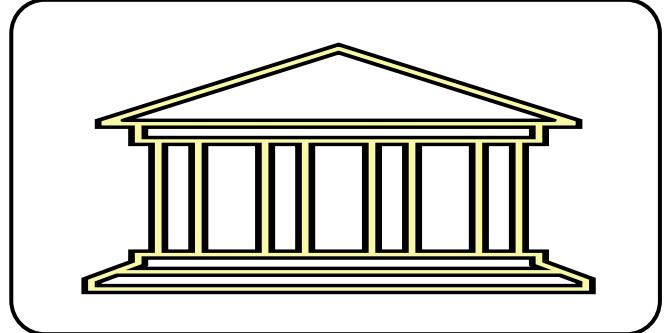
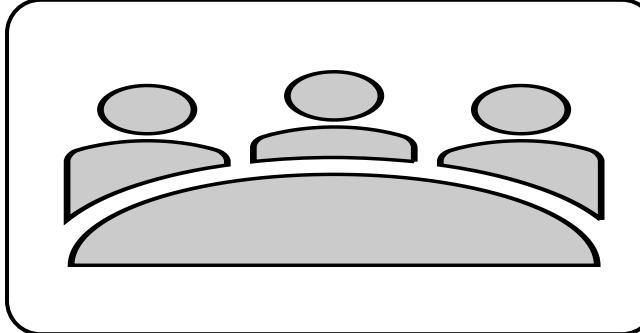
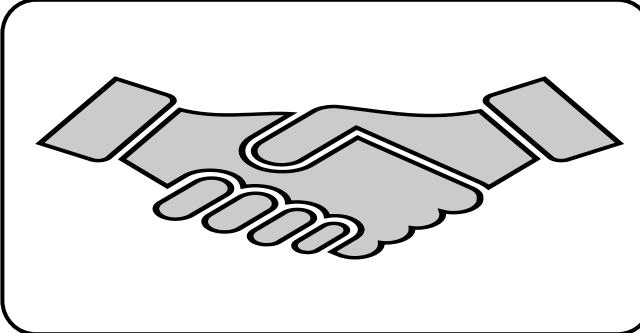
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A robust, enduring, and synergetic network of partnerships and alliances in Industry, Government, NGOs, and Academia that ensures:

- NNSA investments in facilities, people, and capabilities are optimally leveraged for the benefit of the country
- The nation's best technology and methods are employed by NNSA to support the mission
- NNSA can contribute to Whole-of-Government solutions for national and global issues

Strategic Partnerships & Engagement

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SPP

- Oversee Strategic Partnership Projects (SPP) executed by the NNSA labs, Field Offices, and HQ in partnership with external Agencies.

ACNS

- Manage Activities of the Advisory Committee for Nuclear Security (ACNS), to include meetings, studies, and reports delivered to NA-1.

TTP

- Work with OTT, Interagency, and the Administration (i.e. OSTP) to update, execute, and drive Tech Transfer Policy (TTP) actions that directly impact NNSA.

SPP Vision, Mission, and Goals

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Vision:

- Foster partnerships and interagency cooperation to enhance and improve NNSA national security resources.

Mission:

- Advance and strengthen relationships with our strategic partners through world-class science and technology solutions available at NNSA labs.

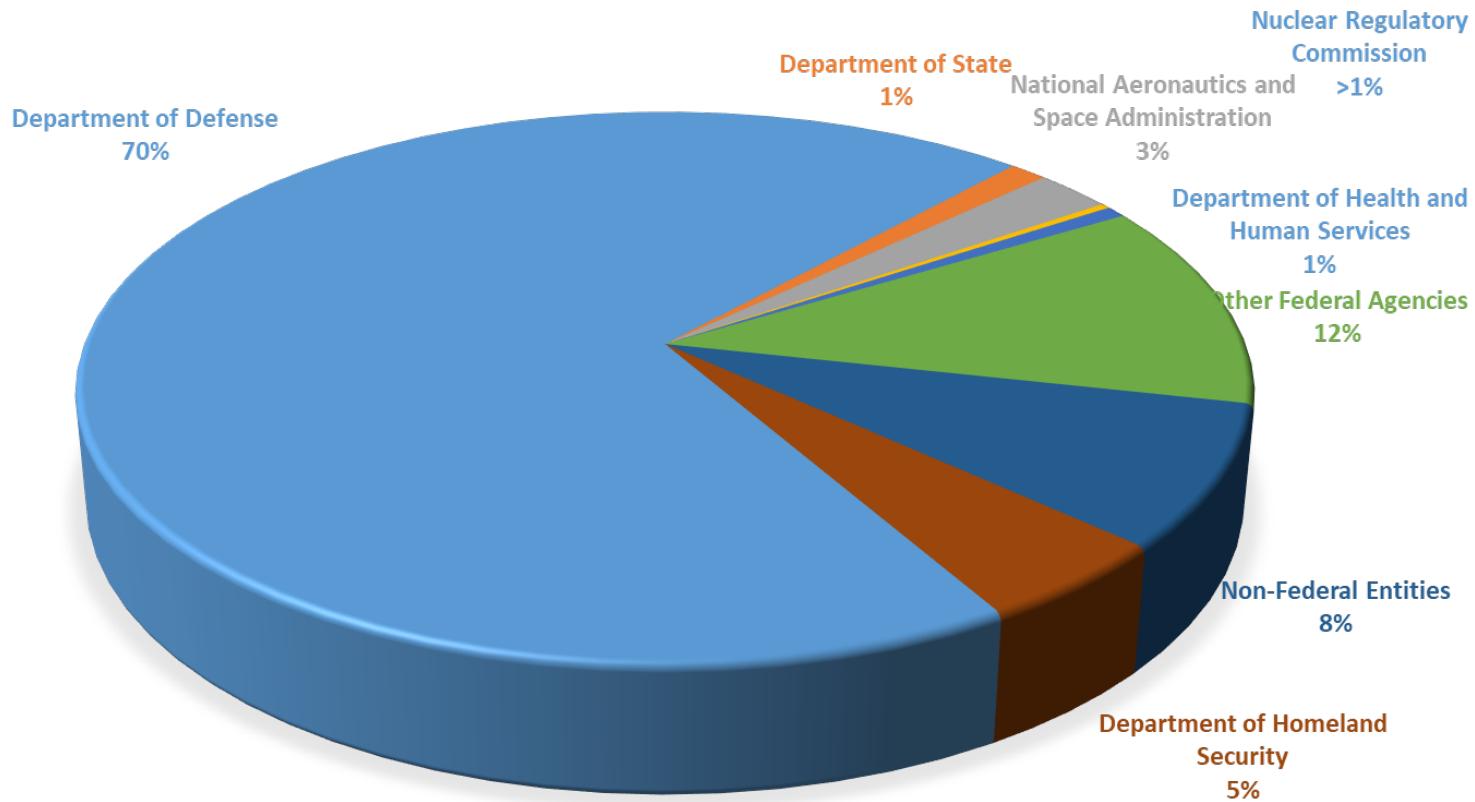
Goals:

- Attract, facilitate, and strengthen strategic partnerships that enhance the synergies between NNSA's core capabilities and broader national security needs
- Improve and expand internal and external communication pathways.
- Strengthen key science, technology, and engineering (ST&E) technologies and capabilities and modernize the national security infrastructure.
- Foster and sustain a highly capable NNSA Federal and contractor workforce with appropriate SPP knowledge and skills to effectively process and address future interagency challenges.

Sponsoring Organizations

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FY2024 SPP FUNDING PERCENT BY SPONSOR

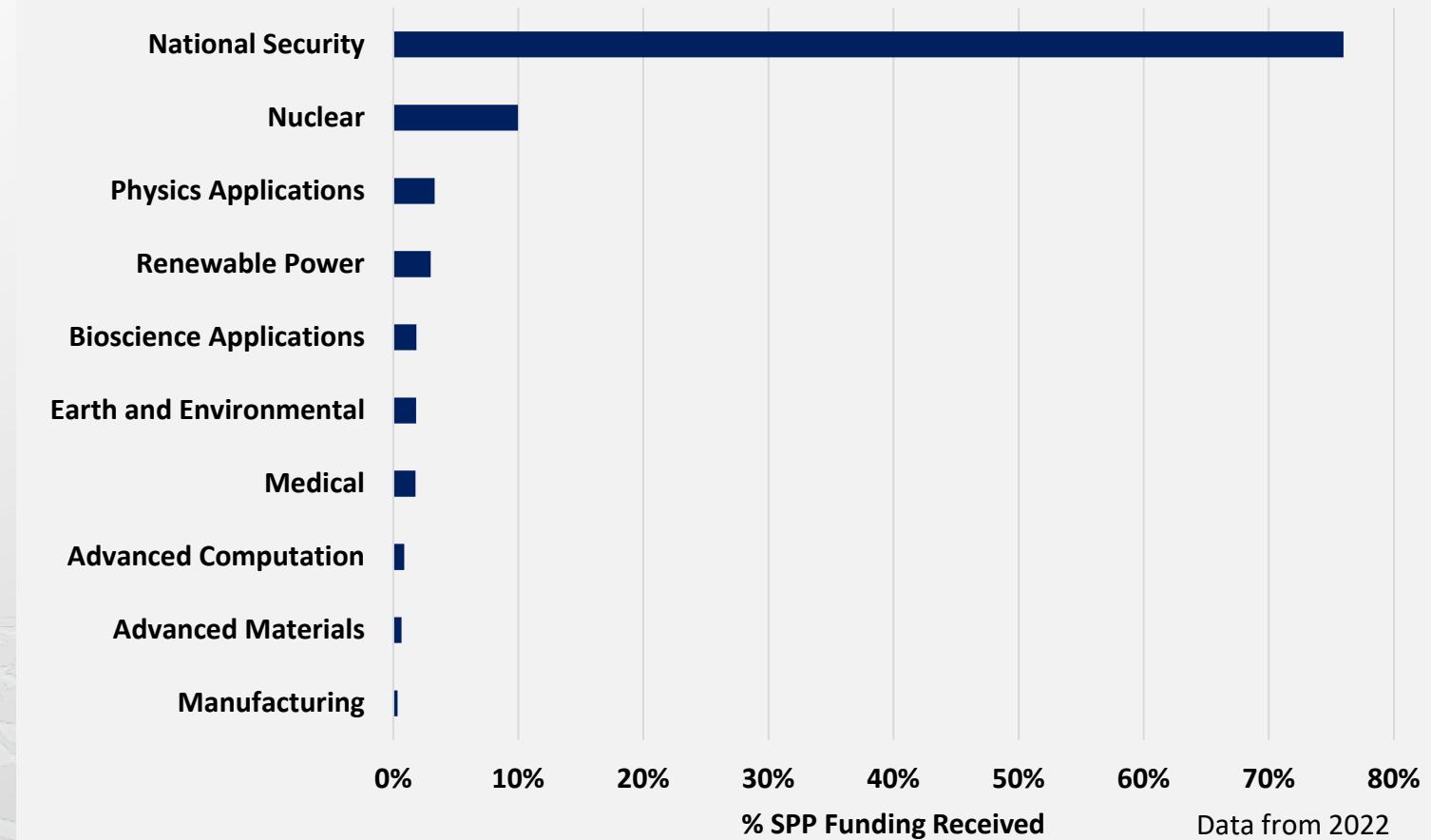


Partnerships Technology Areas

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- **SPP supports many key technology areas for our partners.**
- **National Security work makes up over 75% of SPP Federal partner funding**
- **Nuclear work makes up 10% of SPP Federal partner funding**

SPP Funding Received (Largest Shown)



Counterterrorism Operations Support



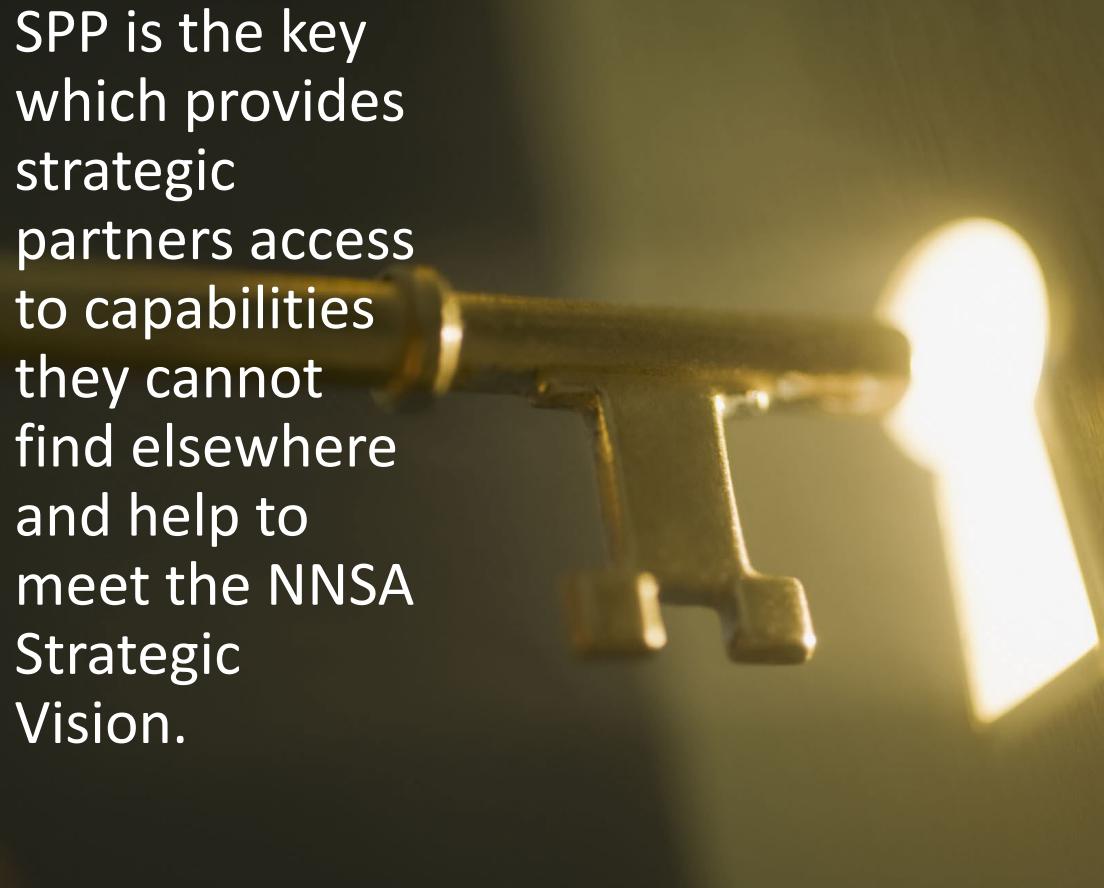
Nuclear and Radiological Field Training Center



Training modules on IND/RDD threats, nuclear production, radiological and fissile hazards, vulnerabilities and process defeat, and strategic competitor capabilities

Purpose

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SPP is the key which provides strategic partners access to capabilities they cannot find elsewhere and help to meet the NNSA Strategic Vision.

Assist Federal Agencies and non-Federal entities in accomplishing their goals.

Provide access to highly specialized or unique facilities, services, equipment, or technical expertise unavailable elsewhere.

Increase RD&E interactions between our facilities and industry to provide opportunities for transferring technology for further development or commercialization.

Assist U.S. industry and universities to strengthen their technology base and improve their international competitiveness.

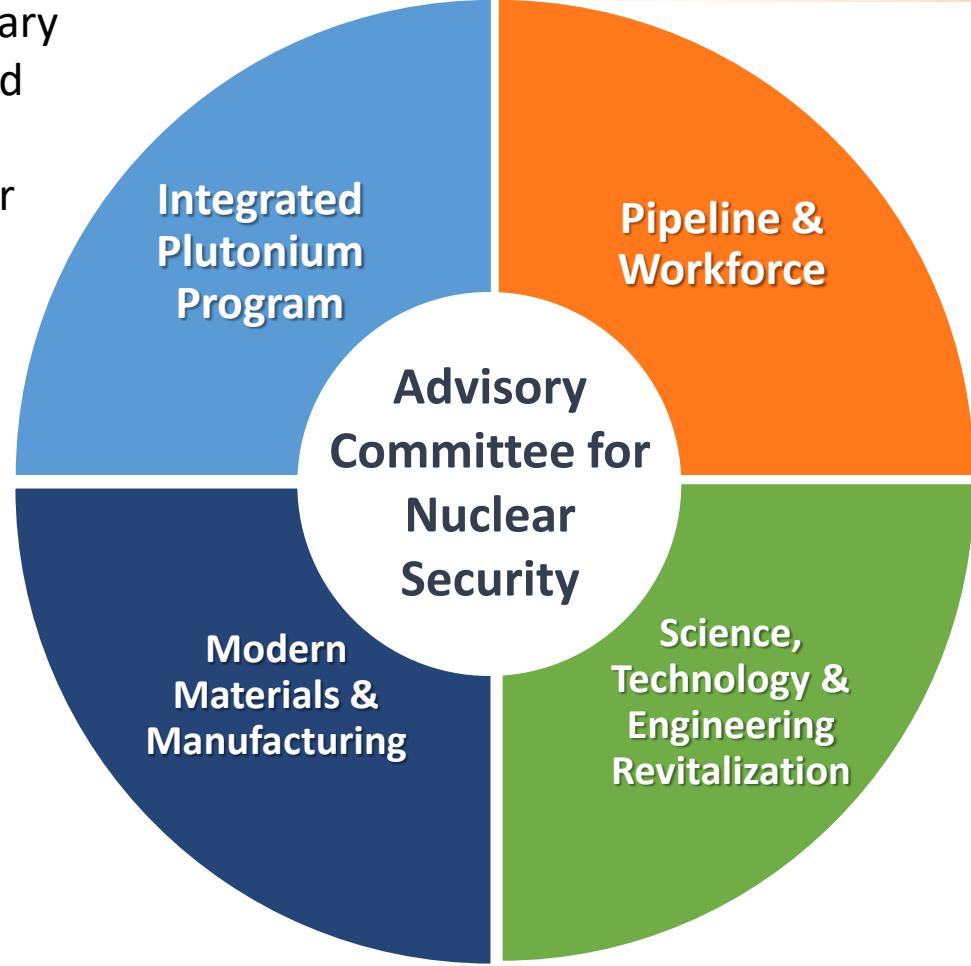
Advisory Committee for Nuclear Security (ACNS)

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The ACNS was established in February 2023 to provide advice, findings and recommendations to the NNSA Administrator in any area under her purview:

- Nuclear deterrent
- Nuclear security
- Nonproliferation
- Counterterrorism
- Counterproliferation
- Nuclear incident & accident response

There are currently **four active subcommittees** approved by NA-1.



IPP Subcommittee

S. Johnson (Chair), J. Harvey (Co-Chair),
P. Hommert, W. Goldstein, A. Rollett

Workforce Subcommittee

S. Pozzi (Chair), S. Graham (Co-Chair)
T. Beechem, J. Cizewski, R. Hayes

M³ Subcommittee

T. Rollett (Chair), T. Kurfess (C-Chair), S. Graham,
W. Goldstein, M. Cooper, B. Wirth, +5

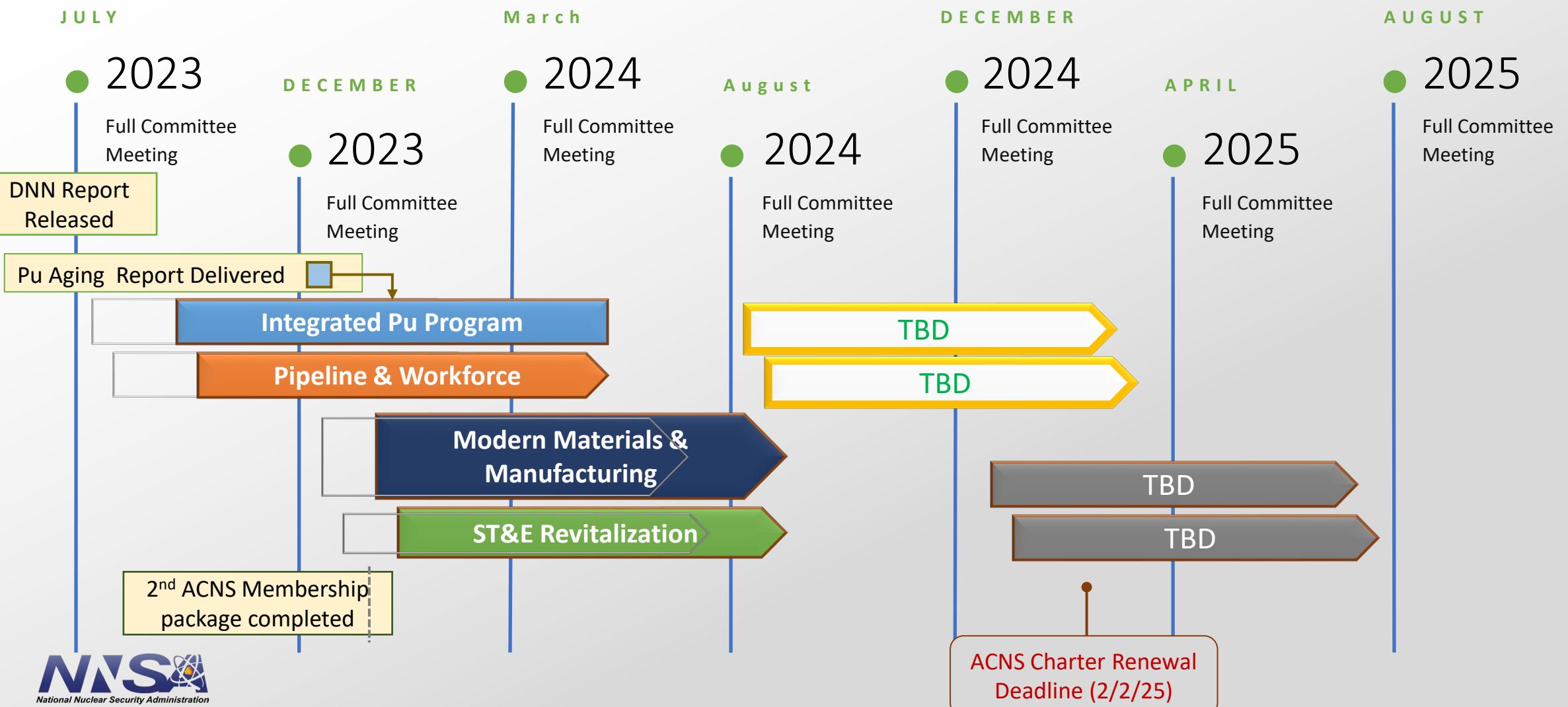
ST&E Subcommittee

D. Cook (Chair), M. Creedon,
W. Goldstein, P. Hommert, S. Seestrom, +2

ACNS Members (12): Dr. Donald Cook (Chair), Dr. Jolie Cizewski, Hon. Madelyn Creedon, Dr. William Goldstein, Dr. Samuel Graham Jr., Dr. John R. Harvey, Dr. Robert Hayes, Dr. Paul Hommert, Ret. RADM Stephen Johnson, Dr. Tom Kurfess, Dr. Sara Pozzi, Dr. Anthony Rollett, .

ACNS Forecast – June 2024

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Building out the Tiers of Technology Transfer Policy (TTP)

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Tier 1: Enterprise-Wide

- Development, modification, reporting, and norms for TT Policy nation-wide – across Agencies, OSTP, and other government entities

Tier 2: DOE-wide

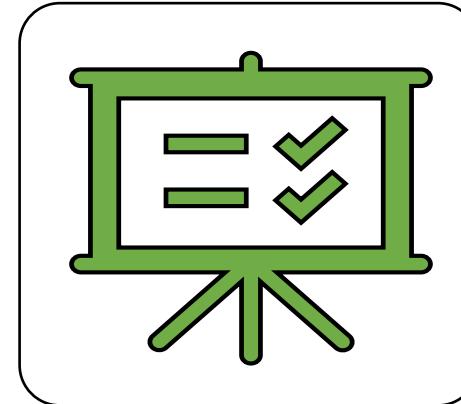
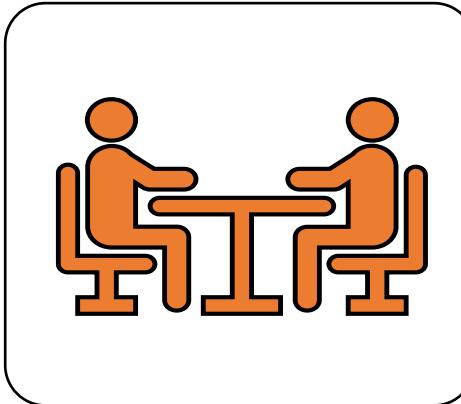
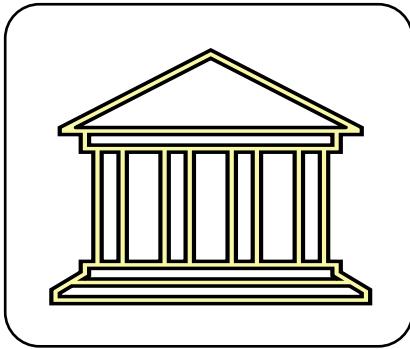
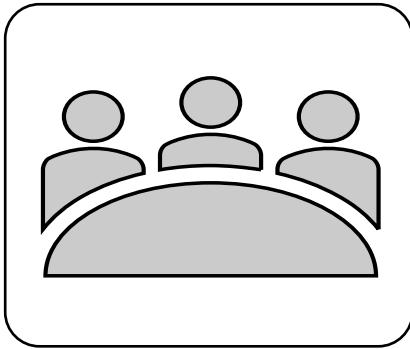
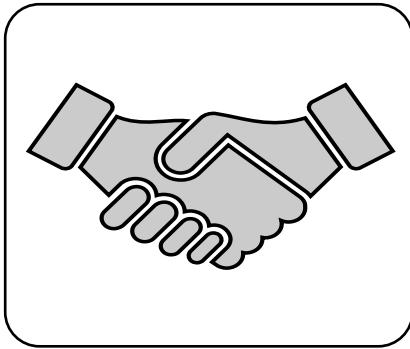
- Development, modification, reporting, and norms for common TT policies within DOE – includes primarily Office of Technology Transitions, Office of Science, and General Council
 - USG Laws, DOE Orders, DOE-wide requests for information
 - DOE Reports, internal and external Reviews (i.e. GAO, Lab Licensing 180-Day Study)

Tier 3: Within NNSA

- Understanding of TT policy issues, challenges, and legal authorities relative to operations at the Labs, Plants, and Sites

What's Next!

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ACNS

- Manage Activities of the Advisory Committee for Nuclear Security (ACNS), to include meetings, studies, and reports delivered to NA-1.

TTP

- Work with OTT, Interagency, and the Administration (i.e. OSTP) to update, execute, and drive Tech Transfer Policy (TTP) actions that directly impact NNSA.

PPP

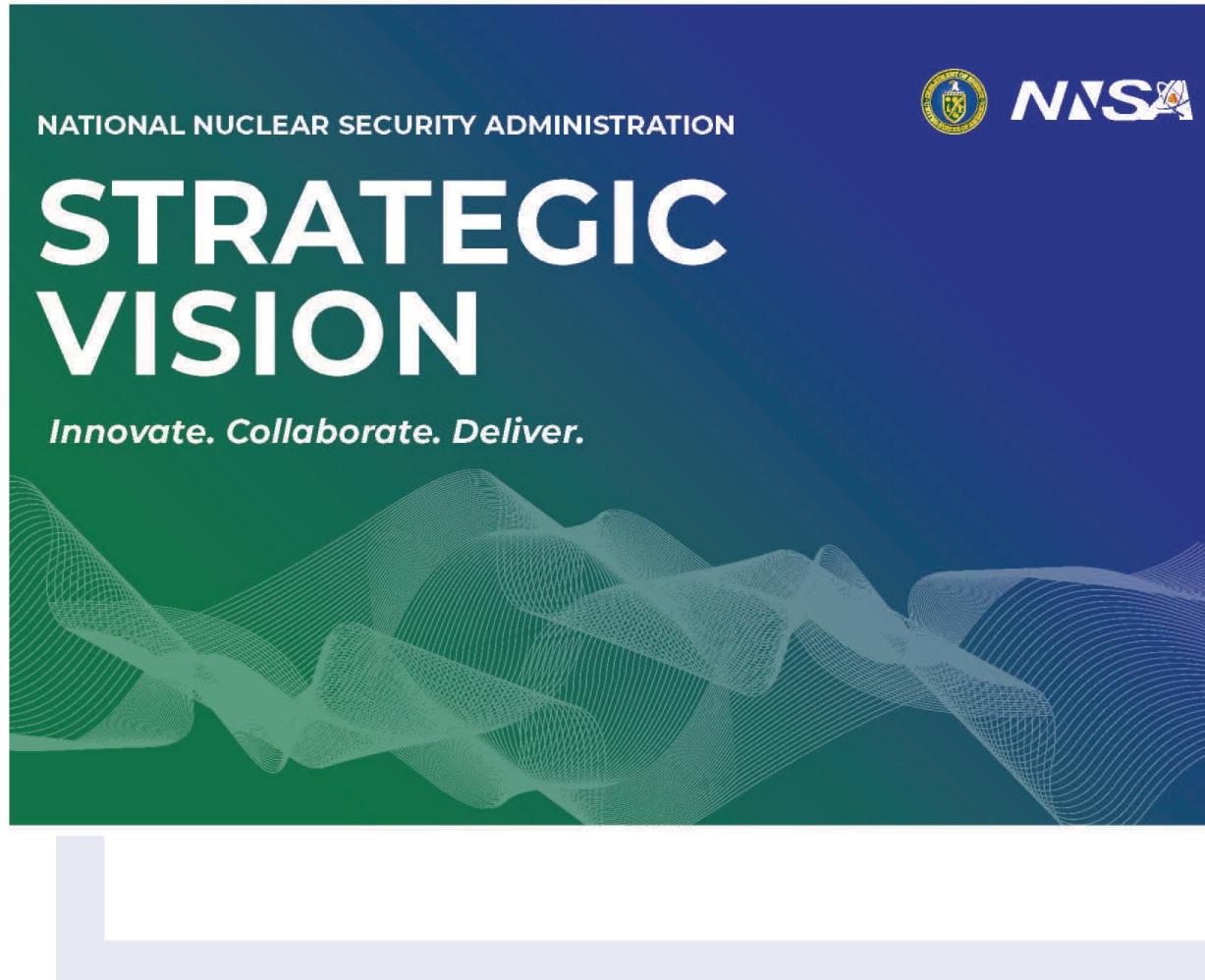
- Build relationships and partnerships with NGOs & the private sector (PPP), to capitalize on synergies in the S&T and/or Nuclear Security Space.

ISR

- Erect a subprogram in NA-1.1 dedicated to the Implementation of Study Recommendations (ISR), primarily focused on independent, external studies that have Congressional visibility – ACNS, JASON, NAS.

Wrap-Up

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NNSA

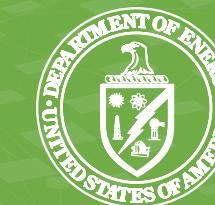
Strategic
Partnerships &
Engagement

Discussion/Q&A

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Backup slides



UNDER SECRETARY FOR NUCLEAR SECURITY & ADMINISTRATOR, NNSA

(NA-1)

Jill Hruby

Acting Principal Deputy Administrator

(NA-2)

Corey Hinderstein

Associate Principal Deputy Administrator

James J. McConnell

Chief of Staff

Steven Ho

Science Advisor

Tina Nenoff

Office of Policy and Strategic Planning
(NA-1.1)

Cindy Lersten

Office of Civil Rights
(NA-1.2)

Bonnie Baisden

Office of Cost Estimating and Program Evaluation
(NA-1.3)

Theresa Lalain

Deputy Admin for Defense Programs
(NA-10)

Marvin Adams

Assoc Admin and Chief for Defense Nuclear Security
(NA-70)

Lewis Monroe III

Deputy Admin for Defense Nuclear Nonproliferation
(NA-20)

Corey Hinderstein

Deputy Admin for Naval Reactors
(NA-30)

Admiral Bill Houston, USN

Assoc Admin for Emergency Management
(NA-40)

Sean Muth (Acting)

Assoc Admin for Congressional and Intergovernmental Affairs
(NA-CI)

Jessica Lee

Assoc Admin for Counterterrorism and Counter-proliferation
(NA-80)

Kasia Mendelsohn (Acting)

Assoc Admin for Infrastructure
(NA-90)

Nicole Nelson-Jean

Office of Communication
(NA-COMM)

Anna Newby

Assoc Admin for Environment, Safety, and Health
(NA-ESH)

Ahmad Al-Daouk

Office of General Counsel
(NA-GC)

Timothy P. Fischer

Assoc Admin for Information Management and CIO
(NA-IM)

James Wolff

Assoc Admin for Management and Budget
(NA-MB)

Frank Lowery

Assoc Admin for Partnership and Acquisition Services
(NA-PAS)

Peter Rodrik

Kansas City Field Office
(NA-KC)

Jeffrey Shoultz

Livermore Field Office
(NA-LL)

Janis Parenti

Los Alamos Field Office
(NA-LA)

Ted Wyka

Savannah River Field Office
(NA-SV)

Michael Mikolanis

Nevada Field Office
(NA-NV)

Dave Bowman

Pantex Field Office
(NA-PFO)

Jason Armstrong

Sandia Field Office
(NA-SN)

Daryl Hauck

Y-12 Field Office
(NA-YFO)

Teresa Robbins

SPP Accomplishments

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FY 2022 NNSA SPP Accomplishments

Over \$2.2B for all work performed



>\$1.9B of all work supports Weapons, Counterterrorism, and Non-proliferation efforts



1467 SPP Projects

23 Federal Partners



1047 National Security related projects



Includes TT Data

625 Patents and Copyrights issued



552 Invention Disclosures



4365 Scientific Results Published



Alignment with NNSA Vision

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Mission Priority 2 - Forge solutions that enable global security and stability

- Deliver technical solutions that strengthen current and future arms control and nonproliferation strategies
- Support and advance technology to counter the threat of nuclear proliferation and nuclear terrorism
- Provide subject matter experts and technology needed to respond to nuclear and/or radiological incidents and accidents worldwide

Mission Priority 4 - Leverage transformative technologies to address emerging challenges

- Support the safe, peaceful use of nuclear energy as a clean energy source
- Allow partners to leverage expertise to provide solutions, advance capabilities, and improve the Nation's ability to anticipate and respond to emerging and non-traditional threats

Mission Enabler – World-Class Science, Technology, and Engineering

- Support activities with interagency, commercial, and university partners to push the boundaries of science and to foster and exercise the national technology base
- Leverage the capabilities of all laboratories, plants, and sites to spur the innovation life cycle

Integrated Plutonium Program Subcommittee

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Members

S. Johnson (Chair)
J. Harvey (Co-Chair)
P. Hommert
W. Goldstein
A. Rollett

Study Focus

- Assess NNSA's management of pit production programs and projects, as well as progress made in recent years toward a consensus understanding of the effects of pit age on primary performance.

Actions for NA-1.1

- Work with DP and serve as Subcommittee liaison (DFO: Dr. Frazier).

Actions for DP

- Coordinate meetings at Forrestal May 7-9, 2024.

Actions for Subcommittees

- Deliver Comprehensive Study to Full ACNS by May 20, 2024

Past Meetings

- September 12, October 11, October 20, December 6, 2023.
March 27, 2024, April 16-18.

Upcoming Meetings

- May 7-9 FORS to develop the draft report.

Deliverables to Date

- ***NNSA Advisory Committee for Nuclear Security Independent Report to Congress on NNSA's Research Program Plan for Plutonium and Pit Aging*** was delivered to Congressional Staff on December 20, 2023.

Projected Completion Date

- June 4, 2024

Pipeline & Workforce Subcommittee

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Members

S. Pozzi (Chair)
S. Graham (Co-Chair)
T. Beechem
J. Cizewski
R. Hayes

Study Focus

- Decadal assessment of what is necessary to produce an Integrated Federal and M&O workforce strategy for current and future missions; sourcing recent and ongoing actions and studies focused on pipeline, recruitment, retention, and other workforce reforms (i.e. FMDL SOI)

Actions for NA-1.1

- Meet with and provide support to Subcommittee Chair and Co-Chair. Deliver requested information and arrange for a technical review of the draft report.

Actions for PAS and MB

- Review Subcommittee Report and complete NNSA fact check May 20-24, 2024.

Actions for Subcommittee

- Complete final draft. Submit to ACNS for review and comment May 28-June 2, 2024.

Past Meetings

- October 25, December 6, 2023
- March 12, April 17-18, May 3, 2024

Upcoming Meetings

- Reoccurring weekly meetings with Chair, Co-Chair, and DFO

Deliverables to Date

- N/A

Projected Completion Date

- June 4, 2024

Modern Materials & Manufacturing

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Members

T. Rollett (Chair)

T. Kurfess (Co-Chair)

S. Graham

M. Cooper

D. Korzekwa

L. Minier

A. Schwartz

B. Wirth

Study Focus

- Review the planning, manufacture, and use of new materials (i.e. additively manufactured polymers and metals) and other modern materials options qualified through computation, experimentation, and diagnostics.

Actions for NA-1.1

- Work with DP and serve as Subcommittee liaison (DFO: Dr. Frazier).

Actions for DP

- Coordinate travel and meetings.

Actions for Subcommittee

- Deliver completed report to full Committee by September 11, 2024.

Past Meetings

- March 26, 2024.

Upcoming Meetings

- Reoccurring biweekly meetings.
- August 12 – 16, 2024, FORS

Deliverables to Date

- N/A

Projected Completion Date

- September 25, 2024

Science, Technology, & Engineering Revitalization

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Members

D. Cook (Chair)

M. Creedon

W. Goldstein

P. Hommert

D. Larsen

S. Seestrom

C. McMillan

Study Focus

- Validation of the Integrated Strategic Plan to revitalize the science, technology, and engineering base; including review of plans for time-phased investments in new and recapitalized facilities, capabilities, and investments in the S&T workforce. (Outcome of EMDI #18)

Actions for NA-1.1

- Work with DP and serve as Subcommittee liaison (DFO: Dr. Frazier).

Actions for DP

- Coordinate travel and meetings.
- Gather requested data for Subcommittee Chair.

Actions for Subcommittee

- Deliver completed report to full Committee by September 11, 2024.

Past Meetings

- March 27, 2024

Upcoming Meetings

- Reoccurring biweekly meetings

Deliverables to Date

- N/A

Projected Completion Date

- September 25, 2024