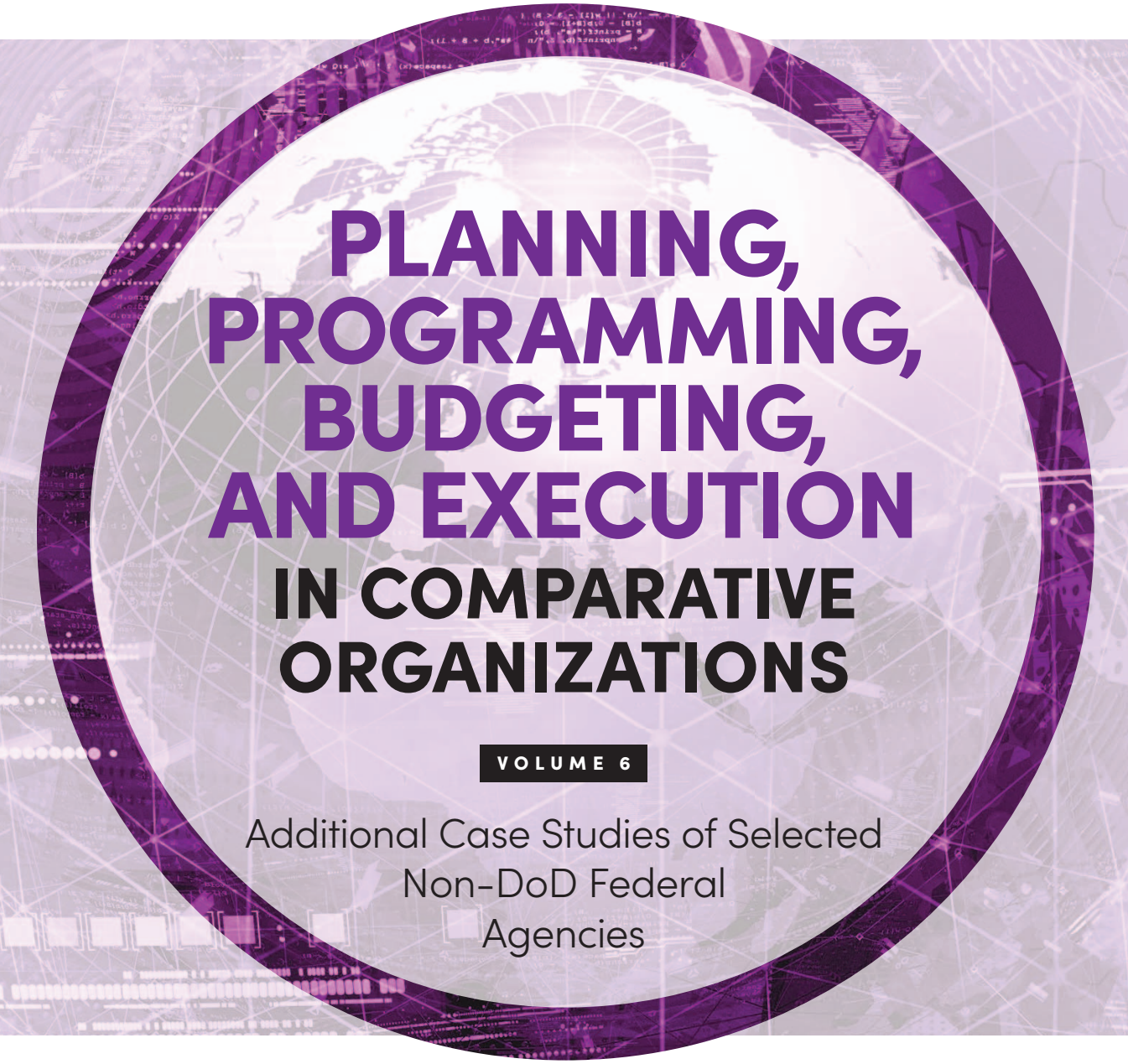


PLANNING, PROGRAMMING, BUDGETING, AND EXECUTION IN COMPARATIVE ORGANIZATIONS

VOLUME 6

Additional Case Studies of Selected Non-DoD Federal Agencies

STEPHANIE YOUNG | MEGAN MCKERNAN | RYAN CONSAUL | LAURINDA L. ROHN
FRANK G. KLOTZ | MICHAEL SIMPSON | SARAH W. DENTON | YULIYA SHOKH
MADISON WILLIAMS | RAPHAEL S. COHEN | JOHN P. GODGES
HEIDI PETERS | LAUREN SKRABALA

RAND CORPORATION

For more information on this publication, visit **www.rand.org/t/RRA2195-6**.

About RAND

The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest. To learn more about RAND, visit www.rand.org.

Research Integrity

Our mission to help improve policy and decisionmaking through research and analysis is enabled through our core values of quality and objectivity and our unwavering commitment to the highest level of integrity and ethical behavior. To help ensure our research and analysis are rigorous, objective, and nonpartisan, we subject our research publications to a robust and exacting quality-assurance process; avoid both the appearance and reality of financial and other conflicts of interest through staff training, project screening, and a policy of mandatory disclosure; and pursue transparency in our research engagements through our commitment to the open publication of our research findings and recommendations, disclosure of the source of funding of published research, and policies to ensure intellectual independence. For more information, visit www.rand.org/about/principles.

RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

Published by the RAND Corporation, Santa Monica, Calif.

Library of Congress Cataloging-in-Publication Data is available for this publication.

ISBN: 978-1-9774-1301-7

Cover design by Peter Soriano; adimas/Adobe Stock images.

Limited Print and Electronic Distribution Rights

About This Report

The U.S. Department of Defense's (DoD's) Planning, Programming, Budgeting, and Execution (PPBE) process is a key enabler for DoD to fulfill its mission. But in light of a dynamic threat environment, increasingly capable adversaries, and rapid technological changes, there has been increasing concern that DoD's resource planning processes are too slow and inflexible to meet warfighter needs.[1] As a result, Congress mandated the formation of a legislative commission in Section 1004 of the National Defense Authorization Act for Fiscal Year 2022 to (1) examine the effectiveness of the PPBE process and adjacent DoD practices, particularly with respect to defense modernization; (2) consider potential alternatives to these processes and practices to maximize DoD's ability to respond in a timely manner to current and future threats; and (3) make legislative and policy recommendations to improve such processes and practices for the purposes of fielding the operational capabilities necessary to outpace near-peer competitors, providing data and analytical insight, and supporting an integrated budget that is aligned with strategic defense objectives.[2]

The Commission on PPBE Reform requested that the National Defense Research Institute provide an independent analysis of PPBE-like functions in selected other countries and other federal agencies. This report is part of a seven-volume set of those case studies. The first four volumes were published in early 2024. Volume 1 analyzes the defense budgeting processes of China and Russia. Volume 2 analyzes the defense budgeting processes of Australia, Canada, and the United Kingdom. Volume 3 analyzes the budgeting processes of four U.S. federal agencies other than DoD. Volume 4, an executive summary, distills key insights from Volumes 1 to 3. Volume 5 analyzes the defense budgeting processes of additional allied and partner nations (France, Germany, Japan, Singapore, and Sweden). This current report, Volume 6, analyzes the budgeting processes of two additional U.S. federal agencies other than DoD. Volume 7, an executive summary, distills key insights from Volumes 5 and 6. The commission will use insights from these 16 case studies to derive potential lessons for DoD and recommendations to Congress on PPBE reform.

The full set of *Planning, Programming, Budgeting, and Execution in Comparative Organizations* report volumes is as follows:

- Vol. 1, *Case Studies of China and Russia*
- Vol. 2, *Case Studies of Selected Allied and Partner Nations*

---

[1] See, for example, Section 809 Panel, *Report of the Advisory Panel on Streamlining and Codifying Acquisition Regulations*, Vol. 2 of 3, June 2018, pp. 12–13; Brendan W. McGarry, *DOD Planning, Programming, Budgeting, and Execution (PPBE): Overview and Selected Issues for Congress*, Congressional Research Service, R47178, July 11, 2022, p. 1; and William Greenwalt and Dan Patt, *Competing in Time: Ensuring Capability Advantage and Mission Success Through Adaptable Resource Allocation*, Hudson Institute, February 2021, pp. 9–10.

[2] Public Law 117-81, National Defense Authorization Act for Fiscal Year 2022, December 27, 2021.

- Vol. 3, *Case Studies of Selected Non-DoD Federal Agencies*
- Vol. 4, *Executive Summary*
- Vol. 5, *Additional Case Studies of Selected Allied and Partner Nations*
- Vol. 6, *Additional Case Studies of Selected Non-DoD Federal Agencies*
- Vol. 7, *Executive Summary for Additional Case Studies*.

This report should be of interest to those concerned with the improvement of DoD's PPBE processes. The intended audience is mostly government officials responsible for such processes. The research reported here was completed in August 2023 and underwent security review with the sponsor and the Defense Office of Prepublication and Security Review before public release.

RAND National Security Research Division

This research was sponsored by the Commission on PPBE Reform and conducted within the Acquisition and Technology Policy Program of the RAND National Security Research Division (NSRD), which operates the National Defense Research Institute (NDRI), a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense intelligence enterprise.

For more information on the RAND Acquisition and Technology Policy (ATP) Program, see www.rand.org/nsrd/atp or contact the director (contact information is provided on the webpage).

Acknowledgments

We thank the members of the Commission on PPBE Reform—Robert Hale, Ellen Lord, Jonathan Burks, Susan Davis, Lisa Disbrow, Eric Fanning, Peter Levine, Jamie Morin, David Norquist, Diem Salmon, Jennifer Santos, Arun Seraphin, Raj Shah, and John Whitley—and staff for their dedication and deep expertise in shaping this work. We extend special gratitude to the commission chair, the Honorable Robert Hale; the vice chair, the Honorable Ellen Lord; executive director Lara Sayer; director of research Elizabeth Bieri; and the commission's senior researcher Kelle McCluskey for their guidance and support throughout this analysis. We would also like to thank the subject-matter experts at the U.S. Department of Veterans Affairs and the National Nuclear Security Administration who provided us valuable insight on these agencies' PPBE-like processes.

From NSRD, we thank Barry Pavel, vice president and director; Mike Spirtas, former associate director; Caitlin Lee, ATP director; and Aaron Frank, former acting ATP associate director, for their counsel and tireless support. We also thank our RAND colleague, Heather Salazar, who provided input at various stages of this work, as well as the team of peer reviewers—

William Shelton, Carrie Farmer, and Alexis Blanc—who offered helpful feedback on individual case studies and on cross-case takeaways. Finally, we would like to thank Maria Falvo and Saci Haslam for their administrative assistance during this effort. The work is much improved by virtue of their inputs, but any errors remain the responsibility of the authors alone.

Dedication

These volumes are dedicated to Irv Blickstein, whose decades of experience in the U.S. Navy's PPBE community deeply informed this work and whose intellectual leadership as a RAND colleague for more than 20 years greatly enhanced the quality of our independent analysis for DoD's most-pressing acquisition challenges. Irv's kindness, motivation, and ever-present mentoring will be sorely missed.

Summary

Issue

The U.S. Department of Defense's (DoD's) Planning, Programming, Budgeting, and Execution (PPBE) System was originally developed in the 1960s as a structured approach for planning long-term resource development, assessing program cost-effectiveness, and aligning resources to strategies. Yet changes to the strategic environment, the industrial base, and the nature of military capabilities have raised the question of whether U.S. defense budgeting processes are still well aligned with national security needs.

Congress, in its National Defense Authorization Act for Fiscal Year 2022, called for the establishment of a commission on PPBE reform, which took shape as a legislative commission in 2022.[1] As part of its data collection efforts, the Commission on PPBE Reform asked the National Defense Research Institute, a federally funded research development center operated by the RAND National Security Research Division, to conduct case studies of budgeting processes first across nine and then eventually across a total of 16 comparative organizations: ten international defense organizations and six other U.S. federal government agencies. The two international case studies of near-peer competitors were specifically requested by Congress, while the other 14 cases were selected in close partnership with the commission.

Approach

For all 16 case studies, the research entailed extensive document reviews and structured discussions with subject-matter experts having experience in the budgeting processes of the selected international governments and other U.S. federal government agencies. Each case study was assigned a unique team with appropriate regional or organizational expertise. The analysis was also supplemented by experts in the U.S. PPBE process, as applicable.

Key Insights

The key insights from this volume's two case studies of selected non-DoD federal agencies—the U.S. Department of Veterans Affairs (VA) and the U.S. Department of Energy's National Nuclear Security Administration (NNSA)—are as follows:

- **Other U.S. government agencies looked to DoD's PPBE System as a model in developing their own systems, which subsequently evolved.** Both VA and NNSA looked to

[1] Public Law 117-81, National Defense Authorization Act for Fiscal Year 2022, December 27, 2021.

DoD's PPBE System as a model for a structured and mature approach to planning and resource allocation decisionmaking. Although the precursor to DoD's PPBE process—the Planning, Programming, and Budgeting System (PPBS)—failed to take hold in VA when originally introduced in the 1960s, some features of a more-structured resource planning process, such as a quadrennial review and a five-year financial plan, have been proposed to address perceived shortcomings of VA's existing system. And although the standup of NNSA postdated by several decades the introduction of PPBE to non-DoD agencies, one of its institutional predecessors, the Atomic Energy Commission, was among the agencies that experimented with a resource planning process modeled on DoD's PPBS. Today, NNSA's Office of Cost Estimating and Program Evaluation (CEPE) is also deliberately modeled on DoD's Office of Cost Assessment and Program Evaluation (CAPE).

- **There are perceived opportunities to strengthen the connection between strategy and budgets.** In VA, the quadrennial planning process supports the development of a strategic plan, but there are perceived opportunities to strengthen how plans drive resource decisionmaking. VA links its annual budget request to mission-oriented outputs (e.g., patients treated, outpatient visits), which, in turn, links resources to mission priorities. At NNSA, the Future Years Nuclear Security Program captures plans beyond the budget year, but there are initiatives to strengthen long-term planning and to better align programs with plans.
- **A variety of mechanisms enable budget flexibility and agility.** VA and NNSA have several budget mechanisms for redirecting appropriated funds. VA's advance appropriations are particularly notable: They can help VA weather the instability from a delayed regular appropriation and position itself for more-stable planning. For NNSA, the lack of designated types of funding appropriations (*colors of money*), plus the comparatively small number of appropriation accounts, afford more discretion on how to prioritize investments and adjust to meet emerging needs. No-year appropriations enable NNSA to carry over unobligated funds from year to year, allowing the agency to better align appropriated funds to priorities rather than spending one-year appropriations in a rush at the end of a fiscal year. VA also has access to multiyear and no-year appropriations for long-term projects, such as construction and land acquisition. Similar to DoD, VA and NNSA can request congressional approval to reprogram resources to accommodate changes above a given threshold; however, in NNSA at least, this process was reported to be slow and laborious.
- **Mechanisms for enabling agility exist to help agencies weather continuing resolutions and other sources of budget turbulence.** Just as budget flexibilities, such as those cited above, can let a manager decide how to set priorities and where to take risks in light of changing mission needs, they can also help an agency manage under continuing resolutions and mitigate the effects of government shutdowns, such as furloughs. VA's advance appropriations mitigate the challenges of constrained operations under a continuing resolution and of uncertain timing for a regular appropriation. Similarly,

NNSA's no-year appropriations provide the agency with a budgetary cushion (and fewer constraints than those faced under a continuing resolution) in the likely event that a regular appropriation is delayed.

- **The emphasis on evaluation rather than execution in some non-DoD PPBE-like processes could be instructive for DoD.** NNSA designates the *E* in PPBE for *evaluation* rather than execution in its process. Thus, in its last PPBE phase, NNSA evaluates progress toward its performance goals. This phase does not generate formal documentation, but its results continuously inform the planning, programming, and budgeting phases. NNSA has developed better analytic inputs in the programming phase to assist with evaluation. For example, NNSA's new FormEX information system and CEPE function have been set up to equip the agency with consistent and rigorous analytic capabilities.
- **Analytical rigor has improved through NNSA's implementation of CAPE-like capabilities.** NNSA has made a substantial effort to centralize its PPBE processes and bolster their rigor by introducing a CAPE-like capability for independent cost estimates and analyses of alternatives through its CEPE office. NNSA further increased analytical rigor by having its cost analysts report to a single headquarters organization while embedding some of them in NNSA program offices, thus ensuring the use of standardized costing methodologies and improving transparency and alignment of programs to enterprise-wide priorities.
- **Consolidated resource management information systems could improve visibility across the federated structures of government agencies.** NNSA's new FormEX information system reflects an effort to modernize the information technology (IT) infrastructure on which NNSA's PPBE decisions rely. An integrated budget information management system, FormEX provides a common budget structure to facilitate insight into plans, gaps, redundancies, and execution risks. As reflected in DoD's effort (as of 2023) to develop the Advana information system,[2] there are opportunities to leverage IT and data analytics to help make complex decisions, foster stronger transparency, and communicate across stakeholder communities.

The Commission on PPBE Reform is looking for potential lessons from the PPBE-like systems of non-DoD federal agencies. Although the budgeting processes were originally modeled after DoD's PPBE System, they have adapted to the unique missions of each agency. Despite the movement away from DoD's PPBE model, the agencies still use similar planning, programming, budgeting, and execution processes. Given these similar processes, there would be no benefit from DoD adopting either of these systems wholesale. However, there is value in exploring the ways in which Congress provides each agency with flexibility so that DoD can ask for similar kinds of flexibility to support more innovation, to make funding more predictable over multiple years, and to obtain relief from various pain points in the

[2] For more on Advana, see Commission on Planning, Programming, Budgeting, and Execution Reform, *Interim Report*, U.S. Senate, August 2023.

system. These pain points include continuing resolutions, rigid appropriation categories, and appropriations for line items instead of portfolios. The commission could further explore the mechanisms for flexibility identified in these two cases.

There are notable similarities in terms of the missions and investment portfolios of VA, NNSA, and DoD. VA, like DoD, provides medical care, builds physical infrastructure, sustains a large footprint of real property, and has ongoing efforts to modernize IT infrastructure. NNSA, like DoD, is required to meet emerging threats in a dynamic, strategic environment and, therefore, needs to enable organizational innovation and leverage new technology.

However, there are important differences that affect the applicability of lessons learned from VA and NNSA to DoD. As is true for all six case studies of non-DoD organizations when compared with DoD, DoD stands alone in terms of its global roles, the breadth and complexity of its missions, and the overall size of its budget.[3] Both VA and NNSA have more-focused mission sets and significantly smaller discretionary budgets than DoD. Another difference is the overall constitution of the budget portfolios: NNSA does not have mandatory funding, and a large percentage of the VA budget, relative to DoD's budget, consists of mandatory spending. About 40 percent of the VA budget is discretionary spending, and much of this is relatively inflexible because it supports medical care. As a result, resource planning depends more on actuarial modeling in VA than in DoD. This difference in planning and programming approaches reflects VA's unique mission and budget portfolio.

[3] For our analysis of the other four selected non-DoD federal agencies, see Megan McKernan, Stephanie Young, Ryan Consaul, Michael Simpson, Sarah W. Denton, Anthony Vassalo, William Shelton, Devon Hill, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 3, *Case Studies of Selected Non-DoD Federal Agencies*, RAND Corporation, RR-A2195-3, 2024.

Contents

Figures and Tables

Figures

Tables

CHAPTER 1

Introduction

In light of a dynamic threat environment, increasingly capable adversaries, and rapid technological changes, there has been increasing concern that the U.S. Department of Defense's (DoD's) resource planning processes are too slow and inflexible to meet warfighter needs.[1] The DoD's Planning, Programming, Budgeting, and Execution (PPBE) System was originally developed in the 1960s as a structured approach for planning long-term resource development, assessing program cost-effectiveness, and aligning resources to strategies. Yet changes to the strategic environment, industrial base, and nature of military capabilities have raised the question of whether DoD's budgeting processes are still well aligned to national security needs.

To consider the effectiveness of current resource planning processes for meeting national security needs and to explore potential policy options to strengthen those processes, Congress called for the establishment of a commission on PPBE reform in Section 1004 of the National Defense Authorization Act for Fiscal Year (FY) 2022.[2] The Commission on PPBE Reform took shape as a legislative commission in 2022, consisting of 14 appointed commissioners, each drawing on deep and varied professional expertise in DoD, Congress, and the private sector. In support of this work, the commission collected data, conducted analyses, and developed a broad array of inputs from external organizations, including federally funded research and development centers, to develop targeted insights of particular interest to the commission. The commission asked the RAND National Defense Research Institute to contribute to this work by conducting case studies first across nine and then eventually across

[1] See, for example, Section 809 Panel, *Report of the Advisory Panel on Streamlining and Codifying Acquisition Regulations*, Vol. 2 of 3, June 2018, pp. 12–13; Brendan W. McGarry, *DOD Planning, Programming, Budgeting, and Execution (PPBE): Overview and Selected Issues for Congress*, Congressional Research Service, R47178, July 11, 2022, p. 1; and William Greenwalt and Dan Patt, *Competing in Time: Ensuring Capability Advantage and Mission Success Through Adaptable Resource Allocation*, Hudson Institute, February 2021, pp. 9–10.

[2] Public Law 117-81, National Defense Authorization Act for Fiscal Year 2022, December 27, 2021. Section 1004 (f) of this Act is of particular relevance to our research approach:

> Compare the planning, programming, budgeting, and execution process of the Department of Defense, including the development and production of documents including the Defense Planning Guidance (described in section 113(g) of Title 10, United States Code), the Program Objective Memorandum, and the Budget Estimate Submission, with similar processes of private industry, other Federal agencies, and other countries.

a total of 16 comparative organizations: ten international defense organizations and six other U.S. federal government agencies. Congress specifically called for two of the international case studies—of near-peer competitors China and Russia—and we selected additional cases in close partnership with the commission[3]

This report is Volume 6 in a seven-volume set of case studies conducted in support of the Commission on PPBE Reform. The accompanying volumes focus on selected near-peer competitors (Volume 1),[4] selected U.S. partners and allies (Volumes 2 and 5),[5] selected non-DoD federal agencies (Volume 3 and this report, Volume 6),[6] and executive summaries that distill key insights from each collection of case studies (Volumes 4 and 7).[7]

[3] Pub. L. 117-81, Section 1004 (f) requires "a review of budgeting methodologies and strategies of near-peer competitors to understand if and how such competitors can address current and future threats more or less successfully than the United States."

[4] Megan McKernan, Stephanie Young, Timothy R. Heath, Dara Massicot, Mark Stalczynski, Ivana Ke, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 1, *Case Studies of China and Russia*, RAND Corporation, RR-A2195-1, 2024.

[5] Megan McKernan, Stephanie Young, Andrew Dowse, James Black, Devon Hill, Benjamin J. Sacks, Austin Wyatt, Nicolas Jouan, Yuliya Shokh, Jade Yeung, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 2, *Case Studies of Selected Allied and Partner Nations*, RAND Corporation, RR-A2195-2, 2024; Stephanie Young, Megan McKernan, Andrew Dowse, Nicolas Jouan, Theodora Ogden, Austin Wyatt, Mattias Eken, Linda Slapakova, Naoko Aoki, Clara Le Gargasson, Charlotte Kleberg, Maxime Sommerfeld Antoniou, Phoebe Felicia Pham, Jade Yeung, Turner Ruggi, Erik Silfversten, James Black, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 5, *Additional Case Studies of Selected Allied and Partner Nations*, RAND Corporation, RR-A2195-5, 2024.

[6] Megan McKernan, Stephanie Young, Ryan Consaul, Michael Simpson, Sarah W. Denton, Anthony Vassalo, William Shelton, Devon Hill, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 3, *Case Studies of Selected Non-DoD Federal Agencies*, RAND Corporation, RR-A2195-3, 2024.

[7] Megan McKernan, Stephanie Young, Timothy R. Heath, Dara Massicot, Andrew Dowse, Devon Hill, James Black, Ryan Consaul, Michael Simpson, Sarah W. Denton, Anthony Vassalo, Ivana Ke, Mark Stalczynski, Benjamin J. Sacks, Austin Wyatt, Jade Yeung, Nicolas Jouan, Yuliya Shokh, William Shelton, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 4, *Executive Summary*, RAND Corporation, RR-A2195-4, 2024; Stephanie Young, Megan McKernan, Andrew Dowse, Nicolas Jouan, Theodora Ogden, Austin Wyatt, Mattias Eken, Linda Slapakova, Naoko Aoki, Ryan Consaul, Laurinda L. Rohn, Frank G. Klotz, Michael Simpson, Jade Yeung, Sarah W. Denton, Yuliya Shokh, Clara Le Gargasson, Charlotte Kleberg, Phoebe Felicia Pham, Madison Williams, Erik Silfversten, James Black, Turner Ruggi, Maxime Sommerfeld Antoniou, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 7, *Executive Summary for Additional Case Studies*, RAND Corporation, RR-A2195-7, 2024.

Evolution of DoD's PPBE System

The Planning, Programming, and Budgeting System (PPBS), the precursor to DoD's PPBE process, took shape in the first decades after World War II and was introduced into DoD in 1961 by then–Secretary of Defense Robert McNamara.[8] Drawing on new social science methods, such as program budgeting and systems analysis, the PPBS was designed to provide a structured approach to weigh the cost-effectiveness of potential defense investments. A central assertion of the PPBS's developers was that strategy and costs needed to be considered together.[9] As Charles Hitch, Secretary McNamara's first comptroller and a key intellectual leader in the development and implementation of the PPBS, noted, "There is no budget size or cost that is correct regardless of the payoff, and there is no need that should be met regardless of cost."[10]

To make decisions about prioritization and where to take risk in a resource-constrained environment, DoD needed an analytic basis for making choices. Therefore, the PPBS first introduced the program budget, an *output*-oriented articulation of the resources associated with a given military capability projected out over five years.[11] The PPBS then introduced an approach for assessing cost-effectiveness, termed *systems analysis*, which was institutionalized in the Office of Systems Analysis. Since 2009, this office has been known as Cost Assessment and Program Evaluation (CAPE).[12] At its inception, the PPBS was a process for explicitly linking resources to strategy and for setting up a structure for making explicit choices between options based on transparent analysis of costs and effectiveness. Then, as today, the system introduced friction with other key stakeholders, including Congress and industry

[8] An oft-quoted assertion by Secretary McNamara from April 20, 1963, which is pertinent to this discussion, is that "[y]ou cannot make decisions simply by asking yourself whether something might be nice to have. You have to make a judgment on how much is enough" (as cited in the introduction of Alain C. Enthoven and K. Wayne Smith, *How Much Is Enough? Shaping the Defense Program, 1961–1969*, RAND Corporation, CB-403, 1971). For more on the history of PPBE, see Stephanie Young, *Power and the Purse: Defense Budgeting and American Politics, 1947–1972*, dissertation, University of California, Berkeley, 2009.

[9] Or, as Bernard Brodie stated succinctly, "strategy wears a dollar sign" (Bernard Brodie, *Strategy in the Missile Age*, RAND Corporation, CB-137-1, 1959, p. 358).

[10] Charles J. Hitch and Roland N. McKean, *The Economics of Defense in the Nuclear Age*, RAND Corporation, R-346, 1960, p. 47.

[11] On the need for an output-oriented budget formulation at the appropriate level to make informed choices, Hitch and McKean (1960, p. 50) noted that the consumer "cannot judge intelligently how much he should spend on a car if he asks, 'How much should I devote to fenders, to steering activities, and to carburetion?' Nor can he improve his decisions much by lumping all living into a single program and asking, 'How much should I spend on life?'"

[12] In an essential treatise on the PPBS's founding, Enthoven (the first director of the Office of Systems Analysis) and Smith described "the basic ideas that served as the intellectual foundation for PPBS" and, thus, PPBE as follows: (1) decisionmaking should be made on explicit criteria of the national interest, (2) needs and costs should be considered together, (3) alternatives should be explicitly considered, (4) an active analytic staff should be used, (5) a multiyear force and financial plan should project consequences into the future, and (6) open and explicit analysis should form the basis for major decisions (1971, pp. 33–47).

partners. Key features of the PPBS have become institutionalized in DoD's PPBE System, and questions have arisen about whether its processes and structures remain relevant and agile enough to serve their intended purposes.[13]

To set up the discussion of case studies, it will be helpful to outline the key features of the PPBE process and clarify some definitions. Figure 1.1 offers a summary view of the process.

Today, consideration of PPBE often broadly encapsulates internal DoD processes, other executive branch functions, and congressional rules governing appropriations. Internal to DoD, PPBE is an annual process by which the department determines how to align military programs and resources to strategic guidance. The process supports the development of DoD inputs to the President's Budget and to a budgeting program with a five-year time horizon, known as the Future Years Defense Program (FYDP).[14] Department of Defense Directive (DoDD) 7045.14, *The Planning, Programming, Budgeting, and Execution (PPBE) Process*, states that one intent for PPBE "is to provide the DOD with the most effective mix of forces, equipment, manpower, and support attainable within fiscal constraints."[15] PPBE consists of four distinct processes, each with its own outputs and stakeholders. Select objectives of each phase include the following:

- **Planning:** "[I]ntegrate assessments of potential military threats facing the country, overall national strategy and defense policy, ongoing defense plans and programs, and projected financial resources into an overall statement of policy."[16]
- **Programming:** "[A]nalyze the anticipated effects of present-day decisions on the future force; detail the specific forces and programs proposed over the FYDP period to meet the military requirements identified in the plans and within the financial limits."[17]
- **Budgeting:** "[E]nsure appropriate funding and fiscal controls, the phasing of the efforts over the funding period, and the feasibility of execution within the budget year"; restructure budget categories for submission to Congress according to the appropriation accounts; and prepare justification material for submission to Congress.[18]
- **Execution:** "[D]etermine how well programs and financing have met joint warfighting needs."[19]

[13] Greenwalt and Patt, 2021, pp. 9–10.

[14] Brendan W. McGarry, *Defense Primer: Planning, Programming, Budgeting and Execution (PPBE) Process*, Congressional Research Service, IF10429, January 27, 2020, p. 1.

[15] DoDD 7045.14, *The Planning, Programming, Budgeting, and Execution (PPBE) Process*, U.S. Department of Defense, January 25, 2013, incorporating change 1, August 29, 2017, p. 2.

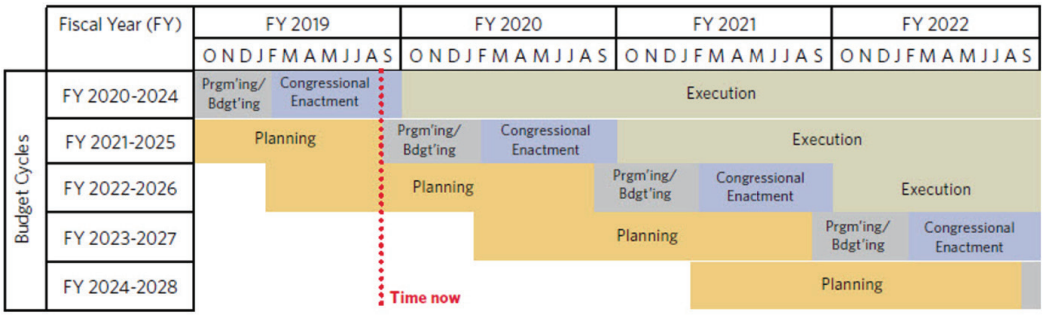
[16] Congressional Research Service, *A Defense Budget Primer*, RL30002, December 9, 1998, p. 27.

[17] Congressional Research Service, 1998, p. 27; McGarry, 2020, p. 2.

[18] McGarry, 2020, p. 2; Congressional Research Service, 1998, p. 28.

[19] DoDD 7045.14, 2017, p. 11.

FIGURE 1.1
DoD's PPBE Process (as of September 2019)



Planning Phase

Objective
Identify and prioritize future capabilities needed as a result of strategies and guidance

Key Products
NSS, NDS, NMS, DPG

Key Stakeholders
President, JCS, SECDEF, COCOMs, OMB, OSD, OUSD(A&S), OUSD(P), OUSD(R&E), DoD Components

Programming/Budgeting Phase

Objective
Identify, balance and justify resources for requirements to complete national strategies and comply with laws and guidance

Key Products
BES, POM, CPA, PBDs, PDMs, RMDs, PB

Key Stakeholders
President, JCS, SECDEF, COCOMs, OMB, OSD CAPE, OUSD(C), OUSD(A&S), OUSD(R&E), DoD Components

Congressional Enactment Process

Objective
Create laws that authorize programs and functions and appropriates the associated budget authority for execution

Key Products
CBR, NDAA, Appropriations Acts, CRs

Key Stakeholders
Congress (Committees and Subcommittees), President, SECDEF, COCOMs, DoD Components

Execution Phase

Objective
Execute authorized programs and functions with appropriated resources

Key Products
Obligations and expenditures (contracts, MIPRs, military pay, civilian pay, travel, GPC transactions), outlays, spend plans

Key Stakeholders
Treasury, GAO, OMB, OUSD(C), OUSD(A&S), OUSD(R&E), DoD Components, DFAS, Industry Partners

SOURCE: Reproduced from Stephen Speciale and Wayne B. Sullivan II, "DoD Financial Management—More Money, More Problems," Defense Acquisition University, September 1, 2019, p. 6.

NOTE: BES = budget estimation submission; CBR = concurrent budget resolution; COCOM = combatant command; CPA = Chairperson's Program Assessment; CR = continuing resolution; DFAS = Defense Finance and Accounting Services; DPG = defense planning guidance; GAO = U.S. Government Accountability Office; GPC = government purchase card; JCS = Joint Chiefs of Staff; MIPR = military interdepartmental purchase request; NDS = National Defense Strategy; NMS = National Military Strategy; NSS = National Security Strategy; OMB = Office of Management and Budget; OSD = Office of the Secretary of Defense; OUSD(C) = Office of the Under Secretary of Defense (Comptroller); OUSD(A&S) = Office of the Under Secretary of Defense (Acquisition and Sustainment); OUSD(P) = Office of the Under Secretary of Defense (Policy); OUSD(R&E) = Office of the Under Secretary of Defense (Research and Engineering); PB = President's Budget; PBD = program budget decision; PDM = program decision memorandum; POM = program objectives memorandum; RMD = resource management decision; SECDEF = Secretary of Defense.

Several features of congressional appropriations processes are particularly important to note. First, since FY 1960, Congress has provided budget authority to DoD through specific appropriations titles (sometimes termed *colors of money*), the largest of which are operations and maintenance (O&M); military personnel; research, development, test, and evaluation (RDT&E); and procurement.[20] These appropriations titles are further broken down into *appropriation accounts*, such as Military Personnel, Army or Shipbuilding and Conversion, Navy (SCN). Second, the budget authority provided in one of these accounts is generally

[20] Congressional Research Service, 1998, pp. 15–17.

available for obligation only within a specified period. In the DoD budget, the period of availability for military personnel and O&M accounts is one year; for RDT&E accounts, two years; and for most procurement accounts, three years (although for SCN, it can be five or six years in certain circumstances). This specification means that budget authority must be obligated within those periods, or with only a few exceptions, it is sent back to the U.S. Department of the Treasury.[21] There has been recent interest in exploring how these features of the appropriations process affect transparency and oversight, institutional incentives, and the exercise of flexibility, should resource needs change.[22]

Importantly, PPBE touches almost everything DoD does and, thus, forms a critical touchpoint for engagement among stakeholders across DoD (e.g., OSD, military departments, Joint Staff, COCOMs), in the executive branch (through OMB), in Congress, and among industry partners.

Research Approach and Methods

In close partnership with the commission, we selected 16 case studies to explore decisionmaking in organizations facing challenges similar to those experienced in DoD: exercising agility in the face of changing needs and enabling innovation. The legislation specifically called for two near-peer case studies, in part to allow the commission to explore the competitiveness implications of strategic adversaries' approaches to resource planning.

For all 16 case studies, we conducted extensive document reviews and structured discussions with subject-matter experts who had experience with the budgeting processes of the international governments and other U.S. federal government agencies. For seven of the eight case studies of allied and partner countries, we leveraged the expertise of researchers in RAND Europe (located in Cambridge, United Kingdom) and RAND Australia (located in Canberra, Australia) who had direct experience with partner defense organizations. Given the diversity in subject-matter expertise required, each case study was assigned a unique team with the appropriate regional or organizational expertise. For the near-peer competitor cases, the assigned experts had the language skills and methodological training to work with primary sources in Chinese or Russian. The analysis was also supplemented by experts in PPBE as applicable.

Case study research drew primarily on government documents outlining processes and policies, planning guidance, and budget information, as well as published academic and policy research. Although participants in our structured discussions varied in accordance with the decisionmaking structures across case studies, they generally included chief financial officers (CFOs), representatives from organizations responsible for making pro-

[21] Congressional Research Service, 1998, pp. 49–50. Regarding RDT&E, see U.S. Code, Title 10, Section 3131, Availability of Appropriations.

[22] McGarry, 2022.

grammatic choices, and budget officials. For obvious reasons, the China and Russia case-study teams faced unique challenges in data collection and in identifying and accessing interviewees with direct knowledge of these countries' PPBE-like processes.

To facilitate consistency, completeness in addressing the commission's highest-priority areas of interest, and cross-case comparisons, we developed a common case study template. This template took specific questions from the commission as several inputs, aligned key questions to PPBE processes and oversight mechanisms, evaluated perceived strengths and challenges of each organization's processes and their applicability to DoD processes, and concluded with lessons learned from each case. To help us develop a consistent evidentiary base across cases, we also developed a standard interview protocol to guide the structured discussions.

Areas of Focus

Given the complexity of PPBE and its many connections to other processes and stakeholders, along with other inputs and ongoing analysis by the commission, we needed to scope this work in accordance with three of the commission's top priorities.

First, although we sought insights across PPBE phases in each case study, in accordance with the commission's guidance, we placed a particular emphasis on an organization's budgeting and execution mechanisms, such as the existence of different types of funding appropriations (i.e., colors of money), and on any mechanisms for exercising flexibility, such as reprogramming thresholds. However, it is important to note that this level of detailed information was not uniformly available. The opacity of internal processes in China, Russia, and (to a lesser extent) Singapore made the budget mechanisms much more difficult to discern in those cases in particular.

Second, while the overall investment portfolios varied in accordance with mission needs, the case studies were particularly focused on investments related to RDT&E and procurement rather than O&M or sustainment activities.

Third, the case studies of other U.S. federal government agencies did not focus primarily on the roles played by external stakeholders, such as OMB, Congress, and industry partners. Such stakeholders are discussed in those case studies when relevant insights emerged from other sources, but interviews and data collection were focused within the bounds of the respective case study organizations rather than across a broader network of key stakeholders.

Research Limitations and Caveats

This research required detailed analysis of the nuances of internal resource planning processes across 16 extraordinarily diverse organizations, conducted on a tight timeline required by the commission's challenging mandate. This breadth of scope was intended to provide the commission with diverse insights into how other organizations address similar challenges, but it also limited the depth of the individual case studies. These constraints warrant additional discussion of research limitations and caveats of two types.

First, all the case-study teams, to varying degree, confronted limitations in data availability. The teams gathered documentation from publicly available sources and doggedly pursued additional documentation from targeted interviews and other experts with direct experience. However, even for allied countries and U.S. federal agencies, including DoD, there was a limit to what information could be confirmed. For example, some important features of how systems work in practice are not captured in formal documentation; the teams often had to tease out and triangulate details about these features from interviews—to the extent that knowledgeable officials were available to engage with them. The general opacity and lack of institutional connections with decisionmakers in China and Russia introduced unique challenges for data collection. Russia was further obscured by the war in Ukraine during the research period, which made access by U.S.-based researchers to reliable government data on current plans and resource allocation impossible.

Second, the case-study teams confronted important inconsistencies across cases that challenged their efforts to establish cross-case comparability. For example, international cases each involved unique political cultures, governance structures, strategic concerns, and military commitments—all of which we characterize to the extent that they provided essential context for understanding how and why resource allocation decisions are made. The context-dependent nature of the international cases made even defining the "defense budget" difficult, given countries' various definitions and inclusions. With respect to the near-peer case studies of China and Russia presented in Volume 1, inconsistencies were especially pronounced when it came to purchasing power. To address some of these inconsistencies, we referenced the widely cited Stockholm International Peace Research Institute (SIPRI) Military Expenditure Database.[23] With respect to U.S. federal agencies, each agency had its own unique mission, organizational culture, resource level, and process of congressional oversight—all of which were critical for understanding how and why resource allocation decisions were made. This diversity strained our efforts to draw cross-case comparisons or to develop internally consistent normative judgments of best practices. For this reason, each case study analysis and articulation of strengths and challenges should be understood relative to only each organization's *own* unique resource allocation needs and missions.

Selected Non-DoD Federal Agencies Focus

The 2022 NDS describes a security environment of complex strategic challenges associated with such dynamics as emerging technology, transboundary threats, and competitors posing "new threats to the U.S. homeland and strategic stability."[24] To meet this challenge, the NDS calls on DoD to undertake three activities: integrated deterrence, campaigning,

[23] SIPRI, "SIPRI Military Expenditure Database," undated.

[24] DoD, *2022 National Defense Strategy of the United States of America Including the 2022 Nuclear Posture Review and the 2022 Missile Defense Review*, October 27, 2022, p. 4.

and "build[ing] enduring advantage." The last category is defined as "undertaking reforms to accelerate force development, getting the technology we need more quickly, and making investments in the extraordinary people of the Department, who remain our most valuable resource."[25] This imperative has prompted reflection on the extent to which internal DoD processes, including PPBE, are up to the challenge of enabling rapid and responsive capability development to address the emerging threats.

The idea of dialogue between DoD and non-DoD agencies for lessons in resource planning areas is not new; in 1965, President Lyndon B. Johnson decided to introduce the still-new DoD PPBS across the federal government.[26] Four of the six cases of non-DoD federal agencies considered by the commission—U.S. Department of Health and Human Services (HHS), National Aeronautics and Space Administration (NASA), U.S. Department of Veterans Affairs (VA) (known as the Veterans Administration in 1965), and National Nuclear Security Administration (NNSA) (functions of which were part of the Atomic Energy Commission in 1965)—were included in this 1965 directive before the experiment fizzled out in 1970. The other two cases of non-DoD U.S. federal agencies—U.S. Department of Homeland Security (DHS) and Office of the Director of National Intelligence (ODNI)—also have PPBE-like functions that resonate with PPBE's origins in DoD. Although Johnson's mandate was relatively short-lived, all six of these agencies looked to DoD's PPBE process in the development of their own processes. These agencies grappled with somewhat similar challenges as DoD did on issues related to strategic planning, enterprise decisionmaking, and institutional control. Figure 1.2 compares the discretionary and mandatory budgets of the six agencies with that of DoD in 2022—showing that DoD's discretionary budget authority was significantly higher than those of the six other agencies.[27] However, HHS's total annual budget authority was more than $1.6 trillion in 2022, which was more than double DoD's total 2022 budget authority of roughly $796 billion. Mandatory HHS funding (primarily for Medicare and Medicaid) constitutes about 90 percent of the total HHS budget.[28]

The six other U.S. government agencies selected for analysis (two in this volume and four in Volume 3) were identified as agencies that, by virtue of their missions, grapple with some issues similar to those that DoD faced (and continues to face) regarding how to enable innovation, make high-tech investments, and transition technology into the field or remain flexible in light of dynamic mission needs. Although each agency is different from DoD in

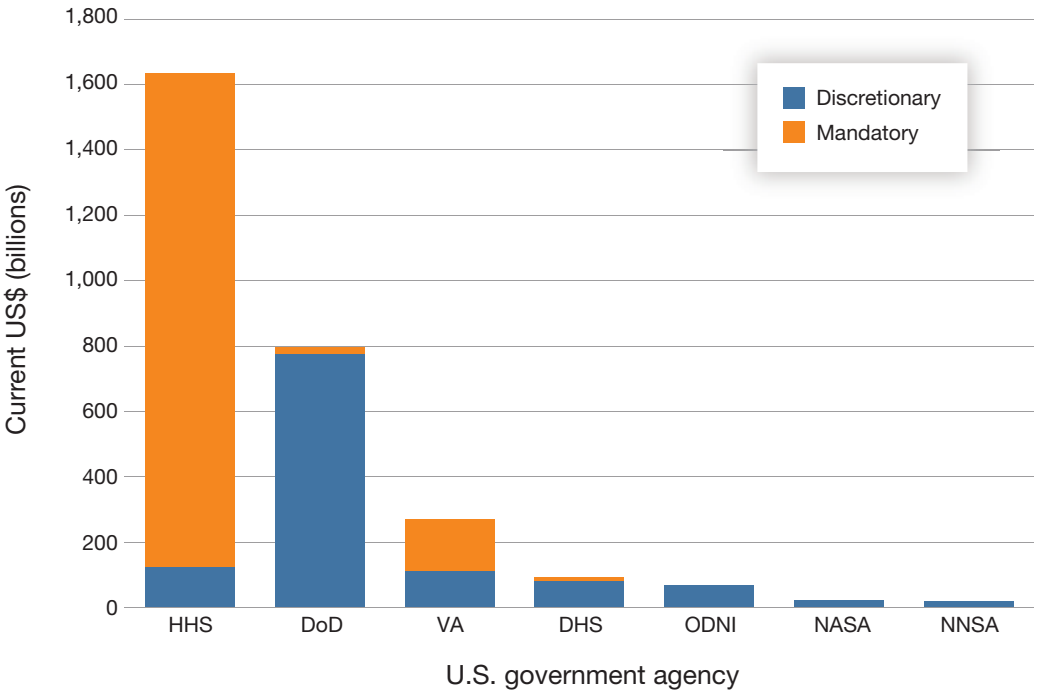
[25] DoD, 2022, p. iv.

[26] See Chapter 4 in Young (2009).

[27] "The authority for discretionary spending stems from annual appropriation acts, which are under the control of the House and Senate Appropriations Committees. . . . Mandatory—or direct—spending includes spending for *entitlement* programs and certain other payments to people, businesses, and state and local governments. Mandatory spending is generally governed by statutory criteria; it is not normally set by annual appropriation acts" (Congressional Budget Office, "Frequently Asked Questions About CBO Cost Estimates," webpage, undated).

[28] OMB, "Historical Tables," webpage, White House, undated.

FIGURE 1.2
Mandatory and Discretionary Budget Authority, by U.S. Government Agency, 2022



SOURCES: Features information from OMB, undated, Table 5.4; ODNI, "U.S. Intelligence Community Budget," webpage, undated.

NOTE: For ODNI, we show the total budget appropriation for the National Intelligence Program and not the discretionary budget authority because of a lack of available data for comparison in the OMB tables. As of FY 2017, per the Federation of American Scientists' Intelligence Resource Program, ODNI does not receive mandatory funds (Federation of American Scientists, "National Intelligence Program," Intelligence Resource Program, archived site, undated). We similarly show the total NNSA budget appropriation because of a lack of available data for comparison in the OMB tables. As of FY 2022, NNSA did not receive any mandatory funds.

important ways, their unique stories also provide some notable insights for the commission. We provide introductory overviews for each of the two agencies covered in this volume in the following sections, as drawn from the respective case studies in Chapters 2 and 3.

U.S. Department of Veterans Affairs

The United States has a long tradition of supporting its veterans population, which predates the nation's founding. For example, Plymouth Colony leaders passed a law so that disabled soldiers would receive support from the colony.[29] The current VA mission statement—"to fulfill President Lincoln's promise to care for those who have served in our nation's military and

[29] VA, "History Overview," webpage, last updated August 17, 2023d.

for their families, caregivers and survivors"[30]—traces back to President Abraham Lincoln's second inaugural address in which the President promised care for Civil War veterans and healing for a war-torn nation. Several agencies have been responsible for various aspects of veterans' benefits and care throughout U.S. history. In July 1930, the Veterans Administration was created through executive order to "consolidate and coordinate Government activities affecting war veterans."[31] This agency later evolved into the U.S. Department of Veterans Affairs (or VA), which was elevated to a cabinet-level executive department in October 1988.[32]

Led by the Secretary of Veterans Affairs, VA is now the third-largest federal cabinet-level department. VA implements four missions:

- veterans' health care, which is administered through the Veterans Health Administration (VHA)
- veterans' benefits, which are administered through the Veterans Benefits Administration (VBA)
- veterans' burial services, which are managed by the National Cemetery Administration (NCA)
- support for federal response activities, known as "the Fourth Mission."[33]

VHA is the largest integrated health care network in the United States; its 1,321 health care facilities serve more than 9 million enrolled veterans and 360,000 eligible family members and dependents each year.[34] VBA provides disability compensation benefits to 6.6 million veterans and their survivors, and it administers pension benefits to almost 263,000 veterans and survivors.[35] Figure 1.3 depicts the organizational structure that supports VA's four missions.

To achieve its missions, VA manages and executes a budget of over $300 billion, more than half of which is appropriated as mandatory spending. Approximately 90 percent of the discretionary spending portion of VA's budget is related to medical programs.[36] VA manages 54 budget accounts maintained by the U.S. Department of the Treasury.[37]

---

[30] VA, *Department of Veterans Affairs Fiscal Years 2022–28 Strategic Plan*, undated-a, p. 1.

[31] VA, 2023d.

[32] VA, 2023d.

[33] VA, undated-a, pp. 1–2.

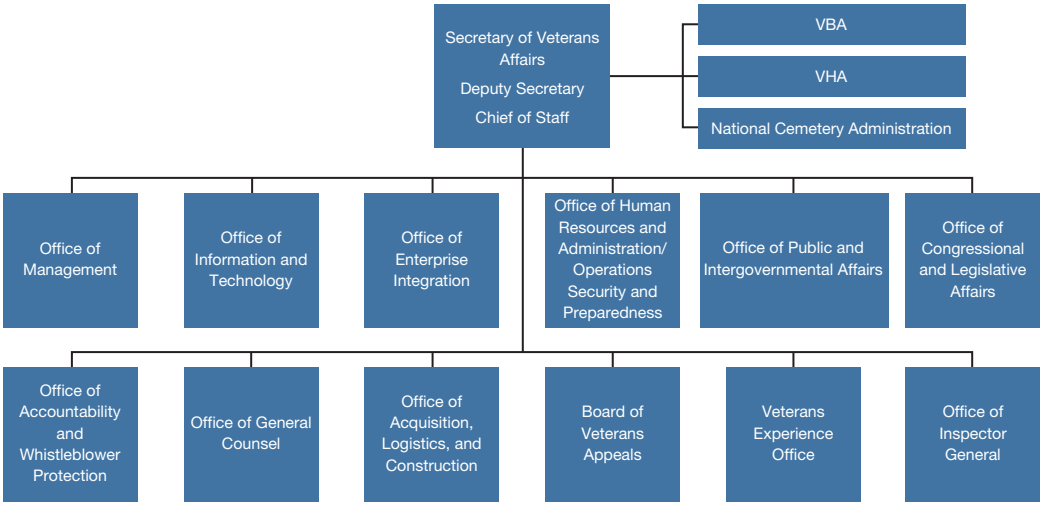
[34] VA, "Veterans Health Administration: About VHA," webpage, last updated November 8, 2023f; VA, "Community Care: Information for Family Members and Dependents," webpage, last updated November 6, 2023e.

[35] VA, "VetPop2020: A Brief Description," undated-b.

[36] VA, *FY 2024 Budget Submission: Budget in Brief*, March 2023a.

[37] VA, "Chapter 02: VA's Budget Cycle and Fund Symbols," *VA Financial Policy:* Vol. II, *Appropriations, Funds and Related Information*, March 15, 2023b, Appendix C.

FIGURE 1.3
VA Organization Chart



SOURCE: Adapted from Office of Enterprise Integration and Office of Policy and Interagency Collaboration, *Department of Veterans Affairs 2021 Functional Organization Manual: Description of Organization Structure, Missions, Functions, Tasks, and Authorities:* Vol. 1, *Administrations*, version 7, U.S. Department of Veterans Affairs, September 30, 2021a, p. 2.
NOTE: This organization chart was accurate as of July 15, 2021.

VA implements aspects of PPBE but focuses primarily on budgeting and execution, and its strategic planning does not transparently align with the other phases in the PPBE process. VA has unique authorities to receive the coming year's appropriations in advance, known as *advance appropriations*. This approach largely insulates VA operations—the benefits and medical care provided to veterans—from continuing resolutions and lapses in appropriations. VA has received a clean audit opinion on its financial statements for 24 consecutive years. DoD could benefit from a better understanding of VA's budget flexibilities and VA's articulation of mission outputs in its budget request.

National Nuclear Security Administration

NNSA was established in 2000 as a "separately organized agency" within the U.S. Department of Energy (DOE), with responsibility for enhancing national security "through the military application of nuclear energy."[38]

[38] U.S. Code, Title 50, Chapter 41, National Nuclear Security Administration; Section 2401, Establishment and Mission. NNSA is often described as a semi-autonomous agency within DOE. However, that terminology is not used in the NNSA Act, which established NNSA, nor in the DOE Organization Act (U.S. Code, Title 42, Chapter 84, Department of Energy; Section 7101, Definitions).

Despite being less than 25 years old, NNSA traces its roots back to World War II. In 1942, the U.S. Army was assigned responsibility for developing and producing the first U.S. atomic bombs as part of the Manhattan Project.[39] Even though the War Department was in charge, civilian institutions and industry partners played major roles in the project's day-to-day activities. Scientists and engineers from top U.S. universities conducted the basic research and design work associated with the new weapons. Large industrial firms built and operated the massive facilities that produced the highly enriched uranium, plutonium, and other components used in making an atomic bomb. This heavy reliance on the scientific community and the commercial sector has been a central, enduring feature of the U.S. nuclear weapons enterprise.[40]

After war ended in 1945, the Truman administration and its allies in Congress sought to exert greater civilian control over atomic energy research and development for both civil and military applications. With the passage of the Atomic Energy Act of 1946, responsibility for the design, development, production, and custody of all U.S. atomic weapons was transferred from the Manhattan Project to the newly created Atomic Energy Commission, an independent civilian agency.[41] The commission was disbanded in 1975, and its nuclear weapon programs were vested in the Energy Research and Development Administration.[42] Two years later, that organization was subsumed into DOE when DOE was established as a cabinet-level department.[43]

In the late 1990s, some members of Congress expressed concern that DOE was not devoting sufficient management attention to the U.S. nuclear weapon laboratories, particularly in matters related to security. A June 1999 report by the President's Foreign Intelligence Advisory Board subsequently recommended that "Congress pass and the President sign legislation that . . . [c]reates a new, semi-autonomous Agency for Nuclear Stewardship,

---

[39] Office of History and Heritage Resources, "Enter the Army," *The Manhattan Project: An Interactive History*, Office of Scientific and Technical Information, U.S. Department of Energy, undated.

[40] Stan Norris makes a similar point in his biography of General Leslie R. Groves, who led the Manhattan Project: "In many respects the practices and culture of the Manhattan Project carried over to the Atomic Energy Commission and its successors, and have lasted to this day" (Robert S. Norris, *Racing for the Bomb: The True Story of General Leslie R. Groves, the Man Behind the Birth of the Atomic Age*, Skyhorse Publishing, 2014, p. xv).

[41] Public Law 79-585, Atomic Energy Act of 1946, August 1, 1946, Chapter 724. The Atomic Energy Act has been amended multiple times since 1946. The current version can be found in U.S. Code, Title 42, Chapter 23, Development and Control of Atomic Energy; Section 2011, Congressional Declaration of Policy. Also see Alice Buck, *The Atomic Energy Commission*, Office of Management, Office of the Executive Secretariat, Office of History and Heritage Resources, U.S. Department of Energy, July 1983, pp. 18–19.

[42] Public Law 93-438, Energy Reorganization Act of 1974, October 11, 1974, Chapter 9; Alice Buck, *A History of the Energy Research and Development Administration*, Office of Management, Office of the Executive Secretariat, Office of History and Heritage Resources, U.S. Department of Energy, March 1982, pp. 2, 4.

[43] 42 U.S.C § 7101.

whose Director will report directly to the Secretary of Energy."[44] Over the objections of the Clinton administration, Congress included provisions in the National Defense Authorization Act (NDAA) for FY 2000 to establish a new agency within DOE focused solely on nuclear defense activities.[45] When the President ultimately signed the FY 2000 NDAA, these provisions (often referred to as the NNSA Act) became law.[46]

The NNSA Act defines the agency's missions, which have remained basically unchanged since NNSA's inception.[47] However, successive NNSA Administrators have amplified and, in some cases, rephrased NNSA's missions. NNSA's 2022 *Strategic Vision* describes NNSA's "mission priorities" as follows:

1. "[d]esign and deliver the Nation's nuclear stockpile"
2. "[f]orge solutions that enable global security and stability"
3. "[h]arness the atom to power a global naval fleet"
4. "[l]everage transformative technologies to address emerging challenges."[48]

The NNSA Act also lays out the basic elements of the agency's organizational structure. It is headed by the NNSA Administrator, who also serves as DOE's Under Secretary for Nuclear Security, in line with the DOE Organization Act.[49] The NNSA Act provides for a Principal Deputy Administrator and three additional deputy administrators (for Defense Programs, Defense Nuclear Nonproliferation, and Naval Reactors) whose roles and responsibilities generally agree with the NNSA's major missions and the major appropriation accounts within its budget. The NNSA Act also provides for a general counsel and an administrative staff with functions similar to those found in other federal agencies (e.g., personnel, public affairs, legislative affairs), as well as functions tailored to NNSA's unique facilities and activities (see Figure 1.4).[50]

NNSA's top-line budget has significantly grown over the past decade. Meanwhile, NNSA has increasingly centralized, standardized, and added rigor to its budgeting processes. It has

---

[44] President's Foreign Intelligence Advisory Board, Special Investigative Panel, *Science at Its Best, Security at Its Worst: A Report on Security Problems at the U.S. Department of Energy*, June 1999, p. 47.

[45] William J. Clinton, "Statement on Signing the National Defense Authorization Act for Fiscal Year 2000," American Presidency Project, University of California, Santa Barbara, October 5, 1999.

[46] 50 U.S.C. § 2401. The national defense budget function (referred to as function 050) includes the DoD budget (051), atomic energy defense activities (053), and defense-related activities (054). The inclusion of atomic energy defense activities in the national defense budget function predates the creation of NNSA. See, for example, U.S. Government, "Budget FY 1996–Analytical Perspectives, Budget of the United States Government, Fiscal Year 1996," February 1, 1995, Table 6-1, p. 69.

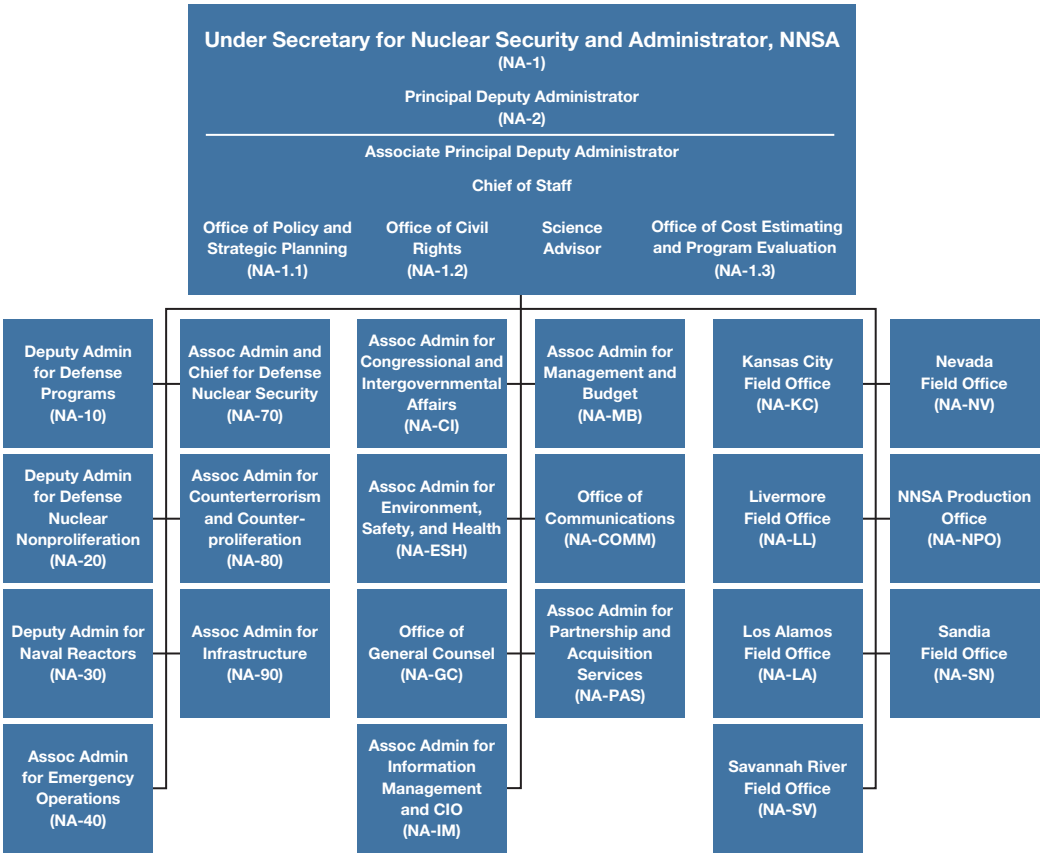
[47] 50 U.S.C. § 2401.

[48] NNSA, *Strategic Vision: Innovate. Collaborate. Deliver.* U.S. Department of Energy, 2022a, pp. 7–10.

[49] U.S. Code, Title 42, Chapter 84, Department of Energy; Section 7132, Principal Officers.

[50] 50 U.S.C. §§ 2407–2408.

FIGURE 1.4
NNSA Organization Chart



SOURCE: Adapted from DOE, "NNSA Organization Chart," February 25, 2024.
NOTE: Assoc = associate; Admin = administrator.

reassigned cost analysts to the Office of the Associate Administrator for Management and Budget (NA-MB) and embedded some analysts back into the programs to improve budget formulation and oversight. It has developed an enterprise-wide financial information system that provides common and authoritative data and enhances visibility into budgets and costs across the agency. NNSA benefits from significant funding flexibility provided by Congress, which allows NNSA to respond to changes in national policy, technical opportunities and challenges, and production capacity. These and other aspects of NNSA's PPBE process could potentially be applied by DoD.

Structure of This Report

In Chapter 2, we provide a detailed case study on VA's resource planning, followed by the case study on NNSA's resource planning in Chapter 3. In Chapter 4, we review key insights across the two case studies.

CHAPTER 2

U.S. Department of Veterans Affairs

Ryan Consaul, Michael Simpson, and Madison Williams

The United States has a long tradition of supporting its veterans population, which predates the nation's founding. For example, Plymouth Colony leaders passed a law so that disabled soldiers would receive support from the colony.[1] The current VA mission statement—"to fulfill President Lincoln's promise to care for those who have served in our nation's military and for their families, caregivers and survivors"[2]—traces back to President Abraham Lincoln's second inaugural address in which the President promised care for Civil War veterans and healing for a war-torn nation. Several agencies have been responsible for various aspects of veterans' benefits and care throughout U.S. history. In July 1930, the Veterans Administration was created through executive order to "consolidate and coordinate Government activities affecting war veterans."[3] This agency later evolved into VA, which was elevated to a cabinet-level executive department in October 1988.[4]

Led by the Secretary of Veterans Affairs, VA is now the third-largest federal cabinet-level department. VA's Secretary, Deputy Secretary, Assistant Secretary for Enterprise Integration, and Under Secretaries for Memorial Affairs, Benefits, and Health positions are appointed by the President and confirmed by the U.S. Senate.[5] VA has four missions:

- veterans' health care, which is administered through VHA
- veterans' benefits, which are administered through VBA
- veterans' burial services, which are managed by NCA
- support for federal response activities, known as "the Fourth Mission."[6]

---

1 VA, 2023d.

2 VA, undated-a, p. 1.

3 VA, 2023d.

4 VA, 2023d.

5 U.S. House of Representatives, Committee on Oversight and Reform, *Policy and Supporting Positions*, U.S. Government Publishing Office, December 2020. The Assistant Secretary for Management is presidentially appointed without Senate confirmation.

6 VA, undated-a, pp. 1–2.

Figure 2.1 shows the organizational structure that supports VA's four missions.

VHA is the largest integrated health care network in the United States; its 1,321 health care facilities serve more than 9 million enrolled veterans and 360,000 eligible family members and dependents each year.[7] VBA provides disability compensation benefits to 6.6 million veterans and their survivors, and it administers pension benefits to almost 263,000 veterans and survivors.[8]

VA manages a vast real property footprint to facilitate its missions. Figures 2.2–2.4 provide overviews of the facilities and other property managed by VA administrations. VHA manages 1,507 health care facilities, including VA medical centers and outpatient sites. VBA manages 216 facilities in the United States, Guam, Puerto Rico, and the Philippines. NCA operates 155 national cemeteries and 34 soldiers' lots and monument sites in the United States and Puerto Rico.

To achieve its missions, VA manages and executes a budget of over $300 billion, more than half of which is appropriated as mandatory spending. Approximately 90 percent of the discretionary spending portion of VA's budget is related to medical programs.[9] VA manages 54 budget accounts maintained by the U.S. Department of the Treasury.[10]

VA implements aspects of PPBE but focuses primarily on budgeting and execution, and its strategic planning does not transparently align with the other phases in the PPBE process. VA has unique authorities to receive the coming year's appropriations in advance, known as *advance appropriations*. This approach largely insulates VA operations—the benefits and medical care provided to veterans—from continuing resolutions and lapses in appropriations. VA has received a clean audit opinion on its financial statements for 24 consecutive years. DoD could benefit from a better understanding of VA's budget flexibilities and VA's articulation of mission outputs in its budget request.

Overview of VA's Budgeting Process

VA has one of the largest budgets (in terms of total budget authority) among the cabinet-level agencies. Its total annual budget authority rose to nearly $303 billion in its enacted FY 2023 appropriation, roughly one-third of DoD's total 2023 appropriation of about $850 billion. VA's discretionary budget—$135 billion in 2023—is third only to those of DoD and HHS.[11]

[7] VA, 2023f; VA, 2023e.

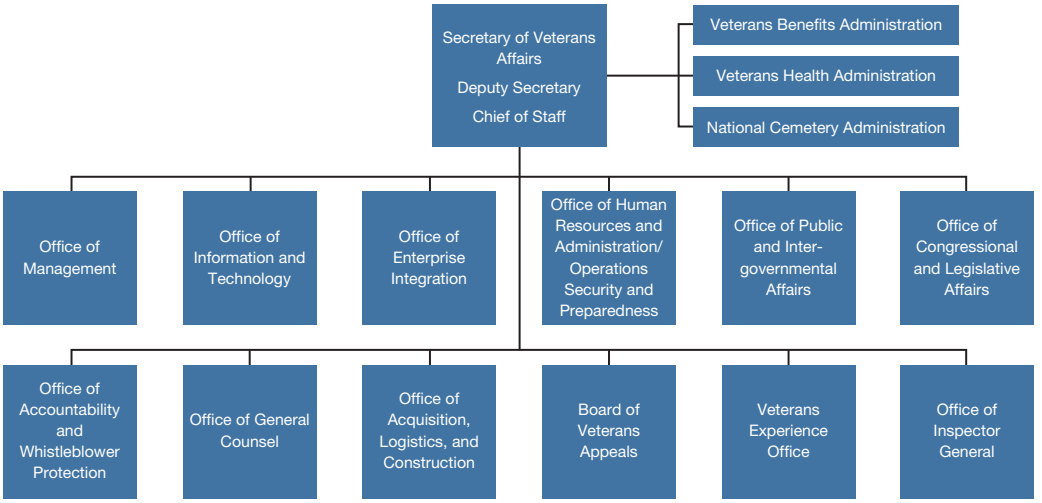
[8] VA, undated-b.

[9] VA, 2023a.

[10] VA, 2023b, Appendix C.

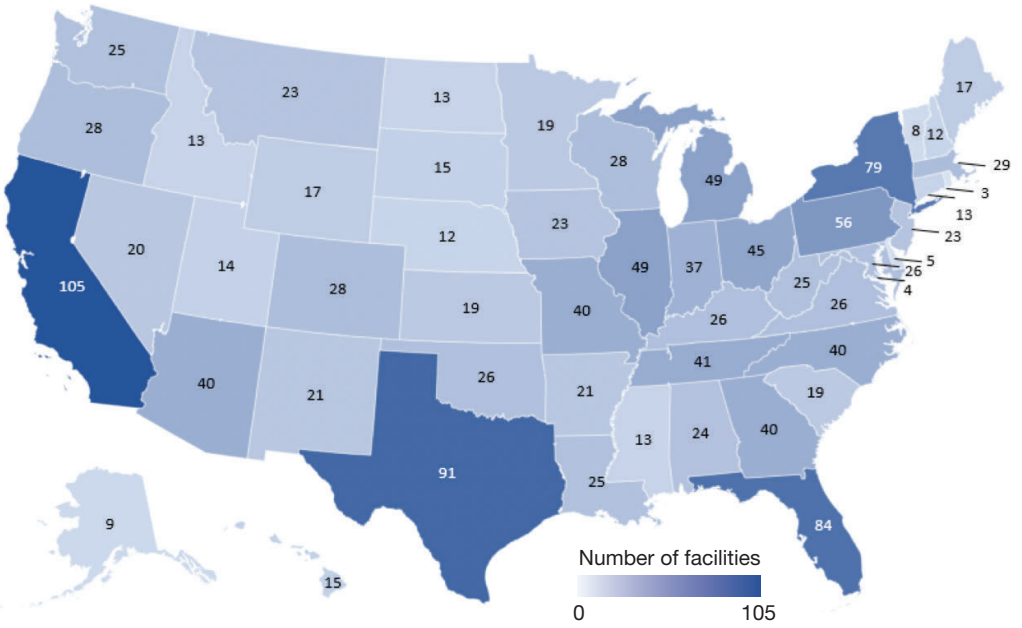
[11] OMB, undated, Table 5.4.

FIGURE 2.1
VA Organization Chart



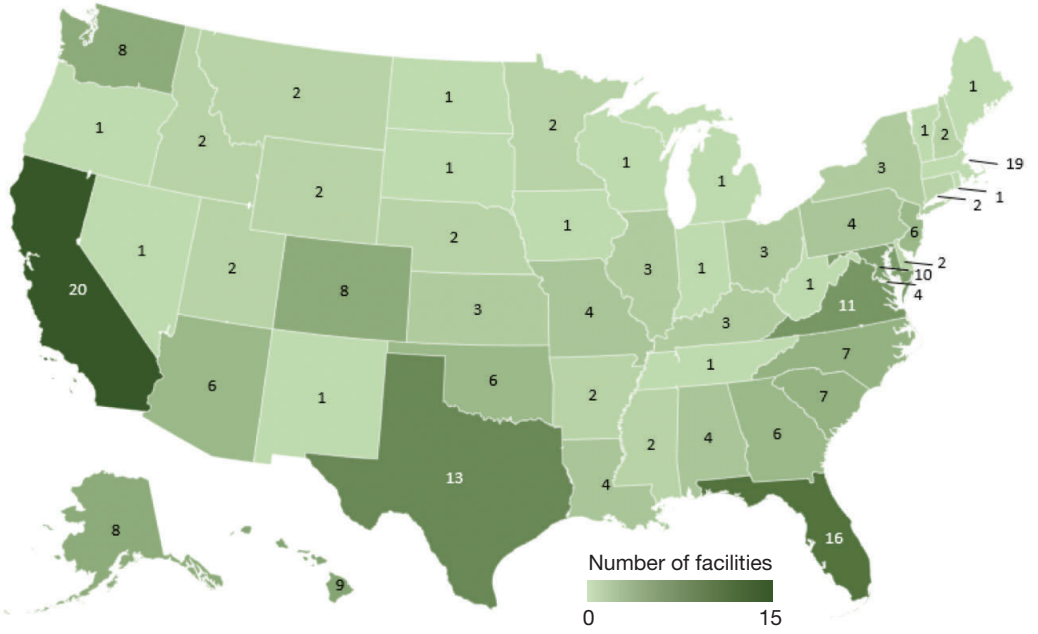
SOURCE: Adapted from Office of Enterprise Integration and Office of Policy and Interagency Collaboration, 2021a, p. 2.
NOTE: This organization chart was accurate as of July 15, 2021.

FIGURE 2.2
National Map of VHA Facilities



SOURCE: Adapted from VA, *Fiscal Year 2022 Agency Financial Report*, November 15, 2022, p. 7.
NOTE: Facilities in Puerto Rico (13), the U.S. Virgin Islands (4), American Samoa (2), the Philippines (1), Guam (2), and the Mariana Islands (1) are not shown on this map. See also VA, "Locations," webpage, last updated November 3, 2021.

FIGURE 2.3
National Map of VBA Facilities



SOURCE: Adapted from VA, 2022, p. 6.
NOTE: Facilities in Guam (1), Puerto Rico (1), and the Philippines (1) are not shown on this map. See also VA, 2021.

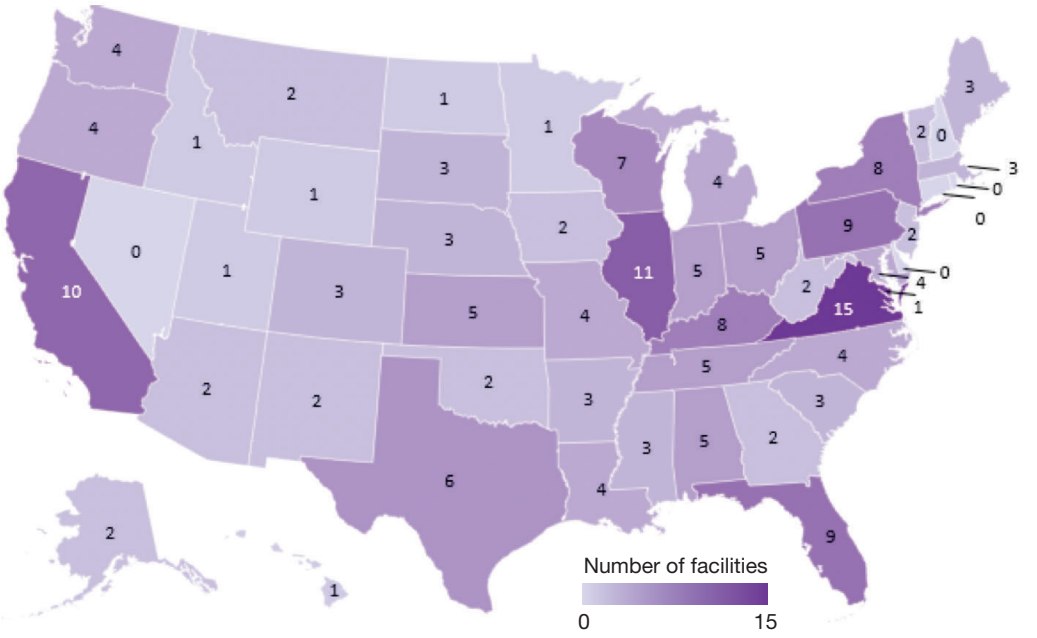
VA's mandatory funding constitutes 58 percent of the total VA budget, as shown in Figure 2.5.[12] Most VA mandatory programs are considered *appropriated entitlements*, which "go through the annual appropriations process" but "are not subject to annual appropriations decisions of the congressional appropriations committees" because "mandatory spending usually involves a binding legal obligation by the [federal government] to provide funding for an individual, program, or activity."[13] Certain entitlement programs, such as Medicare and Social Security are "permanently appropriated," while others, such as VA's programs, are "annually appropriated entitlements."[14] VA's mandatory programs include disability compensation, pensions, life insurance, living allowances, and burial benefits for veterans. In 2022, Congress passed the Sergeant First Class Heath Robinson Honoring Our Promise to Address Comprehensive Toxics Act (known as the Honoring Our PACT Act of 2022 or PACT

[12] Sidath Viranga Panangala and Jared S. Sussman, *Department of Veterans Affairs FY2023 Appropriations*, Congressional Research Service, R47423, February 14, 2023, p. 8.

[13] Panangala and Sussman, 2023, p. 2.

[14] Panangala and Sussman, 2023, p. 2.

FIGURE 2.4
National Map of NCA Cemeteries and Sites



SOURCE: Adapted from VA, 2022, p. 7.
NOTE: Two facilities in Puerto Rico are not shown on this map.

Act), which established the Cost of War Toxic Exposures Fund as an appropriated entitlement for veterans who had previously been exposed to environmental hazards.[15]

The residual VA budget authority, accounting for 42 percent of the department's total budget, covers discretionary appropriations for ongoing operating activities and medical programs. VA's base discretionary budget includes all medical care (medical services, community care, support and compliance, and facilities), medical research, construction, electronic health record modernization and information technology (IT), and all major operating expenses.[16]

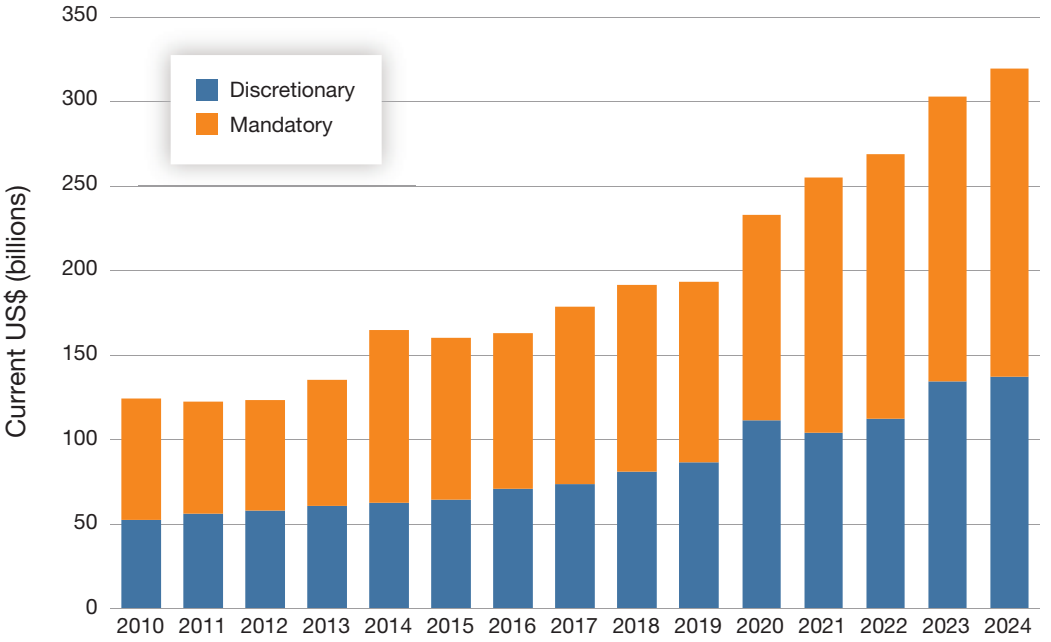
The department's budget submission is generally organized by *purpose*, such as medical services, rather than by *program*.[17] The Congressional Research Service notes, for instance, that VHA's supply chain modernization program does not directly receive appropriated funds; instead, the program is allocated funds from multiple sources of appropriations, such

[15] Public Law 117–168, Sergeant First Class Heath Robinson Honoring Our Promise to Address Comprehensive Toxics Act of 2022, August 10, 2022.

[16] Panangala and Sussman, 2023, p. 3.

[17] Panangala and Sussman, 2023, p. 1.

FIGURE 2.5
VA's Total Budget Authority, 2010–2022



SOURCE: Features data from OMB, undated, Table 5.4.
NOTE: The 2024 values represent estimates based on the President's Budget Request for FY 2024.

as the Medical Support and Compliance account and the Information Technology account, which Congress allocates specifically for VA purposes.[18]

Although budgeted programs cover most VA operational activities, the VA budget does not have a common appropriations structure across these programs. Congress has not established dedicated appropriation categories for specific colors of money, such as O&M or procurement. Instead, most VA programs report different cost categories and mission requirements in their budget justifications. For example, VA Medical Care programs are composed of four appropriation categories: Medical Services, Medical Community Care, Medical Support and Compliance, and Medical Facilities. Although the VA budget does not have a common appropriations structure, individual programs are often appropriated funds through similar cost categories. For instance, VA's Office of Information Technology has an O&M account that Congress uses to appropriate funds for VA's IT infrastructure modernization and cyber investments.[19]

[18] Panangala and Sussman, 2023, p. 1.

[19] VA officials, interviews with the authors, June–August 2023.

Whether for program-specific or department-wide expenses, VA follows an obligation-disbursement approach. Under this approach, funds must be obligated before they can be disbursed.

VA's discretionary operating budget is funded through a mix of one-year, multiyear, and *no-year* appropriations, the latter of which do not expire until they are expended.[20] Most medical care for veterans is appropriated primarily through one-year funds.[21] Multiyear and no-year funds cover a variety of other activities, such as cemetery land acquisition and construction, construction grants to states for extended-care facilities, other major and minor construction, veterans' benefits, and some medical research and community care programs (e.g., VA-purchased care from third-party providers).[22]

In addition to VA's mandatory and discretionary spending accounts, it has advance appropriation authority for certain medical care and benefits programs. *Advance appropriations,* which fall under both mandatory and discretionary funding, are enacted as part of an annual appropriations act, but they do not become available as a budget authority for at least one fiscal year after the budget year covered by the enacted appropriations act.[23] Advance appropriations are often intended to mitigate possible future funding gaps associated with lapses in federal appropriations and to allow covered accounts to bypass a congressional continuing resolution.[24] Advance appropriations can help ensure that veterans' benefits and care covered by advance appropriations cannot be disrupted in a lapse in appropriations or by a reduced funding level that could occur during a continuing resolution. Moreover, programs that receive advance appropriations are better able to manage long-term planning, which is particularly important for VA health care and benefit programs. However, VA may face challenges with unforeseen cost increases that were not accounted for when the advanced appropriation request was developed and appropriated, which is why VA can request additional funding for that same fiscal year—commonly referred to as the "second bite."

Prior to 2009, VA did not receive advance appropriations, and it faced significant challenges in funding veterans' health care through discretionary appropriations. A 2009 GAO report found that problems with VA's budget formulation process, including actuarial errors and unrealistic assumptions in cost estimation practices, had caused VA to systematically underestimate its budgetary needs and projections.[25] These budgeting problems routinely led to long-term planning difficulties for VA programs, unfunded requirements for medical

[20] VA officials, interviews with the authors, June–August 2023.

[21] VA officials, interviews with the authors, June–August 2023.

[22] VA officials, interviews with the authors, June–August 2023; VA, 2023b, Appendix C.

[23] Jessica Tollestrop and Kate P. McClanahan, *Advance Appropriations, Forward Funding, and Advance Funding: Concepts, Practice, and Budget Process Considerations*, Congressional Research Service, R43482, June 10, 2019, p. 1.

[24] Tollestrop and McClanahan, 2019, pp. 4–5.

[25] Randall B. Williamson and Susan J. Irving, *VA Health Care: Challenges in Budget Formulation and Issues Surrounding the Proposal for Advance Appropriations*, testimony before the Committee on Veterans'

care and services, and operational challenges for staff recruitment and for facility construction and maintenance.[26] Consequently, the George W. Bush administration was forced to submit multiple billion-dollar supplemental requests for appropriations to compensate for the unfunded or delayed program requirements.[27]

Veterans service organizations (VSOs) had lobbied Congress for more than a decade to address the funding issues identified in the 2009 GAO report.[28] The fact that VA medical care was funded—and still is—through discretionary appropriations was a core issue from the perspective of the VSOs, whose representatives argued that discretionary funding was, by definition, unstable. The VSOs' lobbying efforts leading up to 2009 were focused on making VA medical care *mandatory* instead of *discretionary*. This lobbying effort was unsuccessful. Thus, pursuing a contingency plan, the VSOs lobbied for the creation of advance appropriations instead, which would at least provide some funding stability for veterans' medical care and benefits.

On October 22, 2009, Congress passed the Veterans Health Care Budget Reform and Transparency Act, which provided advance appropriations authorization for three VHA accounts: Medical Services, Medical Support and Compliance, and Medical Facilities.[29] Congress subsequently authorized three mandatory VBA programs to receive advance appropriations beginning in 2014: compensation and pensions, readjustment benefits, and veterans' insurance and indemnities.[30]

VA's budgeting process includes several key annual outputs; their approximate time frames are shown in Table 2.1.

Following President Johnson's 1965 directive for all civilian agencies in the federal government to use program budgeting,[31] the Bureau of the Budget issued the Planning-Programming-Budgeting (PPB) Guidelines Bulletin No. 68-9 outlining implementation instructions. These guidelines included VA among the federal agencies required to implement

Affairs, U.S. House of Representatives, U.S. Government Accountability Office, GAO-09-664T, April 29, 2009, p. 1.

[26] Sidath Viranga Panangala, *Advance Appropriations for Veterans' Health Care: Issues and Options for Congress*, Congressional Research Service, R40489, April 28, 2009, p. 3.

[27] Panangala, 2009, p. 1.

[28] According to the Congressional Research Service, VSOs are "organizations that aid and serve veterans, servicemembers, dependents and survivors" (Tamar B. Breslauer and Carol D. Davis, *Veterans Service Organizations [VSOs]: Frequently Asked Questions*, Congressional Research Service, R46412, November 1, 2022, p. 1).

[29] Public Law 111-81, Veterans Health Care Budget Reform and Transparency Act of 2009, October 22, 2009.

[30] Panangala and Sussman, 2023, p. 4.

[31] Carl S. Rappaport, "Program Budgeting and PPBS in the Federal Government," paper presented at the 48th annual meeting of the Committee on Program Budgeting, National Academy of Sciences, 1969, p. 7.

TABLE 2.1
VA Budgeting Process

Key Annual Output	Approximate Time Frame
VA's Deputy Assistant Secretary for Budget sends guidance to the administrations and staff offices about planning assumptions, internal formulation deadlines, and fiscal targets.	May, Year *N* – 2
Administrations and staff offices submit preliminary budget requests and legislative proposals to the Office of Budget for review.	Late May–early June, Year *N* – 2
The Office of Budget holds internal budget reviews. Administration and staff office budget divisions present proposals to VA's CFO and Deputy Assistant Secretary for Budget.	June–July, Year *N* – 2
Administration and staff office budget divisions brief budget proposals to the Investment Review Council (IRC), VA Operations Board (VAOB), and VA Executive Board (VAEB). In some cases, the VA undersecretaries follow up on these presentations by briefing key budget items to the VA Secretary.	July, Year *N* – 2
The VA Secretary concludes the internal budget deliberation process. The Office of Budget consolidates each preliminary budget submission into the department-level budget request.	Late July–early August, Year *N* – 2
The administrations and staff offices adjust their budget submissions.	August, Year *N* – 2
VA submits a draft budget to OMB. The administrations and staff offices hold budget hearings with OMB.	August–September, Year *N* – 2
OMB passes back recommendations on the draft budget.	November, Year *N* – 2
VA's Office of Budget collaborates with the administration and staff office budget divisions to develop congressional justification materials for congressional budget hearings.	January, Year *N* – 1

SOURCE: Features information from VA officials, interviews with the authors, June–August 2023; VA, "Budget: Generic Annual Budget Time Frame," webpage, last updated April 25, 2023c.

NOTE: Year *N* represents the year of execution.

the PPBS beginning in 1968.[32] By 1969, however, a study of PPB implementation in federal agencies found that VA leadership used PPB analysis and procedures "irregularly in decision making" and that only "rudimentary" PPB processes had been developed at lower organizational levels.[33] Although VA had introduced comprehensive PPB procedures in accordance with the Bureau of the Budget's implementation guidelines, it lacked three key attributes that other agencies had established: oversight by the agency head or deputy, formal review of planning and analysis results, and organizational integration of budget and analytic processes.[34] Moreover, the 1969 study found that PPB had only "indifferent" support from the VA Admin-

[32] Edwin L. Harper, Fred A. Kramer, and Andrew M. Rouse, "Implementation and Use of PPB in Sixteen Federal Agencies," *Public Administration Review*, Vol. 29, No. 6, November–December 1969, p. 623.

[33] Harper, Kramer, and Rouse, 1969, p. 624.

[34] Harper, Kramer, and Rouse, 1969, p. 630.

istrator.[35] This lack of leadership buy-in ultimately led VA to stop using PPB following OMB's 1971 decision to effectively end the mandate to use PPBS in most civilian agencies.[36]

When VA was elevated to a cabinet-level department in 1988, Congress structured the appropriation accounts for veterans' health care programs primarily as year-of-execution discretionary funding.[37] Aside from the creation of certain advance appropriation authorities in 2009, VA's budgeting process and funding structures have not significantly changed since 1988. Nevertheless, the department faces perennial challenges with long-term planning, inaccurate cost projections and planning assumptions, and continued lapses in discretionary funding for construction, claims processing, and IT system development, which has led Congress to consider ways to improve VA's budgeting process.

Since 2013, Congress has attempted multiple times to emulate DoD's PPBE model for VA. The Putting Veterans Funding First Act of 2013 attempted to codify a PPBE system for VA. This act would have required VA to conduct a quadrennial review, establish a five-year budget plan, and designate a chief strategy officer to oversee the VA PPBE system.[38] However, the bill never made it out of committee. House Resolution 216, the Department of Veterans Affairs Budget Planning Reform Act of 2015, devised a similar set of PPBE requirements for VA.[39] Although it passed in the House, it was not passed by the Senate.

In the absence of a formal, department-wide PPBE process, VA has constructed an ad hoc budgeting process that relies on a series of governance boards and internal reviews to guide and oversee the department's investment decisions and strategic priorities.[40] Perhaps the one exception is VA's Office of Information Technology, which is appropriated funds that are explicitly covered by the reporting and auditing requirements of the Chief Financial Officers Act of 1990.[41] As a result, that office has developed an internal PPBE-like process that is distinct from other VA budgeting processes.

---

[35] Harper, Kramer, and Rouse, 1969, p. 627.

[36] Allen Schick, "A Death in the Bureaucracy: The Demise of Federal PPB," *Public Administration Review*, Vol. 33, No. 2, March–April 1973, p. 147.

[37] Panangala, 2009, p. 3.

[38] U.S. House of Representatives, Committee on Veterans' Affairs, "Legislative Hearing on H.R. 813; H.R. 806; and a Draft Discussion of Bill 'to Amend Title 38, United States Code, to Direct the Secretary of Veterans Affairs to Submit to Congress a Future-Years Veterans Program and a Quadrennial Veterans Review, to Establish in the Department of Veterans Affairs a Chief Strategy Officer, and for Other Purposes,'" July 17, 2013.

[39] U.S. House of Representatives, Department of Veterans Affairs Budget Planning Reform Act of 2015, House Resolution 216, March 25, 2015.

[40] VA officials, interviews with the authors, June–August 2023.

[41] VA officials, interviews with the authors, June–August 2023; Public Law 101-576, Chief Financial Officers Act of 1990, November 15, 1990.

Decisionmakers and Stakeholders

According to VA's *Functional Organization Manual*, the Assistant Secretary for Management acts as the department's CFO, owns the annual budgeting process, and is the principal adviser on the budget to the VA Secretary.[42] VA's Office of Management is further responsible for oversight of the budgeting process, including "budget formulation and execution monitoring, and financial management activities relating to key VA programs and operations for VA's appropriations and revolving funds."[43] The office is staffed by the Office of Budget, which provides initial fiscal and planning guidance to the administrations and staff offices at the start of budget formulation, manages and directs budget formulation and execution activities, develops congressional justification materials in coordination with the administrations and staff offices, and represents VA in budget deliberations with OMB and Congress. Meanwhile, VA's Office of Enterprise Integration owns the strategic planning process, leads the department's efforts in performance management, and conducts the department's biannual strategic review in accordance with OMB Circular A-11.[44]

VA's organizational structure reflects a "management approach of centralized policy direction, complemented by consistent decentralized execution."[45] VA's financial management structure, although a mixture of centralized and decentralized approaches, leans more toward decentralization. For instance, the VA CFO

> has responsibility for establishing financial policy, systems, and operating procedures for all VA financial entities; providing guidance on all aspects of financial management; and producing VA's consolidated financial reports. VA administrations and other offices are responsible for implementing those policies and producing the financial information that [the] VA CFO's office consolidates.[46]

VA's governance structure consists of two principal boards (the VAEB and the VAOB) and two principal councils (the Evidence-Based Policy Council and the IRC). The purpose of the VAEB is to enable the VA Secretary to critically evaluate evidence-based recommendations from VAEB members on the most significant strategy, risk, policy, resource, and

[42] Office of Enterprise Integration and Office of Policy and Interagency Collaboration, *Department of Veterans Affairs 2021 Functional Organization Manual: Description of Organization Structure, Missions, Functions, Tasks, and Authorities:* Vol. 2, *Staff Offices,* version 7, U.S. Department of Veterans Affairs, September 30, 2021b, pp. 227–254.

[43] Office of Enterprise Integration and Office of Policy and Interagency Collaboration, 2021b, p. 227.

[44] OMB Circular A-11, *Preparation, Submission, and Execution of the Budget*, Executive Office of the President, August 2023.

[45] Office of Enterprise Integration and Office of Policy and Interagency Collaboration, 2021b, p. iii.

[46] VA, 2022, p. 145.

operational issues facing the department and receive strategic direction.[47] The purpose of the VA Operations Board (VAOB), according to its charter,[48] is to enable the VA Deputy Secretary to critically evaluate evidence-based, risk-informed recommendations about the operational implementation and execution of the department's strategic plan and provide department-level operational direction.[49] The Evidence-Based Policy Council identifies VA's major strategic and operational challenges and develops recommendations for consideration by the VAOB and the VA Executive Board (VAEB). The Investment Review Council (IRC) is responsible for reviewing major investment proposals, including capital investments against established criteria.[50]

Planning and Programming

The Office of Enterprise Integration (previously the Office of Policy and Planning) implements a quadrennial strategic planning process for VA. The process culminates in the issuance of the department's strategic plan. VA began working on its FY 2022–2028 strategic plan

[47] The VAEB is chaired by the VA Secretary, and its members include the Deputy Secretary, Chief of Staff, Deputy Chief(s) of Staff, senior advisors to the VA Secretary and Deputy Secretary, undersecretaries, assistant secretaries, General Counsel, Chief Acquisition Officer, Veterans Experience Officer, Board of Veterans' Appeals Chair, Center for Women Veterans Director, Center for Minority Veterans Director, Chief Diversity Officer, and subject-matter experts (based on the topic) (U.S. Department of Veterans Affairs Office of Management, "VA Executive Board Charter," July 2023b, p. 6, Not available to the general public).

[48] The VAOB is chaired by the VA Deputy Secretary, and its members include the Chief of Staff, Deputy Chief(s) of Staff, senior advisors, undersecretaries and principal deputy undersecretaries, assistant secretaries and principal deputy assistant secretaries, General Counsel, Chief Acquisition Officer, Veterans Experience Officer, Board of Veterans' Appeals Chair, Center for Women Veterans Director, Center for Minority Veterans Director, Office of Small and Disadvantaged Business Utilization Director, Office of Employment Discrimination Complaint Adjudication Director, Chief Diversity Officer, and subject-matter experts and field leaders (based on the topic) (U.S. Department of Veterans Affairs Office of Management, "VA Operations Board Charter," July 2023c, p. 6, Not available to the general public).

[49] VA Notice 22-15, *Department of Veterans Affairs Governance Structure*, U.S. Department of Veterans Affairs, September 15, 2022. The notice defines *risk-informed* as "ensur[ing that] governance bodies and activities support a culture where it is not only safe but also expected that risks will be actively and openly discussed. All participants in governance bodies and processes will be empowered to bring a risk to the table" (VA Notice 22-15, 2022, p. 2).

[50] VA Notice 22-15, 2022. The IRC is chaired by the CFO, and IT investment decisions are the responsibility of the Chief Information Officer. IRC members include Principal Deputy Assistant Secretary–level officials from the administrations; Board of Veterans' Appeals; Office of Management; Office of Enterprise Integration; Office of Congressional and Legislative Affairs; Office of Human Resources and Administration/Operations, Security and Preparedness; Office of Acquisition, Logistics, and Construction; Office of Information and Technology; Office of Public and Intergovernmental Affairs; and the Veterans Experience Officer (U.S. Department of Veterans Affairs Office of Management, "VA Investment Review Council Charter," April 2023a, p. 7, Not available to the general public).

in October 2019.[51] Several analytic inputs, such as the identification of strategic gaps and an analysis of alternatives, typically inform the plan and its strategic goals.

However, according to VA officials involved with the budget, VA's broader strategic planning activities are disconnected from the annual budget formulation. Instead, VA's Deputy Assistant Secretary for Budget provides the administrations and staff offices with budget and performance guidance.[52] For FY 2025, this guidance noted that "each investment should show how it demonstrably improves performance of the Department in achieving or exceeding its goals for Veterans, their families, caregivers, and survivors and should identify significant risks and articulate how the investment will mitigate the risk."[53] The budget guidance does not, however, align with specific goals and objectives in VA's strategic plan.

The Deputy Assistant Secretary for Budget sends the budget and performance guidance document to the administrations and staff offices about two years before submitting VA's budget request to Congress.[54] For FY 2025, the guidance provided important direction regarding key internal dates, assumptions related to mandatory and discretionary budget requests (such as pay and nonpay increases), and the associated internal review process. The guidance offered a detailed timeline for internal submissions to VA's Office of Management; internal reviews by the CFO, IRC, and VA Secretary;[55] and VA's submission to OMB. Figure 2.6 shows a simplified version of this timeline. The guidance document includes instructions for VA administrations and staff offices, but it does not discuss how the specific requirements in the guidance were formulated beyond the instructions derived from OMB. According to a VA official, the guidance was informed by the priorities of the VA Secretary, OMB, and the presidential administration; the official, however, did not provide details on how these priorities specifically shaped the guidance document. In addition, this official said

FIGURE 2.6
Simplified Timeline of FY 2025 VA Budget Submission Process

SOURCE: Authors' analysis of information from McIlroy, 2023.

[51] VA, undated-a.

[52] Andrew McIlroy, *FY 2025 Internal Budget and Performance Submission Guidance*, U.S. Department of Veterans Affairs, May 2, 2023, Not available to the general public.

[53] McIlroy, 2023, p. 6.

[54] FY 2025 budget and performance guidance was issued on May 2, 2023 (McIlroy, 2023).

[55] The guidance notes that administrations and staff offices should be prepared to summarize information on how the investments improve performance toward the department's goals in the form of budget presentations to VA governance boards. These governance boards—including the VAEB, the VAOB, and the IRC—are described in more detail in the preceding section.

that VA Secretary Denis McDonough had placed greater emphasis than prior secretaries on using VA governance bodies to review the budget submissions.[56]

VA administrations and staff offices use various tools and methodologies to inform their budget submissions. VHA uses an actuarial model known as the Enrollee Health Care Projection Model (EHCPM) to project the next 20 years of veterans' demand for VA health care, including the number of veterans expected to be enrolled; their priority groups, ages, geographic locations, and health care needs; and the expenditures associated with their needs.[57] The model helps inform VHA's budget formulation but does not generate outputs for the budget request. VBA officials told us that their administration also uses actuarial models to inform its budget for certain benefits.[58] To identify and prioritize infrastructure needs for VHA and NCA projects, VA uses a process called Strategic Capital Investment Planning (SCIP). Similar to EHCPM, SCIP informs the budget formulation and develops priorities but does not generate funding levels for construction programs.[59]

Budgeting and Execution

VA's *Functional Organization Manual* delegates authority for the budgeting process to the Assistant Secretary for Management (the department's CFO).[60] The Office of Budget oversees the budget formulation, issues guidance, sets funding targets, develops planning assumptions, reviews budget submissions, and serves as the VA Secretary's principal liaison to the administrations and staff offices in the budgeting process.[61] The process produces a one-year budget submission for a congressional appropriation (or, in the case of advance appropriations, a two-year submission), including justifications and presentation materials.

The budget formulation phase begins when the Deputy Assistant Secretary for Budget issues guidance to the administrations and staff offices outlining fiscal assumptions and priorities in May of each year. According to this initial guidance, each administration and staff office submits a preliminary budget request and legislative proposal by early June to the Office of Budget for review. Next, the Office of Budget holds internal budget reviews, culminating in presentations in late June by the budget offices of each administration and staff office to the VA CFO and the Deputy Assistant Secretary for Budget.[62] The budget offices then pres-

[56] VA officials, interviews with the authors, June–August 2023.

[57] VHA, briefing on VA's 2022 Enrollee Health Care Projection Model provided to the authors, undated, Not available to the general public.

[58] VA officials, interviews with the authors, June–August 2023.

[59] Office of Asset Enterprise Management, "VA's Strategic Capital Investment Planning Process (SCIP)," briefing provided by interviewees to the authors, U.S. Department of Veterans Affairs, undated, Not available to the general public.

[60] Office of Enterprise Integration and Office of Policy and Interagency Collaboration, 2021b, p. 4.

[61] Office of Enterprise Integration and Office of Policy and Interagency Collaboration, 2021b, pp. 229–231.

[62] VA officials, interviews with the authors, June–August 2023.

ent their budget proposals throughout July to the IRC and the VAOB, which is chaired by the VA Deputy Secretary. In some cases, the relevant undersecretaries will follow up the IRC and VAOB presentations by briefing key budget items to the VA Secretary, who chairs the VAEB.[63] By the end of July, the VA Secretary concludes the internal budget deliberation process. The Office of Budget consolidates each preliminary budget submission into the department-level budget request. Each administration and staff office may subsequently adjust its budget submission until the Office of Budget submits its draft budget to OMB for review in the August–September time frame.

Once funds are appropriated, the Office of Budget manages the apportionments—from preparing apportionment requests for OMB to consolidating the spending and operating plans.[64] The Office of Budget leads the department's execution review and serves as the department leadership's liaison in the VA CFO's monthly execution review meetings.[65] The primary purpose of the meetings, which include the Deputy CFO, is to alert department leadership to any problems that might arise during execution, such as a failure to execute funds or hiring delays.[66]

Although the Office of Budget has oversight authority over the budget execution process, each administration and staff office is responsible for "all aspects of budget formulation and execution, establishment of appropriate controls . . . and for the monitoring, tracking, and reporting of financial activities."[67] VA has not developed an integrated data system for its budgeting process; consequently, execution-related data are not well integrated with other relevant information, such as performance data.[68] However, the CFO's office has access to all subagency-level financial systems, such as the Integrated Financial and Acquisition Management System (iFAMS).[69] Therefore, the Office of Budget does exert some top-down oversight and control through its management of the apportionment process, monthly execution reviews, access to subordinate financial management systems, and required quarterly SF-133 reports.[70]

During the execution phase, programs could require additional support to cover emerging needs or adapt to changing circumstances. The annual Military Construction, Veterans

[63] VA officials, interviews with the authors, June–August 2023.

[64] VA, 2023b, Section 020504.

[65] Office of Enterprise Integration and Office of Policy and Interagency Collaboration, 2021b, p. 229.

[66] VA officials, interviews with the authors, June–August 2023.

[67] VA, 2023b, Section 0204.

[68] VA officials, interviews with the authors, June–August 2023.

[69] VA officials, interviews with the authors, June–August 2023.

[70] SF-133 reports are budget execution reports that are submitted quarterly to OMB and must be producible on a monthly basis on demand by OMB. Select SF-133 reports (November, July, August, and the quarterly reports) also go directly to the House Appropriations Committee. The reports are also available publicly through OMB.

Affairs, and Related Agencies (MILCON-VA) appropriations bill has historically afforded VA considerable flexibility for reprogramming funds; for example, budget accounts for construction programs have a cap of $7 million or 25 percent of the account total, while IT programs have a cap of $1 million in the appropriation category. Above these thresholds, Congress must approve any further reprogramming of funds.

Congress has provided VA with additional sources of flexibility during budget execution, such as the Recurring Expenses Transformational Fund (RETF). Congress proposed the RETF in the Consolidated Appropriations Act of 2016 as a means to obligate appropriated funds more efficiently and address critical department-wide technology and infrastructure needs.[71] Under the RETF, VA can take expired, unobligated funds and reallocate them to an account for department-wide purposes, such as infrastructure improvements at VHA facilities and IT modernization, subject to approval by OMB and the congressional appropriations committees.[72] The RETF first became available in FY 2022, which represented the first opportunity for funds initially appropriated in FY 2016 to expire. VA reallocated more than $2 billion to the RETF over the following three fiscal years.

Other flexible-spending mechanisms include VA's multiyear and no-year authorities, advance appropriations, and additional carryover authorities. The MILCON-VA appropriations bills establish a dollar ceiling for carryover amounts on medical care programs.[73] Most other one-year accounts are assigned a percentage-based carryover threshold. For example, NCA's O&M account has a 10-percent carryover limit from one fiscal year to the next.[74] VA's carryover funding has increased over time, from about $600 million in FY 2005 to more than $3 billion in FY 2020.[75] In our interviews, some VA officials observed that the growth in VA's budget in recent years had curtailed the purchasing power of programs with dollar-based carryover thresholds, and they indicated that moving the department's carryover authorities to percentage-based methods could allow for more flexibility.[76]

If current-year appropriations are passed under a continuing resolution, VA discretionary programs are generally required to work within the prior fiscal year account structure. However, the availability of advance appropriations has significantly mitigated the impact of continuing resolutions on VA's operations and benefits. Programs funded with advance appropriations can use previously appropriated funds, as originally intended, to continue operating during funding lapses and under continuing resolutions. This change is particularly important for VHA, which can now provide ongoing medical services to veterans with-

[71] Public Law 114-113, Consolidated Appropriations Act, 2016, December 18, 2015.

[72] Pub. L. 114-113, 2015.

[73] VA officials, interviews with the authors, June–August 2023.

[74] VA officials, interviews with the authors, June–August 2023.

[75] VA officials, interviews with the authors, June–August 2023.

[76] VA officials, interviews with the authors, June–August 2023.

out significant interruptions, despite funding lapses.[77] Indeed, one interviewee observed that advance appropriations "help calm the waters with [VHA] staff and for the VSOs and veterans [because] all of VHA is advance-funded and not beholden to debate and turmoil."[78]

Oversight

As discussed, VA's budgeting process begins about two years before the VA budget request is submitted to Congress, with several budget reviews by VA governance bodies, department leadership, and OMB prior to submission. Once the President's Budget is released (which, by law, is supposed to occur in early February), the House and Senate Committees on Veterans' Affairs and the House and Senate Appropriations Committees and subcommittees begin reviewing it.[79] The House and Senate committees hold budget hearings with the VA Secretary each year and may hold additional hearings with the leadership of VA's administrations or staff offices. When approved, VA's budget is appropriated with those of other federal agencies and programs in the annual MILCON-VA appropriations bill.

One unique aspect of VA's budget review in Congress is the perspective of the VSOs. According to the Congressional Research Service, VSOs "are organizations that aid and serve veterans, servicemembers, dependents, and survivors" and may fall into one or more of the following categories:

- congressionally chartered organizations;
- organizations recognized by VA;
- organizations recognized by VA to prepare, present, and prosecute claims;
- national organizations;
- state, county, or tribal governmental organizations;
- regional or local organizations; or
- nonprofit organizations.[80]

VSOs are frequently represented at hearings to testify on the VA budget and operations. In addition, Disabled American Veterans, Paralyzed Veterans of America, and the Veterans of Foreign Wars collaborate on their own "independent budget," distinct from the VA budget request, which is publicly released.[81] These perspectives, along with those of congressional constituents and contacts at VA regional and local facilities, inform the congressional oversight of VA's budget in a concerted way that other federal agencies might not experience.

---

[77] VA officials, interviews with the authors, June–August 2023.

[78] VA official, interview with the authors, June–August 2023.

[79] The subcommittees of jurisdiction on the House and Senate Appropriations Committees are the MILCON-VA subcommittees.

[80] Breslauer and Davis, 2022, p. 1.

[81] Disabled American Veterans, Paralyzed Veterans of America, and Veterans of Foreign Wars of the United States, *The Independent Budget: Veterans Agenda for the 118th Congress*, February 13, 2023.

In 2022, President Joe Biden signed legislation into law to benefit veterans exposed to a variety of occupational and environmental hazards, such as burn pits and Agent Orange. The Honoring Our PACT Act of 2022 (the PACT Act) established the Cost of War Toxic Exposures Fund and appropriated $500 million to the fund in FY 2022, which is to remain available until the end of FY 2024.[82] VA requested more than $20 billion for the fund in its FY 2024 budget request in response to current and projected PACT Act–related claims.[83] This example demonstrates the potential impact of newly authorized benefits on VA's budget.

As part of its oversight efforts, Congress has placed limitations on VA appropriations in some cases. For example, Congress has become increasingly concerned about the progress of VA's Electronic Health Record Modernization program. As a result, Congress appropriated FY 2023 funding for VA to continue the effort but restricted 25 percent of the funding until the VA Secretary addressed legislators' concerns by taking several steps, such as reporting on outstanding issues with the system's stability and usability, certifying the program's schedule, and certifying that the outstanding issues have been addressed.[84] Although such limitations appear uncommon across VA accounts, Congress can direct how VA executes its budget.

To monitor expenditures, VA prepares monthly execution reviews for the CFO and submits required reports to OMB, some of which are submitted to Congress. Because VA uses a single financial system—the aforementioned iFAMS—VA headquarters has access to department-wide data.[85] Drawing from these data, VA officials compile the execution reports in various ways: Some accounts are prepared by administrations and staff offices, while others are compiled by headquarters. According to one VA official, the department considers execution when developing its budget requests, especially its balances of no-year funds.[86]

VA undergoes annual audits of its financial statements. For the past 24 years, it has obtained clean audit opinions.[87] Although VA has the third-largest cabinet-level department budget, it has fewer lines of business than DoD does, among other differences, which makes the VA financial statements less complex. GAO has reported on DoD's financial management challenges, noting that "[DoD's] sheer size and complexity contribute to the many challenges it faces in resolving pervasive, complex, and long-standing financial management and related

[82] Sidath Viranga Panangala, *Honoring Our PACT Act of 2022 (P.L. 117-168): Expansion of Health Care Eligibility and Toxic Exposure Screenings*, Congressional Research Service, R47542, May 2, 2023.

[83] VA, 2023a.

[84] Public Law 117-328, Consolidated Appropriations Act, 2023, December 29, 2022, 136 Stat. 4944–4945.

[85] A VA official noted that a separate legacy financial system is still in use but is being phased out and that there are plans for iFAMS to be the single financial system for use across VA (VA official, interview with the authors, June–August 2023).

[86] VA official, interview with the authors, June–August 2023.

[87] VA, 2022, p. 1.

business operations and systems problems."[88] One VA official noted that VA had made it a priority to achieve clean audit opinions on its financial statements and had invested the time and resources to do so.[89]

Analysis of VA's Budgeting Process

Strengths

We identified three strengths in VA's budgeting process. First, VA has flexibility that several other federal agencies do not have through its *advance appropriations and the longevity of many of its accounts*. VA's advance appropriations reduce the impact that continuing resolutions and lapses in appropriations have on the department. Advance appropriations provide VA with a greater level of stability and assurance that it can continue operating even during times of uncertainty in federal government funding. VA budget officials also likely need to spend less time analyzing the potential impact of such situations on VA's budget execution. Moreover, the RETF allows VA to reallocate expiring, unobligated funds to other department-wide needs. VA has used the RETF to fund more than $2 billion in projects related to VA hospital and other facility improvements, IT modernization, and construction since the fund's inception in FY 2022.[90]

Second, VA uses *analytic tools*, such as EHCPM and SCIP, to inform its budgeting.[91] These tools are intended to give VA greater assurance in the rectitude of its budget requests. The tools support VA's budget decisionmaking with data, which is important, given the numerous constituencies vying to influence the budgeting process.

Third, VA's budget submission *articulates the benefits and levels of care* that could be provided through its request. These links to VA's missions make for a more compelling case to Congress during the appropriations process. For example, the estimated benefits and levels of care to be provided with the VA's FY 2024 budget request are as follows:

- 7.4 million unique patients treated by VA
- 139.7 million outpatient visits
- $4.1 billion for construction
- [e]ducation assistance programs serving nearly 820,000 trainees
- Veteran Readiness and Employment (VR&E) benefits for over 144,000 Veterans

[88] Asif A. Khan, *DOD Financial Management: Efforts to Address Auditability and Systems Challenges Need to Continue*, testimony before the Subcommittees on National Security, the Border, and Foreign Affairs, and Government Operations and the Federal Workforce, Committee on Oversight and Accountability, U.S. House of Representatives, U.S. Government Accountability Office, GAO-23-106941, July 13, 2023, p. 4.

[89] VA official, interview with the authors, June–August 2023.

[90] VA, 2023a.

[91] We did not assess the accuracy or validity of these analytic tools as part of this study.

- [a] home mortgage program with a portfolio of 3.9 million active loans
- [a] national cemetery system projected to [serve more than 140,000] Veterans and eligible family members in 2024.[92]

Challenges

We identified three challenges in VA's budgeting process. First, *VA's strategic plans*, including its departmental strategic plan and quadrennial strategic plan, *are not clearly traceable to VA's budget*. Although a VA official said that the budget is informed by presidential administration and OMB priorities, it lacks clear traceability to VA's own strategic plan.[93] As a result, it is unclear how changes in the budget directly support the department's strategic planning.

Second, *VA does not conduct a strategic review of the budgeting process to determine whether the requested funding addresses the department's stated needs*. One VA official told us that budget officials conduct after-action reviews to identify lessons learned to make future budget development more efficient.[94] In addition, the Office of Enterprise Integration is responsible for the department's performance review activities. However, performance does not play a formal role in informing future budget requests.

Third, *VA headquarters does not provide specific guidance to the administrations and staff offices regarding the inputs required to justify their budget submissions*. There are mechanisms—such as EHCPM, SCIP, and other actuarial models—to inform certain parts of the budget. But these supporting analyses are not specifically required for all budget accounts, leading to a decentralized approach to budget formulation. As a result, some budget submissions received by VA headquarters may be subject to less underlying analysis than others.

Applicability

More than half of VA's budget is funded through mandatory spending. Of the 42 percent funded through discretionary spending, almost 90 percent is for medical programs.[95] While discretionary, much of this spending on medical programs is relatively inflexible because it relates to medical care. For this reason, actuarial modeling is more important for VA than for DoD. Although DoD provides health care to military personnel, health care is only a fraction of the total DoD budget. In contrast, providing medical care and benefits to veterans is a *primary* VA mission.

Although their missions differ, DoD and VA are similar in terms of providing medical care for personnel, facilitating construction and infrastructure projects over a vast real property footprint, and modernizing IT. Both departments have large subcomponents with their own focused missions. DoD and VA also have active and engaged congressional authoriza-

[92] VA, 2023a, pp. 1–2.

[93] VA official, interview with the authors, June–August 2023.

[94] VA official, interview with the authors, June–August 2023.

[95] VA, 2023a.

tion and appropriations committees that can significantly influence the departments' activities and budgets.

Lessons from VA's Budgeting Process

Lesson 1: VA Has Benefited from Advance Appropriations

Advance appropriations provide greater stability to VA's funding. VA does not have to expend time and resources to plan for contingencies that could be caused by continuing resolutions or lapses in appropriations, such as changes in budget execution to account for a prolonged continuing resolution, personnel furloughs, or restitution of back pay for furloughed employees. The department's missions to provide veterans with benefits and medical care can continue even when the rest of the federal government is shut down. DoD budget accounts that provide mission-essential support would benefit from advance appropriations and the stability they provide, as VA accounts do.

Lesson 2: Several VA Accounts Take Advantage of Carryover Funding

Certain VA accounts lack restrictive periods of availability. This approach gives VA flexibility and allows it to carry over funding for use in future years. Although the carryover balances need to be monitored and considered for future budgets, this approach reduces pressure on VA to spend down its budget within a specified, narrow time frame. Current constraints on some DoD accounts could incentivize DoD agencies to use resources unwisely at the end of each fiscal year to not lose the funding. DoD could review its accounts to determine where less-restrictive periods of availability might benefit DoD's mission and enhance its budget execution.

Lesson 3: VSOs Advocate for VA's Budget

VSOs have a unique partnership with VA and advocate on behalf of various groups of veterans. VSOs provide unique perspectives on VA's priorities and budget to Congress and the public. Although DoD may receive differing perspectives and advocacy from outside groups, such as industry associations, those organizations lack statutory recognition and the ability to engage with DoD that VSOs have. Obtaining regular viewpoints on the DoD budget from outside constituent groups with vested interests in achieving DoD's mission—and with vested interests other than those already well represented by defense contractors—could provide DoD with another valuable input to inform its PPBE process.

Table 2.2 summarizes the lessons we have identified from VA's budgeting process.

TABLE 2.2

Summary of Lessons from VA's Budgeting Process

Theme	Lesson Learned	Description
Planning and programming	Lesson 1: VA has benefited from advance appropriations.	DoD mission-essential accounts would benefit from the stability that advance appropriations provide.
Budgeting and execution	Lesson 2: Several VA accounts take advantage of carryover funding.	Implementing no-year funding for certain accounts could reduce budget execution pressures on DoD.
Oversight	Lesson 3: VSOs advocate for VA's budget.	DoD's budget could be informed by a broader variety of outside groups that advocate on behalf of DoD missions.

CHAPTER 3

National Nuclear Security Administration

Laurinda L. Rohn, Frank G. Klotz, Sarah W. Denton, and Yuliya Shokh

NNSA was established in 2000 as a "separately organized agency" within DOE, with responsibility for enhancing national security "through the military application of nuclear energy."[1]

Despite being less than 25 years old, NNSA traces its roots back to World War II. In 1942, the U.S. Army was assigned responsibility for developing and producing the first U.S. atomic bombs as part of the Manhattan Project.[2] Even though the War Department was in charge, civilian institutions and industry played major roles in the project's day-to-day activities. Scientists and engineers from top U.S. universities conducted the basic research and design work associated with the new weapons. Large industrial firms built and operated the massive facilities that produced the highly enriched uranium, plutonium, and other components used in making an atomic bomb. This heavy reliance on the scientific community and the commercial sector has been a central, enduring feature of the U.S. nuclear weapons enterprise ever since.[3]

After the war ended in 1945, the Truman administration and its allies in Congress sought to exert greater civilian control over atomic energy research and development for both civil and military applications. With the passage of the Atomic Energy Act of 1946, responsibility for the design, development, production, and custody of all U.S. atomic weapons was transferred from the Manhattan Project to the newly created Atomic Energy Commission, an independent civilian agency.[4] The commission was disbanded in 1975,

[1] 50 U.S.C. § 2401. NNSA is often described as a semi-autonomous agency within DOE. However, that terminology is not used in the NNSA Act, which established NNSA, nor in the DOE Organization Act (42 U.S.C. § 7101).

[2] Office of History and Heritage Resources, undated.

[3] Stan Norris makes a similar point in his biography of General Leslie R. Groves, who led the Manhattan Project: "In many respects the practices and culture of the Manhattan Project carried over to the Atomic Energy Commission and its successors, and have lasted to this day" (Norris, 2014, p. xv).

[4] Pub. L. 79-585, 1946, Chapter 724. The Atomic Energy Act has been amended multiple times since 1946. The current version can be found in 42 U.S.C., starting with § 2011. Also see Buck, 1983, pp. 18–19.

and its nuclear weapon programs were vested in the Energy Research and Development Administration.[5] Two years later, that organization was subsumed into DOE when DOE was established as a cabinet-level department.[6]

In the late 1990s, some members of Congress expressed concern that DOE was not devoting sufficient management attention to the U.S. nuclear weapon laboratories, particularly in matters related to security. A June 1999 report by the President's Foreign Intelligence Advisory Board subsequently recommended that "Congress pass and the President sign legislation that . . . [c]reates a new, semi-autonomous Agency for Nuclear Stewardship, whose Director will report directly to the Secretary of Energy."[7] Over the objections of the Clinton administration, Congress included provisions in the NDAA for FY 2000 to establish a new agency within DOE focused solely on nuclear defense activities.[8] When the President ultimately signed the FY 2000 NDAA, these provisions (often referred to as the NNSA Act) became law.[9]

The NNSA Act specifically defines the agency's missions as follows:

- To enhance United States national security through the military application of nuclear energy.
- To maintain and enhance the safety, reliability, and performance of the United States nuclear weapons stockpile, including the ability to design, produce, and test, in order to meet national security requirements.
- To provide the United States Navy with safe, militarily effective nuclear propulsion plants and to ensure the safe and reliable operation of those plants.
- To promote international nuclear safety and nonproliferation.
- To reduce global danger from weapons of mass destruction.
- To support United States leadership in science and technology.[10]

This list has remained basically unchanged since NNSA's inception.[11] However, successive NNSA Administrators have amplified and, in some cases, rephrased NNSA's missions in their periodic statements of the organization's vision. NNSA's 2022 *Strategic Vision*, for example, describes NNSA's "mission priorities" as follows:

- [d]esign and deliver the Nation's nuclear stockpile
- [f]orge solutions that enable global security and stability
- [h]arness the atom to power a global naval fleet
- [l]everage transformative technologies to address emerging challenges.[12]

---

[5] Public Law 93-438, 1974, Chapter 9; Buck, 1982, pp. 2, 4.

[6] 42 U.S.C. § 7101.

[7] President's Foreign Intelligence Advisory Board, Special Investigative Panel, 1999, p. 47.

[8] Clinton, 1999.

[9] 50 U.S.C. § 2401.

[10] 50 U.S.C. § 2401, paragraph (b).

[11] 50 U.S.C. § 2401.

[12] NNSA, 2022a, pp. 7–10.

According to the same document, achieving these priorities depends on three "mission enablers": "world-class science, technology, and engineering"; an "adaptive workforce [and] resilient infrastructure"; and "integrated enterprise management [and] operations."[13]

The NNSA Act also lays out the basic elements of the agency's organizational structure. It is headed by the NNSA Administrator, who also serves as DOE's Under Secretary for Nuclear Security, in line with the DOE Organization Act.[14] The NNSA Act provides for a Principal Deputy Administrator and three additional deputy administrators (for Defense Programs, Defense Nuclear Nonproliferation, and Naval Reactors) whose roles and responsibilities generally agree with the NNSA's major missions and the major appropriation accounts within its budget. The NNSA Administrator, Principal Deputy Administrator, and two of the other three deputy administrators are political appointees nominated by the President and confirmed by the Senate. The Deputy Administrator for Naval Reactors, on the other hand, has always been an active-duty four-star Navy admiral. As noted, one of NNSA's statutorily defined missions is "to provide the United States Navy with safe, militarily effective nuclear propulsion plants." Within the U.S. government, this responsibility is shared between DOE (acting through NNSA) and the Department of the Navy. By executive order, the responsibility for carrying out this mission is assigned to a single individual who essentially wears two hats—one as NNSA's Deputy Administrator for Naval Reactors and the other as Director of the Naval Nuclear Propulsion Program, reporting directly to the Chief of Naval Operations.[15]

The NNSA Act also provides for a general counsel and an administrative staff with functions similar to those found in other federal agencies (e.g., personnel, public affairs, legislative affairs), as well as functions tailored to NNSA's unique facilities and activities (see Figure 3.1).[16]

Roughly 60,000 people work for NNSA. Of these, only about 2,000 (or 3.3 percent) are federal government employees.[17] They are responsible for performing inherently governmental functions, such as program and project management and contract assurance. They work primarily at NNSA's headquarter facilities in the Washington, D.C., area and in Albuquerque, New Mexico, as well as in field offices at each of NNSA's major facilities (see Figure 3.2).

NNSA's scientific and technical work is performed largely at three national security laboratories, four production plants, and a national security site formerly known as the Nevada Test Site. These sites are owned by the U.S. government, but they are run by various com-

[13] NNSA, 2022a, p. 13.

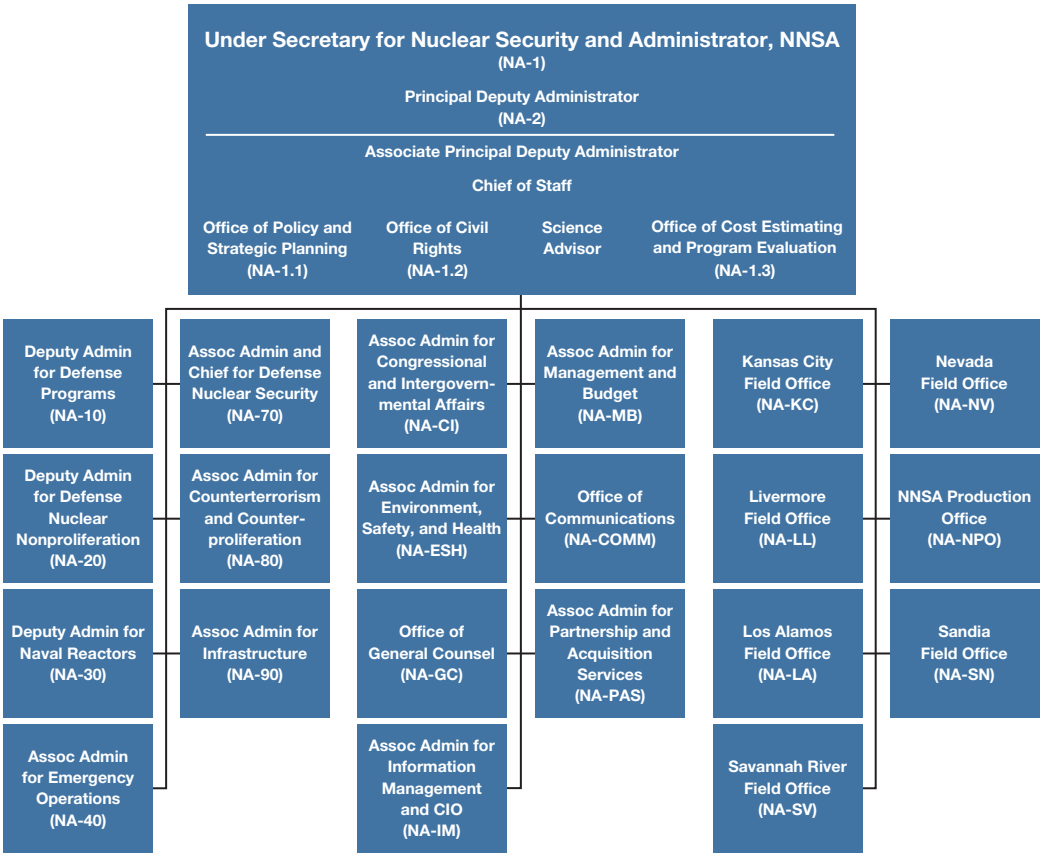
[14] 42 U.S.C. § 7132.

[15] 50 U.S.C. §§ 2403–2406; Executive Order 12344, *Naval Nuclear Propulsion Program*, Executive Office of the President, February 1, 1982.

[16] 50 U.S.C. §§ 2407–2408.

[17] Office of the Chief Financial Officer, *U.S. Department of Energy FY 2024 Congressional Justification:* Vol. 1, *National Nuclear Security Administration: Federal Salaries and Expenses, Weapons Activities, Defense Nuclear Nonproliferation, Naval Reactors*, U.S. Department of Energy, March 2023, p. 10.

FIGURE 3.1
NNSA Organization Chart



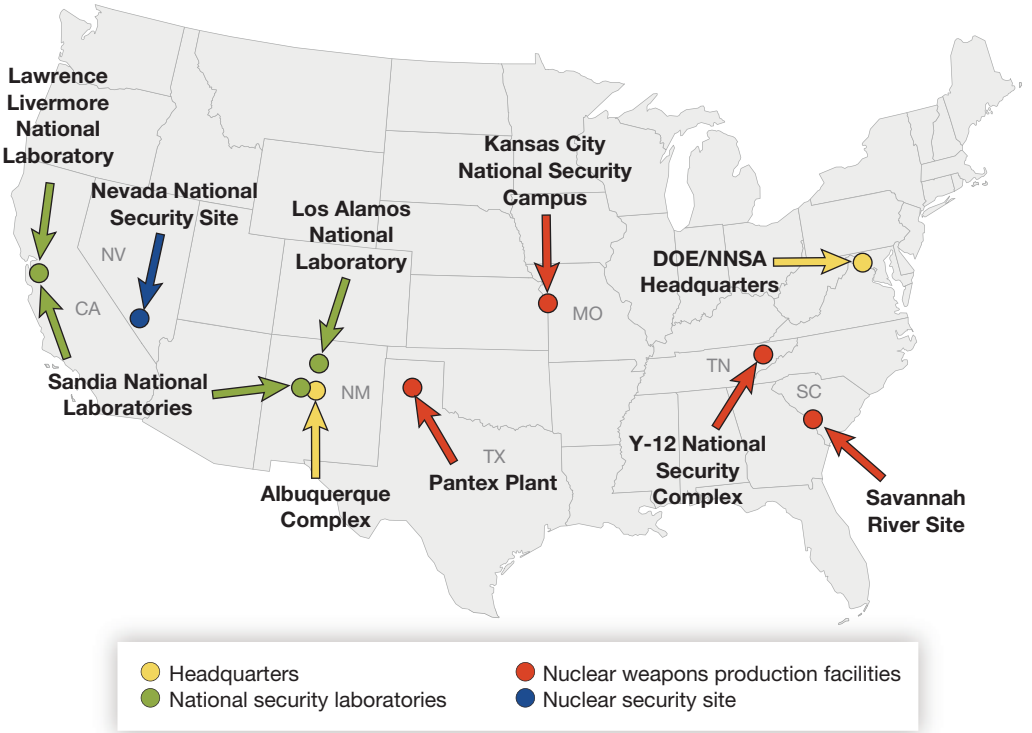
SOURCE: Adapted from DOE, 2024.
NOTE: Assoc = associate; Admin = administrator.

mercial entities on behalf of NNSA under management and operating (M&O) contracts.[18] The approximately 57,000 scientists, engineers, technicians, and specialists who work at these NNSA facilities are generally employees of the M&O contractors, not the federal government.[19]

[18] Federal Acquisition Regulation, Part 17, Special Contracting Methods; Subpart 17.6, Management and Operating Contracts; Section 17.601 defines an M&O contract as "an agreement under which the Government contracts for the operation, maintenance, or support, on its behalf, of a Government-owned or [Government]-controlled research, development, special production, or testing establishment wholly or principally devoted to one or more major programs of the contracting Federal agency." An up-to-date list of DOE/NNSA M&O contracts can be found at DOE, "DOE/NNSA Site Facility Management Contracts," April 19, 2023.

[19] Office of the Chief Financial Officer, 2023, p. 9.

FIGURE 3.2
NNSA Laboratories, Production Facilities, and Sites



SOURCE: Adapted from NNSA, *Fiscal Year 2022 Stockpile Stewardship and Management Plan: Report to Congress*, U.S. Department of Energy, March 2022b, p. 1-3, Figure 1-1.

The sections that follow describe the nature, size, and unique characteristics of the budget that funds NNSA's missions, facilities, and workforce, as well as the process by which that budget is formulated each year. NNSA's top-line budget has significantly grown over the past decade. During that same period, the agency has increasingly centralized, standardized, and put additional rigor in its budgeting processes. For example, NNSA has reassigned cost analysts to NA-MB and embedded some of them back into the programs to improve budget formulation and oversight. It has also developed an enterprise-wide financial information system that provides common and authoritative data and enhances visibility into budgets and costs across the agency. NNSA also benefits from significant funding flexibility provided by Congress, which allows NNSA to respond to changes in national policy, technical opportunities and challenges, and production capacity.

These and other aspects of NNSA's Planning, Programming, Budgeting, and Evaluation (PPBE) process could be applicable to DoD.[20] That said, it is worth bearing in mind that

[20] Like ODNI, NNSA has chosen to use the term *evaluation* in naming the fourth phase of its PPBE process rather than *execution*.

NNSA, like many other federal agencies, has deliberately patterned its PPBE process on the DoD model. Moreover, the scale and scope of DoD's missions, activities, and corresponding budgets are orders of magnitude larger and more complex than those of NNSA.[21] This reality must be factored in when considering whether and how NNSA's noteworthy practices could be applied to DoD's PPBE processes.

Overview of NNSA's Budgeting Process

NNSA's budget consists of four appropriation accounts. These accounts broadly correspond to the missions assigned to the agency by the NNSA Act—Weapons Activities, Defense Nuclear Nonproliferation, and Naval Reactors—and Federal Salaries and Expenses (e.g., training and travel) of the agency's U.S. government employees. These accounts are, in turn, further divided into separate programs (see Figure 3.3).

NNSA's budget has significantly increased over the past decade, in both real and percentage terms. The enacted budget for FY 2016 was $12.53 billion. By FY 2023, NNSA's top-line budget had grown to $22.2 billion, an increase of 77 percent. As Figure 3.4 shows, the Weapons Activities appropriation is by far the largest account in terms of budget share. It has also experienced the most growth over time, more than doubling since FY 2016, primarily to pay for an unprecedented number of programs to modernize the U.S. nuclear weapon stockpile and to recapitalize NNSA's aging research and production infrastructure—parts of which date back to the early days of the Cold War and, in some cases, to the Manhattan Project.[22] The budget shares for the other three appropriation accounts have remained fairly steady during this same period, essentially keeping pace with the rate of inflation.

There are several significant differences between NNSA and DoD appropriations. First, there are no colors of money in the NNSA appropriations. Thus, an NNSA program manager does not have to decide whether a particular activity should be treated as research and development, procurement, O&M, or another activity aligned to formal appropriations, as required in the DoD budget. Second, the vast majority of NNSA appropriations are considered no-year funding that can be carried over from fiscal year to fiscal year (i.e., Congress does not designate a formal expiration date of the NNSA funds in the appropriations bill).[23] Third, money can generally be moved *within* each of the programs in the four appropriation

[21] For example, the FY 2023–enacted funding level for NNSA was $22.2 billion, compared with $816.7 billion for DoD.

[22] For details on the current U.S. nuclear modernization programs of record, see NNSA, *Fiscal Year 2023 Stockpile Stewardship and Management Plan—Biennial Plan Summary: Report to Congress*, U.S. Department of Energy, April 2023b.

[23] NNSA's funding in the Federal Salaries and Expenses appropriation account (plus a small amount in the Weapons Activities appropriation account to pay for the salaries and expenses of employees in the secure transportation workforce and in the Naval Reactors appropriation account for those naval propulsion program employees funded by NNSA) is two-year funding (GAO, *Financial Management: DOE*

FIGURE 3.3
NNSA's Four Appropriation Categories

Weapons Activities	Defense Nuclear Nonproliferation	Naval Reactors	Federal Salaries and Expenses
Stockpile management	Material management and minimization	Operations and infrastructure (including minor construction)	Travel
Production modernization	Global material security	Development (including ship construction/ maintenance support)	Support services
Stockpile research, technology, and engineering	Nonproliferation and arms control	S8G prototype refueling	Training
Academic programs and community support	Research and development	Columbia-class reactor systems development	Space and occupancy
Infrastructure and operations	Bioassurance	Program direction	DOE Working Capital Fund
Secure transportation asset	Nonproliferation construction	Construction	
Defense nuclear security	Nuclear counterterrorism and incident response		
IT and cybersecurity			

SOURCE: Features information from Office of the Chief Financial Officer, 2023.
NOTE: The Federal Salaries and Expenses account does not include funding for federal staff supporting the Weapons Activities Secure Transportation Asset program or the Naval Reactors account.

accounts without a reprogramming action.[24] However, moving money from one program to another within the same appropriation account (e.g., from stockpile management to production modernization in Weapons Activities) would require a reprogramming action.[25] In short, NNSA has decidedly more flexibility than DoD in managing the funds appropriated to it by Congress.

The NNSA Act requires the NNSA Administrator "to ensure the planning, programming, budgeting, and financial activities" of NNSA "comport with sound financial and fiscal management principles."[26] Like many other federal agencies, NNSA has patterned its PPBE process on the DoD model in carrying out this mandate. However, the four phases in the NNSA process are planning, programming, budgeting, and *evaluation*, each of which is described in greater detail in the sections that follow.

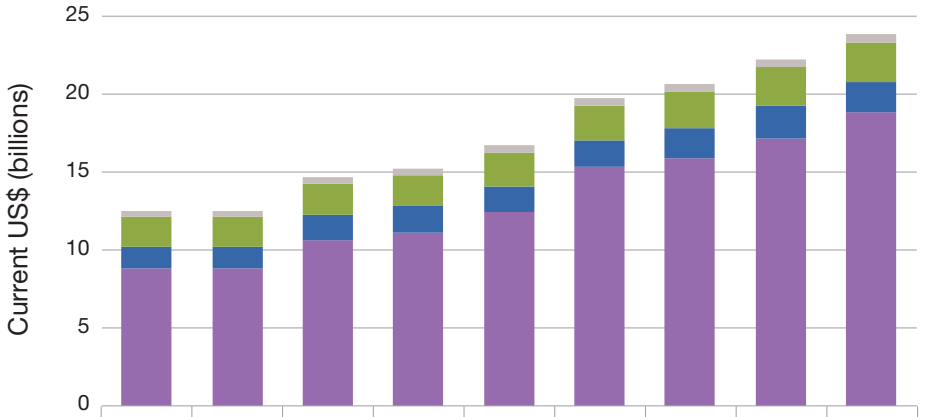
and NNSA Have Opportunities to Improve Management of Carryover Balances, GAO-22-104541, July 25, 2022, pp. 5, 47).

[24] NNSA officials, interviews with the authors, June–August 2023.

[25] NNSA officials, interviews with the authors, June–August 2023.

[26] 50 U.S.C. § 2452.

FIGURE 3.4
NNSA's Budget, by Appropriation Account



	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Federal Salaries and Expenses	0.36	0.36	0.41	0.41	0.44	0.44	0.46	0.48	0.54
Defense Nuclear Nonproliferation	1.94	1.94	1.99	1.93	2.16	2.26	2.35	2.49	2.51
Naval Reactors	1.38	1.37	1.62	1.79	1.65	1.68	1.92	2.08	1.96
Weapons Activities	8.85	8.83	10.64	11.1	12.46	15.35	15.92	17.17	18.83

SOURCE: Features data from American Institute of Physics, "Budget Tracker: FY2024 National Nuclear Security Administration," webpage, last updated July 24, 2023.
NOTE: FY24 budget numbers reflect requested budget values.

NNSA's approach to PPBE has not remained static; rather, it has continued to evolve. In fact, as its budget has risen dramatically in recent years, NNSA has taken important steps to standardize, centralize, and add rigor to its PPBE process. In 2014, for example, and in accordance with a legislative amendment to the NNSA Act, NNSA stood up the Office of Cost Estimating and Program Evaluation (CEPE). Its director reports to the NNSA Administrator and is responsible for, among other things, performing independent cost estimates and reviewing technology readiness assessments for Major Atomic Energy Defense Acquisition programs.[27] CEPE was deliberately modeled on DoD's CAPE but has less-robust analytic capabilities. While CEPE has 18 federal employees and ten contractors, CAPE is staffed by 314 civilian federal employees, military officers, and contractors.[28]

[27] 50 U.S.C. § 2411.

[28] NNSA officials, interviews with the authors, June–August 2023; Commission on Planning, Programming, Budgeting, and Execution Reform, *Interim Report*, U.S. Senate, August 2023, p. 97. CAPE staffing levels are as of December 2022. The commission notes that the planned workforce growth from 135 civil-

In 2019, NNSA reengineered its PPBE process to provide more-centralized management and oversight through NA-MB to help ensure the consistency and quality of budgeting products and data and to support budget execution and decisionmaking. As part of this realignment, budget analysts were transferred out of individual programs to NA-MB. NA-MB, in turn, embedded many of these analysts back into programs, although they still officially work for and report to NA-MB.[29]

NNSA has also made concerted efforts to more clearly define the roles and responsibilities of its major players, as well as the key steps and deliverables in its PPBE process. A series of NNSA policy (NAP) documents, signed by the NNSA Administrator, have been published to codify existing procedures and revise them as required.[30] The NAP document governing the overall PPBE process, for example, was first published in 2019 and updated for the second time in July 2023.[31] In this latest version, NNSA more explicitly defines the roles and responsibilities of the deputy and associate administrators in the PPBE process. The Deputy Administrator for Defense Programs and Deputy Administrator for Defense Nuclear Nonproliferation were designated as *account integrators* for, respectively, the Weapons Activities and the Defense Nuclear Nonproliferation appropriation accounts in the budget. Likewise, the Associate Administrator for Management and Budget was designated as the *account integrator* for the Federal Salaries and Expenses appropriation account.[32] According to NAP documents, each of the three account integrators is "responsible for integrating and prioritizing their respective portfolio, including long-term portfolio planning, and has authority for making and approving all . . . (specifically, reprogramming) decisions within their respective account."[33]

Notably absent in this list of account integrators is the Deputy Administrator for Naval Reactors. Executive Order 12344 and the NNSA Act give the Director of Naval Propulsion authority to administer all aspects the Naval Nuclear Propulsion Program, including fiscal management.[34] In practice, the Naval Reactors staff uses U.S. Navy PPBE processes to formulate plans, programs, and budgets involving funding for nuclear propulsion from both NNSA and the Department of the Navy. Those parts of the program that are to be funded through

ians up to the authorized level of 164 is needed to support CAPE's mission (Commission on Planning, Programming, Budgeting, and Execution Reform, 2023, p. 100).

[29] NNSA officials, interviews with the authors, June–August 2023; NNSA, *Planning, Programming, Budgeting, and Evaluation (PPBE) Process*, NAP 130.1C, July 18, 2023d, p. 3.

[30] A complete list of NAP documents can be found at NNSA, "NNSA Policy Documents (NAP)," webpage, undated-b.

[31] NNSA, 2023d.

[32] NNSA, 2023d, p. 4.

[33] NNSA, 2023d, p. 6; NNSA officials, interviews with the authors, June–August 2023.

[34] Executive Order 12344, 1982.

NNSA's Naval Reactors appropriation account are then merged into NNSA's PPBE process during the programming phase.[35]

Decisionmakers and Stakeholders

As noted, the NNSA Act gives the NNSA Administrator authority over "[b]udget formulation, guidance, and execution, and other financial matters" within the agency.[36] Accordingly, the NNSA Administrator is responsible for approving all deliverables in NNSA's PPBE process, including annual planning guidance, annual programming guidance, the NNSA budget request, and "changes in budget execution that require congressional notification/approval."[37] The deputy administrators and NNSA staff—including the associate administrators, the Office of Policy and Strategic Planning, CEPE, program managers, and field offices—provide inputs at various stages in the process.

Other stakeholders with roles to play in NNSA's PPBE process include the Secretary of Energy, the Nuclear Weapons Council (NWC), and M&O contractors.

Secretary of Energy

In accordance with both DOE and OMB directives, the NNSA budget is included in DOE's annual budget submission to OMB and, ultimately, in the President's Budget request to Congress.[38] The DOE Secretary must approve the overall DOE budget, including the NNSA budget nested within it. Significantly, the NNSA Act states that NNSA employees "shall not be responsible to, or subject to the authority, direction, or control, of any other officer, employee, or agent of the Department of Energy."[39] That said, the Office of the DOE CFO reviews the NNSA budget and forwards it to the DOE Secretary, as it does for all other organizations in the department, and coordinates DOE's responses to OMB—part of the *passback* process. In carrying out these functions, the DOE CFO staff engages regularly and often with NA-MB staff in NNSA.[40]

Nuclear Weapons Council

Perhaps no stakeholder has a greater interest or concern about the NNSA budget and the decisions that shape its PPBE process than DoD and the armed services—particularly the U.S. Air Force and the Navy. Although NNSA is responsible for developing, producing, and

[35] NNSA officials, interviews with the authors, June–August 2023.

[36] 50 U.S.C. § 2402.

[37] NNSA, 2023d, pp. 3–4.

[38] NNSA, 2023d, pp. APC-1–APC-4. However, the NNSA Act stipulates that NNSA be set forth separately within the other amounts requested for DOE. Accordingly, the NNSA budget is included as a separate volume in the DOE budget justification.

[39] 50 U.S.C. §§ 2402, 2410.

[40] NNSA officials, interviews with the authors, June–August 2023.

maintaining the weapons in the U.S. nuclear weapon stockpile, DoD is responsible for developing, acquiring, operating, and maintaining the bombers, submarines, and long-range missiles capable of delivering those weapons to their intended targets (see Figure 3.5). Therefore, in the FY 1987 NDAA, Congress established the NWC to enhance coordination between DoD and DOE on decisions affecting nuclear weapon development and production. The NWC's membership includes the NNSA Administrator and six senior DoD civilian and military officials.[41]

Under Title 10 of the U.S. Code, one of NWC's responsibilities is "[c]oordinating and approving the annual budget proposals of the National Nuclear Security Administration" and reporting to Congress each year as to whether NNSA's plans and budgets are adequate to meet current and projected requirements related to nuclear weapons.[42] Thus, NWC, a con-

FIGURE 3.5
Shared Responsibility for U.S. Nuclear Forces

SOURCE: Reproduced from Stacy Jo Huser, "Defense Programs Overview," National Nuclear Security Administration, April 26, 2023.

[41] U.S. Code, Title 10, Section 179, Nuclear Weapons Council. The members of the NWC are the Under Secretary of Defense for Acquisition and Sustainment (chair), Vice Chairman of the Joint Chiefs of Staff, DOE Under Secretary for Nuclear Security (NNSA Administrator), Under Secretary of Defense for Policy, Under Secretary of Defense for Research and Engineering, and the commander of U.S. Strategic Command.

[42] 10 U.S.C. § 179.

gressionally established body, external to DOE and NNSA, can and does have a major say in the NNSA budget. In practice, most potential issues between DOE/NNSA and DoD regarding NNSA's budget are resolved by the NWC's Budget Certification Working Group, which includes staff officers from both departments and from OMB. To date, the NWC has never failed to approve the budget developed through NNSA's PPBE process and approved by the DOE Secretary.[43]

M&O Contractors

The M&O contractors that manage and operate NNSA's laboratories, plants, and other sites—as well as the 57,000 nongovernment employees who work at those locations—obviously have stakes in the outcome of NNSA's PPBE process. However, the "determination of budget policy, guidance, and strategy, and the determination of Federal program priorities or budget requests" is considered an inherently governmental function that must be performed by federal government employees.[44] Nevertheless, M&O contractors can and do express their views on requirements and priorities early in the PPBE process and in frequent individual and group meetings with the NNSA Administrator and other senior agency officials. They also have daily contact, at their respective laboratories or plants, with federal employees in the NNSA field offices. And they provide data and reports that federal government employees use as the basis for their budget formulation deliberations.[45] M&O contractors can and do meet with members of Congress and their staffs, and some maintain government relations offices.[46] As discussed later, the final decisions on the NNSA budget are made by Congress as part of the annual authorization and appropriations process.

Planning and Programming

Although NNSA officials consider planning to be a year-round, continuous activity, the annual planning phase runs from March to September.[47] According to NNSA directives, the agency's internal strategic planning documents must align with and support the mission priorities expressed in the NSS, the NDS, and the Nuclear Posture Review, which are typically

[43] NNSA officials, interviews with the authors, June–August 2023.

[44] Office of Federal Procurement Policy, Office of Management and Budget, Policy Letter 11–01, "Performance of Inherently Governmental and Critical Functions," *Federal Register*, Vol. 76, No. 176, September 12, 2011, p. 56243.

[45] NNSA officials, interviews with the authors, June–August 2023.

[46] NNSA officials, interviews with the authors, June–August 2023.

[47] NNSA, 2023d, p. APA-1. Time frames are approximate and based on information from NNSA, "General PPBE Process," briefing slide provided by Office of the Associate Administrator for Management and Budget staff to the authors, undated-a, Not available to the general public.

issued within a year or so of each new presidential administration taking office.[48] NNSA's specific goals and objectives are articulated in its annual planning guidance, which is drafted by NNSA's Office of Policy and Strategic Planning (NA-1.1) and is approved and issued by the NNSA Administrator in November.[49] This document, in turn, guides the NNSA programs, laboratories, plants, and sites in formulating their respective plans and helps provide NNSA leadership with a sense of priorities for the overall enterprise.[50]

The planning guidance informs the programming phase, during which decisionmakers align available NNSA resources with expressed NNSA priorities. The final product of this programming phase is an NNSA budget proposal that is briefed to DOE leadership for guidance and approval.[51]

NNSA's NA-MB manages the programming phase, which runs from January through August.[52] Early in this phase, NA-MB drafts the annual programming guidance, which is approved and issued by the NNSA Administrator, typically in February.[53] The programming guidance includes top-line budget targets and potential alternative scenarios with which to match alternative resourcing plans (e.g., fully funding all requirements, 5-percent across-the-board reductions).[54]

Once the top-down programming guidance has been issued, NNSA's programs and other organizations work with NA-MB to develop cost estimates, priority lists, cost plans, and other related products.[55] Each account integrator then uses these program-level products to integrate and prioritize all the programs within an appropriation account, developing an integrated priority list and a draft budget for each appropriation account. NA-MB develops an integrated Future Years Nuclear Security Program (FYNSP) proposal in early July.[56] CEPE, as part of managing the program review process, leads issue teams that "determine program alternatives, offsets, and programmatic and portfolio effects and risks."[57] The program review process, which runs from May through July, ends with briefings to

[48] The Biden administration's versions of these documents are as follows: Joseph R. Biden, Jr., *National Security Strategy*, White House, October 2022; and DoD, 2022.

[49] NNSA, 2023d, pp. APA-1–APA-3. Time frames are approximate and based on information from NNSA, undated-a.

[50] NNSA officials, interviews with the authors, June–August 2023.

[51] NNSA, 2023d, pp. APB-1–APB-2.

[52] Time frames are approximate and based on information from NNSA, undated-a.

[53] NNSA, 2023d, p. APB-3. Time frames are approximate and based on information from NNSA, undated-a.

[54] NNSA officials, interviews with the authors, June–August 2023.

[55] NNSA, 2023d, p. APB-5. NNSA uses the term *elements* to refer to its program, field, functional, and other organizations. Because DoD uses *program elements* to refer to something very different, we avoid using *elements* in this report to prevent confusion.

[56] NNSA, 2023d, p. APB-4. Time frames are approximate and based on information from NNSA, undated-a.

[57] NNSA, 2023d, p. APB-1.

NNSA leadership on the pending issues and on assessments of the budget proposals for the various scenarios.[58] The final decisions are documented in the NNSA Administrator's Preliminary Decision Memorandum, which is issued in August.[59] NNSA's programming phase culminates with the NNSA Administrator briefing DOE leadership on the proposed budget and DOE then issuing its program decision guidance.[60]

Improving Planning and Programming

NNSA refines its PPBE process continuously. One recent improvement that several interviewees lauded was the development and deployment of the FormEX information system, which was first used during the development of the FY 2024 budget. FormEX provides common, authoritative budget formulation data and visibility across NNSA. A broad variety of users can see what other organizations in NNSA are funding, when, and at which sites.[61] NA-MB can use FormEX to see redundancies and gaps in funding plans. Decisionmakers can view up-to-date data and create graphs and reports on their computer displays.[62] Having a single source of authoritative data also makes it easier to provide consistent answers to budget-related questions from DOE, DoD, OMB, and congressional leadership.[63]

In another improvement, NNSA is launching a series of studies to improve long-range planning. These studies are intended to help close the gap between NNSA's long-term needs (i.e., what it will need in 20 years) and the decisions NNSA needs to make now to address those needs.[64]

A potential refinement under discussion would be to change the timing of the planning and programming phases to tighten their alignment.[65] In some cases, NNSA plans and guidance have been issued too late to be useful to its laboratories, plants, and sites in developing their inputs to the programming process.[66] In another case, NNSA had about a month to complete the programming phase, leaving little time for discussions about trade-offs.[67]

[58] NNSA, 2023d, p. APB-1. Time frames are approximate and based on information from NNSA, undated-a.

[59] NNSA, 2023d, p. APB-6. Time frames are approximate and based on information from NNSA, undated-a.

[60] NNSA, 2023d, p. APB-2.

[61] NNSA officials, interviews with the authors, June–August 2023.

[62] NNSA officials, interviews with the authors, June–August 2023. Tableau is also used to create reports.

[63] NNSA officials, interviews with the authors, June–August 2023.

[64] NNSA officials, interviews with the authors, June–August 2023.

[65] NNSA officials, interviews with the authors, June–August 2023.

[66] NNSA officials, interviews with the authors, June–August 2023.

[67] NNSA officials, interviews with the authors, June–August 2023.

Another potential improvement under consideration would be to upgrade NNSA's data management system to make it easier to develop alternative budgets for alternative scenarios and to allow programs and other organizations to input data continuously.[68]

Budgeting and Evaluation

NNSA splits its budgeting phase into two subphases: budgeting formulation and budgeting execution.[69] During the budgeting-formulation subphase (September–January), NA-MB modifies the FYNSP as needed and develops the associated justification materials (such as crosscutting exhibits and performance data). The DOE CFO then sends these materials to OMB. On reviewing the materials and receiving related briefings, OMB issues decisions on NNSA's budget request as part of the passback process. Once any appeals of these decisions are completed, NA-MB prepares the final NNSA input and associated materials, which the DOE CFO then sends to OMB for inclusion in the annual President's Budget request to Congress.[70]

The NWC executes its statutorily required certification of the NNSA budget during this subphase, having gained some prior knowledge of whether the Secretary of Energy (and ultimately Congress) has assessed NNSA's plans and budgets to be adequate to meet current and projected requirements related to nuclear weapons. NNSA and the NWC communicate frequently, primarily through the NWC's Budget Certification Working Group, in staffing the NWC's certification report.[71]

During the budgeting-execution subphase (October–September), congressionally appropriated funds flow to DOE for NNSA's use for the approved purposes.[72] The appropriated funds can also be shifted within appropriation accounts—referred to as *reprogramming*—subject to certain constraints on the purpose and amount of funding, which are discussed later in this section.

Three features of NNSA's appropriated funding give the organization valuable flexibility. First, unlike DoD's funds, NNSA's funds are not restricted by *type* of spending (e.g., O&M or RDT&E)—often referred to as colors of money. Thus, an NNSA program manager generally has the flexibility to determine the most effective way to spend the funds within a

[68] NNSA, "Improving PPBE," briefing provided by interviewees to the authors, May 18, 2023c, Not available to the general public.

[69] This highlights a key difference between NNSA's PPBE process and DoD's PPBE process. In NNSA, budget execution happens in the *budgeting* phase, not in the evaluation phase. In DoD, budget execution happens in the *execution* phase.

[70] NNSA, 2023d, pp. APC-1–APC-3. Time frames are approximate and based on information from NNSA, undated-a.

[71] NNSA officials, interviews with the authors, June–August 2023.

[72] NNSA, 2023d, p. APD-1. Time frames are approximate and based on information from NNSA, undated-a.

program and can reprogram how they are spent during the year to respond to changing circumstances.[73]

The other two features are closely related: funding that has not been obligated does not expire (often referred to as *no-year money*) and unspent funding can be retained for use in future years (often referred to as *carryover funding*). These two features provide several benefits. NNSA leadership and program managers can use no-year money to offset challenges resulting from continuing resolutions and government shutdowns.[74] These funds can be used to continue critical operations and important work during shutdowns or to make it easier to fund multiyear projects.[75] Balances from prior years can also be used to fund unanticipated needs, as was done for NNSA's Ukraine support operations.[76] As an additional bonus, the ability to carry funding forward means that there is no incentive to spend remaining funds quickly at the end of a fiscal year in less-than-optimal ways.

However, managing no-year and carryover funding is more difficult and complex than managing annual funding. No-year funding must be tracked by the year of appropriation, simultaneously.[77] Thus, NNSA programs must manage two different types of money: budget authority money and prior-year balances. In addition, the funds that NNSA requests in one year will not necessarily be the funds it spends in subsequent years whenever money is carried over.[78] These accounting complexities can sometimes lead to errors.[79] In fact, NNSA's ability to manage its carryover balances has come under scrutiny from Congress, GAO, and OMB because of concerns about the size of NNSA's carryover balances, its ability to manage them, and how it reports them.[80] NNSA officials note, however, that after a large growth in budget authority in recent years, it has reduced the rate of carryover growth. NNSA carried over $1.88 billion more into FY 2022 than it carried over into FY 2021, but it carried over only

[73] NNSA officials, interviews with the authors, June–August 2023. Restrictions can be imposed by DOE management, OMB, or Congress.

[74] Such use is still subject to limits imposed by Congress, such as reprogramming requirements and not exceeding the level of spending from the previous year during continuing resolutions.

[75] NNSA officials, interviews with the authors, June–August 2023; NNSA, *Prevent, Counter, and Respond—NNSA's Plan to Reduce Global Nuclear Threats, FY 2022–FY 2026: Report to Congress*, U.S. Department of Energy, December 2021, pp. 6-14–6-19.

[76] NNSA officials, interviews with the authors, June–August 2023. Also see NNSA, "Russia's Disregard for Nuclear Safety and Security in Ukraine," fact sheet, U.S. Department of Energy, March 4, 2023a.

[77] Some of NNSA's existing balances go back to 2005. NNSA officials, interviews with the authors, June–August 2023; Pub. L. 117-328, 2022, Section 301.

[78] NNSA officials, interviews with the authors, June–August 2023.

[79] NNSA officials, interviews with the authors, June–August 2023.

[80] NNSA officials, interviews with the authors, June–August 2023; GAO, 2022, pp. 2–3, 12.

$400 million more into FY 2023 than it carried over into FY 2022. Officials said that NNSA might now be able to reduce actual carryover in future years.[81]

Notwithstanding this flexibility, NNSA cannot always transfer funds and must sometimes reprogram them. Section 301 of the Consolidated Appropriations Act of 2023 gives NNSA legislative authority for internal reprogramming (i.e., below-threshold reprogramming) actions limited to $5 million or 10 percent of any annual funding level, whichever is less:

> The amounts made available by this title may be reprogrammed for any program, project, or activity, and the Department shall notify, and obtain the prior approval of, the Committees on Appropriations of both Houses of Congress at least 30 days prior to the use of any proposed reprogramming that would cause any program, project, or activity funding level to increase or decrease by more than $5,000,000 or 10 percent, whichever is less, during the time period covered by this Act.[82]

If internal reprogramming actions are not sufficient to solve the issue, NNSA must do external reprogramming (i.e., above-threshold reprogramming), notify Congress, and wait for 30 days before executing the actions. Requests for external reprogramming actions must go through NNSA, DOE, and OMB. Once all offices agree, NNSA sends the request to Congress, and the 30-day wait period begins. The DOE Secretary can waive the waiting period if "compliance with such requirement or restriction would pose a substantial risk to human health, the environment, welfare, or national security" and must notify the House and Senate Committees on Appropriations no later than three days after exercising the waiver authority.[83]

Although external reprogramming actions are not constrained by a dollar-amount or percentage threshold, NNSA rarely takes these actions. The process is more politically sensitive than internal actions, given the need for congressional review; is never conducted the same way twice; and is perceived to be less agile and more difficult than DoD's reprogramming process.[84] Time is an additional barrier: External reprogramming takes longer—more than three months for coordination and the 30-day wait period versus two to four weeks for

[81] NNSA officials, interviews with the authors, June–August 2023. NNSA also noted that it has used more than $1.2 billion from FY 2021 to FY 2024 to either offset its request for new budget authority or to address emergent issues during the year of execution.

[82] Pub. L. 117-328, 2022, 136 Stat. 4644, paragraph (e). Internal reprogramming actions are also limited to $5 million or *15 percent*, whichever is less, of *authorized appropriations*. Anything over this amount requires congressional notification and a 30-day waiting period without the ability to waive it (U.S. Code, Title 50, Chapter 42, Atomic Energy Defense Provisions; Section 2742, Reprogramming).

[83] Pub. L. 117-328, 2022, 136 Stat. 4644, paragraph (g)(1).

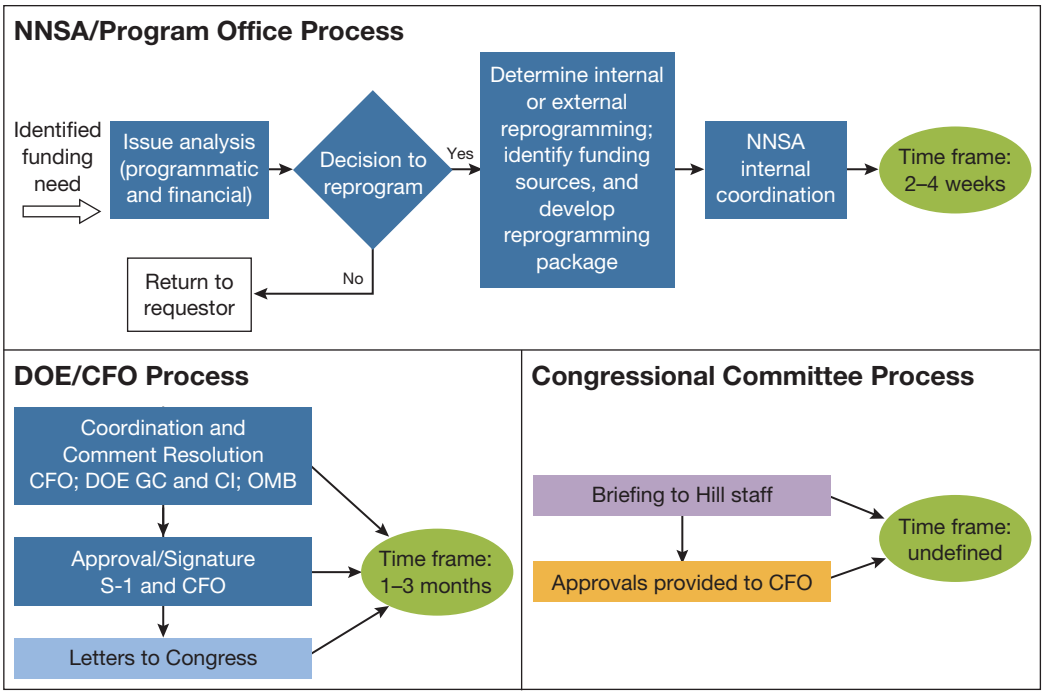
[84] NNSA officials, interviews with the authors, June–August 2023. Interviewees, some of whom had DoD experience, perceived that DoD's reprogramming process is faster and more likely to succeed, in part, because it is exercised more often.

internal reprogramming.[85] NNSA's reprogramming authorities come with some additional restrictions. NNSA cannot reprogram funds to "[create, initiate, or eliminate] a program, project, or activity," or increase "funds or personnel for any program, project, or activity" for which Congress has previously denied or restricted funds.[86] Also, NNSA receives its reprogramming authority by appropriation year, so those limits can change from year to year.

Figure 3.6 summarizes the processes that guide reprogramming actions for NNSA.

In addition to reprogramming funds *within* each of its four major appropriation accounts, Title 50 of the U.S. Code (drawing on the FY 2003 and FY 2004 NDAAs) gives NNSA limited

FIGURE 3.6
NNSA's Reprogramming Processes: Internal (top) and External (bottom)



SOURCE: Features information from NNSA, undated-c.
NOTE: CI = Congressional and Intergovernmental Affairs; GC = General Counsel; S-1 = Secretary of Energy.

[85] NNSA officials, interviews with the authors, June–August 2023; NNSA, "Reprogrammings," briefing provided by interviewees to the authors, undated-c, Not available to the general public. Internal reprogramming depends on internal NNSA processes, while external reprogramming depends on DOE processes that can take one to three months. Neither NNSA nor DOE can control the timing of congressional committee processes. One interviewee indicated that external reprogrammings took closer to six months. Furthermore, although NNSA *can* execute external reprogramming actions 30 days after notifying Congress, it has been NNSA's practice to wait for approvals from the House and Senate authorization committees and appropriations subcommittees before executing external reprogramming actions (NNSA officials, interviews with the authors, June–August 2023).

[86] Pub. L. 117-328, 2022, Section 301. These restrictions are not unique to NNSA.

transfer authority to move funds *between* (or *across*) its four major accounts and allows it to move up to 5 percent of any DOE national security *authorization* to another DOE national security authorization that has already been appropriated to DOE.[87] Once merged, the transferred funds can be used only for the authorization to which they are transferred and during the same period, and they cannot be used to fund something that Congress has specifically denied.[88] Additionally, any budget item to which the funds are transferred must have a higher national security priority than the source of the transfer. Finally, the DOE Secretary must notify Congress about such transfers promptly.[89] Such transfers have historically not been viewed favorably by appropriations committee staffs.[90]

The last phase of NNSA's PPBE process is the evaluation-performance phase (October–September), during which NNSA assesses progress toward achieving the identified performance measures of the PPBE process at multiple levels within NNSA.[91] Funding execution information is distributed monthly, allowing program managers to assess performance against plans. This phase is driven by accounting compliance, internal controls, risk analysis, cost performance, and agency priority goals.[92] The deputy and associate administrators and field office managers also provide input and feedback to NA-MB on any decisions related to the PPBE process that would result in a new cost assessment or increase an existing assessment.[93] There are no formal products from the evaluation phase, but its results continuously inform the planning, programming, and budgeting phases during the next PPBE cycle.

Figure 3.7 shows NNSA's PPBE process for developing its input to the President's annual budget request, including proposed funding for the coming fiscal year and the FYNSP.

Oversight

NNSA's PPBE process takes almost a year and a half, from the beginning of the planning phase (in October) to the submission of the President's Budget request to Congress (a year from the following February). As with other federal government agencies, there are multiple reviews by NNSA's leadership and by OMB examiners throughout the process. In addition, as noted previously, oversight of the NNSA budget is exercised by two actors external to NNSA. First, because the NNSA budget is nested within DOE's overall budget, it is reviewed by DOE CFO staff before being forwarded to the DOE Secretary for final approval. Second, the NWC, composed predominantly of senior DoD leaders, is required by law to coordinate and approve

[87] U.S. Code, Title 50, Chapter 42, Atomic Energy Defense Provisions; Section 2745, Fund Transfer Authority.

[88] 50 U.S.C. § 2745.

[89] 50 U.S.C. § 2745.

[90] NNSA, undated-c.

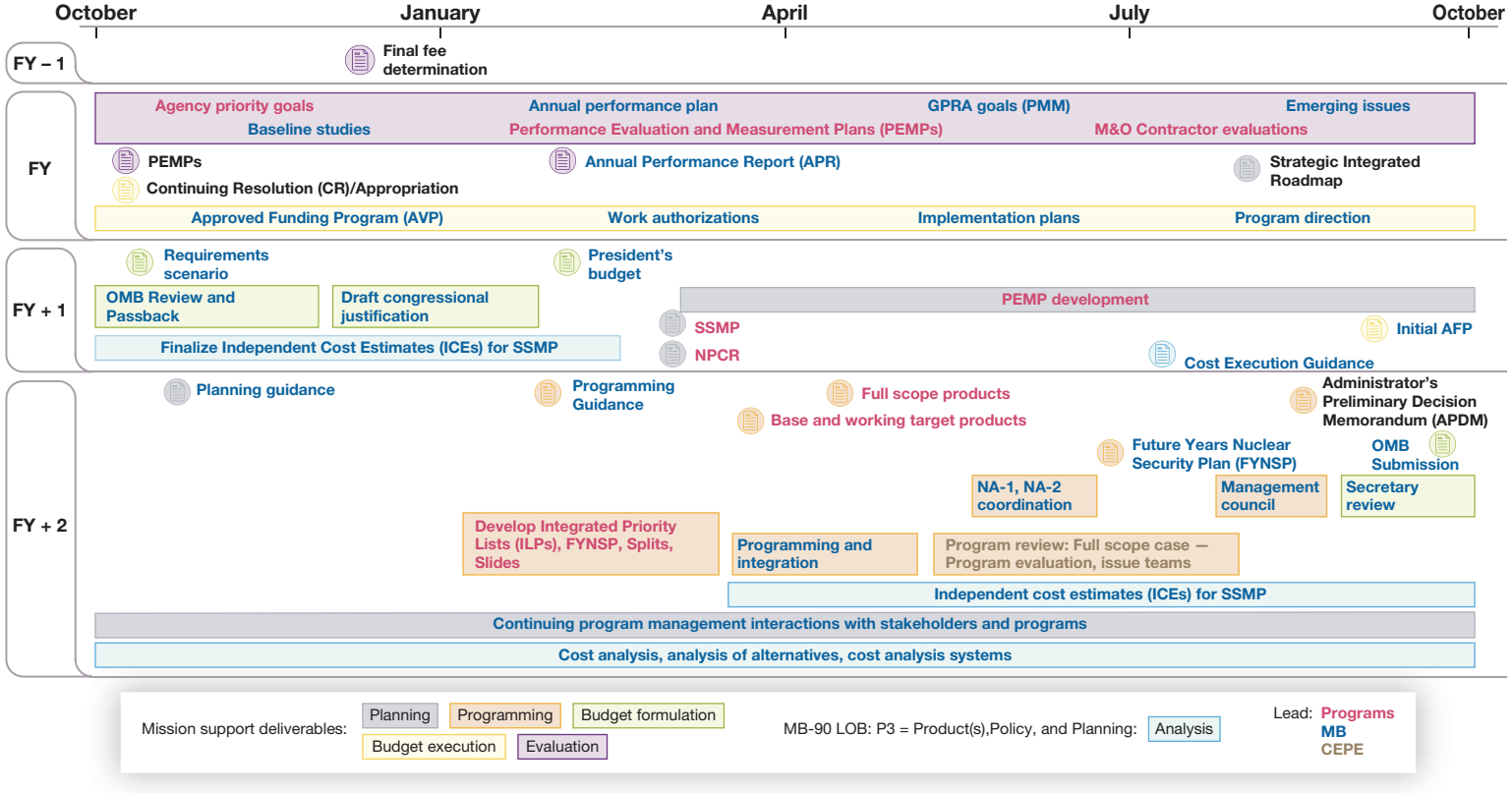
[91] NNSA, 2023d, p. APE-1. Time frames are approximate and based on information from NNSA, undated-a.

[92] NNSA officials, interviews with the authors, June–November 2023.

[93] NNSA, 2023d.

FIGURE 3.7

NNSA's PPBE Phases and Steps



SOURCE: Adapted from NNSA, undated-a.

NOTE: GPRA = Government Performance and Results Act; MB = Management and Budget; MB-90 LOB = MB-90 lines of business; NA-1 = NNSA Administrator; NA-2 = NNSA Deputy Administrator; NPCR = *Prevent, Counter, and Respond: NNSA's Plan to Reduce Global Nuclear Threats*; PMM = Performance Measures Manager; SSMP = Stockpile Stewardship and Management Plan.

NNSA's annual budget proposals and report to Congress each year on the adequacy of such proposals in meeting current and projected requirements related to nuclear weapons.[94]

Oversight of NNSA's budget in Congress is also somewhat unique. As is the case with DoD's budget submission, both the House Armed Services Committee and the Senate Armed Services Committee exercise jurisdiction over the *authorization* process for NNSA. In both the House and Senate committees, matters affecting NNSA are usually handled by the Subcommittee on Strategic Forces. Authorization language pertaining to NNSA is included in the annual NDAA. Both committees also produce a report to accompany the NDAA, and this report can provide further guidance and direction to NNSA. However, jurisdiction over *appropriations* for NNSA (as well as all other DOE programs and activities) falls under the Energy and Water Development Subcommittees of the appropriations committees in both chambers of Congress, *not* under the defense subcommittees, as is the case with DoD.[95] Accordingly, NNSA's appropriations appear in the Energy and Water Development and Related Agencies Act not in the Defense Appropriations Act. In recent years, funding for most federal agencies, including DOE/NNSA, has generally been rolled up into an omnibus or consolidated appropriations act.[96]

Shortly after the President's Budget request is formally delivered to Congress, ideally in February, NNSA officials begin to meet with professional staff (and occasionally members of Congress) from the various subcommittees and committees with jurisdiction over NNSA to review its budget submission in detail. Then, during the spring hearing season, the DOE Secretary, the NNSA Administrator, and deputy administrators testify before the subcommittees and committees in both open and closed (classified) sessions. Depending on the wishes of the subcommittee and committee chairs, NNSA witnesses may appear singly, in pairs, as a group, or even joined by senior DoD officials.[97] In all these settings, congressional staff and members of Congress can delve into any and all aspects of NNSA's programs and activities as they draft legislative provisions and reports that govern NNSA's budget and program execution.

Congress has also exercised oversight through studies performed by organizations in the legislative branch and by other entities. The Congressional Budget Office is required by law to project the ten-year costs of nuclear forces every two years. These reports include data on

[94] NNSA officials, interviews with the authors, June–August 2023.

[95] The full name of the House subcommittee is Energy and Water Development and Related Agencies.

[96] NNSA officials, interviews with the authors, June–August 2023.

[97] See, for example, the lineup of NNSA, DOE, Air Force, and Navy senior officials who testified before the Senate Armed Services Strategic Forces Subcommittee in April 2023 (U.S. Senate, Committee on Armed Services, Subcommittee on Strategic Forces, "Hearing to Receive Testimony on the Department of Energy's Atomic Energy Defense Activities and Department of Defense Nuclear Weapons Programs in Review of the Defense Authorization Request for the Fiscal Year 2024 and Future Years Defense Program," stenographic transcript, Alderson Court Reporting, April 18, 2023).

the DOE/NNSA budget.[98] The Congressional Research Service produces reports and issue briefs for members of Congress on the U.S. nuclear weapon enterprise in general and on NNSA in particular.[99] GAO has conducted several studies in recent years on specific NNSA programs, often focusing on issues associated with cost, schedule, and program execution.[100] And GAO senior officials have been called to testify alongside the NNSA Administrator in congressional hearings.[101] Finally, Congress has chartered independent commissions and nonprofit, nonpartisan organizations, including the Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise and the National Academy of Public Administration, to examine and make recommendations on the governance of NNSA. Congress has also required NNSA to report to Congress on its plans to implement the recommendations of these panels.[102]

NNSA's financial statements and internal controls over financial reporting are included in annual audits of DOE's consolidated financial statements. These audits are performed by an external, independent public accounting firm in accordance with Generally Accepted Accounting Principles, Government Accounting Standards, and OMB Bulletin 22-01.[103] DOE has received an unmodified (*clean*) opinion every year since approximately 2006.[104]

---

[98] Congressional Budget Office, *Projected Costs of U.S. Nuclear Forces, 2023 to 2032*, July 2023.

[99] See, for example, Amy F. Woolf and James D. Werner, *The U.S. Nuclear Weapons Complex: Overview of Department of Energy Sites*, Congressional Research Service, R45306, March 31, 2021.

[100] For a recent example, see GAO, *National Nuclear Security Administration: Assessments of Major Projects*, GAO-23-104402, August 2023b.

[101] U.S. Senate, Committee on Armed Services, Subcommittee on Strategic Forces, "Hearing to Receive Testimony on the Department of Energy's Atomic Energy Defense Activities and Programs," stenographic transcript, Alderson Court Reporting, May 24, 2017.

[102] Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise, *A New Foundation for the Nuclear Enterprise: Report of the Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise*, November 2014; National Academies of Sciences, Engineering, and Medicine and National Academy of Public Administration, *Governance and Management of the Nuclear Security Enterprise*, National Academies Press, 2020; NNSA, *National Nuclear Security Administration Comments on the Final Report of the Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise, Report to Congress*, U.S. Department of Energy, May 2015.

[103] DOE, Office of Inspector General, Office of Cyber Assessments and Data Analytics, *Audit Report: The Department of Energy's Fiscal Year 2022 Consolidated Financial Statements*, DOE-OIG-23-06, November 2022.

[104] NNSA officials, information provided on request by the authors, August 2023. According to GAO, "A clean opinion is when auditors find that the statements are presented fairly and consistent with accounting principles" (GAO, "DOD Financial Management: Additional Actions Needed to Achieve a Clean Audit Opinion on DOD's Financial Statements," webpage, May 15, 2023a).

Analysis of NNSA's Budgeting Process

Strengths

We identified four strengths in NNSA's budgeting process. First, the organization has *centralized and added rigor* to its PPBE process over the past decade. It has published guidance defining roles, responsibilities, authorities, and accountability for the process. NNSA established CEPE—modeled on DoD's CAPE—to provide independent cost estimates and analyses of alternatives.[105] Cost analysts embedded in the NNSA programs now report directly to NA-MB and use standardized NNSA-wide costing methodologies, thus improving accuracy and oversight and better aligning individual incentives with enterprise-wide interests.[106]

Second, NNSA decisionmakers and program managers have *significant flexibility to respond to changing circumstances*. This flexibility is provided by the combination of funding that can be carried forward from year to year, the lack of colors of money that restrict the purpose for which funding can be used, and the comparatively small number of appropriation accounts and control points. Thus, an NNSA program manager could, for example, compensate for higher-than-expected development costs by shifting funding from lower-than-expected production costs. The ability to carry over funding from year to year provides decisionmakers with a safety net both to continue critical operations during a government shutdown and to continue or even increase funding for important work during a continuing resolution. As an added benefit, there is no incentive to spend remaining funds quickly at the end of the fiscal year in less-than-optimal ways.

Third, NNSA is actively engaged in *improving its PPBE process*. Several of the officials whom we interviewed provided thoughts on how they hope to refine the process in the future. Although the process looks slightly different every year, interviewees seemed to feel that it was improving.[107]

Finally, NNSA has deployed a new budget information management system, called FormEX, which provides *common budget data and visibility across the organization*. The system contains budget formulation data and historical data.[108] All program managers and agency decisionmakers can access up-to-date information reports—a capability one interviewee called "a game changer."[109] The system allows decisionmakers to see redundancies

[105] NNSA officials, interviews with the authors, June–August 2023. A more detailed description of the duties of CEPE can be found in 50 U.S.C. § 2411.

[106] NNSA officials, interviews with the authors, June–August 2023.

[107] NNSA officials, interviews with the authors, June–August 2023.

[108] NNSA officials, interviews with the authors, June–August 2023.

[109] NNSA official, interview with the authors, June–August 2023. Although almost 500 users have access to this system, permissions to modify the information are restricted to a small team to ensure data integrity (NNSA officials, interviews with the authors, June–August 2023).

and gaps in proposed budgets and to assess executability.[110] It also allows organizations to see what is being funded by other NNSA organizations so that, for example, program managers know what infrastructure improvements are or are not being funded at sites they need to use.[111]

Challenges

We identified five challenges in NNSA's budgeting process. First, the *strategic planning phase needs further maturing*. This phase of NNSA's PPBE process—which should serve as the basis for the programming, budgeting, and evaluation phases—was only recently formalized. For example, strategic planning guidance was being issued *after* program offices had provided guidance to laboratories, plants, and other sites for their budget inputs. That timing is being changed so that the planning guidance will be issued earlier.[112] Interviewees said that the NNSA planning function needed to be more robust and better able to use analyses to support the NNSA Administrator in developing the planning guidance. They also noted that NA-1.1, responsible for policy and strategic planning, had not yet been staffed to perform a true enterprise-wide planning function.[113]

Second, NNSA's no-year funding and the associated carryover balances create accounting complexities that require *a unique set of financial controls*. Although funding that does not expire provides flexibility, NNSA has to track this funding by the year in which it was appropriated. As programs mature, more prior-year carryover balances need to be tracked until they are spent.

Third, *external reprogramming actions can take several months* to complete. Such proposed actions are coordinated within NNSA and with DOE and OMB before they go to Congress. As a result, reprogramming takes at least six months when it should take about two months, according to interviewees, and it is a politicized process.[114] NNSA officials noted that their reprogramming process was different every time and perceived that DoD's process is faster and more agile, in part because DoD uses it more often.[115]

Fourth, *DOE guidance might or might not be issued by the time NNSA submits its budget* to DOE.[116] DOE's guidance is often not issued until after NNSA starts its programming pro-

[110] NNSA officials, interviews with the authors, June–August 2023.

[111] NNSA officials, interviews with the authors, June–August 2023.

[112] NNSA officials, interviews with the authors, June–August 2023.

[113] NNSA officials, interviews with the authors, June–August 2023.

[114] NNSA officials, interviews with the authors, June–August 2023.

[115] NNSA officials, interviews with the authors, June–August 2023.

[116] NNSA officials, interviews with the authors, June–August 2023.

cess. If the guidance differs from NNSA's expectations, NNSA programs might have to be adjusted, which costs additional staff time and leads to delays.[117]

Finally, the independent *CEPE unit has less-robust analytic capabilities* than similar organizations, such as DoD's CAPE. CEPE has 18 federal employees and ten contractors, whereas CAPE has 314 civilian government employees, military officers, and contractors.[118]

Applicability

NNSA's PPBE process was intentionally patterned after DoD's PPBE process, and they are broadly similar. NNSA's missions (listed in the introductory section of this chapter) overlap significantly with DoD's missions, and the Naval Reactors budget is developed using the Navy's PPBE processes and incorporated into NNSA's overall budget. These factors suggest that the processes that work for one organization might be likely to work for the other. This theory holds true in some respects. For example, the flexibility in funding that NNSA enjoys could also benefit DoD.

There are, however, three key differences between NNSA and DoD that could limit the extent of mutual applicability. First, NNSA's smaller size and more-focused missions allow it to be more agile and change its processes more quickly and easily than DoD can because of its much broader set of missions, its significantly larger budget, and its global responsibilities and footprint. Second, although the NNSA Act vests the NNSA Administrator with responsibility for "budget formulation, guidance, and execution," DoD and DOE play major roles in NNSA's process, thus constraining NNSA's autonomy to some degree.[119] Third, congressional oversight of NNSA's budget is exercised by different committees and subcommittees than those overseeing DoD's budget. While authorizations for both DoD and NNSA are provided by the House and Senate Armed Services Committees in accordance with the NDAA, NNSA's appropriations are provided by the Energy and Water Development Subcommittees of the House and Senate Appropriations Committees in the Energy and Water Development and Related Agencies Act, not in the NDAA.[120]

[117] NNSA officials, interviews with the authors, June–August 2023.

[118] NNSA officials, interviews with the authors, June–August 2023; Commission on Planning, Programming, Budgeting, and Execution Reform, 2023, p. 97. CAPE staffing levels are as of December 2022. The commission notes that the planned workforce growth from 135 civilians up to the authorized level of 164 is needed to support CAPE's mission (Commission on Planning, Programming, Budgeting, and Execution Reform, 2023, p. 100).

[119] 50 U.S. § 2402, paragraph (b)(3).

[120] Alexandra G. Neenan and Mary Beth D. Nikitin, *Energy and Water Development Appropriations for Nuclear Weapons Activities: In Brief*, Congressional Research Service, R47657, August 21, 2023, p. 1.

Lessons from NNSA's Budgeting Process

Lesson 1: NNSA Benefits from Significant Financial Flexibility

The combination of no-year funding that can be carried over from year to year, comparatively fewer appropriation accounts and control points, and no colors of money gives NNSA a significant amount of flexibility to respond to changing circumstances. Program managers can more effectively use their funding, and funding can more easily be moved between programs when necessary. NNSA can continue funding critical operations and important work during continuing resolutions and government shutdowns. In addition, there is no pressure to spend remaining funds quickly at the end of the fiscal year. NNSA, DOE, OMB, and Congress provide guardrails and exercise oversight, although OMB and Congress have raised concerns about the amount and management of carryover funding.

Lesson 2: NNSA Is Continually Improving Its PPBE Process

Many of the NNSA interviewees discussed how the PPBE process had recently been improved and how they would like to improve it in the future. A similar continuous improvement approach to PPBE processes could benefit other organizations, including DoD. However, NNSA's smaller size makes it easier to implement changes to its PPBE process. Given its much larger number of stakeholders, DoD would likely face more challenges in refining its PPBE process.

Lesson 3: NNSA Developed an Enterprise-Wide PPBE Information System

NNSA developed a budget information management system that provides common, authoritative data and visibility across the organization. Decisionmakers can easily see gaps and redundancies in proposed budgets, and officials in one NNSA organization can see what other organizations are and are not funding. Having a single source of authoritative budget data makes it easier to provide consistent answers to budget-related questions from NNSA, DOE, OMB, and congressional leadership. Developing such a budget information management system would be a much more complicated and costly task for DoD,[121] but an assessment of the costs and benefits of developing such a system could be worthwhile.

[121] Implementing such enterprise-wide resource planning systems is very challenging and has been tried unsuccessfully in DoD. See, for example, GAO, *DOD Business Systems Modernization: Important Management Controls Being Implemented on Major Navy Program, but Improvements Needed in Key Areas*, GAO-08-896, September 8, 2008; and Jessie Riposo, Guy Weichenberg, Chelsea Kaihoi Duran, Bernard Fox, William Shelton, and Andreas Thorsen, *Improving Air Force Enterprise Resource Planning-Enabled Business Transformation*, RAND Corporation, RR-250-AF, 2013.

Lesson 4: Making Cost Analysts Part of a Single Headquarters Organization While Embedding Some of Them in Programs Improved NNSA's Budget Planning and Oversight

When NNSA revised its PPBE process in 2019, cost analysts working in NNSA's programs became part of NA-MB. However, while cost analysts report to a single headquarters organization, some of them are embedded in NNSA programs. Thus, the programs now use standardized NNSA-wide costing methodologies. This change improved budget accuracy and oversight, and it aligned individual incentives with enterprise-wide interests. Taking such an approach would be challenging for DoD because of its size, but assessing the costs and benefits of implementing this approach would be worthwhile.

Table 3.1 summarizes the lessons from NNSA's PPBE process.

TABLE 3.1
Summary of Lessons from NNSA's Budgeting Process

Theme	Lesson Learned	Description
Planning and programming	Lesson 4: Making cost analysts part of a single headquarters organization while embedding some of them in programs improved NNSA's budget planning and oversight.	Having cost analysts report to a single headquarters organization while being embedded in programs improved NNSA's budget accuracy and oversight.
Budgeting and evaluation	Lesson 1: NNSA benefits from significant financial flexibility.	The combination of no-year funding that can be carried over, fewer accounts and control points, and no colors of money gives NNSA a significant amount of flexibility to respond to changing circumstances.
Oversight	Lesson 2: NNSA is continually improving its PPBE process.	NNSA officials discussed how the PPBE process had recently been improved and how they would like to improve it in the future.
	Lesson 3: NNSA developed an enterprise-wide PPBE information system.	NNSA's system provides authoritative data and budget visibility across the organization. Although this would be a much more complicated and costly task for DoD, an assessment of the costs and benefits of developing such a system could be worthwhile.

CHAPTER 4

Key Insights from Selected Non-DoD Federal Agencies Case Studies

The two case studies presented in this report provide the Commission on PPBE Reform with insights into how other non-DoD U.S. federal government agencies navigate U.S. political institutions and resource planning processes to meet mission needs. In Chapters 2 and 3, we discussed how these agencies conduct defense resource planning, programming, budgeting, execution, and oversight—and the strengths and challenges of their approaches.

This final chapter focuses on summary takeaways. As part of this analysis, we used an initial set of standard questions from the commission—focusing on core areas related to resource planning—as a means of ensuring that there would be some ability to compare across cases. The material presented in this chapter, distilled from Chapters 2 and 3, outlines important themes for the commission to understand when trying to compare DoD's defense resource planning processes with those of other U.S. government agencies. Despite significant differences between DoD and these selected agencies in terms of mission requirements, portfolio, organizational evolution, oversight, and size, among many other factors, these cases suggest several insights that are germane for DoD, which we present below.

The following section on key insights consolidates the strengths, challenges, and lessons outlined in the case studies in this volume. The concluding section on applicability speaks directly to the commission's mandate—and to the potential utility of such insights for DoD's PPBE System. Thus, we also include key insights derived from the four cases studies of non-DoD federal agencies presented in Volume 3.[1]

[1] For more details on these insights, see McKernan, Young, and Consaul, et al. (2024).

Key Insights

Key Insight 1: Other U.S. Government Agencies Looked to DoD's PPBE System as a Model in Developing Their Own Systems, Which Subsequently Evolved

In 1965, President Johnson drew on the still-nascent PPBS in DoD as a model for the implementation of analogous systems across the federal government. Although that formal effort fizzled out a few years later, both agencies considered in this report have looked to DoD's PPBE System as a model for a structured and mature approach to planning and resource allocation decisionmaking.

However, budgeting processes have evolved individually in accordance with the agencies' leadership buy-in, missions, organizational structures, authorities provided by Congress, staff capacities, other available resources, and many other factors. For example, while civilian PPBE processes failed to take hold in the Veterans Administration when originally introduced in the 1960s, features of a more structured resource planning process, such as a quadrennial review to drive planning and a five-year financial plan, were proposed as a means of addressing perceived shortcomings of the existing system. While the standup of NNSA postdated by several decades President Johnson's introduction of PPBE to non-DoD agencies, one of its institutional predecessors, the Atomic Energy Commission, was among the agencies that did experiment in developing resource planning processes modeled on DoD's PPBE processes. Today, NNSA's PPBE process is indebted to DoD's PPBE System while tailored to NNSA's unique mission needs. For example, NNSA's PPBE process leverages the original intent of DoD's PPBE System, albeit with an increased focus on evaluation as the fourth phase of its process. The FYNSP underlies NNSA's long-term planning, and NNSA's CEPE is deliberately modeled on DoD's CAPE.

Despite the evolution of NNSA's PPBE process away from DoD's PPBE System, NNSA and DoD still generally follow a budgeting process that is common to most U.S. federal civilian agencies. This process begins with an annual planning cycle and culminates in budget execution and performance evaluation.

Key Insight 2: There Are Perceived Opportunities to Strengthen Connections Between Strategy and Budgets

Both VA and NNSA have processes for long-term planning and linking strategy to budgets, but (like DoD) there are perceived opportunities to strengthen these connections. In VA, the quadrennial planning process supports the development of a strategic plan, but there are perceived opportunities to strengthen how plans drive resource decisionmaking. For example, VA aligns its annual budget request (albeit not a long-term plan) to specific mission-oriented outputs (e.g., patients treated, outpatient visits), which provides a helpful link between mission priorities and resources. In NNSA, the FYNSP captures plans beyond the budget year,

but there are also initiatives underway to strengthen long-term planning (beyond the FYNSP) and facilitate better alignment between plans and programs.

Several agencies that we analyzed in Volume 3 maintained significantly less robust long-term planning processes than the two cases considered in this report. For example, HHS's discretionary budget, primarily focused on the delivery of health care services and grants, has led to the development of a relatively near-term planning horizon. DHS's organizational structure, within which individual components receive direct appropriations, introduces challenges for headquarters in shaping forward-looking cross-component priorities to drive resource decisionmaking. While the relative focus on long-term planning varies across cases in accordance with an agency's mission, organizational design, analytic capabilities, and resource constraints, among many other factors, grappling with how to link priorities to budgetary decisionmaking was a theme across all cases.

Key Insight 3: A Variety of Mechanisms Enable Budget Flexibility and Agility

For both VA and NNSA, we identified several budget mechanisms that are useful for enabling flexibility and agility, primarily because they give each agency a degree of discretion to redirect appropriated funds. VA's advance appropriations are particularly notable in this regard, and for NNSA, the lack of designated colors of money and the comparatively small number of appropriation accounts (relative to DoD) provide more discretion to the agency on how to prioritize investments and flex as needed to meet emerging needs.

Another mechanism for flexibility is the authority to carry over funding across years. NNSA's no-year appropriations for its operational budget provides funds that remain available for obligation until expended, without the time pressure associated with funding that must be obligated within a certain time frame. These appropriations enable NNSA to spend such funds as needed and avoids incentivizing a spending rush at the end of a fiscal year. One consideration, however, associated with no-year flexibility is the requirement to maintain sufficient financial controls to manage the complex accounting of executing such appropriations provided over several fiscal years at once. VA also has access to multiyear and no-year appropriations for long-term projects, such as construction and land acquisition, among other functions.

VA's advance appropriations provide several useful management levers to the agency. As discussed below, they can help VA weather instability caused by delays in receiving regular appropriations and position the agency for more-stable long-term planning.

Finally, similar to DoD, VA and NNSA can request congressional approval to reprogram resources to accommodate changes above a given threshold (see details in Table 4.4), but in NNSA at least, this process was reported to be slow and laborious.

Key Insight 4: Mechanisms for Enabling Agility Help Agencies Weather Continuing Resolutions and Other Sources of Budget Turbulence

Just as budget flexibilities, such as those cited above, can let a manager decide how to prioritize and where to take risks in light of changing mission needs, they can also help an agency manage under continuing resolutions and mitigate the effects of government shutdowns, such as furloughs. Among other benefits, VA's advance appropriations help mitigate challenges associated with constraints on activities during operations under a continuing resolution and uncertainty regarding the timing of a regular appropriation. Similarly, NNSA's no-year appropriations provide the agency with a budgetary cushion (and fewer constraints than those faced under a continuing resolution) in the likely event that a regular appropriation is delayed.

Key Insight 5: The Emphasis on Evaluation Rather Than Execution in Some Non-DoD PPBE-Like Processes Could Be Instructive for DoD

As was the case for ODNI (discussed in Volume 3), NNSA's PPBE process focuses its fourth phase on *evaluation* rather than *execution*. DHS has also made recent efforts to bolster evaluation feedback in its PPBE process by mandating organizational evaluations and annual evaluation plans. In the evaluation phase of NNSA's PPBE process, NNSA evaluates progress toward its performance goals. Although this phase does not generate formal documentation, the input is intended to feed back into the planning phase for the following fiscal year.

Beyond this explicit focus on evaluation in NNSA, both VA and NNSA have implemented mechanisms to support better analytic inputs to assist with evaluation, primarily in the programming phase of their PPBE processes. For example, VA leverages actuarial models to project future demand and inform budget requests for certain benefits in the budgeting phase; NNSA's new FormEx information system and CEPE function also equip the agency with consistent and rigorous analytic capabilities.

Key Insight 6: Analytical Rigor Has Improved Through NNSA's Implementation of CAPE-Like Capabilities

For several of the cases considered in Volume 3, we found that constraints caused by significantly smaller staff and resources shaped the scale of the PPBE-like functions that agencies could execute. ODNI, for example, undertook an effort to institutionalize a CAPE-like capability in its Office for Systems and Resource Analyses, but the effort ultimately faltered under the challenge of maintaining the capacity and capability to fully carry out this function.

While it is too soon to assess CEPE's impact, we found substantial effort in the NNSA case study to centralize and bolster the rigor of its PPBE processes, including the introduction of CEPE, a CAPE-like capability for developing independent cost estimates and analyses of

alternatives. NNSA further increased analytical rigor by having its cost analysts report to a single headquarters organization while embedding some of them in NNSA program offices, thus ensuring the use of standardized costing methodologies and improving transparency and alignment of programs to enterprise-wide priorities.

Key Insight 7: Consolidated Resource Management Information Systems Could Improve Visibility Across the Federated Structures of Government Agencies

In Volume 3, we noted efforts (albeit somewhat uneven in practice) in other non-DoD agencies to strengthen information systems to enable resource decisionmaking. For example, DHS had an initiative underway to consolidate its PPBE information system to support the development of its five-year funding plan: Capturing performance management data has facilitated automation in reporting. NNSA's new FormEX similarly reflects an effort to modernize the IT infrastructure on which PPBE decisions rely. As a budget information management system, FormEX is intended to bolster transparency and information-sharing by providing a common budget structure to facilitate insight into plans, gaps, potential redundancies, and potential execution risks.

As these cases suggest—and as the motivation for DoD's efforts (as of 2023) to develop Advana reflects[2]—there are potential opportunities to leverage IT and data analytics to better meet complex decisionmaking needs and foster stronger transparency and communication across stakeholder communities.

Applicability of Key Insights to DoD's PPBE System

The Commission on PPBE Reform is looking for potential lessons from the PPBE-like processes of non-DoD federal agencies. While those agencies' budgeting processes were originally modeled after DoD's PPBE System, they have been adapted over time to align with the unique missions of each agency. Despite the movement away from DoD's PPBS model, the agencies still use similar PPBE processes. Because of these similarities, there would be no benefit from DoD adopting any of these systems wholesale. However, there is value in exploring the ways in which Congress provides each agency with flexibility so that DoD can ask for similar kinds of flexibility to support more innovation, make funding more predictable over multiple years, and obtain relief from various pain points in the system. These pain points include continuing resolutions, rigid appropriation categories, and appropriations for line items instead of portfolios. The commission could further explore the flexibility mechanisms identified below, organized by agency.

[2] For more on Advana, see Commission on Planning, Programming, Budgeting, and Execution Reform, 2023.

Despite having significant differences with DoD, VA and NNSA have some notable similarities with DoD in terms of missions and investment portfolios. First, DoD's PPBE System served as the initial model for the resource planning processes institutionalized in both VA and NNSA. VA, like DoD, provides medical care, oversees infrastructure construction, sustains a large footprint of real property, and conducts efforts to modernize IT infrastructure. NNSA, like DoD, has requirements informed by the demands of emerging threats and a dynamic strategic environment, which necessitate a posture that enables innovation and the leveraging of new technology.

However, there are also important differences that affect the applicability of lessons from VA and NNSA to DoD. As was true when comparing all of the case studies of comparative non-DoD organizations with DoD, DoD stands alone in terms of the global roles that U.S. defense spending enables, the breadth and complexity of its missions, and the overall size of its budget. Both VA and NNSA have more-focused mission sets and significantly smaller discretionary budgets than those of DoD. Another key difference is the overall constitution of non-DoD agencies' budgets compared with DoD's portfolio. VA—and HHS—has a large percentage of its overall budget in mandatory spending, relative to DoD's budget. About 40 percent of the VA budget is discretionary spending, and much of this funding is relatively inflexible because it supports medical care. This means that resource planning to support its primary mission depends more on actuarial modeling in VA than in DoD. This difference in planning and programming approaches reflects VA's unique mission and budget portfolio.

Summary of the Budgetary Flexibilities of Comparative U.S. Federal Agencies

In Tables 4.1 through 4.4, we summarize the budgetary flexibilities of the non-DoD U.S. federal agencies assessed in this volume and in Volume 3, compared with DoD budgetary flexibilities.[3] As an introduction, Table 4.1 specifies each agency's planning and budget system. Table 4.2 summarizes the funding categories and funding availability within each system. Table 4.3 compares the different types of carryover funds and restrictions during continuing resolutions. Table 4.4 focuses on the different kinds of reprogramming, transfers, and supplemental funding available within each system.

[3] Information presented in these tables is derived from multiple sources and materials reviewed by the authors and cited elsewhere in this report and in Volume 3. See the references list of both volumes for full bibliographic details.

TABLE 4.1

Planning and Budget Systems of DoD and Comparative U.S. Agencies

Agency	Planning and Budget System
DoD	Planning, Programming, Budgeting, and Execution (PPBE) System
DHS	Future Years Homeland Security Program (FYHSP)
HHS	No direct analog at departmental level; operating divisions (OPDIVs) have individual approaches to annual budget planning and formulation
NASA	PPBE System
ODNI	Intelligence Planning, Programming, Budgeting, and Evaluation (IPPBE) System
VA	No direct analog at departmental level; ad hoc process relying on governance boards and internal reviews that focus on budgeting and execution—strategic planning is not well aligned with related processes
NNSA	Planning, Programming, Budgeting, and Evaluation (PPBE) process

TABLE 4.2

Funding Categories and Funding Availability for DoD and Comparative U.S. Agencies

Agency	Funding Categories	Funding Availability
DoD	• Discretionary budget includes Military Personnel (MILPERS), Operation and Maintenance (O&M), Procurement, Research, Development, Test, and Evaluation (RDT&E), and Construction (Military Construction, Family Housing, and Base Realignment and Closure Program) account categories	• Varies by account type; multiyear or no-year appropriations for limited programs as authorized by Congress
DHS	• Discretionary budget includes component-level accounts organized by four common categories • Mandatory funding for some functions, such as Coast Guard benefits • Some activities funded through discretionary fees and collections	• Varies by account type; multiyear or no-year appropriations for certain programs as authorized
HHS	• Discretionary budget organized under 12 OPDIVs • Mandatory funding is ~90% of budget • Some activities funded through discretionary fees	• One-year appropriations for most of discretionary operational budget; multiyear and no-year appropriations for certain programs
NASA	• Discretionary budget with output-oriented appropriations allocated at program level	• Six-year appropriations, construction • Two-year appropriations (except Office of Inspector General and Construction and Environmental Compliance and Restoration), all other account types
ODNI	• Discretionary budget for National Intelligence Program (NIP) activities managed by ODNI • Discretionary budget for Military Intelligence Program (MIP) activities managed through DoD	• Varies by account type; one-year appropriations for ODNI operations

Table 4.2—Continued

Agency	Funding Categories	Funding Availability
VA	• Budget organized by function; mix of mandatory and discretionary funding • Mandatory funding is ~60% of budget and includes veterans' disability compensation, pensions, life insurance, living allowances, and burial benefits • Discretionary funding includes ongoing medical care programs and operating activities (construction, electronic health record modernization, information technology [IT], and other operating expenses)	• Varies by function; discretionary budget includes a mix of one-year, multiyear, and no-year appropriations • Discretionary and mandatory accounts receive advance appropriations for certain veterans' medical care and benefits programs, available one year after appropriation
NNSA	• Discretionary budget includes Weapons Activities, Defense Nuclear Nonproliferation, Naval Reactors, and Federal Salaries and Expenses account categories • No specific types of funding appropriations or *colors of money* allows the movement of funds within each program or project under the account categories without reprogramming	• No-year appropriations for the majority of operational budget

TABLE 4.3

Carryover Funds and Restrictions for DoD and Comparative U.S. Agencies

Agency	Carryover Funds	Restrictions During Continuing Resolutions
DoD	• Limited carryover authority in accordance with Office of Management and Budget (OMB) Circular A-11	• Various; no new programs, increases in production rates, etc.
DHS	• Authority to carry over one-year operations and support funding into the next fiscal year; can expend up to 50% of prior-year lapsed balance	• Various; no new programs, new hiring, or new contract awards for discretionary programs
HHS	• Limited carryover authority in accordance with OMB Circular A-11	• Various; new contract awards and grants have been suspended for discretionary programs.
NASA	• Limited carryover authority in accordance with OMB Circular A-11	• Minimal; two-year appropriations and 90–95% obligation goal for first year of availability allow forward funding of contracts.
ODNI	• Limited carryover authority in accordance with OMB Circular A-11	• Restrictions on ODNI/NIP operations are unclear; MIP operations are subject to restrictions on DoD activities during continuing resolutions.
VA	• Authority to carry over funding related to medical care programs, subject to a ceiling; additional percentage-based carryover authority threshold for one-year appropriations	• Varies by function; minimal to no impact on veterans' medical care and benefit programs receiving advance appropriations, as well as on accounts with multiyear and no-year funding • Discretionary programs funded through one-year accounts are subject to prior–fiscal year funding levels.
NNSA	• No-year appropriations for operational budget allows the carryover of unobligated funds from year to year.	• Minimal; carryover of prior-year balances allows continued, unrestricted operations.

TABLE 4.4

Reprogramming, Transfers, and Supplemental Funding for DoD and Comparative U.S. Agencies

Agency	Reprogramming	Transfers	Supplemental Funding
DoD	• As authorized; four defined categories of reprogramming actions • Prior-approval reprogramming actions—increasing procurement quantity of a major end item, establishing a new program, etc.—require approval from congressional defense committees	• As authorized; general and special transfer authorities, typically provided in defense authorization and appropriations acts	• Frequent; linked to emerging operational and national security needs
DHS	• As authorized; request to Congress must be made before June 30 if additional support for emerging needs or crises exceeds 10% of original appropriated funding • Restrictions (creation of program, augmentation of funding in excess of $5M/10%, reduction of funding by ≥10%, etc.) absent notification	• As authorized; up to 5% of current fiscal year appropriations may be transferred if appropriations committees are notified at least 30 days in advance; transfer may not represent >10% increase to an individual program except as otherwise specified	• Frequent; linked to Disaster Relief Fund for domestic disaster and emergency response and recovery
HHS	• As authorized; no notification below threshold of lesser of $1M or 10% of an account; notification of reprogramming actions above this threshold required • Notification required above threshold of $500K if reprogramming decreases appropriated funding by >10% or substantially affects program personnel or operations	• As authorized; Secretary's One-Percent Transfer General Provision allows transfer of up to 1% from any account into another account, not to exceed up to 3% of funds previously in account, maximum transfer amount of ~$900M	• Frequent; linked to public health crises, hurricane relief, and refugee resettlement support
NASA	• As authorized; reprogramming documents must be submitted if a budget account changes by $500K • Within the Exploration Systems and Space Operations account, no more than 10% of funds for Explorations Systems may be reprogrammed for Space Operations and vice versa	• As authorized; transfers for select purposes authorized by 51 U.S.C. § 20143	• Rare
ODNI	• As authorized; Director of National Intelligence (DNI) may reprogram funds within the NIP with the approval of the OMB Director and in consultation with affected agencies • Notification to Congress within 30 days for reprogramming actions >$10M or 5% when funds transferred in or out of NIP or between appropriation accounts • Notification to Congress of reprogramming actions prior to June 30	• As authorized; DNI may transfer funds within the NIP with the approval of the OMB Director and in consultation with affected agencies	• Detailed funding profiles for NIP and MIP are not publicly available.

Table 4.4—Continued

Agency	Reprogramming	Transfers	Supplemental Funding
VA	• As authorized; annual appropriations legislation typically authorizes reprogramming actions for certain accounts, subject to limitations ($7M or 25% of an account for construction programs; $1M for IT programs) • Notification to Congress required for above-threshold reprogramming actions and certain categories of reprogramming actions	• As authorized; Recurring Expenses Transformational Fund allows the reallocation of expired, unobligated funds to an account for department-wide purposes, such as Veterans Health Administration facility infrastructure improvements and IT modernization	• Rare; post extension of authority to request advance appropriations for veterans' medical care and benefits programs
NNSA	• As authorized; annual appropriations legislation typically authorizes internal reprogramming actions, subject to limitations ($5M or 10% of any annual funding level) • Notification to Congress and 30-day waiting period required for above-threshold reprogramming actions, which must be cleared through NNSA, DOE, and OMB • Reprogramming authorities do not allow the creation, initiation, or elimination of a program, project, or activity • Reprogramming authorities cannot be used to increase funds or personnel for any program, project, or activity for which Congress has previously denied funds	• As authorized by 50 U.S.C. § 2745; allows transfer of up to 5% of previously authorized funds between DOE account categories, subject to certain limitations and congressional notification	• Rare; no-year appropriations allow funding of unanticipated needs using prior-year balances

Abbreviations

CAPE	Office of Cost Assessment and Program Evaluation
CEPE	Office of Cost Estimating and Program Evaluation
CFO	chief financial officer
COCOM	combatant command
DHS	U.S. Department of Homeland Security
DoD	U.S. Department of Defense
DoDD	Department of Defense Directive
DOE	U.S. Department of Energy
EHCPM	Enrollee Health Care Projection Model
FY	fiscal year
FYDP	Future Years Defense Program
FYNSP	Future Years Nuclear Security Program
GAO	U.S. Government Accountability Office
HHS	U.S. Department of Health and Human Services
iFAMS	Integrated Financial and Acquisition Management System
IRC	Investment Review Council
IT	information technology
M&O	management and operating
MILCON-VA	Military Construction, Veterans Affairs, and Related Agencies
MIP	Military Intelligence Program
NA-1.1	Office of Policy and Strategic Planning
NA-MB	Office of the Associate Administrator for Management and Budget
NAP	NNSA Policy
NASA	National Aeronautics and Space Administration
NCA	National Cemetery Administration
NDAA	National Defense Authorization Act
NDS	National Defense Strategy
NIP	National Intelligence Program
NNSA	National Nuclear Security Administration
NSS	National Security Strategy
NWC	Nuclear Weapons Council
O&M	operations and maintenance
ODNI	Office of the Director of National Intelligence
OMB	Office of Management and Budget

OPDIV	operating division
OSD	Office of the Secretary of Defense
PPB	Planning-Programming-Budgeting
PPBE	Planning, Programming, Budgeting, and Execution
PPBE	Planning, Programming, Budgeting, and Evaluation (NNSA)
PPBS	Planning, Programming, and Budgeting System
RDT&E	research, development, test, and evaluation
RETF	Recurring Expenses Transformational Fund
SCIP	Strategic Capital Investment Planning
SIPRI	Stockholm International Peace Research Institute
VA	U.S. Department of Veterans Affairs
VAEB	VA Executive Board
VAOB	VA Operations Board
VBA	Veterans Benefits Administration
VHA	Veterans Health Administration
VSO	veterans service organization

Bibliography

American Institute of Physics, "Budget Tracker: FY2024 National Nuclear Security Administration," webpage, last updated July 24, 2023. As of August 16, 2023: https://ww2.aip.org/fyi/fy2024-national-nuclear-security-administration

Biden, Joseph R., Jr., *National Security Strategy*, White House, October 2022.

Breslauer, Tamar B., and Carol D. Davis, *Veterans Service Organizations (VSOs): Frequently Asked Questions*, Congressional Research Service, R46412, November 1, 2022.

Brodie, Bernard, *Strategy in the Missile Age*, RAND Corporation, CB-137-1, 1959. As of April 21, 2023: https://www.rand.org/pubs/commercial_books/CB137-1.html

Buck, Alice, *A History of the Energy Research and Development Administration*, Office of Management, Office of the Executive Secretariat, Office of History and Heritage Resources, U.S. Department of Energy, March 1982.

Buck, Alice, *The Atomic Energy Commission*, Office of Management, Office of the Executive Secretariat, Office of History and Heritage Resources, U.S. Department of Energy, July 1983.

Clinton, William J., "Statement on Signing the National Defense Authorization Act for Fiscal Year 2000," American Presidency Project, University of California, Santa Barbara, October 5, 1999.

Commission on Planning, Programming, Budgeting, and Execution Reform, *Interim Report*, U.S. Senate, August 2023.

Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise, *A New Foundation for the Nuclear Enterprise: Report of the Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise*, November 2014.

Congressional Budget Office, "Frequently Asked Questions About CBO Cost Estimates," webpage, undated. As of November 10, 2023: https://www.cbo.gov/about/products/ce-faq

Congressional Budget Office, *Projected Costs of U.S. Nuclear Forces, 2023 to 2032*, July 2023.

Congressional Research Service, *A Defense Budget Primer*, RL30002, December 9, 1998.

Department of Defense Directive 7045.14, *The Planning, Programming, Budgeting, and Execution (PPBE) Process*, U.S. Department of Defense, January 25, 2013, incorporating change 1, August 29, 2017.

DeVine, Michael E., *Defense Primer: Budgeting for National and Defense Intelligence*, Congressional Research Service, IF10524, November 17, 2022.

Disabled American Veterans, Paralyzed Veterans of America, and Veterans of Foreign Wars, *The Independent Budget: Veterans Agenda for the 118th Congress*, February 13, 2023.

DoD—*See* U.S. Department of Defense.

DoDD—*See* Department of Defense Directive.

DOE—*See* U.S. Department of Energy.

Enthoven, Alain C., and K. Wayne Smith, *How Much Is Enough? Shaping the Defense Program, 1961–1969*, RAND Corporation, CB-403, 1971. As of April 21, 2023: https://www.rand.org/pubs/commercial_books/CB403.html

Executive Order 12344, *Naval Nuclear Propulsion Program*, Executive Office of the President, February 1, 1982.

Federal Acquisition Regulation, Part 17, Special Contracting Methods; Subpart 17.6, Management and Operating Contracts; Section 17.601, Definition.

Federation of American Scientists, "National Intelligence Program," Intelligence Resource Program, archived site, undated. As of November 20, 2023: https://irp.fas.org/budget/nip-fy2017-fs.pdf

GAO—*See* U.S. Government Accountability Office.

Greenwalt, William, and Dan Patt, *Competing in Time: Ensuring Capability Advantage and Mission Success Through Adaptable Resource Allocation*, Hudson Institute, February 2021.

Harper, Edwin L., Fred A. Kramer, and Andrew M. Rouse, "Implementation and Use of PPB in Sixteen Federal Agencies," *Public Administration Review*, Vol. 29, No. 6, November–December 1969.

Hitch, Charles J., and Roland N. McKean, *The Economics of Defense in the Nuclear Age*, RAND Corporation, R-346, 1960. As of April 21, 2023: https://www.rand.org/pubs/reports/R346.html

Huser, Stacy Jo, "Defense Programs Overview," National Nuclear Security Administration, April 26, 2023.

Khan, Asif A., *DOD Financial Management: Efforts to Address Auditability and Systems Challenges Need to Continue*, testimony before the Subcommittees on National Security, the Border, and Foreign Affairs, and Government Operations and the Federal Workforce, Committee on Oversight and Accountability, U.S. House of Representatives, U.S. Government Accountability Office, GAO-23-106941, July 13, 2023.

McGarry, Brendan W., *Defense Primer: Planning, Programming, Budgeting and Execution (PPBE) Process*, Congressional Research Service, IF10429, January 27, 2020.

McGarry, Brendan W., *DOD Planning, Programming, Budgeting, and Execution (PPBE): Overview and Selected Issues for Congress*, Congressional Research Service, R47178, July 11, 2022.

McIlroy, Andrew, *FY 2025 Internal Budget and Performance Submission Guidance*, U.S. Department of Veterans Affairs, May 2, 2023, Not available to the general public.

McKernan, Megan, Stephanie Young, Ryan Consaul, Michael Simpson, Sarah W. Denton, Anthony Vassalo, William Shelton, Devon Hill, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 3, *Case Studies of Selected Non-DoD Federal Agencies*, RAND Corporation, RR-A2195-3, 2024. As of January 23, 2024: https://www.rand.org/pubs/research_reports/RRA2195-3.html

McKernan, Megan, Stephanie Young, Andrew Dowse, James Black, Devon Hill, Benjamin J. Sacks, Austin Wyatt, Nicolas Jouan, Yuliya Shokh, Jade Yeung, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 2, *Case Studies of Selected Allied and Partner Nations*, RAND Corporation, RR-A2195-2, 2024. As of January 23, 2024: https://www.rand.org/pubs/research_reports/RRA2195-2.html

McKernan, Megan, Stephanie Young, Timothy R. Heath, Dara Massicot, Andrew Dowse, Devon Hill, James Black, Ryan Consaul, Michael Simpson, Sarah W. Denton, Anthony Vassalo, Ivana Ke, Mark Stalczynski, Benjamin J. Sacks, Austin Wyatt, Jade Yeung, Nicolas Jouan, Yuliya Shokh, William Shelton, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 4, *Executive Summary*, RAND Corporation, RR-A2195-4, 2024. As of January 23, 2024: https://www.rand.org/pubs/research_reports/RRA2195-4.html

McKernan, Megan, Stephanie Young, Timothy R. Heath, Dara Massicot, Mark Stalczynski, Ivana Ke, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 1, *Case Studies of China and Russia*, RAND Corporation, RR-A2195-1, 2024. As of January 23, 2024: https://www.rand.org/pubs/research_reports/RRA2195-1.html

National Academies of Sciences, Engineering, and Medicine and National Academy of Public Administration, *Governance and Management of the Nuclear Security Enterprise*, National Academies Press, 2020.

National Nuclear Security Administration, "General PPBE Process," briefing slide provided by Office of the Associate Administrator for Management and Budget staff to the authors, undated-a, Not available to the general public.

National Nuclear Security Administration, "NNSA Policy Documents (NAP)," webpage, undated-b. As of September 3, 2023: https://directives.nnsa.doe.gov/nnsa-policy-documents

National Nuclear Security Administration, "Reprogrammings," briefing provided by interviewees to the authors, undated-c, Not available to the general public.

National Nuclear Security Administration, *National Nuclear Security Administration Comments on the Final Report of the Congressional Advisory Panel on the Governance of the Nuclear Security Enterprise: Report to Congress*, U.S. Department of Energy, May 2015.

National Nuclear Security Administration, *Financial Integration,* NAP 412.1, February 11, 2019.

National Nuclear Security Administration, *Prevent, Counter, and Respond—NNSA's Plan to Reduce Global Nuclear Threats, FY 2022–FY 2026: Report to Congress*, U.S. Department of Energy, December 2021.

National Nuclear Security Administration, *Strategic Vision: Innovate. Collaborate. Deliver.* U.S. Department of Energy, 2022a.

National Nuclear Security Administration, *Fiscal Year 2022 Stockpile Stewardship and Management Plan: Report to Congress*, U.S. Department of Energy, March 2022b.

National Nuclear Security Administration, "Russia's Disregard for Nuclear Safety and Security in Ukraine," fact sheet, U.S. Department of Energy, March 4, 2023a.

National Nuclear Security Administration, *Fiscal Year 2023 Stockpile Stewardship and Management Plan—Biennial Plan Summary: Report to Congress*, U.S. Department of Energy, April 2023b.

National Nuclear Security Administration, "Improving PPBE," briefing provided by interviewees to the authors, May 18, 2023c, Not available to the general public.

National Nuclear Security Administration, *Planning, Programming, Budgeting, and Evaluation (PPBE) Process*, NAP 130.1C, July 18, 2023d.

Neenan, Alexandra G., and Mary Beth D. Nikitin, *Energy and Water Development Appropriations for Nuclear Weapons Activities: In Brief*, Congressional Research Service, R47657, August 21, 2023.

NNSA—*See* National Nuclear Security Administration.

Norris, Robert S., *Racing for the Bomb: The True Story of General Leslie R. Groves, the Man Behind the Birth of the Atomic Age*, Skyhorse Publishing, 2014.

ODNI—*See* Office of the Director of National Intelligence.

Office of Asset Enterprise Management, "VA's Strategic Capital Investment Planning Process (SCIP)," briefing provided by interviewees to the authors, U.S. Department of Veterans Affairs, undated, Not available to the general public.

Office of Enterprise Integration and Office of Policy and Interagency Collaboration, *Department of Veterans Affairs 2021 Functional Organization Manual: Description of Organization Structure, Missions, Functions, Tasks, and Authorities:* Vol. 1, *Administrations*, version 7, U.S. Department of Veterans Affairs, September 30, 2021a.

Office of Enterprise Integration and Office of Policy and Interagency Collaboration, *Department of Veterans Affairs 2021 Functional Organization Manual: Description of Organization Structure, Missions, Functions, Tasks, and Authorities:* Vol. 2, *Staff Offices,* version 7, U.S. Department of Veterans Affairs, September 30, 2021b.

Office of Federal Procurement Policy, Office of Management and Budget, Policy Letter 11–01, "Performance of Inherently Governmental and Critical Functions," *Federal Register*, Vol. 76, No. 176, September 12, 2011.

Office of History and Heritage Resources, "Enter the Army," *The Manhattan Project: An Interactive History*, webpage, Office of Scientific and Technical Information, U.S. Department of Energy, undated. As of September 3, 2023:
https://www.osti.gov/opennet/manhattan-project-history/Events/1942/enter_army.htm

Office of Management and Budget, "Historical Tables," webpage, White House, undated. As of August 11, 2023:
https://www.whitehouse.gov/omb/budget/historical-tables

Office of Management and Budget Circular A-11, *Preparation, Submission, and Execution of the Budget*, Executive Office of the President, August 2023.

Office of the Chief Financial Officer, "Budget (Justification & Supporting Documents)," webpage, U.S. Department of Energy, undated. As of August 16, 2023:
https://www.energy.gov/cfo/listings/budget-justification-supporting-documents

Office of the Chief Financial Officer, *U.S. Department of Energy FY 2024 Congressional Justification:* Vol. 1, *National Nuclear Security Administration: Federal Salaries and Expenses, Weapons Activities, Defense Nuclear Nonproliferation, Naval Reactors*, U.S. Department of Energy, March 2023.

Office of the Deputy Assistant Secretary of Defense for Nuclear Matters, "Nuclear Weapons Council," *2020 Nuclear Matters Handbook*, 2020.

Office of the Director of National Intelligence, "U.S. Intelligence Community Budget," webpage, undated. As of January 30, 2023:
https://www.dni.gov/index.php/what-we-do/ic-budget

OMB—*See* Office of Management and Budget.

Panangala, Sidath Viranga, *Advance Appropriations for Veterans' Health Care: Issues and Options for Congress*, Congressional Research Service, R40489, April 28, 2009.

Panangala, Sidath Viranga, *Honoring Our PACT Act of 2022 (P.L. 117-168): Expansion of Health Care Eligibility and Toxic Exposure Screenings*, Congressional Research Service, R47542, May 2, 2023.

Panangala, Sidath Viranga, and Jared S. Sussman, *Department of Veterans Affairs FY2023 Appropriations*, Congressional Research Service, R47423, February 14, 2023.

President's Foreign Intelligence Advisory Board, Special Investigative Panel, *Science at Its Best, Security at Its Worst: A Report on Security Problems at the U.S. Department of Energy*, June 1999.

Public Law 79-585, Atomic Energy Act of 1946, August 1, 1946.

Public Law 93-438, Energy Reorganization Act of 1974, October 11, 1974.

Public Law 101-576, Chief Financial Officers Act of 1990, November 15, 1990.

Public Law 111-81, Veterans Health Care Budget Reform and Transparency Act of 2009, October 22, 2009.

Public Law 114-113, Consolidated Appropriations Act, 2016, December 18, 2015.

Public Law 117-81, National Defense Authorization Act for Fiscal Year 2022, December 27, 2021.

Public Law 117–168, Sergeant First Class Heath Robinson Honoring Our Promise to Address Comprehensive Toxics Act of 2022 (Honoring Our PACT Act of 2022), August 10, 2022.

Public Law 117-328, Consolidated Appropriations Act, 2023, December 29, 2022.

Rappaport, Carl S., "Program Budgeting and PPBS in the Federal Government," paper presented at the 48th annual meeting of the Committee on Program Budgeting, National Academy of Sciences, 1969.

Riposo, Jessie, Guy Weichenberg, Chelsea Kaihoi Duran, Bernard Fox, William Shelton, and Andreas Thorsen, *Improving Air Force Enterprise Resource Planning-Enabled Business Transformation*, RAND Corporation, RR-250-AF, 2013. As of August 11, 2023: https://www.rand.org/pubs/research_reports/RR250.html

Schick, Allen, "A Death in the Bureaucracy: The Demise of Federal PPB," *Public Administration Review*, Vol. 33, No. 2, March–April 1973.

Section 809 Panel, *Report of the Advisory Panel on Streamlining and Codifying Acquisition Regulations*, Vol. 2 of 3, June 2018.

SIPRI—*See* Stockholm International Peace Research Institute.

Speciale, Stephen, and Wayne B. Sullivan II, "DoD Financial Management—More Money, More Problems," Defense Acquisition University, September 1, 2019.

Stockholm International Peace Research Institute, "SIPRI Military Expenditure Database," undated. As of March 17, 2023:
https://milex.sipri.org/sipri

Tollestrop, Jessica, and Kate P. McClanahan, *Advance Appropriations, Forward Funding, and Advance Funding: Concepts, Practice, and Budget Process Considerations*, Congressional Research Service, R43482, June 10, 2019.

U.S. Code, Title 10, Section 179, Nuclear Weapons Council.

U.S. Code, Title 10, Section 3131, Availability of Appropriations.

U.S. Code, Title 42, Chapter 23, Development and Control of Atomic Energy; Section 2011, Congressional Declaration of Policy.

U.S. Code, Title 42, Chapter 84, Department of Energy; Section 7101, Definitions.

U.S. Code, Title 42, Chapter 84, Department of Energy; Section 7132, Principal Officers.

U.S. Code, Title 50, Chapter 41, National Nuclear Security Administration.

U.S. Code, Title 50, Chapter 42, Atomic Energy Defense Provisions; Section 2742, Reprogramming.

U.S. Code, Title 50, Chapter 42, Atomic Energy Defense Provisions; Section 2745, Fund Transfer Authority.

U.S. Code, Title 51, Section 20143, Full Cost Appropriations Account Structure.

U.S. Department of Defense, *2022 National Defense Strategy of the United States of America States, Including the 2022 Nuclear Posture Review and the 2022 Missile Defense Review*, October 27, 2022.

U.S. Department of Energy, "National Laboratories," webpage, undated. As of August 31, 2023: https://www.energy.gov/national-laboratories

U.S. Department of Energy, "DOE/NNSA Site Facility Management Contracts," April 19, 2023.

U.S. Department of Energy, "NNSA Organization Chart," February 25, 2024.

U.S. Department of Energy, Office of Inspector General, Office of Cyber Assessments and Data Analytics, *Audit Report: The Department of Energy's Fiscal Year 2022 Consolidated Financial Statements*, DOE-OIG-23-06, November 2022.

U.S. Department of Veterans Affairs, *Department of Veterans Affairs Fiscal Years 2022–28 Strategic Plan*, undated-a.

U.S. Department of Veterans Affairs, "VetPop2020: A Brief Description," undated-b.

U.S. Department of Veterans Affairs, "Locations," webpage, last updated November 3, 2021. As of September 25, 2023:
https://www.va.gov/directory/guide/home.asp

U.S. Department of Veterans Affairs, *Fiscal Year 2022 Agency Financial Report*, November 15, 2022.

U.S. Department of Veterans Affairs, *FY 2024 Budget Submission: Budget in Brief*, March 2023a.

U.S. Department of Veterans Affairs, "Chapter 02: VA's Budget Cycle and Fund Symbols," *VA Financial Policy:* Vol. II, *Appropriations, Funds and Related Information*, March 15, 2023b.

U.S. Department of Veterans Affairs, "Budget: Generic Annual Budget Time Frame," webpage, last updated April 25, 2023c. As of August 7, 2023:
https://department.va.gov/administrations-and-offices/management/budget/#generic-timeline

U.S. Department of Veterans Affairs, "History Overview," webpage, last updated August 17, 2023d. As of September 14, 2023:
https://department.va.gov/history/history-overview

U.S. Department of Veterans Affairs, "Community Care: Information for Family Members and Dependents," webpage, last updated November 6, 2023e. As of February 6, 2024:
https://www.va.gov/COMMUNITYCARE/programs/dependents/index.asp

U.S. Department of Veterans Affairs, "Veterans Health Administration: About VHA," webpage, last updated November 8, 2023f. As of November 17, 2023: https://www.va.gov/health/aboutvha.asp

U.S. Department of Veterans Affairs Office of Management, "VA Investment Review Council Charter," April 2023a, Not available to the general public.

U.S. Department of Veterans Affairs Office of Management, "VA Executive Board Charter," July 2023b, Not available to the general public.

U.S. Department of Veterans Affairs Office of Management, "VA Operations Board Charter," July 2023c, Not available to the general public.

U.S. Government, "Budget FY 1996–Analytical Perspectives, Budget of the United States Government, Fiscal Year 1996," February 1, 1995.

U.S. Government Accountability Office, *DOD Business Systems Modernization: Important Management Controls Being Implemented on Major Navy Program, but Improvements Needed in Key Areas*, GAO-08-896, September 8, 2008.

U.S. Government Accountability Office, *Financial Management: DOE and NNSA Have Opportunities to Improve Management of Carryover Balances*, GAO-22-104541, July 25, 2022.

U.S. Government Accountability Office, "DOD Financial Management: Additional Actions Needed to Achieve a Clean Audit Opinion on DOD's Financial Statements," webpage, May 15, 2023a.

U.S. Government Accountability Office, *National Nuclear Security Administration: Assessments of Major Projects*, GAO-23-104402, August 17, 2023b.

U.S. House of Representatives, Department of Veterans Affairs Budget Planning Reform Act of 2015, House Resolution 216, March 25, 2015.

U.S. House of Representatives, Committee on Veterans' Affairs, "Legislative Hearing on H.R. 813; H.R. 806; and a Draft Discussion Bill 'to Amend Title 38, United States Code, to Direct the Secretary of Veterans Affairs to Submit to Congress a Future-Years Veterans Program and a Quadrennial Veterans Review, to Establish in the Department of Veterans Affairs a Chief Strategy Officer, and for Other Purposes,'" July 17, 2013.

U.S. House of Representatives, Committee on Oversight and Reform, *Policy and Supporting Positions*, U.S. Government Publishing Office, December 2020.

U.S. Senate, Committee on Armed Services, Subcommittee on Strategic Forces, "Hearing to Receive Testimony on the Department of Energy's Atomic Energy Defense Activities and Programs," stenographic transcript, Alderson Court Reporting, May 24, 2017.

U.S. Senate, Committee on Armed Services, Subcommittee on Strategic Forces, "Hearing to Receive Testimony on the Department of Energy's Atomic Energy Defense Activities and Department of Defense Nuclear Weapons Programs in Review of the Defense Authorization Request for the Fiscal Year 2024 and Future Years Defense Program," stenographic transcript, Alderson Court Reporting, April 18, 2023.

VA—*See* U.S. Department of Veterans Affairs.

VA Notice 22-15, *Department of Veterans Affairs Governance Structure*, U.S. Department of Veterans Affairs, September 15, 2022.

Veterans Health Administration, briefing on VA's 2022 Enrollee Health Care Projection Model provided to the authors, undated, Not available to the general public.

VHA—*See* Veterans Health Administration.

Williamson, Randall B., and Susan J. Irving, *VA Health Care: Challenges in Budget Formulation and Issues Surrounding the Proposal for Advance Appropriations*, testimony before the Committee on Veterans' Affairs, U.S. House of Representatives, U.S. Government Accountability Office, GAO-09-664T, April 29, 2009.

Woolf, Amy F., and James D. Werner, *The U.S. Nuclear Weapons Complex: Overview of Department of Energy Sites*, Congressional Research Service, R45306, March 31, 2021.

Young, Stephanie, *Power and the Purse: Defense Budgeting and American Politics, 1947–1972*, dissertation, University of California, Berkeley, 2009.

Young, Stephanie, Megan McKernan, Andrew Dowse, Nicolas Jouan, Theodora Ogden, Austin Wyatt, Mattias Eken, Linda Slapakova, Naoko Aoki, Clara Le Gargasson, Charlotte Kleberg, Maxime Sommerfeld Antoniou, Phoebe Felicia Pham, Jade Yeung, Turner Ruggi, Erik Silfversten, James Black, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 5, *Additional Case Studies of Selected Allied and Partner Nations*, RAND Corporation, RR-A2195-5, 2024. As of April 2024:
https://www.rand.org/pubs/research_reports/RRA2195-5.html

Young, Stephanie, Megan McKernan, Andrew Dowse, Nicolas Jouan, Theodora Ogden, Austin Wyatt, Mattias Eken, Linda Slapakova, Naoko Aoki, Ryan Consaul, Laurinda L. Rohn, Frank G. Klotz, Michael Simpson, Jade Yeung, Sarah W. Denton, Yuliya Shokh, Clara Le Gargasson, Charlotte Kleberg, Phoebe Felicia Pham, Madison Williams, Erik Silfversten, James Black, Turner Ruggi, Maxime Sommerfeld Antoniou, Raphael S. Cohen, John P. Godges, Heidi Peters, and Lauren Skrabala, *Planning, Programming, Budgeting, and Execution in Comparative Organizations:* Vol. 7, *Executive Summary for Additional Case Studies*, RAND Corporation, RR-A2195-7, 2024. As of April 2024:
https://www.rand.org/pubs/research_reports/RRA2195-7.html

NATIONAL DEFENSE RESEARCH INSTITUTE

The U.S. Department of Defense (DoD) Planning, Programming, Budgeting, and Execution (PPBE) System is a key enabler for DoD to fulfill its mission. But in light of a dynamic threat environment, increasingly capable adversaries, and rapid technological changes, there has been increasing concern that DoD's resource planning processes are too slow and inflexible to meet warfighter needs. As a result, Congress mandated the formation of a legislative commission to (1) examine the effectiveness of the PPBE process and adjacent DoD practices, particularly with respect to defense modernization; (2) consider potential alternatives to these processes and practices to maximize DoD's ability to respond in a timely manner to current and future threats; and (3) make legislative and policy recommendations to improve such processes and practices for the purposes of fielding the operational capabilities necessary to outpace near-peer competitors, providing data and analytical insight, and supporting an integrated budget that is aligned with strategic defense objectives.

The Commission on PPBE Reform asked RAND to provide an independent analysis of PPBE-like functions in selected countries and other non-DoD federal agencies. This report, part of a seven-volume set, presents case studies of PPBE functions in the U.S. Department of Veterans Affairs (VA) and the U.S. Department of Energy's National Nuclear Security Administration (NNSA) to provide additional insights for improving DoD's PPBE processes.

$30.00

ISBN-10 1-9774-1301-3
ISBN-13 978-1-9774-1301-7

www.rand.org

RR-A2195-6