

# Aligning the Governance Structure of the NNSA Laboratories to Meet 21st Century National Security Challenges

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The Department of Energy's (DOE) National Nuclear Security Administration (NNSA) National Security Laboratories assure the reliability, safety, and security of the nation's arsenal of nuclear weapons. The NNSA laboratories also perform significant work for other national security agencies. However, work for other agencies, in its current model, cannot sustain the recapitalization of major equipment and facilities used to support that work at the NNSA laboratories. Previous studies of NNSA governance recommended that other national security agencies be given some shared responsibility for helping the DOE to maintain the NNSA laboratories.

This study specifically examines how the governance of NNSA laboratories might be changed to increase engagement with the other national security agencies and to adapt to a changing national security landscape. The study establishes six key principles of any new governance structure. Using these principles as a basis, the study recommends that DOE should remain the sole sponsor of the NNSA laboratories, while building strategic partnerships with the other national agencies. Additionally, the Mission Executive Council of the Four-Party Governance Charter should become the primary vehicle to implement the other agencies' governance role and it should help DOE develop a clear mission statement for the NNSA laboratories. The study offers several other recommendations to improve governance of these laboratories and strengthen their strategic relations with other national security agencies.

## The NNSA Laboratories and Their Mission

The Department of Energy's NNSA National Security Laboratories are, for the purposes of this study, Los Alamos National Laboratory, Lawrence Livermore National Laboratory, and the two Sandia National Laboratories. The Nevada Nuclear Security Site is also included due to its partnership in the NNSA laboratories' work and shared history. In support of their core nuclear weapons mission, DOE has funded a vast infrastructure at the NNSA laboratories including advanced computing facilities, state-of-the-art scientific equipment, and multidisciplinary science and engineering facilities.

As the capabilities of the NNSA laboratories have grown, their mission has expanded to include a broad array of national security challenges. Today, the unique capabilities of these laboratories address applications such as nuclear forensics, nuclear nonproliferation, defense against chemical and biological weapon threats, cyber warfare, and energy. In the current era of extended federal budget

austerity, the challenge for DOE is how to maintain the NNSA laboratories' capabilities to address a broad array of national security challenges when the nuclear weapons budget is focused on maintenance of an aging stockpile.

## Work for Others

In addition to their work for DOE, the NNSA laboratories undertake various projects for other national security agencies—especially the Department of Defense, the Intelligence Community, and Department of Homeland Security. Work for Others (WFO) has grown to be a significant portion of the laboratories' budgets, totaling \$1.656 billion in FY2013, or about 20 percent of the total budget. Several previous studies found that WFO benefits the core nuclear weapons mission of the NNSA laboratories by helping to keep them at the cutting edge of science and engineering and attract and retain top scientific talent. However, these same studies also found that the current WFO model will not sustain critical capabilities at the NNSA laboratories. WFO does not relate to any long-term

strategic planning and does not pay for the recapitalization of major equipment and facilities at these laboratories.

To address this problem, several recent studies recommended that other agencies be given some shared responsibility for helping DOE to maintain the capabilities of the NNSA laboratories. In 2010, the Secretaries of the Departments of Energy, Defense, and Homeland Security and the Director of National Intelligence took an initial step by establishing a *Governance Charter for an Interagency Council on the Strategic Capabilities of DOE National Laboratories as National Security Assets*. The Charter creates a body of high-level executives from each participating agency called the Mission Executive Council (MEC). The MEC defines the shared national security agenda and coordinates multi-agency engagement with the NNSA laboratories.

## Purpose of this Report

This is a period of unusual ferment and debate with regard to governance issues relating to DOE, NNSA, and all of DOE's National Laboratories including its many science laboratories. As this study was being written, no less than three other studies mandated by Congress were underway that were charged with considering various aspects of DOE laboratory governance issues. The focus of this study, distinct from other studies, is how changes to the governance of the NNSA laboratories might enhance their engagement with other national security agencies. Specifically, a key question addressed by this study is whether the other national security agencies should, in effect, become co-owners with DOE of the NNSA laboratories or whether some more evolutionary model of shared governance is appropriate.

## Six Principles of Any New Governance Structure

To begin, the study lays out six key principles of any new governance model for NNSA laboratories. These principles are the basis for the study's findings, conclusions, and recommendations.

### 1. *The mission should be clearly defined.*

The mission of the NNSA laboratories has evolved from an exclusive focus on nuclear weapons to a more diverse and largely undefined mission of advancing "national security."

### 2. *Clear lines of authority and accountability are essential.*

This principle is a high hurdle for a multi-agency governance model.

### 3. *Recruitment and retention of a talented workforce are critical.*

At least one NNSA laboratory expressed concern that early- to mid-career personnel are leaving at increasing rates.

### 4. *Competition should exist with other science and technology providers.*

In areas not closely related to nuclear weapons, NNSA laboratories should compete with other science and technology providers for national security resources.

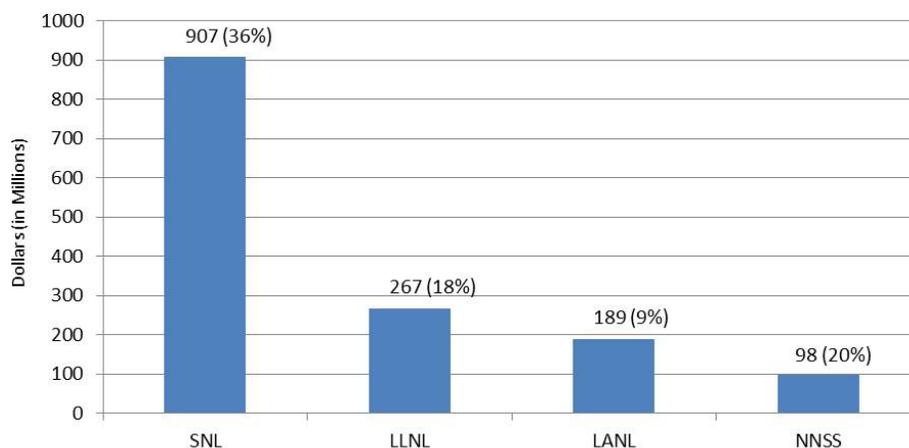
### 5. *Sustained strategic engagement should exist between the national security agencies and the NNSA laboratories.*

National security agencies need to be aware of the NNSA laboratories' special capabilities and the laboratories need to be aware of the agencies' strategic challenges.

### 6. *The governance structure and operations should be continuously evaluated for cost effective conduct of mission.*

While national security agencies perceive that the NNSA laboratories provide valuable capabilities, they also find the laboratories to be significantly more expensive than other potential providers.

## FY13 NNSA Laboratory Work for Others



WFO funding totals and budget percentages for S&T projects sponsored by other (non-DOE) agencies and conducted at NNSA laboratories in FY2013.

## Recommendations

### **Recommendation 1.1: DOE should remain the sole sponsor of the NNSA laboratories.**

A new governance model involving formal, multiple-agency federally funded research and development center sponsorship of the NNSA laboratories would create more problems than it would solve and would be resisted by the other national security agencies. This study proposes a more modest approach that would build on a governance structure with which the various agencies are already comfortable.

### **Recommendation 1.2: To complement DOE's sponsorship of the NNSA laboratories, the other national security agencies should have a strategic partnership with the DOE which should be formally recognized and should give those agencies a seat at the governance table for the laboratories.**

As strategic partners the national security agencies would have the responsibility to help the NNSA laboratories understand and meet the needs of the larger national security agenda.

### **Recommendation 2: The Department of Energy, in collaboration with the other national security agencies, should develop a clear mission statement for the NNSA laboratories.**

Although the NNSA laboratories are now by law referred to as "National Security Laboratories," rather than "nuclear weapons laboratories," no one has clearly articulated what this evolution means in terms of the mission of the laboratories and their relationships with other national security agencies. The DOE should use the MEC to develop a mission statement for the NNSA laboratories that reflects the buy-in of the national security agency strategic partners.

### **Recommendation 3.1: The Mission Executive Council should become the primary vehicle to define and implement the national security agencies' governance role discussed above. It should develop and pursue an agenda focused on identifying strategic priorities and critical capabilities to deal with national security challenges, coordinate approaches for supporting needed investments in the NNSA laboratories, and provide coordinated guidance and processes.**

The establishment of the MEC was a significant beginning for the four agencies' strategic partnership. However, the MEC's performance to date has not met the need for

shared, long-term R&D planning, has not addressed how the agencies would prioritize and fund the sustainment of laboratory capabilities, and has had limited engagement with the NNSA laboratories.

### **Recommendation 4.1: NNSA should generate one or more Work Scope Agreement(s) with each of the other national security agencies (DOD, ODNI, DHS) that is considered a strategic partner.**

The Work Scope Agreement would be the bounding document for bringing in new work from the strategic partner. Used in conjunction with a Work Boundary Agreement between NNSA and each laboratory, work that falls within the envelope of these agreements would require only the processing of the funding documents. Further approvals would not be needed.

### **Recommendation 4.2: NNSA should conduct a comparative assessment of the Office of Science approach to WFO including planning, processes, working relationship between site office and laboratory, and all associated oversight and approval actions.**

While the current NNSA WFO approval process has been improved, it still involves repetitive steps and unnecessary oversight. The study committee found less controversy and inefficiency around approval of WFO at several Office of Science laboratories than at the NNSA laboratories. A comparative assessment could suggest useful changes for the NNSA laboratories.

### **Recommendation 5: The Mission Executive Council should be directed to develop a systematic approach for multi-agency investment in the NNSA laboratories that allows for DOE investment together with investment from other federal agencies when and where appropriate.**

### **Recommendation 6: The governance model described in this report should encompass other DOE laboratories and NNSA facilities that receive a significant fraction of their funding from interagency national security work, including Pacific Northwest National Laboratory, Oak Ridge National Laboratory, and the Nevada Nuclear Security Site. Moreover, as a long-term goal, WFO processes should be applied uniformly across these institutions, as described in Recommendations 4.1 and 4.2 above.**

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