Summary Minutes of the

U.S. Department of Energy (DOE)
Commission to Review the Effectiveness of the National Energy Laboratories
Public Meeting

Commission Members in Attendance:	TJ Glauthier, Co-Chair; Jared Cohon, Co-Chair; Charles Elachi; Richard Meserve; Wanda Austin; Paul Fleury
Date and Time:	9:00 AM - 4:30 PM, October 6, 2014
Location:	Institute for Defense Analysis, IDA Mark Center, Room 1301, 4850 Mark Center Drive, Alexandria, VA
Purpose:	Meeting of the Commission to Review the Effectiveness of the National Energy Laboratories
Presenters:	Devon Streit, Senior Advisor, Department of Energy; Donald Cook, Deputy Administrator for Defense Programs, NNSA; Ellen Williams, Senior Advisor, Department of Energy; Rose Gottemoeller, Under Secretary for Arms Control and International Security, Department of State; John Fischer, Director, Defense Laboratories Enterprise, Office of the Assistant Secretary of Defense for Research and Engineering, Department of Defense; Jamie Johnson, Director, Office of National Laboratories, Science and Technology Directorate, Department of Homeland Security; Todd Doss, FBI Assistant Director and Head, FBI Laboratory, Federal Bureau of Investigation; William Madia, Vice President of SLAC, Stanford University; Kimberly Budil, Vice President for Laboratory Management, University of California; Ronald Townsend, Executive Vice President of Global Laboratory Operations, Battelle Memorial Institute; Peter Paul, Associate Vice President for Brookhaven Affairs, Stony Brook University
DOE Staff:	Karen Gibson, Director, Office of Secretarial Boards and Councils (Designated Federal Officer)
IDA & STPI Staff:	Mark Taylor, Research Staff Member; Susannah Howieson, Research Staff Member; Martha Merrill, Science Policy Fellow; Julian Zhu, Science Policy Fellow

Meeting Summary

The Commission to Review the Effectiveness of the National Energy Laboratories (Commission) was convened for its third meeting at 9:00 AM on October 6, 2014. The Commission members heard a DOE perspective on interagency work/work for others. Representatives from the Department of State, the Department of Defense, the Department of Homeland Security, and the Federal Bureau of Investigation provided their respective perspectives on working with national labs. Commission members also received a briefing on governance and contracting models, and a panel of M&O contractors provided insights to the M&O contract model and its effectiveness. A final briefing focused on working with industry and academia and was followed by an opportunity for public comment and adjournment. The next meeting will be held November 4th, at Argonne National Laboratory in Lemont, Illinois.

Opening of Public Meeting

Co-Chair Jared Cohon opened the meeting and welcomed the commissioners, speakers, and observers.

DOE Overview of Interagency Work

Devon Streit, Senior Advisor, Department of Energy, and Donald Cook, Deputy Administrator for Defense Programs, NNSA, provided a DOE perspective on the benefits of work for others (WFO). WFO helps leverage national security capabilities, support the national science and technology enterprise through scientific facilities, and integrate capabilities through interactions with other agencies, industry, and universities. WFO benefits: taxpayers and the country by reducing duplication of facilities across the Federal complex and making best use of extant capabilities; other Federal agencies by providing their unique and high quality technical capabilities when needed; and DOE by enhancing core capabilities and cross-pollination of ideas. WFO also helps make labs resilient to turbulence in programmatic funding, providing the staff flexibility to moderate larger budget swings as well as sustain future S&T capabilities. Streit stated that the average percentage of the Lab budget derived from WFO varies from 2% to 35%, noting that the trends over the last five years have remained relatively flat.

Issues related to WFO, include perceived duplication and overlap, an approval process that can be cumbersome, staffing fluctuations, and legacy responsibilities. Declining Federal budgets make everyone more sensitive to questions of "who gets the work." Frustrations at the labs stem in large part from different interpretations of risk criteria associated with WFO. There is an imperfect consensus of the role of the National Labs. The NNSA Labs are expensive due to higher overhead costs associated with safety and security. And aging infrastructure is also driving costs in the Science Labs.

The Mission Executive Council (MEC) is intended as a governance mechanism to look at the capabilities required by the departments with national security missions and to take stock of capabilities within all the National Labs to serve the mission needs.

A Q&A session followed.

Department of State

Rose Goettemoeller, Under Secretary for Arms Control and International Security spoke to the Department of State's work through the National Labs. DOS relies on the labs for work related to weapons of mass destruction (WMD's) threat reduction - to account for, secure, and eliminate WMD. DOS is primarily interested in the labs for their expertise in nuclear weapons and non-proliferation, but also other issues such as bioterror threats. Labs provide technical support, and help with guidance on nuclear safety and training, but also provide innovative directions and new thinking. She also noted that some competition among the labs is good. DOS has a good symbiotic relationship with the labs that has been built over time, e.g. safeguards work at ORNL.

A Q&A session followed

Interagency Panel

Representatives from the Department of Homeland Security, the Department of Defense, and the Federal Bureau of Investigation presented on their respective agency's interactions with the DOE labs.

John Fischer, Director, Defense Laboratories Enterprise, Office of the Assistant Secretary of Defense for Research and Engineering, Department of Defense, described DOD's interactions with the DOE labs. DOD has a wide and complex mission set supported by DOE labs in areas such as M&S, conventional

explosives, protein identification, power and energy, and hypersonic flight. DOD primarily uses the NNSA labs, but uses many of the other DOE labs depending on technology need. It is the responsibility of the program manager to select which lab to work with. Given that the DOE labs are FFRDCs, this allows non-competitive selection to perform specific work. The labs are selected when they offer the best capability and technology solutions for DOD's needs. Use of the labs is proportional to available budget. Overall, the DOD customer base is satisfied with the performance of DOE labs and has found the process for obtaining DOE lab support adequate, although one complaint heard is that the labs are expensive.

Jamie Johnson, Director, Office of National Laboratories, Science and Technology Directorate, Department of Homeland Security, gave a perspective of Homeland Security's use of the DOE National Lab Complex. He described the Office of National Laboratories and its mandate to facilitate and manage S&T and DHS utilization of the DOE and DHS laboratory infrastructure, technical expertise, and capabilities. Johnson highlighted some of the labs where DHS has determined a unique lab capability exists that is critical to the DHS mission and where DHS has made investments. DHS has special access privileges and relationship with the DOE due to the language in the Homeland Security Act. He noted that DHS's engagement is based on its mission requirements and does not distinguish between the NNSA, Science, or Energy Labs. He noted that the labs have subject matter knowledge that can be brought to bear, such as regional response. DHS accesses the DOE Labs primarily through a modified Work for Others process, supported by a master interagency agreement, through interagency agreements, and competitive and directed awards. Johnson also discussed the Mission Executive Council (MEC), which arose in 2010 from a shared need to maintain capabilities critical to national and homeland security missions. The MEC provides long-term strategic planning for capabilities that are unique to the DOE National Labs. Johnson also offered his observations on the issues driving new studies on lab governance, including expectations in the current fiscal environment, the draw-down of nuclear weapons programs and associated legacy costs, budget pressures on WFO clients, the NNSA structure and inadequate sponsorship for its labs and sites, and issues resulting from diminishing resources at some labs.

Todd Doss, FBI Assistant Director and Head, FBI Laboratory, Federal Bureau of Investigation, gave an overview of FBI's interactions with the DOE National Labs. The FBI has a long history working with DOE in cyber, IT, and information collection, for example. The FBI relies on the National Labs for work that can't be done at the FBI, such as work with hazardous, radiological, and biological material. The labs provide facilities and equipment where trained FBI personnel can safely perform forensic examination on radiologically contaminated evidence. They collaborate with DOE on quality control, field exercises, and efficiency testing, training for post blast investigations, and for collection and training related to IEDs. In Second Line of Defense, the labs provide expertise in radiation detection and training. In some cases, DOE lab infrastructure changes have impacted FBI missions, such as where the FBI had invested heavily and then the facilities were closed.

A Q&A session followed.

<u>Governance and Contracting Models</u>

William Madia, Vice President of SLAC, Stanford University, presented a history of the Government-Owned, Contractor-Operated (GOCO) model for lab management that is used by DOE. He spoke of the benefits of the original GOCO model in which the public and private sectors worked together as "co-trustees" to expand science and technology of the nation – and noted how this model has eroded over time, resulting in a number of contractors walking away. Madia spoke about the Cooperative Agreement (CA), noting how it looks much like the original GOCO model. He outlined the differences between the

CA and today's M&O contract and posed the question of whether it is possible to identify a "best of both worlds" paradigm. Madia proposed an experiment – a "Cooperative M&O Agreement". Stanford is willing to consider hosting this experiment, which would include 3 phases – analysis with a Go/No Go decision to proceed, implementation, and lessons learned. The Secretary of Energy Advisory Board (SEAB) is also looking at this experiment.

A Q&A session followed

M&O Contractor Panel

A panel of three M&O contractors provided another perspective on lab management.

Kim Budil, Vice President for Laboratory Management, University of California, stated that for contractors that are universities, laboratories are aligned with university missions of teaching, research, and public service. She also noted that science laboratories and NNSA laboratories are more alike than they are different, as both are at their heart S&T enterprises. The relationship between government and contractors has tremendous benefits, giving the government real experts on problems of interest and providing the M&O contractors responsibility for providing leadership. However, the relationship is becoming increasingly prescriptive, restrictive, and transactional. The sense of partnership comes down to people. High fees were put in place as incentives, but fees go to the LLCs and not the performers at the lab. The ability of labs to deal with the challenges of running labs is different today than ten years ago. The most substantial problem is rebuilding principles of the relationship and retraining the bureaucracy.

Ronald Townsend, Executive Vice President of Global Laboratory Operations, Battelle Memorial Institute, stated that the Lab/GOCO model has delivered extraordinary results and on the whole no greater system exists. Tension comes in part from a lack of clarity in roles and responsibilities. What has occurred is a focus on process rather than outcome, and a deviation from the GOCO model. The nature of DOE's allocation assures alignment of work with DOE missions, but, there is a mismatch between resources required and the amount of funding available to sustain capabilities. Redundancy is not a major issue - competitiveness weeds out capabilities that aren't competitive. The ability to sustain facilities will diminish under constrained budgets. The relationship between laboratories and DOE could be improved through clarification of roles and a focus on outcomes rather than process. LDRD is critical and is a good metric to reflect laboratory strategic priorities and alignment, as well as management quality from a business perspective.

Peter Paul, Associate Vice President for Brookhaven Affairs, Stony Brook University, pointed out that Laboratories are strong for large-scale projects and the National Lab System is the envy of the world. Strategically the system has shown its worth. The U.S. plays a major intellectual role. No university could do what the labs do. Universities and industry bring different cultures to a laboratory: universities bring flexibility and resources, and industry brings experience, expertise and discipline. LDRD can be used to build relationships and connections with other customers.

A Q&A session followed.

Working with Industry and Academia

Ellen Williams, Senior Advisor, Department of Energy, gave an overview of technology transfer, noting that to address "valley of death" issues present at laboratories that develop early-stage technology, DOE develops a number of partnership mechanisms: Cooperative Research and Development Agreements (CRADAs), Work for Others (WFO), and Agreements for Commercializing Technology (ACT), a pilot program that allows M&O contractors to take more of the risk than WFO and streamlines the bureaucratic processes for industrial engagements. DOE's Office of Energy Efficiency and Renewable Energy (EERE) has developed a new search engine for DOE initiated patents – the Energy Innovation Portal, and has developed a number of pilot programs: Lab Corps (entrepreneurial training for lab personnel); Small Business Vouchers (for small businesses to work with Labs competitively); and Manufacturing Partners (to encourage one-on-one relationships for manufacturing). Customers can use DOE User Facilities for proprietary or non-proprietary work. If the work is proprietary, the cost to use is higher. DOE has measures of activity, but it is difficult to capture quality or success related to technology transfer.

A Q&A session followed.

Public Comment

No public comment

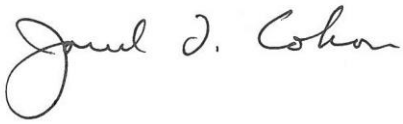
Meeting adjourned at 4:05 PM.

Respectfully Submitted:

Karen Gibson, Designated Federal Officer

I hereby certify that these minutes of the October 6, 2014 Lab Commission meeting are true and correct to the best of my knowledge.

TJ Glauthier
Co-Chair



Jared Cohon
Co-Chair