

## Summary Minutes of the

### U.S. Department of Energy (DOE) Secretary of Energy Advisory Board Public Meeting

Committee Members: John Deutch, Co-Chair; Persis Drell, Co-Chair; Frances Beinecke; Albert Carnesale; Shirley Jackson; Deborah Jin; Paul Joskow; Steven Koonin; Michael McQuade; Richard Meserve; Cherry Murray; Carmichael Roberts; Ram Shenoy; Martha Schlicher; Daniel Yergin

Date and Time: 9:00 AM- 12:00 NOON, March 28, 2014

Location: U.S. Department of Energy Forrestal Building, 1000 Independence Avenue SW, Washington, D.C. 20585

Purpose: Meeting of the Secretary of Energy Advisory Board (SEAB)

SEAB Staff: Karen Gibson, Designated Federal Officer

DOE Staff: Secretary Ernest Moniz and Loan Programs Office Director Peter Davidson

#### Meeting Summary

This was the third meeting of the Secretary of Energy Advisory Board (SEAB). SEAB members heard opening remarks by Secretary Moniz and the Co-Chairs John Deutch and Persis Drell. The first agenda item was discussion and adoption of the final report of the Hubs+ Task Force. The second agenda item was discussion and adoption of the FracFocus 2.0 Task Force. The members were updated by other task force chairs on their respective activities. The members also received a briefing on the Department of Energy Loan Programs Office from Director Peter Davidson.

#### Opening of Public Meeting

Secretary Moniz opened the meeting with a brief overview of the FY14 and FY15 budget, noting that overall DOE received a relatively strong budget. The Secretary said that he was looking forward to hearing the recommendations from the Hubs+ and FracFocus 2.0 reports. He updated the SEAB members on the status of the QER, which has gained traction with interagency coordination and is planning regional workshops; noted the high priority of high performance computing (HPC) in the context of DOE's historical role in advancing HPC; and remarked on the timeliness of SEAB's nuclear nonproliferation study. There are a number of issues that the Secretary would like SEAB to address, including national laboratory governance and the public interest model and technology development for environmental cleanup. He highlighted a number of ongoing studies that are reporting on lab governance and that he would like SEAB to help advise on reacting to and implementing recommendations. The Secretary expects SEAB to meet quarterly and rotate locations between DOE Headquarters in DC and Laboratories with the next meeting in June at Argonne National Laboratory.

#### Discussion of the Hubs+ Task Force Report

The Hubs+ Task Force looked at DOE's new funding constructs (Hubs, BRCs, EFRCs, and the ARPA-E Program). The task force held 4 days of meetings, 4 conference calls, and reviewed extensive materials requested by the task force. The task force found that the set of funding modalities addresses the full range – from basic science to innovation to integration, and that they balance the magnitude of funding to the risk. Fundamentally, the task force supports the constructs, but made recommendations related to clearer definitions of each modality and more disciplined management. The task force found that the EFRCs and ARPA-E projects are appropriately scoped and funded. The Hubs and BRCs have had mixed success, requiring more individually tailored management and organization and clearer objectives and more disciplined management. The Department needs to adopt best practices in engaging the community in deciding in which subjects to place large investments. The Department needs to establish appropriate retroactive metrics of success. Overall the new constructs are effectively engaging national laboratories, academia, and industry and are complementary to the regular DOE programs. The report was approved by the full Board. The full report can be found on the SEAB website:

<http://energy.gov/seab/secretary-energy-advisory-board-task-force-support-evaluation-new-funding-constructs-energy-0>

#### Discussion of the FracFocus 2.0 Task Force Report

The FracFocus 2.0 Task Force report builds upon the recommendations in the 2011 SEAB Subcommittee report. The task force found that FracFocus has been a success in terms of the ease of disclosure of chemicals added to fracturing fluid, the value of this disclosure for the public, and the importance of public confidence in the quality and accessibility of the FracFocus data. The report laid out recommendations for improving the accuracy and completeness of registry submissions and for an independent audit of how well the process has gone. The task force favors full disclosure of all known constituents added to fracturing fluid with few exceptions, using a “systems approach” that reports the chemicals added separately from the additive names and product names, which should generally provide adequate protection of trade secrets. The report was approved by the full Board. The full report and written public comments received can be found on the SEAB website:

<http://energy.gov/seab/secretary-energy-advisory-board-seab-task-force-fracfoc-20>

#### Reports of the Task Force Chairs

QER Task Force Chair Paul Joskow, reported that the task force has met twice, once via conference call and once in person in DC. The task force received briefings from Melanie Kenderdine and her team on their progress in defining the scope of the QER; on the background analysis they have done; and on the plan for regional stakeholder meetings. Progress is being made on background analysis of critical infrastructure sectors and on development of an outline. The QER is an interagency program led by the White House and for which DOE is the Secretariat. The task force will continue to monitor, receive briefings, and develop recommendations.

The Task Force on Nuclear Nonproliferation was established following the December 3<sup>rd</sup> SEAB meeting. Task force members include Albert Carnesale (University of California, LA), Matthew Bunn (Harvard University), Jay Davis (Hertz Foundation), Shirley Ann Jackson (Rensselaer Polytechnic Institute), Jessica Mathews (Carnegie Endowment for International Peace), Richard Meserve (Carnegie Institution for Science), Joan Rohlfing (Nuclear Threat Initiative), Gary Samore (Harvard University), Amy Zegart (Hoover Institution), and Ex Officio members Brent Scowcroft (Scowcroft Group), John Deutch (Massachusetts Institute of Technology), and Persis Drell (Stanford University). The task force chair,

Albert Carnesale, reported that the task force is responding to five questions in the charge, including the instruction to interview officials in other agencies. To date they have held one in person meeting and two conference calls. The task force has split into two subcommittees which are interviewing officials at stakeholder agencies, including the White House, national labs, FBI, DOS, DOD, DHS, NRC, and others. The members are developing a list of priorities for the US Government and for DOE, now bearing in mind recent events in Ukraine and Russia. The task force aims to issue an interim report in July and a final report in December.

The High Performance Computing Task Force is being co-chaired by Shirley Ann Jackson and Michael McQuade. The task force is charged with looking at the investability of exascale computing. They are looking at budgetary considerations for HPC in a very different landscape that goes beyond just mathematics to data centric computing. For the next meeting, the task force is seeking to understand the balance of the ecosystem across classical HPC and data driven computing. They are looking at basic science and motivations, industry applications, the nexus of government and industry and investment opportunities. They will also have a classified briefing in order to look at national security drivers. The task force will make recommendations on DOE's role in the broader context. A report will be made to the full SEAB in June 2014.

#### Presentation on the DOE Loan Programs Office

Peter Davidson, Director of the Loan Programs Office, briefed the Board members on DOE's loan programs. The Program's mission is to accelerate the U.S. commercial deployment of clean energy and advanced vehicle technology. Mr. Davidson gave an overview of LPO's diverse portfolio, including loan authority for fossil energy, renewable energy, nuclear, and advanced vehicles. He outlined the LPO's strong financial performance with more than 30 projects, total loan guarantees of more than \$32 billion, only 2% loss (approx.) of total loan amount, and more than \$50 billion in total economic investment leveraged. Mr. Davidson gave an overview of how DOE programs support the full arc of commercialization and noted how LPO's public-private partnerships have expanded total project investment. He gave examples of major companies that made their first clean energy investments in LPO projects. He also noted that LPO has more than \$40 billion in remaining loan authority for renewable energy and energy efficiency, nuclear energy, and mixed-use authority.

#### Public Comment

No Public Comment

#### Chair Wrap-Up

Co-Chair Persis Drell adjourned the meeting and noted that the next meeting would take place on June 20<sup>th</sup> at Argonne National Laboratory in Lemont, Illinois.

Meeting adjourned at 12:00 NOON.

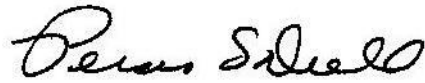
Respectfully Submitted:

Karen Gibson  
Designated Federal Officer

I hereby certify that these minutes of the March 28, 2014, SEAB meeting are true and correct to the best of my knowledge.

Handwritten signature of John Deutch in black ink.

John Deutch  
Co-Chair

Handwritten signature of Persis Drell in black ink.

Persis Drell  
Co-Chair