

**Summary Minutes of the
U.S. Department of Energy (DOE)
Secretary of Energy Advisory Board (SEAB)
Public Meeting**

Advisory Board Members:

SEAB Members: Arun Majumdar (SEAB Chair), Madelyn Creedon (SEAB Vice Chair), Trenton Allen, Norman Bay, Roxanne Brown, Kerry Duggan, Brian Garcia, Phil Giudice, Paula Gold-Williams, Denise Gray, Shirley Ann Jackson, Brad Markell, Maria Pope, Adrienne Quintero, Suzanne Singer, Christopher Smith.

DOE Staff: Secretary of Energy Jennifer M. Granholm, Dr. Ali Douraghy (Principal Deputy Under Secretary for Science and Innovation), Kate Gordon (Senior Advisor to the Secretary), Dr. Amanda Stiles (Cyclotron Road, Lawrence Berkeley National Labs (LBNL)), Dr. Tina Nenoff, Science Advisor, National Nuclear Security Administration (NNSA)), Dr. Dick Co (Director of Chain Reaction Innovations, Argonne National Lab (ANL)), Dr. Vanessa Chan (Director of the Office of Technology Transitions (OTT)), David Borak (SEAB Designated Federal Officer (DFO)), Oriana Tannenbaum (Office of the Secretary), Angel Johnson (Office of Secretarial Boards & Councils).

Other Attendees: Tricia Martinez-Saab (Managing Director at Techstars, Knoxville, TN)

Date and Time: April 25, 2023, 1:00 p.m.-3:30 p.m. EDT
Location: DOE Headquarters (1000 Independence Ave, SW, Washington, D.C.) and Virtual
Purpose: SEAB Public Meeting

Meeting summary

This is the eighth Secretary of Energy Advisory Board (SEAB) convened under Secretary of Energy Jennifer M. Granholm. The meeting was physically conducted at DOE headquarters and virtually via WebEx. The meeting was called to order at approximately 1:00 p.m. EDT. The meeting was attended by members of Secretary Granholm's staff, 16 SEAB members, members of the public, and the press. Presentations were made discussing entrepreneurial ecosystems at DOE national laboratories.

Public Meeting

DFO David Borak opened the meeting by addressing housekeeping and logistical items attendant to the meeting. Mr. Borak then took roll call to ascertain a quorum of attendees for the record (16 of 18 members responded). Upon completion of roll call and noting a quorum, he introduced Dr. Arun Majumdar, the SEAB Chair, for meeting direction. The Secretary of Energy was then introduced for comments.

Secretary Granholm thanked David Borak for his efforts in convening the meeting as well as all of the SEAB members for their time and participation. She welcomed the three new SEAB members: Brad Markell, Suzanne Singer, and Chris Smith. The Secretary articulated her excitement for the upcoming meeting as it would cover the network of national laboratories and how they could serve as an ecosystem of innovation and invest in not only technology, but the people and communities in which they are located. She then turned the meeting over to the SEAB Chair, Dr. Arun Majumdar.

SEAB Chair Dr. Arun Majumdar thanked the Secretary and her staff for their service and for the time and energy invested in the energy transition. He welcomed the three new SEAB members, and then returned the floor to the Secretary for her comments.

Secretary Granholm again expressed her thanks to the board members and noted that former SEAB member Michael Skelly had to return to his company and could no longer participate on SEAB. She briefly outlined the impact that the CHIPS and Science Act, the Bipartisan Infrastructure Law, and the Inflation Reduction Act will have on DOE and the national laboratories in particular.

She listed some projects funded over the past six months which included the nuclear credit program, grid resilience, battery processing and recycling, creation of five industrial assessment centers, and energy efficiency programs. Among a sampling of opportunities that would likely be touched on in future meetings were clean hydrogen electrolysis program, transmission funding opportunities, smart grid investment matching program, preventing outages and resilience, and energy improvement in rural and remote areas. She also touched on the work happening at the Loan Program Office (LPO). She noted that DOE has emphasized the involvement of DOE laboratories in their communities. She then opened the floor for questions from SEAB members.

Norman Bay asked Secretary Granholm what her priorities were for grid modernization.

Secretary Granholm responded by noting the amount of energy that still needed to be added to the grid and discussed what the path of least resistance would be to get that done, including permitting challenges. She noted that technology around reconductoring was important as well because of the volume of energy that recondored lines could move.

Shirley Ann Jackson asked Secretary Granholm to provide the SEAB with her vision and view of how US competitiveness can be enhanced.

Secretary Granholm noted the increase in funding for DOE infrastructure and continued investment in the DOE facilities would be necessary in order for them to become modern, world-class facilities.

Arun Majumdar asked the Secretary what made her optimistic about the nation and what gave her pause for concern.

Secretary Granholm answered that what we are seeing happening because of policy made her very optimistic, noting 150 battery technology companies were coming to the US because of policy. She hoped that Congress would see the benefit of incentivizing home-grown energy initiatives.

Arun Majumdar followed up by asking the Secretary what she would like to see happen in the remaining days of the Administration.

Secretary Granholm replied that she wanted all of DOE's funding decided and out-the-door.

The first topic for discussion introduced by Chair Majumdar was the new working group dealing with laboratory entrepreneurship. Dr. Ali Douraghy moderated the discussion.

Ali Douraghy described how the national laboratories turn investments into entrepreneurial opportunities for the Nation. He further introduced the panel which included Dr. Amanda Stiles, Dr. Trisha Martinez, Dr. Tina Nenoff, and Dr. Dick Co.

Amanda Stiles spoke about Activate Transformation and from her position as a Fellow at Activate at LBNL. Her program works between government and the private sector transforming scientists into high-impact entrepreneurs. She mentioned that one of the projects had been featured on the television series "Shark Tank."

Tricia Martinez, from Techstars Industries of the Future in partnership with Oak Ridge National Laboratory and the University of Tennessee, noted that she had been a Fellow at DOE working across the 17 national laboratories and studying the struggles the new technology faced relative to its initial funding cycle. Her emphasis had been on bringing high technology startups to the Tennessee Valley region. She briefly described what Techstars does relative to technologists and startup companies. Specifically, the accelerator focuses on Artificial Intelligence, Quantum Information Sciences, Cleantech, advanced manufacturing and biotechnology.

Tina Nenoff, Science Advisor to the NNSA Administrator, briefly described the three national laboratories associated with NNSA. She highlighted her association with Sandia National Laboratory and how these laboratories in general, utilized Lab Directed Research and Development (LDRD) to enhance technology related to mission work. As well, she noted that they worked with all size organizations to meet the technology goals. Further, she highlighted the significant impact (in dollars) that LDRD had both on the local economies and nationwide, and presented examples of encouraging entrepreneurship through various programs within the NNSA laboratories.

Dick Co, Director of Chain Reaction Innovations (CRI) at ANL, presented on the Lab-Embedded Entrepreneurship Program (LEEP). He noted that ANL is one of the four nodes of the LEEP. He underscored his belief that science is the bedrock on which innovation feeds entrepreneurship. He stated that all four LEEP nodes are currently oversubscribed.

Ali Douraghy as moderator turned the floor back to the SEAB for questions. Madelyn Creedon asked how someone would know which LEEP node to go to. Dick Co responded that it would

depend upon which stage one was at as an innovator/inventor and described how the process worked at CRI. Tricia Martinez echoed the preceding remarks noting particularly how the accelerators need to support the innovators. Amanda Stiles briefly discussed how the Cyclotron Road node viewed the challenges of keeping the nodes healthy. Arun Majumdar and the Secretary asked about taking the problems of DOE to the innovator ecosystem and ask them to help solve the problems. Tricia Martinez postulated the idea of DOE pursuing a path similar to Broad Area Announcements (BAA) targeted at specific regions in the country which would cover the areas in which the Department needed to invest not only for the laboratories but for the nation. She further articulated that most of the funding for innovators had gone to the coastal States (New York and California were mentioned), but that there are thousands of eager innovators resident throughout the country.

Following this discussion, the Chair called a short break for the SEAB.

The second topic presented in the public meeting was on Regional Innovation, presented by the DOE Office of Technology Transfer (OTT).

Vanessa Chan, Chief Commercialization Officer for the Department of Energy and Director of OTT, introduced the topic by sharing her background and experience. She touched on OTT/Office of Science place-based projects, focused on the national labs; Liftoff Reports and Rural & Remote Primer; and examples of OTT Technology Commercialization Fund (TCF) and Place-based Projects to include:

- TCF Program: MAKEIT Prize
- TCF Program: C-4 Partnering Model
- TCF Program: Boost
- Energy Program for Innovation Clusters

She described OTT's mission as a backdrop to the presentation. The presentation highlighted the key building blocks of the innovation ecosystem while noting that the national labs had activities that were natural catalysts for regional hubs. She framed her comments concerning place-based innovation around the Lift-off reports, noting however that execution was at the local level. She addressed the TCF, which was established by Congress in 2005. Her presentation was followed by questions from the SEAB members which facilitated a discussion on entrepreneurship.

David Borak noted that there were no public comments registered, nor did any public participants have any questions.

The Secretary gave final comments on the substance of the SEAB meeting.

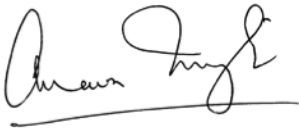
The SEAB Chair adjourned the meeting, thanking everyone for their participation.

Meeting Adjourned at approximately 3:30 pm EDT.

Respectfully Submitted:

David Borak
Designated Federal Officer

I hereby certify that these meeting minutes of the April 25, 2023, SEAB meeting are true and correct to the best of my knowledge.

A handwritten signature in black ink, appearing to read "Arun Majumdar", written over a horizontal line.

Dr. Arun Majumdar
Chair, SEAB