

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

April 9, 2024
12:30 p.m. - 4:00 p.m. EDT
Brookhaven National Laboratory
Upton, New York

Attendance:

Advisory Board Members: Arun Majumdar (Chair), Trenton Allen, Norman Bay, Roxanne Brown, John Dabiri, Kerry Duggan, Bryan Garcia, Paula Gold-Williams, Kate Gordon, Philip Giudice, Shirley Ann Jackson, Maria Pope, Adrianna Quintero, Suzanne Singer, Christopher Smith.

DOE attendees:

Dr. Vanessa Chan, *Director, Office of Technology Transitions*
David Borak, *SEAB Designated Federal Officer & Acting Director, Office of Secretarial Boards and Councils*
Helena Fu, *Director, Office of Critical and Emerging Technologies*
Alyssa Petit, *Office of Secretarial Boards and Councils*
Karen Skelton, *Senior Advisor, Office of the Secretary of Energy*
Paul Syers, *Advanced Materials and Manufacturing Technologies Office, Office of Energy Efficiency and Renewable Energy*
Oriana Tannenbaum, *Office of the Secretary of Energy*

Brookhaven National Laboratory (BNL) attendees:

Ann Emrick, *Deputy Director for Operations, BNL*
Dr. JoAnne Hewett, *Director, BNL*

Other attendees:

Arshad Mansoor, Chief Executive Officer, *Electric Power Research Institute*

Meeting summary

This is the 11th Secretary of Energy Advisory Board (SEAB) convened under Secretary of Energy Jennifer M. Granholm. The meeting was conducted in person at Brookhaven National Laboratory (BNL) in Upton (Long Island), NY and virtually via Zoom. The meeting was called to order at approximately 12:30 p.m. EDT. It was attended by U.S. Department of Energy (DOE) and BNL staff, SEAB members, members of the public and the press. Presentations were made on the topics of Balancing Increasing Power Demand with Renewables Supply; Tribal and Community Benefits Plans; Lab Entrepreneurship Ecosystems; Artificial Intelligence, and Grid Deployment. The presentations were followed by SEAB discussion and public comment.

Public Meeting

Designated Federal Officer (DFO) David Borak opened the meeting by reviewing the day's agenda and logistical items pertinent to the meeting. Mr. Borak then took roll call to ascertain a quorum of attendees for the record. Upon completion of roll call and noting a quorum, he thanked Secretary Jennifer Granholm, the SEAB members, the public listening to the meeting, and the BNL staff for their work in making the meeting a success. Mr. Borak then introduced Dr. Arun Majumdar, the SEAB Chair, for meeting direction.

Chair Majumdar thanked Mr. Borak for his efforts in coordinating the SEAB and Dr. JoAnne Hewitt and her BNL staff for hosting the SEAB at the laboratory. He also thanked the Secretary

and her team for their service. The Chair summarized the meeting agenda highlighting the efforts of the three working groups. The meeting was focused on Lab Entrepreneurship, Grid Modernization and Deployment, Artificial Intelligence, and new potential topics for the SEAB to examine (i.e., Tribal and Community Benefits Plans and Balancing Increasing Power Demand). The group heard brief welcoming comments by Karen Skelton, Senior Advisor to the Secretary of Energy, and Dr. JoAnne Hewitt, Director of Brookhaven National Laboratory. They were followed by the Secretary of Energy, the Honorable Jennifer M. Granholm.

Secretary Granholm thanked Chair Majumdar for his leadership, the SEAB members, and BNL, then began her remarks noting DOE has been making numerous announcements. She then highlighted announcements from the past five weeks. Specifically, several significant funding announcements for decarbonization of energy intensive industries, tax credits for communities under the Qualifying Advanced Energy Project Credit (48C) Program, conditional loan commitments to Holtec to restart a nuclear facility in Michigan, clean energy hydrogen projects, energy security in rural and remote communities, clean energy projects on former mine lands, and the Renew America’s Schools Program. Secretary Granholm noted these programs are incredible accomplishments that everyone may not be aware of. Therefore, she took the opportunity to highlight 50 years of unemployment under 4%, record low unemployment for African Americans and Latinos, etc. Additionally, she listed the four points of the industrial strategy – make America irresistible for investment, ensure communities that have been left behind (disproportionately/negatively affected) are first in line for funding, foster a strong workforce, and manufacture more in the U.S. Secretary Granholm noted that DOE needs help spreading this information. After her remarks, the Secretary answered a few questions from the SEAB and returned the floor to Chair Majumdar for the remaining agenda.

Chair Majumdar thanked Secretary Granholm and introduced **Maria Pope**, President and CEO, Portland General Electric, and **Arshad Mansoor**, President and CEO, Energy Power Research Institute, and to discuss the issue of balancing the increasing power demand especially due to AI and data centers. Ms. Pope and Mr. Mansoor gave their presentation “Balancing Increasing Power Demand with Clean Electric Supply to Enable Near-Term AI Datacenter Growth.” The key points were that there is rapid demand for power emerging, causing a land rush for data centers, and posing clean energy challenges and opportunities. They proposed a path to accelerate new solutions. Secretary Granholm stated that a concept paper or other framework would be beneficial to determine next steps. Chair Majumdar then announced the new working group focused on tribal and community benefits plans and handed it over to working group co-leads **Kate Gordon** and **Dr. Suzanne Singer**.

Kate Gordon and **Dr. Suzanne Singer** presented on the new working group: Tribal and Community Benefits Plans. The subject statement of their presentation was that the successful implementation of the Bipartisan Infrastructure Law, Inflation Reduction Act, and all current and future programs with the DOE depends on the Department’s ability to remove barriers and increase opportunities for communities and workers across America. Dr. Singer addressed internal operational support and external partnerships that could advance equity and economic opportunity. They acknowledged that the group needs a better understanding of long-term engagement opportunities, how progress is being evaluated, how feedback is being provided and used within DOE, etc. Ms. Gordon noted the working group will prepare an interim report with

recommendations in July, draft report in September, and presentation to the Secretary of Energy in October 2024. Secretary Granholm briefly discussed the pilot being developed in the Gulf using a third-party university as an intermediary.

Dr. Shirley Ann Jackson thanked the Laboratory Entrepreneurship team (Trenton Allen, Madelyn Creedon, Dr. John Dabiri, Philip Giudice, Tracy Mustin, Dr. Ravi Prasher, and Dr. Suzanne Singer), Mr. Borak for his support, and Chair Majumdar for charging the team to examine the entrepreneurship ecosystems across the National Lab complex. She explained startup companies are a key component of our innovation ecosystem and the current process is not advantageous for smaller companies and tended to favor larger enterprises. The working group made recommendations across six broad areas (organization and communication, funding and funding sources, external partnerships, metrics, recruitment and mentoring, and incentives for lab scientists). Secretary Granholm wanted to hear from Dr. JoAnne Hewitt and Dr. Vanessa Chan because they're currently working on these issues. Dr. Chan and Dr. Hewitt agreed with the report's findings. Dr. Hewitt briefly discuss the Cooperative Research and Development Agreement system, as an example, noting potential partnerships with industry ending during the process because it is too burdensome for them. Chair Majumdar noted there will be a vote on the recommendations after the public comment period.

Chair Majumdar provided an interim report on Artificial Intelligence (AI). He thanked the members (Dr. John Dabiri, Maria Pope, Kate Gordon, Adrianna Quintero, and Madelyn Creedon) of the AI Working Group. Chair Majumdar noted they received local community, industry, academia, and national lab presentations at the last SEAB meeting at SLAC National Accelerator Laboratory where AI research is happening. Chair Majumdar proposed that DOE should create an AI organization focused on the U.S.'s competitive innovation and national security. The working group coordinated with Helena Fu, Director of the Office of Critical and Emerging Technologies, and drafted a memo to identify the DOE's uniqueness in the AI space (i.e., computing facility, largest funding source for research in the physical sciences, national labs, etc.). Chair Majumdar indicated no vote today based upon new issues, and suggested there should be further deliberation and form a separate working group with multiple parallel efforts. Chair Majumdar then acknowledged the Grid Deployment Working Group and handed it over to Norman Bay.

Norman Bay thanked the members (Dr. Shirley Ann Jackson, Maria Pope, and Paul Gold-Williams) of the Grid Deployment Working Group. He mentioned there are nine recommendations, some of which DOE has considered or are already implemented. Ms. Pope emphasized the importance of and concerns with resource adequacy, and Ms. Gold-Williams discussed the need for more investment and infrastructure. She explained the importance for DOE to continue to stimulate markets and look for ways to enhance how the markets function. Chairman Majumdar opened for comments on the recommendations and, with no objections, move to vote after the public comment section.

Chair Majumdar moderated a lively discussion with Secretary Granholm and the SEAB members following the presentations. After a five-minute break, David Borak introduced the public comment session as the final part of the SEAB agenda. There were four members of the public that addressed the Secretary and the SEAB, each for three minutes.

Public Comment

Full public comments can be viewed on the SEAB website.

Joe Weiss: Mr. Weiss' comments focused on the need for more cybersecurity, and control systems to be used in manufacturing facilities.

Douglas Ellsworth: Mr. Ellsworth discussed concerns about the sun and coronal mass ejections. He noted there's a 12% change of being hit with a civilization-ending coronal mass ejection that could destroy unprotected transformers. Mr. Ellsworth indicated there are hardware solutions currently installed in live grid at the Tennessee Valley Authority, Western Area Power Administration, and the American Transmission Company.

Sean Pond: Mr. Pond discussed the economic impact to his community after the 2018 shutdown of the local coal mine and power plants. He shared a potential solution called the Eurovan uranium and mineral belt. However, there's a national monument proposal backed by an anti-mining organization.

David Moran: Mr. Moran is a private citizen from Delta, CO voicing concerns over vulnerabilities that face our centralized grid system and weakening magnetic fields that protect our earth from natural disaster and climate change.

Tommy Waller: Mr. Waller's comments focused on the defective protection standard established for protection of the grid against harmful ground-induced currents, and the solution his nonprofit organization provides.

David Borak noted that there were no other public comments registered.

Chair Majumdar indicated there will now be a vote on two of the three reports, and provided procedures (i.e., yes, or no, recuse). **Results:** *Lab Entrepreneurship Ecosystem – Yes (with one recusal, Kerry Duggan); Grid Modernization and Deployment – Unanimous Yes.* Chair Majumdar will forward both reports to DOE, but the vote on AI will be delayed based upon earlier discussion. He provided some post-meeting summary remarks.

Secretary Granholm thanked everyone for their participation in the meeting, noting that there were great discussions and very specific recommendations.

Chair Majumdar noted the next SEAB would be virtual tentatively scheduled for July 30, 2024. Absent any further comments, he then adjourned the meeting at 4:00 p.m. EDT.

Meeting Adjourned at approximately 4:00 p.m. EDT.

Respectfully Submitted:

David Borak
Designated Federal Officer, Secretary of Energy Advisory Board

I hereby certify that these meeting minutes of the April 9, 2024, SEAB meeting are true and correct to the best of my knowledge.

A handwritten signature in black ink, appearing to read "Arun Majumdar", is written over a horizontal line. A vertical line is positioned to the right of the signature.

Dr. Arun Majumdar
Chair, Secretary of Energy Advisory Board