

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

**Advisory Board Members:**

In attendance: Arun Majumdar, Chair; Madelyn Creedon, Vice Chair; Trenton Allen, Norman Bay, Roxanne Brown, John Dabiri, Kerry Duggan, Brian Garcia, Paula Gold-Williams, Denise Gray, Brad Markell, Tracy Mustin, Maria Pope, Adrienne Quintero, Suzanne Singer.

**Date and Time:** July 26, 2023, 10:30 a.m.- 2:55 p.m. EDT  
**Location:** Princeton Plasma Physics Laboratory (PPPL), Plainsboro, NJ.  
**Purpose:** Secretary of Energy Advisory Board (SEAB) Meeting  
**SEAB Staff:** David Borak, Designated Federal Officer and Acting Director of Secretarial Boards and Councils.

**Meeting summary**

This is the ninth Secretary of Energy Advisory Board (SEAB) convened under Secretary of Energy Jennifer M. Granholm. The meeting was physically conducted Princeton Plasma Physics Laboratory (PPPL) in Plainsboro, NJ and virtually on Zoom. The meeting was called to order at approximately 10:30 a.m. EDT. The meeting was attended by members of Secretary Granholm's staff, 15 SEAB members, members of the public and the press. Presentations were made on the topics of Workforce in the Clean Energy Economy; Job Training Needs for the Clean Energy Economy; and Educational Investment toward Long-Term Needs. The presentations were followed by SEAB discussion and public comment.

**Public Meeting**

**Designated Federal Officer (DFO) David Borak** Mr. 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 (15 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.

**Chair Majumdar** thanked David Borak for his efforts in coordinating the SEAB and to PPPL for hosting the SEAB at the laboratory. The Chair summarized the preceding day's meeting highlighting the efforts of the two working groups, Grid Deployment and Lab Entrepreneurship Ecosystems. The current meeting was focused on the workforce and the requirements that will be needed moving forward into a clean energy environment. The Chair also summarized the upcoming day's meeting agenda. The group heard brief comments by PPPL senior staff. They were followed by the Secretary of Energy, the Honorable Jennifer Granholm.

**Secretary Granholm** began her remarks by reminding everyone that achieving 100% clean energy by 2035 was the Department's goal or North Star. She then highlighted several significant dollar amounts from the Bipartisan Infrastructure Law (BIL) and the Inflation Reduction Act (IRA) that had been awarded to various states, agencies, and organizations in pursuit of the goal. Additionally, she listed several Basic Ordering Agreements (BOA) that had been put in place by the Department, likewise in pursuit of the goal of 100% clean energy. She cited all of this as a demonstration of "Biden-omics in action." After her remarks, the Secretary entertained a few questions from the SEAB and returned the floor to Chair Majumdar for the remaining agenda.

**Chair Dr. Arun Majumdar** Chair Majumdar thanked the Secretary and introduced Dr. Erin Mayfield, Hodgson Family Assistant Professor of Engineering, Dartmouth College for her presentation on the Workforce and Clean Energy Economy.

**Dr. Mayfield** presented on Labor transitions to meet U.S. climate targets, highlighting the labor demand induced by the IRA. She proceeded to explain how that would reshape the energy workforce, stressing how place-based policies can redistribute labor demands and benefits. She concluded by discussing the gaps in current policies and programs which currently existed relative to support the labor needed to meet climate goals. She was followed by David Foster, Distinguished Associate, Energy Futures Initiative.

**David Foster's** presentation focused on an analysis of the IRA and key findings on workforce demand, quantitatively highlighting job quality from the IRA as well as energy job losses and gains with related skills. Important to the presentation was the discussion of employment scenarios associated with reaching net zero by 2050 and the regional variation attendant thereto. He noted in closing that 1.5 million additional jobs would be created by the IRA by 2030 and that employer participation in workforce transition planning would be essential for current employees in key sectors.

Following Mr. Foster's presentation, the topic of Energy Workforce and Training Needs for the Clean Energy Economy was addressed. Three members of the Secretary's senior staff presented briefings. **Gene Rodrigues**, Assistant Secretary for Electricity, **Dr. Michael Goff**, Principal Deputy Assistant Secretary of the Office of Nuclear Energy, and **Betony Jones**, Director of the Office of Energy Jobs presented an overview of energy workforce needs.

**Adele Ratcliffe**, Director, Innovation Capability and Modernization Office, Office of the Assistant Secretary of Defense for Industrial Base Policy gave the final presentation dealing with workforce educational investment. She explained how the investment portfolio of the National Imperative for Industrial Skills initiative was addressing all segments of the workforce development ecosystem. The presentation included deep dives into electricity and nuclear energy and was followed by a robust discussion with members of the SEAB.

Following a break for lunch, the SEAB launched into another series of presentations around the topic of Workforce: Educational Investment Toward Long Term Needs. The presentations and discussions were moderated by **Denise Gray**.

**Erica Swinney Staley**, Executive Director, Manufacturing Renaissance presented on Educational Investments Needed for Getting More Young People into STEM + M Career Pathways. The subject statement of her presentation was that it takes a village to build a diverse, manufacturing talent engine. She was followed by Dr. Thomas Kurfess, Executive Director, Georgia Tech Manufacturing Research Institute.

**Dr. Kurfess** presented on workforce development in manufacturing and how to engage the next generation of potential manufacturing workers. One of the key challenges highlighted was the lack of awareness of opportunities and career paths available in the manufacturing field. Additionally, he noted that the pace of technological change coupled with the skills gap and talent retention were adding to the challenge of maintaining and growing a robust workforce for the manufacturing sector.

**Professor Rakesh Agrawal**, Distinguished Professor, Purdue University, Forney Hall of Chemical Engineering was the final presenter. His presentation was entitled Workforce Development for a Clean Energy Economy. A key point in his presentation was that it seemed as if supply chain issues had not fully been considered. Professor Agrawal discussed how the nature of the workforce is different today, the fact that manufacturing has image problems and communication is the key to rectifying the image issue, and what educational institutions could do and what the Department of Energy could encourage to buttress future workforce development.

**Chair Majumdar** next moderated a lively discussion with Secretary Granholm and the SEAB members around the aforementioned presentations. Following this discussion, David Borak introduced Public Comment as the final part of the SEAB agenda. There were five members of the public that addressed the Secretary and the SEAB, each for three minutes.

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

**Amber McCoy:** Ms. McCoy was from the International Brotherhood of Carpenters (IBC). Her request was for DOE to ensure that the union was fully integrated into the opportunities associated with infrastructure modernization.

**Dr. Chou Yan:** Dr. Yan is a consultant with Princeton NuEnergy, a spinoff company from Princeton University. The company is focused on recycling old cathode/anode materials into the new energy storage source production lines.

**David Moran:** Mr. Moran is a private citizen from Delta, CO voicing concern over the letter of discouragement sent to Energy Field Security relative to their not proceeding with an intended project for rural Colorado.

**Matt Capece:** Mr. Capece is with the United Brotherhood of Carpenters. He raised a question over the enforcement of labor standards especially on the tax incentive projects.

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

**Chair Majumdar** gave some post-meeting summary remarks.

**Secretary Granholm** thanked everyone for their participation in the meeting, noting that there were great discussions and future thought presented. She commented on the ‘homework’ that the Department needed to do in response the meeting topics.

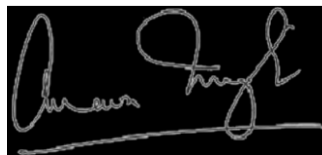
**Chair Majumdar** noted that Tracy Mustin would be leaving the SEAB after the meeting and thanked her for your service and contributions. He also noted the next SEAB is tentatively scheduled for October 24, 2023. Absent any further comment, he then adjourned the meeting at 2:55 pm, EDT.

**Meeting Adjourned** at approximately 2:55 pm EDT.

Respectfully Submitted:

David Borak  
Designated Federal Officer

I hereby certify that these meeting minutes of the July 26, 2023, SEAB meeting are true and correct to the best of my knowledge.

A handwritten signature in black ink, appearing to read 'Arun Majumdar', is centered on the page. The signature is written in a cursive style with a horizontal line underneath.

Dr. Arun Majumdar  
Chair, Secretary of Energy Advisory Board