

Summary Minutes of the

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

Advisory Board Members:

Present via phone: Vicki Hollub, Chair; Norman R. Augustine; Pedro Pizarro; Samantha Ravich; Thomas Rosenbaum; Richard Mies; Kay Coles James; Dan Yergin; Michael Whatley; Sean McGarvey; Marvin Fertel; David Lockwood; Ankur Jain; Bill Samuel; Scott Campbell

Absent: Kirstjen Nielsen

Date and Time:

May 21, 2020, 2:00-4:00 p.m. EDT

Location:

Virtual Meeting with dial-in for SEAB members and the general public.
DOE Headquarters for DOE Senior Leadership (James V. Forrestal Building, Program Review Center)

Purpose:

Secretary of Energy Advisory Board (SEAB) Meeting

SEAB Staff:

Kurt Heckman, Designated Federal Officer and Director of Secretarial Boards and Councils; Allison Mills, Deputy Director, Office of Secretarial Boards and Councils

Speakers:

Secretary of Energy Dan Brouillette
NNSA Administrator Lisa Gordon-Hagerty
Under Secretary for Science Paul Dabbar
Under Secretary of Energy Mark Menezes

Meeting summary

This is the second Secretary of Energy Advisory Board (SEAB) convened under Secretary Dan Brouillette. Due to the COVID-19 pandemic and travel restrictions, the SEAB meeting was conducted at the Department Of Energy Headquarters (James V. Forrestal Building) by teleconference, with the SEAB members and many public participants calling in to an AT&T conference number. The call was monitored by many domestic and international press outlets. SEAB members heard from Secretary Brouillette, the National Nuclear Security Administration (NNSA) Administrator Lisa Gordon-Hagerty who presented on NNSA pandemic operations; Under Secretary for Science Paul Dabbar who presented remarks dealing with the involvement of DOE in the COVID-19 response, and; Under Secretary of Energy Mark Menezes discussed DOE and the oil market. The meeting adjourned after opportunity for public comment.

Public Meeting

Designated Federal Officer Kurt Heckman Mr. Heckman opened the meeting, thanked the SEAB Members and the DOE Staff for attending, reviewed the meeting agenda, and provided brief logistical comments regarding the teleconference format.

SEAB Chair Vicki Hollub Chairwoman Hollub opened the meeting by extending her good wishes to all of the conference participants and to those monitoring the teleconference. She thanked Secretary Brouillette and President Trump for not only saving jobs in the oil and gas industry during the pandemic, but also providing the country the opportunity to maintain its energy independence. She then yielded back to Secretary Brouillette for his remarks.

Secretary Dan Brouillette Secretary Brouillette opened his remarks by thanking the SEAB Chair for her remarks and welcomed all of the SEAB members to the call, extending his best wishes to all of the participants on the call, as well as their families, with respect to their good health during the pandemic. He thanked the SEAB members for their leadership in helping to save jobs in the oil and gas market, stating that although many jobs had been lost, the situation would have been worse had it not been for the action of the leaders in the oil and gas industries together with decisive and quick movement by President Trump, and others in the Administration.

The Secretary continued by conveying his hope that the markets had seen the low point with respect to the price of oil. He then again thanked the leaders within the oil and gas market for their support, and for the strong commitment and vital perspectives that each member of the SEAB provided to him and the leadership of DOE. He also mentioned the vital support that the national laboratories were providing in the approach that continued to ensure the health and safety of the American people, and across the DOE enterprise. He cited that out of the approximately 140,000 people that make up the DOE enterprise, there were only 50 confirmed cases, as of May 20th. He underscored the DOE as the home of the national laboratories, and that several of DOE's laboratories; Argonne, Berkeley, Lawrence Livermore, Los Alamos, Oak Ridge, Idaho National Labs, and Sandia were all partners in the COVID-19 High Performance Computing Consortium, with DOE and IBM serving as co-chairs for the consortium.

He then stressed the commitment to eradicate the COVID-19 virus, and while meeting that challenge, the nation's critical infrastructure remained fully operational. Additionally, that leadership was very focused through the Department and the offices dealing with electricity and cybersecurity to ensure protection of the grid.

Next, the Secretary provided a high-level view of his involvement regarding discussions with his counterparts in Saudi Arabia and Russia regarding their energy supply decisions. He stated that as those discussions began to conclude, it was clear that head-of-state involvement would be necessary to bring the situation to closure.

He went on to discuss the President's direction to him regarding the opening of the strategic petroleum reserve for storage purposes and of capitalizing on the lower price of oil to fill up the reserves. He highlighted how the action was beneficial to the American taxpayer and to the nation. Further, he was pleased to announce that the government was under contract for approximately 23 million barrels of oil, having received roughly one-third of the amount, with the rest expected through June of this year.

Yet another topic was the Small Business Innovation Research (SBIR) and the Small Business Technology Transfer (STTR) programs. The Secretary mentioned that on May 20th, he announced 256 grants totaling \$53 million to 211 small businesses in 35 states and the District of Columbia. He challenged the SEAB to help him identify and highlight some of the critical work being done at the labs through grants in connection with these programs, and to help him to brand and market this type of work so that customers from within the Department as well as elsewhere could take better advantage of them.

Finally, Secretary Brouillette discussed the Department's role in the National Space Council, and his excitement with the Department's involvement in finding fuel sources to propel upcoming work in space with respect to the moon, Mars, and beyond. He also spoke of the Department being mentioned specifically at the Council meeting, and of his upcoming trip to Florida to witness the launch of the SpaceX spacecraft.

National Nuclear Security Administration (NNSA) Administrator, Lisa Gordon-Hagerty

Administrator Gordon-Hagerty began by introducing herself to the teleconference. She stated that it was a pleasure for her to speak with the SEAB again, and to report that the 50,000-person strong nuclear security enterprise was safe and secure, and that she was proud to announce that during the COVID-19 pandemic, NNSA had delivered on all of the major milestones as well as all of the tasked requirements. She reminded the SEAB members of the three NNSA missions; responsibility for the safe, secure, and reliable operation of the US nuclear deterrent; responsibility for fighting or combatting nuclear threats across the spectrum of prevention; and providing the U. S. Navy with militarily effective nuclear fuel.

She reminded the SEAB members that NNSA had eight labs, plants, and sites, three of which (the three national security laboratories) were participating in the COVID response. Although many operations within the enterprise had gone to a maximum telework posture, there were some missions throughout the NNSA enterprise that could not. She cited as examples, PF-4 and Y-12 operations, as well as other non-nuclear work being accomplished by the Kansas City plant. In framing her presentation, Administrator Gordon-Hagerty highlighted the 'heavy lift' challenge that NNSA was dealing with in that there had been only one major modernization program within the stockpile in the last 20 years, but now NNSA was looking at 5 major modernization programs and activities over the next 15 to 20 years. She stated that NNSA was only able to accomplish all of this because of the resiliency and innovativeness of the 50,000 men and women across the nuclear security enterprise, and how important it was to continue to invest significantly in the workforce.

In highlighting the mission, she assured the SEAB members that NNSA had been a full partner with the Department, and that NNSA was responsible for two of the three primary mission essential functions (PMEF). PMEF number one was to maintain the safety and security of the United States nuclear weapons stockpile, and special materials throughout the enterprise. She highlighted the sustainment of 100% safe and secure positions in both safety and security across all plants, and throughout the secure transportation mission area. She underscored the work of Dr. Charlie Burton as the Deputy Administrator for defense programs, referring to him as the 'conductor' orchestrating the mission essential functions at all the plants and labs that service NNSA.

In discussing PMEF number two, the Administrator discussed the requirement to execute their responsibilities under presidential directive in providing operational support and decision making, as well as protecting against and responding to any nuclear or non-nuclear incidents whether at home or abroad. She touched on how NNSA was fully coordinated across the national security enterprise, but more importantly, across the entirety of the Department.

Another aspect of the partnership between NNSA and DOE was the coordination effort for personal protective equipment (PPE). This equipment is vital to NNSA operations, and of course in conducting scientific research in direct support of the COVID-19 response, and in cleanup of materials across the Department's sites. Ms. Gordon-Hagerty mentioned how fortunate the enterprise and the department were to have Mr. Jim McConnell, who was leading the effort to coordinate PPE across the entire Department.

Ms. Gordon-Hagerty next explained how NNSA was dealing with the workload through staggered shifts, and by engaging the workforce for lessons learned during the COVID-19 pandemic. She touched upon two stories that illustrated the engagement of the workforce. The first dealt with how NNSA was using 'tabletop' exercises to obtain solutions for the myriad of challenges that face not only NNSA, but in some cases the local communities as well. Another story touched on how the workforce at UPF, in order to observe the social distancing requirements and to deal with staggered work shifts in the construction effort at UPF, hired local unemployed school bus drivers and community bus services to bring the workforce to and from the site.

Amidst the COVID-19 pandemic, the Administrator mentioned the 20th anniversary of the establishment of NNSA by Congress, and how it has maintained very good relationships and close ties with the communities in which they operate. She indicated that at no time during the various shelter in place orders throughout the country was NNSA impacted. She praised the lab and site leadership, along with DOE leadership for the great communication with federal, state, and local elected officials which facilitated the continued operations during the various state and local shelter in place orders.

She then proceeded to highlight the critical role that the three national security labs were playing in the COVID-19 response effort. Among these were the computational screening of published diagnostics on the virus, and the work with the COVID-19 genome analytics site for information tracking to help accelerate the discovery of therapeutic antibodies or antivirals. Finally, she mentioned the searchable data base that had been constructed by Lawrence Livermore National Laboratory (LLNL) to share with the COVID-19 research and scientists and the general public, worldwide.

She closed by again citing the numerous contributions that the labs and sites in NNSA were making to the effort, and how the sharing of best practices was paramount. Specifically, Ms. Gordon-Hagerty mentioned the sharing of best practices in leveraging NA-40 and the emergency operations team, so that they were best postured to respond on behalf of the entire Department. She remained extremely optimistic as, from her vantage point in leading the NNSA, she has had the opportunity to witness the incredible judgement, expertise, and leadership across both NNSA and the Department.

Under Secretary for Science, Paul Dabbar

Mr. Dabbar began his comments noting that overall, the Department continued in the COVID-19 environment, keeping occupational health of the workforce in mind during this time. At the EM complex, for the first time since the Manhattan Project, the Department was standing up three

unique nuclear facilities at the same time; the Salt Waste Processing Facility in South Carolina, the Integrated Waste Treatment Unit in Idaho, and the Direct Feed Low Activity Waste Facility (DF LAWF) in Washington State. He also spoke of the announcement by the Secretary and Governor Newsom of California of May 20th, in which it was announced that 10 of the remaining 18 buildings at the former Santa Susana Field Laboratory in California were set for demolition.

He next discussed the DOE COVID-19 response, and how the science complex along with the 17 national laboratories was deeply engaged in the big four areas of science: physics, biology, materials, and chemistry. He articulated briefly how the labs could attack different topics utilizing their great capabilities and underscored the complex's long history with biology.

As a follow-on topic, the Under Secretary for Science touched on the COVID-19 high performance computing consortium, its membership, and how it was aggregating the algorithmic research relative to the virus. He also touched on the research proposal process and the associated peer review process, the aim of which was to aggregate and accelerate ongoing research projects dealing with the COVID-19 virus. Further, Mr. Dabbar mentioned the supercomputing capability at Oak Ridge and Livermore, which in combination with academia and the private sector, had more than \$1 billion in hardware and had matched 56 of 105 research proposals.

The Under Secretary for Science then spoke of bringing in members of the international community, and how in addition to the computing resources within the Department, DOE was coordinating with the NSC in aggregating patent and testing data. Additionally, the Department was communicating with the Department of Health and Human Services (HHS), National Institutes of Health (NIH), Centers for Disease Control (CDC), Veterans Administration (VA), and the Department of Defense (DOD), to look at ongoing research efforts with respect to the virus. Likewise, he mentioned that Argonne National Laboratory (ANL) was collating and reviewing public data from the United Kingdom (UK). Some other areas of on-going research mentioned were Ribonucleic Acid (RNA) sequencing analysis, discovering various molecular targets utilizing ion imaging, and investigating the efficacy of current drug solutions relative to the virus. Mr. Dabbar shared that the research efforts of the national laboratories had revealed that more than 50 drugs with other uses had been identified during the COVID-19 work.

Mr. Dabbar then highlighted Dr. Chris Fall and his team's effort regarding some specifics relative to the COVID-19 response. The three areas under study include looking at drugs that could perform as inhibitors and block the virus from entering human cells; inhibitors that block the virus response to the replication cycle; and finally, inhibitors aimed at human targets to modulate immune response.

At this juncture, several participating members exchanged comments and thoughts while awaiting the Under Secretary of Energy.

Dan Yergin recognized what the Department had done to stabilize the oil and gas industry, and commented on how amazing the extent of scientific capabilities and leadership brought to the COVID crisis by the Department were.

Tom Rosenbaum wondered how Under Secretary Dabbar was thinking about the interface with NIH and other federal organizations.

Under Secretary Dabbar commented that DOE had already begun thinking about the interaction with NIH, overall capabilities on the bio side, and what we wanted to invest more money into. He said it was in an early stage as the budget was only passed in December, but it had come into the budget last year for the first time in scale. He went on to discuss how the NIH had capabilities, CDC had capabilities, and DOE had various capabilities which were already built, so we were executing on it. He then posed the questions of what the sort of lab structures and user facilities we wished we could have, and how we would set up structures across government. He then deferred to the Secretary for comment.

Secretary Brouillette mentioned that Senator Lamar Alexander and others were interested in this.

Pedro Pizarro expressed his thanks to the Secretary and DOE for the efforts during the pandemic, especially with respect to the electric sector. His question for the Secretary dealt with ill-meaning actors trying to take advantage of the situation in areas such as cybersecurity.

Secretary Brouillette indicated that although there had been a slight increase, he felt good about the coordination in place.

Under Secretary Dabbar confirmed and reinforced the Secretary's previous comments.

Pedro Pizarro again, on behalf of all his colleagues, expressed great satisfaction with the level of partnership between DOE and the industry.

Michael Whatley suggested it might be a good idea to put together a series of thoughtful analyses regarding the long-term impacts to the energy sector and the economy from the lock down.

Secretary Brouillette agreed with Mr. Whatley and thought perhaps the SEAB could help with it. Following a comment by Chair Vicki Hollub, the Secretary indicated that he would work with Kurt Heckman and her, to organize a subcommittee or working group to do just that.

Samantha Ravich commented on the uptick in other parts of technology regarding counterfeits adding to the supply chain challenges.

Kurt Heckman shared that the Working Groups were making progress, and that they had also reached out to NASA, to discover new things and how the SEAB working groups could further support NASA. He also asked if the Secretary would elaborate a bit on how to help people better understand the DOE mission.

Secretary Brouillette indicated that what he'd like to do is to create a working group that might help us understand branding a little better and perhaps once we could do that work, we could perhaps utilize our talents to help ourselves understand how we might market some of this work

that's being done within the labs much more effectively than we're doing it today.

His thought was that he thought DOE had some really good things happening within the department, and he wanted to tell the American people about it.

Kay Coles James from the Heritage Foundation commented that although the Foundation did not market products or services, it did market ideas, and she felt she could be very helpful to any working group that might undertake this.

Under Secretary of Energy, Mark Menezes

Mr. Menezes began his remarks by articulating his appreciation for the work being done by the members of the SEAB. He shared the experience of his first conference after coming to the Department in 2017. The conference had been in India and it was then that Saudi Arabia and Russia announced that they would control the world's oil market. By their over-producing and then curtailment, an opportunity was set up for U. S. oil producers to step in and dominate the market. Mr. Menezes referred to the President's policy that U. S. companies should produce crude oil to meet global demand. To that end, he stated that the United States was now number one in the production of oil and natural gas. He remarked on how this had changed the geopolitics of the world, and that Saudi Arabia and Russia had oversupplied the market.

The Under Secretary then turned to the discussion of the statutory requirements regarding the federal government's limitation of holding 1 billion barrels in the strategic oil reserve, and that the government was currently working to have it filled at about 713 million barrels. However, to keep the US market stable, DOE had offered storage for 23 million barrels, and that there were active Requests for Proposals (RFP) to lease space, in order to accommodate excess US production.

Public Comment Period

There were no requests for public comment.

Meeting Adjourned

Meeting adjourned at 3:47 p. m., EDT.

Respectfully Submitted:
Kurt Heckman
Designated Federal Officer

I hereby certify that these minutes of the May 21, 2020 SEAB meeting are true and correct to the

best of my knowledge.

A handwritten signature in black ink, appearing to read "V. Hollub". The signature is fluid and cursive, with a long horizontal stroke at the end.

Vicki Hollub
Chair, Secretary of Energy Advisory Board