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Committee on Laying the Foundation for New and Advanced Nuclear Reactors in the United States

PUBLIC AGENDA for VIRTUAL MEETING #4
Wednesday and Thursday, May 26-27, US EASTERN TIME

Meeting Topic: ARDP Demo Winners TerraPower and X-Energy, and a discussion with the Department of Defense on Project Pele

Public Livestream: https://livestream.com/accounts/7036396/events/9676249
Submit questions and public comments here: www.nationalacademies.org/deps-meeting-comments

Wednesday, May 26th

11:00 a.m. – 11:10 a.m. Welcome and opening remarks
Richard Meserve, Committee Chair, and **Kasia Kornecki,** Study Director

****Each presentation will be ~20-30 minutes, followed by Q&A and discussion with the study committee****

11:10 a.m. – 12:10 p.m.
X-Energy Demo Project Overview: Technologies and Costs
Eben Mulder and **Ben Reinke**

12:15 p.m. – 1:15 p.m.
TerraPower Natrium Demo Project Overview: Technologies and Costs
Chris Levesque and **Tara Neider**

1:15 p.m. Adjourn for closed sessions

In lieu of a public comment period, we encourage viewers to submit their comments using the link above. All comments will be made available to the committee and will be included in the public access file for this study.

Note: The data gathering session of this meeting to be held on May 26, 2021, from 1:30 pm – 3:30 pm, EDT, will not be open to the public under Subsection 15(b)(3) of the Federal Advisory Committee Act, 5 U.S.C. App. The Academy has determined that to open this session to the public would disclose information described in 5 U.S.C. 552(b).

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Thursday, May 27th

Public Livestream: https://livestream.com/accounts/7036396/events/9676249
Submit questions and public comments here: www.nationalacademies.org/deps-meeting-comments

11:00 a.m. – 11:10 a.m. Welcome and opening remarks
Richard Meserve, Committee Chair, and **Kasia Kornecki,** Study Director

11:10 a.m. – 12:15 p.m.
Advanced reactors in the military: Overview of activities and Project Pele
Eric Wesley and **Jeff Waksman**

12:30 p.m. Adjourn for closed sessions

In lieu of a public comment period, we encourage viewers to submit their comments using the link above. All comments will be made available to the committee and will be included in the public access file for this study.

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Speaker Biographies

Eben Mulder As X-energy's Chief Nuclear Officer, Eben Mulder, PhD, leads development of X-energy's pebble bed high-temperature gas reactor (HTGR) technology. In this executive leadership role, he serves as overall lead for the project, guiding the architectural framework for the Xe-100 reactor project, the R&D roadmap for advanced fuel-cycle designs, core thermal-hydraulic flow path design, and reactivity control and shutdown layout and design. His duties extend to overseeing techno-economical coherence of the overall design consideration. An expert in nuclear reactor design, Eben has authored more than 30 technical papers and presented more than 55 keynote addresses and invited talks worldwide. Before joining X-energy, Eben was CEO and Director of Steenkampskraal Thorium Ltd. (Centurion, South Africa), responsible for the oversight of advanced small pebble bed high-temperature reactors and advanced fuel cycle designs. Prior to that, Eben was Chief Scientific Officer and Chief Nuclear Consultant at PBMR (Pty) Ltd., South Africa's clean technology Pebble Bed Modular Reactor program. He has also served as Professor in Northwest University's (Potchefstroom, South Africa) School of 9 Mechanical and Nuclear Engineering, and has presented numerous international short courses. Eben holds undergraduate and master's degrees in mathematics from the University of Port Elizabeth (South Africa) and a BS in Applied Mathematics from University of Pretoria (South Africa), and a Doctor of Engineering in Nuclear

Engineering from Rheinisch-Westfälische Technische Hochschule (Aachen, Germany). He is a member of the South African Council for Natural Scientists (SACNAS), an affiliate member of the Institution of Nuclear Engineers, a Member of the American Nuclear Society (ANS), and an elected member of the South African Academy of Sciences and Art.

Tara Neider, Senior Vice President (Program Development) and Program Director of Natrium Reactor Program TerraPower, LLC Tara Neider is Senior Vice President of Program Development and Director of the Natrium program. She has overall responsibility for the development of sodium fast reactors at TerraPower and leads the Natrium Advanced Reactor Demonstration. Neider comes to TerraPower with more than 30 years of experience in nuclear engineering, project management and licensing. Previously, she worked as senior vice president of Back End Business Development and Sales at AREVA, Inc. Neider had responsibility for directing back end customer relations for AREVA in North America, developing an overall fuel and decommissioning strategy for the company, and pushing sales revenues for AREVA and AREVA subsidiary Transnuclear, Inc. to double their sales targets. For four years prior, Neider served as President and CEO of AREVA Federal Services. She established the overall strategy for AREVA Federal Services. In this role, she held board positions on major Department of Energy project teams, including the MOX Fuel Fabrication Facility, Hanford Tank Operations, Yucca Mountain, Savannah River Remediation and Waste Isolation Pilot Plant. Neider spent much of her early career with Transnuclear, Inc. She began as a project manager and design engineer and rose to serve as President and CEO of the company. Neider holds a Bachelor of Science and a Master of Science degree in Mechanical Engineering, both from the Massachusetts Institute of Technology (MIT). She also earned an MBA in Finance and International Business from New York University.

Eric J. Wesley (Lieutenant General, U.S. Army, Retired) has transitioned from the Army as the Deputy Commanding General of Army Futures Command. In this capacity he was charged with developing the future Army and publishing a strategy to achieve it. He currently serves as the EVP of Flyer Defense, LLC, a leading developer of electric combat vehicles where he is building a consortium of industry partners who will electrify the future battlefield. Prior to his last assignment in the Army, LTG Wesley served for over 20 years in senior leadership positions from the battalion to the Army enterprise level. LTG Wesley has also served frequently as a strategic planner. He served in the White House on the NSC staff, and he twice served as the lead planner in Afghanistan. He also led the task force that designed and formed the newest 4-star command – Army Futures Command. And he twice served on the Chief of Staff of the Army's transition team in 2015 and 2019. A graduate of the United States Military Academy at West Point, LTG Wesley holds two masters degrees in security policy. He is a Distinguished Graduate from the Army War College.

Jeff Waksman is a program manager for the Strategic Capabilities Office, within the Office of the Secretary of Defense, where he leads Project Pele. Prior to this job his prior federal service was for Congress and for NASA. In Congress he was a Science & Technology Fellow, and he then served as a Senior Policy Adviser to the NASA Administrator on issues of strategy, planning, and interagency regulatory reform. Prior to his federal service he worked in the private sector for IBM, where he was a staff scientist working on advanced semiconductor programs such as quantum computing and heterogeneous integration. He has a Masters Degree in Nuclear Engineering and a PhD in Physics, both from the University of Wisconsin-Madison.