Pathways for New Nuclear Development: A Workshop

Committee

David A. Petti

Chair

Dr. David Petti is a graduate of the MIT Nuclear Engineering Department and has been recognized as a Fellow at both Idaho National Laboratory and the American Nuclear Society. He recently retired from the Idaho National Laboratory after 35 years of nuclear technology experience for both fission and fusion systems. He was the director of the Nuclear Fuels and Materials Division at INL and was also the chief scientist of the Nuclear Science and Technology Directorate. Most recently, he was the Executive Director of MIT's study entitled The Future of Nuclear Energy in a Carbon-constrained World. He is currently a member of the Nuclear Regulatory Commission's Advisory Committee on Reactor Safeguards and a Senior Editor for the Journal of Nuclear Materials. He was elected to be a National Academy of Engineering member in 2022.

Steven Arndt

Member

Steven Arndt currently serves as an Adjunct Professor of Nuclear Engineering at the University of Tennessee. Previously he spent 4 years as a Distinguished R &D staff member at Oak Ridge National Laboratory where his research involves advanced reactor design readiness and 31 years as a senior scientist and manager at the Nuclear Regulatory Commission (NRC), leading key research efforts in the areas of digital instrumentation and control, software reliability, emergency response, and severe accident analysis. Prior to his work at the NRC, Dr. Arndt was a Professor at the U.S. Naval Academy. Dr. Arndt holds a B.S. in engineering physics and a M.S. and Ph.D. in nuclear engineering all from The Ohio State University, where he was honored by the faculty of the College of Engineering in 2004 as a Distinguished Alumnus. Dr. Arndt also holds an M.S. in reliability engineering from the University of Maryland. Dr. Arndt is a Fellow of the American Society of Mechanical Engineers (ASME), the American Nuclear Society (ANS), the Association for the Advancement of Science (AAAS), the American Society for Quality (ASQ) and the National Society of Professional Engineers (NSPE). Dr. Arndt has served in leadership roles in several professional societies. He was the 68th President of ANS.

Kara Colton

Member

Ms. Colton is the Director of Nuclear Policy at the Energy Communities Alliance (ECA), the national non-profit organization of local governments impacted by Department of Energy (DOE) activities. She oversees the activities of the organization on nuclear energy issues including research and development of new nuclear technologies, waste classification, reprocessing, interim storage, nuclear workforce development, siting nuclear facilities and high-level waste management. She is also the co-author of A Community Handbook on Nuclear Energy: Understanding Nuclear Energy and Alternatives for the Future, a publication aimed at helping local communities identify and understand the myriad of issues associated with hosting a nuclear facility and the role they can play in its development. Prior to joining ECA, Ms. Colton was the Program Director of the Energy and Environment Division at the National Governors Association's Center for Best Practices. Her responsibilities included working with Governors' designees and DOE to ensure the responsible cleanup of federal nuclear facilities, to highlight and encourage successful state strategies for encouraging energy efficiency and renewable energy resources, transmission siting and regional energy planning.

Laura Hermann

Member

Laura Hermann is a change management strategist with global energy infrastructure systems expertise. Her background relates to technology adoption and supply chain development. She works across public-private partnerships to facilitate investment, systems change and market creation. As an advisor to investors and their portfolio companies, Laura helps navigate necessary activities related to technology transfer, stakeholder engagement, and market definition. She develops curricula and advises national leaders on efforts in numerous countries to establish new civilian nuclear programs. She is a consulting expert at the International Atomic Energy Agency, MIT's Center for Advanced Nuclear Studies and a twenty-year member of the American Nuclear Society. Laura has facilitated planning exercises to help small and mid-sized companies in international joint venture formation, supporting investor relations and social licensing efforts. She designed and implemented crisis response programs for multiple entities and has recruited and coached subject matter experts to explain complex science to non-technical audiences. Her across numerous jurisdictions has tailored evidence-based approaches to improving outcomes related to regulatory conflict, environmental clean-up and armed conflict. She studied anthropology and organizational behavior at Loyola University Chicago and received a Masters in Science at Northwestern University. She is an associate at Rock Lake Advisors and sits on the board of the Billy Fiske Foundation.

Julie Kozeracki

Member

Julie Kozeracki is the Director of Strategy for the United States Department of Energy Loan Programs Office, which provides attractive debt financing for high-impact, large-scale clean energy infrastructure projects. LPO has provided loan guarantees to Vogtle, the first new start-to-finish commercial nuclear reactor constructed in the US in 35 years, and to Palisades, which would be the first restart of a closed nuclear power plant in the US. She leads the cross-DOE effort on Advanced Nuclear Pathways to Commercial Liftoff, serving as lead author of the Nuclear Liftoff Report, which identifies pathways for tripling US nuclear capacity by 2050. Prior to DOE, she was a Principal with the Boston Consulting Group, where she was a leader in the firm’s federal and operations practices. She holds a BS in Economics from the Wharton School and a BA in Cognitive Neuroscience from the University of Pennsylvania.

Adam Stein

Member

Dr. Adam Stein is the Director of the Nuclear Energy Innovation program at the Breakthrough Institute. His current focus is on evidence-based research to find innovative solutions to nuclear energy's technology, policy, risk, and economics. He also studies complex interdisciplinary systems and decision-making in risk, resilience, and clean energy systems. He has spent almost twenty years in the energy sector as an engineer, researcher, and consultant, working with every major energy source over that time. He earned a Ph.D. and M.S. in Engineering and Public Policy from Carnegie Mellon University, an MBA, and degrees in Mechanical Engineering and Nuclear Engineering.

Aditi Verma

Member

Aditi Verma (she/her) is an Assistant Professor in the Department of Nuclear Engineering and Radiological Sciences at the University of Michigan. She was previously a Stanton Nuclear Security Postdoctoral Fellow at the Harvard Kennedy School’s Belfer Center for Science and International Affairs. Aditi worked at the OECD Nuclear Energy Agency before her appointment at the Belfer Center. Aditi is broadly interested in how nuclear energy systems and their institutional infrastructures can be designed in more creative, participatory, and inclusive of lay perspectives. To this end, her research group at the University of Michigan works towards developing a more fundamental understanding of the early stages of the design process to improve design practice and pedagogy and the tools with which designers of complex sociotechnical systems work. In her position at the OECD NEA, Aditi’s work, endorsed and funded by policymakers from the NEA member countries, focused on bringing epistemologies from the humanities and social sciences to academic and practitioner nuclear engineering, thus broadening their epistemic core. At the NEA, Aditi also led the establishment of the Global Forum on Nuclear Education, Science, Technology, and Policy. Aditi holds undergraduate and doctoral degrees in Nuclear Science and Engineering from MIT.