



Meeting of the

President's Council of Advisors on Science and Technology (PCAST)

October 18-19, 2021

Invited Speaker Biographies

October 18, 2021 (in order of presentation)

GINA MCCARTHY, MS

Gina McCarthy is the first National Climate Advisor—the President's chief advisor on domestic climate policy—and leads the White House Office of Domestic Climate Policy focused on mobilizing a whole-of-government approach to tackling the climate crisis, creating good-paying, union jobs, and securing environmental justice. Previously, she served as 13th Administrator of the Environmental Protection Agency and then as President and CEO of the Natural Resources Defense Council (NRDC). One of the nation's most trusted and accomplished voices on climate issues, she has been at the forefront of environmental and public health progress in a variety of leading roles for over three decades. In her time leading the EPA, McCarthy oversaw successful efforts to reduce greenhouse gases, mitigate air pollution, conserve critical water sources, and safeguard vulnerable communities from chemical hazards. She spearheaded the Obama-Biden Administration's Clean Power Plan, which set America's first-ever national standards for lowering carbon emissions from power plants, and helped pave the way for the Paris Climate Agreement. Prior to her role with the NRDC, McCarthy was a professor at the Harvard T.H. Chan School of Public Health and currently serves as chair of the board of directors of the Harvard Center for Climate, Health, and the Global Environment. Throughout her career, McCarthy has advised five administrations of both Democratic and Republican Massachusetts governors on environmental matters, and she served as Commissioner of the Connecticut Department of Environmental Protection prior to being appointed by President Obama to head up the EPA's Air Office. As EPA administrator, she pursued innovative global collaborations with the United Nations and the World Health Organization, and on global efforts to address pollution. Born and raised in Boston, McCarthy graduated from the University of Massachusetts Boston and earned a master of science at Tufts University.

MICHAEL OPPENHEIMER, PHD

Michael Oppenheimer is the Albert G. Milbank Professor of Geosciences and International Affairs at Princeton University and Director of the Center for Policy Research on Energy and the Environment at Princeton's School of Public and International Affairs. Oppenheimer has been an author of reports of the Intergovernmental Panel on Climate Change (IPCC), which won the Nobel Peace Prize in 2007, since its First Assessment Report. He served most recently as a coordinating lead author on IPCC's Special Report on Oceans, Cryosphere and Climate Change, published in September 2019, and now serves as a Review Editor of its Sixth Assessment Report. Oppenheimer is a science advisor to the Environmental Defense Fund and member of the board of directors of two other NGOs, Climate Central and the Climate Science Legal Defense Fund. His current research focuses on sea level rise, migration, and other impacts of climate change from the perspectives of science, adaptation, and risk. Much of his work has centered on defining the concept of "dangerous" climate change, a key aspect of the UN Framework Convention on Climate Change and the Paris Agreement. Oppenheimer is the author of over 200 articles published in professional journals and is co-author (with Robert H. Boyle) of a 1990 book, *Dead Heat: The Race against the Greenhouse Effect*. He is also coauthor of the book *Discerning Experts: The Practices of Scientific Assessment for Environmental Policy*, published in 2019. He joined the Princeton faculty in 2002 after more than two decades with the Environmental Defense Fund, where he served as chief scientist and manager of the Climate and Air Program. Earlier, he was an Atomic and Molecular Astrophysicist at the Harvard-Smithsonian Center for Astrophysics.

JANE LUBCHENCO, PHD

Jane Lubchenco is on loan from Oregon State University to serve as Deputy Director for Climate and Environment at the White House Office of Science and Technology Policy. An ecologist with expertise in the ocean, climate change, biodiversity, and interactions between the environment and human well-being, she brings leadership experience in academia, civil society, philanthropy, and government. She served as the Under Secretary of Commerce for Oceans and Atmosphere and Administrator of NOAA from 2009-2013, and from 2014-2016, as the first U.S. State Department Science Envoy for the Ocean, serving as a science diplomat to China, Indonesia, South Africa, Mauritius and the Seychelles. She served ten years on the National Science Board (1996-2006). Lubchenco is an elected member of the National Academy of Sciences, the American Philosophical Society, The American Academy of Arts and Sciences, The Royal Society, The World Academy of Sciences, The Chilean Academy of Sciences, and the Pontifical Academy of Sciences. She has been President of AAAS, the Ecological Society of America, and the International Council for Science (ICSU). She co-founded three organizations that enable scientists to be better communicators and engage more effectively with society. She has received numerous awards including 23 honorary doctorates, a MacArthur Fellowship, and the highest honors given by the National Academy of Sciences (the Public Welfare Medal), the National Science Foundation (the Vannevar Bush Award), and the Department of Commerce (Gold Medal Award), and the highest honor given to a civilian by the U.S. Coast Guard (Distinguished Public Service Award). A native of Denver, Colorado, Lubchenco received a B.A. in biology from Colorado College, a M.S. in zoology from the University of Washington, and a Ph.D. in ecology from Harvard University. She has held faculty appointments at Harvard University, Stanford University, and Oregon State University.

JESSE D. JENKINS, PHD

Jesse D. Jenkins is an assistant professor at Princeton University in the Department of Mechanical & Aerospace Engineering and the Andlinger Center for Energy & the Environment with courtesy appointments at the School of Public and International Affairs and the High Meadows Environmental Institute. Jenkins is a macro-scale energy systems engineer with a focus on the rapidly evolving electricity sector and leads the Princeton ZERO Lab, which focuses on improving and applying optimization-based energy systems models to evaluate low-carbon energy technologies and generate insights to guide policy and planning decisions. He earned a PhD in Engineering Systems and SM in Technology & Policy from the Massachusetts Institute of Technology and was previously a postdoctoral environmental fellow at Harvard University. Jenkins serves on the National Academies of Science Engineering and Medicine expert committee on *Accelerating Decarbonization of the U.S. Energy System* and was a principal investigator and lead author of Princeton's landmark *Net-Zero America* study. Jenkins has delivered invited testimony to multiple Congressional committees and his research is regularly featured in major media outlets. He also spent six years as an energy and climate policy analyst prior to embarking on his academic career and continues to provide technical analysis and policy advice for non-profit organizations and policy makers and early-stage technology ventures working to accelerate the deployment of clean energy.

ARUN MAJUMDAR, PHD

Arun Majumdar is the Jay Precourt Provostial Chair Professor at Stanford University, a faculty of the Department of Mechanical Engineering and Senior Fellow and former Director of the Precourt Institute for Energy. In October 2009, Majumdar was nominated by President Obama and confirmed by the Senate to become the Founding Director of the Advanced Research Projects Agency - Energy (ARPA-E), where he served until June 2012. Between March 2011 and June 2012, he also served as the Acting Under Secretary of Energy. In 2010, he served on Secretary Chu's Science Team to help stop the leak of the Deep Water Horizon (BP) oil spill. Majumdar currently serves as the Chair of the Advisory Board of the U.S. Secretary of Energy, Jennifer Granholm. He served as the Vice Chairman of the Advisory Board of U.S. Secretary of Energy, Ernest Moniz, and was a Science Envoy for the U.S. Department of State. After leaving Washington, DC and before joining Stanford University, Majumdar was the Vice President for Energy at Google, where he led the effort to create technologies and businesses at the intersection of data, computing and the electricity grid. Majumdar is a member of the U.S. National Academy of Sciences, U.S. National Academy of Engineering, and the American Academy of Arts and Sciences. Prior to joining the Department of Energy in 2009, Majumdar was the Almy & Agnes Maynard Chair Professor of Mechanical Engineering and Materials Science & Engineering at University of California, Berkeley and the Associate Laboratory Director for energy and environment at Lawrence Berkeley National Laboratory. Majumdar received his bachelor's degree in Mechanical Engineering at the Indian Institute of Technology, Bombay and his Ph.D. from the University of California, Berkeley.

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RICHARD HAWRYLUK, PHD

Richard Hawryluk has recently retired from his position as Associate Director for Fusion at the Princeton Plasma Physics Laboratory (PPPL). Among other responsibilities, he was Interim Deputy Director for Operations from October 2018 to January 2019 and Interim Director of PPPL from August 2017 to July 2018. Hawryluk came to the Lab in 1974 after receiving a Ph.D. in physics from MIT. He headed the Tokamak Fusion Test Reactor at PPPL, then the largest magnetic confinement fusion facility in the United States, from 1991 to 1997 and led the deuterium-tritium experiments. Hawryluk oversaw all research and technical operations as Deputy Director of the Laboratory for 11 years from 1997 to 2008. He then spent several years working on research and management topics associated with ITER, as head of the ITER and Tokamaks Department from 2009 to 2011 and from 2013 to 2016, and as Deputy Director General for the Administration Department of ITER from 2011 to 2013. He has received numerous awards during his career including an American Physical Society Prize for Excellence in Plasma Physics, U.S. Department of Energy Distinguished Associate Award, a Kaul Foundation Prize for Excellence in Plasma Physics Research and Technology, and a Fusion Power Associates Leadership Award. He is fellow of the American Association for the Advancement of Science since 2008 and of the American Physical Society since 1986; he also chairs the board of editors of Nuclear Fusion, a monthly journal devoted to controlled fusion energy. He has chaired or participated in many national and international reviews and advisory panels and most recently the National Academy of Science, Engineering and Medicine Committee on the Key Goals and Innovations Needed for a U.S. Fusion Pilot Plant.

ERIN SIKORSKY, MIA

Erin Sikorsky is Director of the Center for Climate and Security (CCS) and the International Military Council on Climate and Security. Previously, she was the Deputy Director of CCS. Prior to joining the organization, Sikorsky served as Deputy Director of the Strategic Futures Group on the National Intelligence Council in the U.S., where she co-authored the quadrennial Global Trends report and led the U.S. intelligence community's environmental and climate security analysis. She is also the founding chair of the Climate Security Advisory Council, a Congressionally-mandated group designed to facilitate coordination between the intelligence community and U.S. government scientific agencies. Sikorsky worked in the U.S. intelligence community for over a decade, where she led teams covering a range of issues related to the Middle East and Africa. Sikorsky is an adjunct professor at George Mason University, a visiting fellow at University of Pennsylvania's Perry World House, and serves on the advisory board of the Smith College Center for Environment, Ecological Design and Sustainability. She has published articles in a range of outlets, including *War on the Rocks*, *The Hill*, *Just Security*, and *The Cipher Brief*. Sikorsky earned a Master of International Affairs at Columbia University and a B.A. in government from Smith College.