

The National Academies of SCIENCES • ENGINEERING • MEDICINE

Carbon Utilization Webinar Series Speaker Biographies

Day 1: CO₂-Derived Products

Panel 1

Marcus Extavour, XPRIZE

Dr. Marcus Extavour combines his passion for communication and outreach with his background in engineering and physics to work on transformative innovation that can benefit humanity. A widely published scientist and innovation practitioner, he is the youngest member of the U.S. National Academies of Science Board on Energy & Environmental Systems, University of Michigan's Global CO₂ Initiative, University of Ottawa's Institute on Governance, Carbontech Leadership Council of New York University's Carbon to Value Program, and Neste's Advisory Council. Dr. Extavour's work has been featured in the various articles including *the New York Times* and *the Economist*, and in video and television at *PBS NOVA*, *BNN Bloomberg*, and *TVO's The Agenda*. He has also given talks around the world, including at SXSW Eco, the Clean Energy Ministerial, and many others. He was named a 2019 VERGE Vanguard Fellow as one of 20 dreamers, pioneers, entrepreneurs and others leading the clean economy. As Vice President of Energy & Climate at XPRIZE Foundation he leads development and execution of the foundation's portfolio of energy and climate change innovation programs, including the \$100M XPRIZE Carbon Removal funded by Elon Musk, and the NRG COSIA Carbon XPRIZE. His work in the private sector includes work in the electricity markets risk group at Ontario Power Generation, Nortel Networks, and the Council of Canadian Academies. Extavour has also shaped government policies and practices supportive of innovation in clean energy and critical materials as congressional AAAS Science & Technology Policy Fellow in the U.S. Senate Committee on Energy & Natural Resources. Dr. Extavour holds a Ph.D. and MSc. in quantum optics and atomic physics and an undergraduate degree in engineering science from the University of Toronto.

Rahul Shendure, CarbonBuilt

Rahul Shendure is the CEO of CarbonBuilt, a low carbon concrete technology company with origins at UCLA's Institute for Carbon Management. Rahul has spent almost all of his 26+ year career focused on reducing humankind's environmental impact. Rahul serves as Board Chair of Oscilla Power, a pioneering ocean energy technology company he co-founded in 2009, and as a Director of the Composite Recycling Technology Center, a non-profit commercializing products from carbon fiber scrap. He is active early-stage investor with a portfolio consisting of more than 40 companies, 80% of which are focused on climate solutions. Previously, Rahul served as co-founder, CEO and Board Chair of Bellwether Bio, a cancer diagnostics company acquired by Guardant Health in 2019. Earlier, Rahul was the Vice President of Product Marketing and first business hire at Amyris, a pioneering industrial biotechnology company, and led product management at Ballard Power Systems, a pioneering hydrogen fuel cell company. He started his career with engineering and operational assignments at General Electric. Rahul has a BS in Chemical Engineering from MIT and an MBA from Harvard. He's the proud father of two opinionated teenagers.

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Karl Haider, Covestro

Karl Haider is a Research Fellow in Group Innovation at Covestro LLC, one of the world's largest suppliers of polycarbonate and polyurethane products. He is responsible for industry/academia collaboration in North America. In his current role, he is focused on external collaboration, to develop more sustainable polymer products and technologies to shift Covestro's products from a primarily linear to circular economy. He has over 30 years of experience in the polyurethanes industry, primarily in R&D and innovation functions. He is an inventor on >25 granted U.S. Patents and has contributed to the development of products and processes for the production of polyurethane elastomers, optical materials, binders, rigid foam, and polyols. He is a co-inventor of Covestro's technology for co-polymerization of CO₂ and propylene oxide, which is the basis for Covestro's Cardyon® family of polyether- carbonate polyol building blocks. Karl is Fellow of the American Chemical Society and has served on several ACS advisory and national award selection committees. Karl currently serves on university advisory committees for West Virginia University, Virginia Tech, and the University of Minnesota. Karl holds a BS in Chemistry from Juniata College, and M.S. and Ph.D. Degrees in Organic Chemistry from The Ohio State University.

Panel 2

Julio Friedmann, Columbia University

Dr. Julio Friedmann is a Non-Resident Fellow at the Center on Global Energy Policy at Columbia University SIPA. He currently serves as Chief Scientist at Carbon Direct. He recently served as Principal Deputy Assistant Secretary for the Office of Fossil Energy at the Department of Energy where he was responsible for DOE's R&D program in advanced fossil energy systems, carbon capture, and storage (CCS), CO₂ utilization, and clean coal deployment. His expertise includes Large-Scale Carbon Management, CO₂ removal, hydrogen production and use, CO₂ recycling, Oil and Gas production, and international clean energy engagements. He has held positions at Lawrence Livermore National Laboratory, including Chief Energy Technologist, where he worked for 15 years. He is also the CEO of Carbon Wrangler, LLC, is an advisor to Carbon Direct, and a Distinguished Associate at the Energy Futures Initiative. Dr. Friedmann is one of the most widely known and authoritative experts in the U.S. on carbon removal (CO₂ drawdown from the air and oceans), CO₂ conversion and use (carbon-to-value), hydrogen, industrial decarbonization, and carbon capture and sequestration. In addition to close partnerships with many private companies and NGOs, Julio has worked with the U.S. State Department, the U.S. Environmental Protection Agency, and the U.S. Treasury. Dr. Friedmann received his Bachelor of Science and Master of Science degrees from the Massachusetts Institute of Technology (MIT), followed by a Ph.D. in Geology at the University of Southern California. He worked for five years as a senior research scientist at ExxonMobil, then as a research scientist at the University of Maryland.

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Jennifer Holmgren, LanzaTech

Dr. Jennifer Holmgren is CEO of LanzaTech. Under Jennifer's guidance, LanzaTech is developing a variety of platform chemicals and fuels, including the world's first alternative jet fuel derived from industrial waste gases. She is also the Director and Chair of the LanzaJet Board of Directors. Prior to LanzaTech, Jennifer was VP and General Manager of the Renewable Energy and Chemicals business unit at UOP LLC, a Honeywell Company. While at UOP, she was a key driver of UOP's leadership in low carbon aviation biofuels. Jennifer has authored or co-authored 50 U.S. patents and more than 30 scientific publications and is a member of the National Academy of Engineering. She is on the Governing Council for the Bio Energy Research Institute in India. The institute has been set up by the DBT (Department of Biotechnology, Indian Government) and IOC (Indian Oil Corporation). She also sits on the Advisory Council for the Andlinger Center for Energy and the Environment at Princeton University, the Halliburton Labs Advisory Board, and the Founder Advisory for The Engine, a venture capital fund built by MIT. Jennifer has an honorary doctorate from Delft University of Technology. Jennifer holds a B.Sc. degree from Harvey Mudd College, a Ph.D. from the University of Illinois at Urbana-Champaign and an MBA from the University of Chicago.

André Bardow, ETH Zürich

André Bardow has been full professor for Energy and Process Systems Engineering at ETH Zurich since 2020. He is also the director of the Institute for Energy and Climate Research (IEK-10) at Forschungszentrum Jülich, Germany. Previously, he was a professor and head of the Institute of Technical Thermodynamics at RWTH Aachen University (2010-2020); and associate professor at TU Delft (2007-2010). He was a visiting professor at the University of California, Santa Barbara (2015/16). He earned his Ph.D. degree at RWTH Aachen University. Prof. Bardow is a fellow of the Royal Chemical Society and chairs the Technical Committee for Thermodynamics of VDI – The Association of German Engineers. He received the Recent Innovative Contribution Award of the CAPE-Working Party of the European Federation of Chemical Engineering (EFCE) in 2019, and the PSE Model-Based Innovation (MBI) Prize by Process Systems Enterprise in 2018. He was the first recipient of the Covestro Science Award. In 2009, he received the Arnold-Eucken-Award of the VDI-Society for Chemical Engineering (GVC). He is the recipient of RWTH's "FAMOS für Familie" award for family-friendly leadership, and of teaching awards at RWTH and TU Delft.

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Cathy Tway, Johnson Matthey

Cathy Tway is the Technology and Applications Director for Catalyst Technologies in Johnson Matthey. In her role, Cathy is responsible for a global team of scientists and engineers specializing in catalysis, process technologies, and engineering design. She ensures customer driven R&D and engineering is delivered efficiently and provides technical input, oversight, and direction. Prior to joining Johnson Matthey, Cathy held positions at Dow, Celanese, Solutia, and Akzo Nobel, holding both R&D leadership and individual contributor roles. Her more than 25 years of industrial experience covers the entire catalyst project life cycle including front-end opportunity identification and creation of new technologies, process scale-up, commercialization and plant support. She has served on numerous review panels, boards and committees including the committee for the National Academies of Sciences, Engineering, and Medicine consensus study report on “Gaseous Carbon Waste Streams Utilization.” Currently, she is serving as Vice Chair of the National Academies of Sciences, Engineering, and Medicine’s study on “Enhancing the U.S. Chemical Economy through Investments in Fundamental Research in the Chemical Sciences.” Cathy earned her BS degree in chemistry from Wichita State University and her Ph.D. in physical inorganic chemistry from the University of Nebraska-Lincoln.

Jean-Paul Lange, Shell

Panel 3

Bill Tumas, National Renewable Energy Laboratory

Bill Tumas is responsible for overall leadership, management, technical direction, and workforce development of the materials, chemical, and computational science capabilities at NREL, spanning fundamental and applied R&D for renewable energy and energy efficiency. Tumas has been actively engaged in collaborative research and a range of technical management and leadership positions for over 30 years in industry and at national laboratories. He joined NREL in December 2009 as director of the Chemical and Materials Science Center. He has led a number of program development activities and created a number of multi-institution and international collaborations. He has also led two Energy Frontier Research Centers on materials discovery: the Center for Next Generation of Materials Design and the Center for Inverse Design. Prior to NREL, Bill was at Los Alamos National Laboratory for 17 years, where his last position was program director for Applied Energy Programs (DOE's Energy Efficiency and Renewable Energy, Fossil Energy, and Electricity Delivery and Energy Reliability offices).

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Etosha Cave, Twelve

Dr. Etosha Cave is co-founder and CSO of Twelve, a new kind of chemical company built for the climate era that is making everyday products from air, not oil. Etosha earned a B.S. in engineering from Franklin W. Olin College as a member of the first class. She subsequently worked at the McMurdo Station in Antarctica, where she tested a spectroscopy system that was being designed for a NASA Rover mission. She went on to earn a Ph.D. in mechanical engineering from Stanford University. Etosha is an Accel Innovation Scholar, an Echoing Green Fellow, and a Smithsonian Institution Innovator to Watch. Twelve was supported in their seed stage by Activate with an entrepreneurial fellowship at Lawrence Berkeley National Laboratory and by Elemental Excelsior.

Ed Rightor, American Council for an Energy-Efficient Economy

Edward Rightor is the Director of the Industrial Program. Prior to joining ACEEE, Ed worked at Dow Chemical. He earned a doctorate in chemistry from Michigan State University and a bachelor of science in chemistry from Marietta College. He joined ACEEE in June, 2019. Prior to joining ACEEE, held several leadership roles at Dow Chemical during his 31-year career. Through 2017, he served as the director of strategic projects in Dow's Environmental Technology Center. In this role he worked with Dow businesses, operations and corporate groups, to reduce air emissions, waste, freshwater intake, and energy use. He also served as the facilitator of Dow's Corporate Water Strategy Team, led teams to establish and pursue Dow's 2025 Sustainability Goals, including the first ever water goal. Working across global industrial associations, he spearheaded a roadmap for the chemical industry on paths to reduce energy and greenhouse gas (GHG) emissions.

Gay Wyn Quance, Solid Carbon Products

Gay Wyn Quance is the CEO and co-founder of Solid Carbon Products LLC. Solid Carbon Products makes carbon dioxide (CO₂) profitable by converting CO₂ into valuable durable carbon products and pure water through a patented, low cost, catalytic converter process – the Noyes Process. This changes the economics of CO₂ mitigation from a cost burden to a profit stream. Being able to profitably deploy CO₂ as a feedstock means that the economics of carbon capture can be driven by profit. The Noyes Process is net carbon negative, providing a positive environmental impact. Ms. Quance has over 30 years of experience working with technology platforms and applications in the electric, gas and water utilities markets. Serving as Vice President – Professional Services, implementing large-scale Smart Grid deployments for electrical utilities, enterprise resource management applications for nuclear power generating stations, aluminum and paper manufacturers. Prior to this she was a commissioning and reliability engineer at Ontario Hydro Nuclear in Canada, ensuring safe, reliable operation. She holds her Honors Bachelor of Science, Chemistry & Geology from Carleton University.

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Day 2: CO₂ Utilization Infrastructure

Panel 1

Jesse Jenkins, Princeton University

Jesse D. Jenkins is an Assistant Professor at Princeton University with a joint appointment in the Department of Mechanical and Aerospace Engineering and the Andlinger Center for Energy and Environment. He is also an affiliated faculty with the Center for Policy Research in Energy and Environment at the Princeton School of Public and International Affairs and an associated faculty at the High Meadows Environment Institute. Jesse leads the Princeton ZERO Lab - the Zero carbon Energy systems Research and Optimization Laboratory -- which conducts research to improve decision-making to accelerate rapid, affordable, and effective transitions to net-zero carbon energy systems. Jesse completed a PhD in Engineering Systems ('18) and MS in Technology and Policy ('14) at the Massachusetts Institute of Technology and a BS in Computer and Information Science ('06) at the University of Oregon.

Michael Drescher, Equinor

Panel 2

Marcus Extavour, XPRIZE

Dr. Marcus Extavour combines his passion for communication and outreach with his background in engineering and physics to work on transformative innovation that can benefit humanity. A widely published scientist and innovation practitioner, he is the youngest member of the U.S. National Academies of Science Board on Energy & Environmental Systems, University of Michigan's Global CO2 Initiative, University of Ottawa's Institute on Governance, Carbontech Leadership Council of New York University's Carbon to Value Program, and Neste's Advisory Council. Dr. Extavour's work has been featured in the various articles including *the New York Times* and *the Economist*, and in video and television at *PBS NOVA*, *BNN Bloomberg*, and *TVO's The Agenda*. He has also given talks around the world, including at SXSW Eco, the Clean Energy Ministerial, and many others. He was named a 2019 VERGE Vanguard Fellow as one of 20 dreamers, pioneers, entrepreneurs and others leading the clean economy. As Vice President of Energy & Climate at XPRIZE Foundation he leads development and execution of the foundation's portfolio of energy and climate change innovation programs, including the \$100M XPRIZE Carbon Removal funded by Elon Musk, and the NRG COSIA Carbon XPRIZE. His work in the private sector includes work in the electricity markets risk group at Ontario Power Generation, Nortel Networks, and the Council of Canadian Academies. Extavour has also shaped government policies and practices supportive of innovation in clean energy and critical materials as congressional AAAS Science & Technology Policy Fellow in the U.S. Senate Committee on Energy & Natural Resources. Dr. Extavour holds a Ph.D. and MSc. in quantum optics and atomic physics and an undergraduate degree in engineering science from the University of Toronto.

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Geoff Holmes, Carbon Engineering

Geoff has worked on Direct Air Capture of CO₂ since 2008, both in an academic capacity and at Carbon Engineering. Geoff has led much of CE's air contactor research and design, has been involved with several generations of prototyping and testing, and has published on air contactor design and general techno-economics of DAC and fuel synthesis. Geoff now leads CE's Regulatory Engagement and public outreach efforts.

Jennifer Holmgren, LanzaTech

Dr. Jennifer Holmgren is CEO of LanzaTech. Under Jennifer's guidance, LanzaTech is developing a variety of platform chemicals and fuels, including the world's first alternative jet fuel derived from industrial waste gases. She is also the Director and Chair of the LanzaJet Board of Directors. Prior to LanzaTech, Jennifer was VP and General Manager of the Renewable Energy and Chemicals business unit at UOP LLC, a Honeywell Company. While at UOP, she was a key driver of UOP's leadership in low carbon aviation biofuels. Jennifer has authored or co-authored 50 U.S. patents and more than 30 scientific publications and is a member of the National Academy of Engineering. She is on the Governing Council for the Bio Energy Research Institute in India. The institute has been set up by the DBT (Department of Biotechnology, Indian Government) and IOC (Indian Oil Corporation). She also sits on the Advisory Council for the Andlinger Center for Energy and the Environment at Princeton University, the Halliburton Labs Advisory Board, and the Founder Advisory for The Engine, a venture capital fund built by MIT. Jennifer has an honorary doctorate from Delft University of Technology. Jennifer holds a B.Sc. degree from Harvey Mudd College, a Ph.D. from the University of Illinois at Urbana-Champaign and an MBA from the University of Chicago.

Robert Niven, Carboncure

Robert Niven is the Chair and Chief Executive Officer of CarbonCure Technologies, the global leader in carbon dioxide (CO₂) removal technologies for the concrete industry. Rob founded the company in 2012 with the simple goal of making concrete sustainability both profitable and easy for industry. With Rob at the helm, CarbonCure and its partners are achieving their mission to reduce 500 million tonnes of CO₂ emissions annually by 2030. Under his direction, CarbonCure has won numerous international awards honouring leadership in sustainability, innovation and technology development including the \$20M NRG COSIA Carbon XPRIZE, Cleantech Group's 2020 North American Company of the Year, the BloombergNEF New Energy Pioneers Award and recognition as one of the Top 100 Global Cleantech Companies for seven consecutive years. Featured as one of Canada's Top 40 Under 40 for his leadership in CO₂ utilization, Rob holds an MSc in Environmental Engineering from McGill University and a BSc in Chemistry from the University of Victoria, British Columbia. In his spare time, Rob is an avid outdoors enthusiast and devotes his time to nature conservation and environmental community events.

Kristjana Kristjánsdóttir, Carbon Recycling

Kristjana has extensive international experience in the energy industry and carbon to value projects. In her role as Director of Projects for CRI, she has developed and managed CO₂ to methanol projects, including business development, strategic planning and bringing together diverse groups of stakeholders to achieve carbon capture and utilisation for production of sustainable methanol with CRI's Emission-to-Liquids technology solutions.

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Panel 3

Brett Perlman, Center for Houston's Future

Brett Perlman is currently CEO of the Center for Houston's Future, a non-profit that focuses on developing consensus-based solutions to important social issues for the entire Houston region. Before his appointment, he was a Fellow at Harvard's Kennedy School of Government and at the Harvard Advanced Leadership Initiative (ALI), an innovative program composed of experienced global leaders focused on developing new approaches to the world's most pressing social issues. Brett has also been recognized for his roles as a business person, corporate director and public official in the energy and telecommunications industries. He holds advanced degrees in public policy from Harvard University and in law from the University of Texas. He was a Phi Beta Kappa graduate of Northwestern University.

Nico de Meester, Porthos Project

Nico de Meester is external relations manager for the Porthos project. The Porthos project is the first Carbon Capture, Transport and Storage project in the Netherlands. The project is being developed in the port of Rotterdam. There are four launching customers: Shell, Air Products, Air Liquide and Exxon. The aim of Porthos is create an open access pipeline transport system to store captures CO₂ in depleted gas fields offshore. Nico has been working in the Utility, Energy and Chemical sector for over ten years and is experienced in stakeholder engagement and project management. As external relations manager, Nico organizes the dialogue with stakeholders on the subject of CCS. He has a broad perspective on the topic (i.e. societal, policy and technical).

Heleen De Coninck, Eindhoven University of Technology

Heleen de Coninck is a full Professor of Socio-Technical Innovation and Climate Change at Eindhoven University of Technology since 2020, and an Associate Professor in Innovation Studies and Sustainability at the Department of Environmental Science at Radboud University Nijmegen's Faculty of Science since 2012. As a researcher, Heleen's main research focus is on the role of innovation and technology in the international climate negotiations, on policy for making energy-intensive industry climate-neutral, and on the viability and societal dynamics of new technologies for 1.5C-mitigation pathways. Heleen was a Coordinating Lead Author in the IPCC Special Report on Global Warming of 1.5C, and is currently a Coordinating Lead Author in the AR6. She was part of the IPCC Working Group III Technical Support Unit during the AR4 cycle, where she coordinated the IPCC Special Report on CCS. She was also a Lead Author in the climate mitigation part of AR5 (2014).

Bilal Ahmad, Northern Endurance Partnership

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Day 3: CO₂-Derived Products

Panel 1

Al Collins, Oxy

Al Collins is the Vice President of Public Policy at Houston-based Occidental Petroleum Corporation (Oxy), an international oil and gas exploration and production and chemical company. Oxy is one of the largest oil and gas companies in the United States based on equity market capitalization and the world's largest user of carbon dioxide (CO₂) to enhance oil recovery (EOR). With over 33 years of experience, Mr. Collins has held a variety of positions in the environmental policy, engineering and management fields. His experience spans air, water, hazardous waste, toxics, and superfund issues, both on behalf of regulators and those being regulated. He has participated in environmental negotiations with federal, state, and local agencies, and has extensive experience with regulatory and legislative development. At Occidental, Mr. Collins is involved in a variety of issues, including hydraulic fracturing, endangered species, remediation, toxics and EOR using CO₂. Mr. Collins was very involved in Occidental's development of the first U.S. Government approved plan for quantifying the amount of CO₂ geologically stored during EOR.

Kevin Poloncarz, Covington & Burling, LLP

Kevin Poloncarz co-chairs the Covington & Burling's Environmental and Energy Practice Group, Energy Industry Group and ESG Practice. Kevin is ranked by *Chambers USA* among the nation's leading climate change attorneys and California's leading environmental lawyers, with sources describing him as "a phenomenal" and "tremendous lawyer." He represents electric utilities, financial institutions, investors and companies in policy, litigation and transactional matters concerning power and carbon markets, carbon capture, utilization and storage (CCUS), sustainable aviation fuel, green and blue hydrogen and carbon offsets projects. He also helps clients establish and communicate their ESG commitments and decarbonization objectives to investors, customers and other stakeholders.

Keith Tracy, Elysian

Keith Tracy is the Chief Commercial Officer of Elysian, a carbon management company. Keith has been in the carbon capture business for 15 years, and is one of the pioneers of the carbon capture industry. Keith co-founded Elysian a few years ago to develop, own and operate carbon capture, utilization and storage projects, such as a capture project at an existing natural gas combined cycle power plant with Starwood Energy Group and the Oil and Gas Climate Initiative. For many years, Keith worked for Chaparral Energy, an EOR company that used *exclusively* anthropogenic CO₂. He directed all carbon capture project development, design, construction, and operations of the company's three carbon capture plants and over 200 miles of CO₂ pipelines. Keith is a recognized expert on 45Q tax credits, and made extensive comments to the IRS during its rulemaking process, and many of those suggestions fully adopted in the final IRS regulations. Keith has written and obtained EPA-approval of a Subpart RR monitoring, reporting and verification or MRV Plan. He is also a founding participant in the Carbon Capture Coalition.

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Panel 2

Sheila Olmstead, University of Texas

Sheila Olmstead is a professor at the Lyndon B. Johnson School of Public Affairs at The University of Texas at Austin (UT), a visiting fellow at Resources for the Future (RFF) in Washington, DC and a senior fellow at the Property and Environment Research Center in Bozeman, Mont. From 2016 to 2017, she served as the senior economist for energy and the environment at the President's Council of Economic Advisers. Before joining UT in 2013, Olmstead was a senior fellow (2013) and fellow (2010–13) at RFF, as well as associate professor (2007–10) and assistant professor (2002–07) of environmental economics at the Yale School of Forestry and Environmental Studies. Dr. Olmstead is currently an editor of the Journal of the Association of Environmental and Resource Economists. She has also served as vice president and a member of the board of directors of the Association of Environmental and Resource Economists, as associate editor of Water Resources Research, as co-editor of Environmental and Resource Economics, book review editor of Water Economics and Policy, and as editorial council member for the Journal of the Association of Environmental and Resource Economists. Dr. Olmstead holds a Ph.D. in public policy from Harvard University (2002), a master's in public affairs from The University of Texas at Austin (1996) and a B.A. from the University of Virginia (1992).

Linda Daugherty, Department of Transportation

Linda Daugherty serves as the Deputy Associate Administrator (DAA) for Pipeline Safety – Field Operations at the Department of Transportation. She has worked with the Pipeline and Hazardous Materials Safety Administration (PHMSA) overseeing the safety of liquefied natural gas facilities, hazardous liquid, and natural gas pipelines for more than 30 years. Ms. Daugherty leads Field Operations, including pipeline inspection and enforcement staff located across the country and the agency's Accident Investigation Division. She previously served as DAA for Policy and Programs in Washington, leading the efforts of the Enforcement, Engineering, Emergency Response & Security, Regulatory, Training and Qualifications, State Programs and Program Development Divisions. Ms. Daugherty, a chemical engineer by training joined PHMSA in 1991 as an inspector/investigator.

Panel 3

Vernice Miller-Travis, Miller-Travis & Associates

Vernice is one of the nation's pioneering and most respected thought leaders on environmental justice and the interplay of civil rights and environmental policy. Vernice has vast experience as a civil rights and environmental policy analyst and advocate; consultant for federal and state agencies, foundations and nonprofits; environmental program manager and foundation program officer. She was a contributing author to the landmark report "Toxic Waste and Race in the United States." This inspired her to go on to help build a social movement that is rooted at the intersection of race, environment, economics, social justice and public health. The Sierra Club recently awarded Vernice the Robert Bullard Environmental Justice Award.

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Patricia Romero-Lankao, National Renewable Energy Laboratory

Dr. Patricia "Paty" Romero-Lankao is a distinguished research scientist at the National Renewable Energy Laboratory. Paty examines key interactions among people, cities, and climate, with a particular emphasis on just and sustainable energy systems as well as people's capacity to fairly address sustainability challenges. Throughout her career, she has developed a considerable body of highly regarded interdisciplinary research, resulting in several research grants, and 138 peer-reviewed publications. Paty has extensive experience as a sociologist working across disciplines, and at the science-policy interface, in the US and many other cities internationally. She was co-leading author to Working Group II of the Nobel prize-winning IPCC Fourth Assessment Report (AR4). She is editor of *Earth's Future* and editorial board member of several journals.

Deepika Nagabhushan, Carbon Direct

Deepika Nagabhushan Client Engagement Manager at Carbon Direct. Deepika advises clients on meeting their carbon management goals using science-based evaluation of carbon removal projects. Prior to Carbon Direct, Deepika spent six years at Clean Air Task Force leading the Carbon Capture & Sequestration program advocating policy at the US Federal level and in California to advance rapid deployment of CCS infrastructure. Deepika graduated in 2015 from The Earth Institute at Columbia University with a Master of Science in Sustainability Management. She holds a bachelor's degree in business management from Bangalore University in Karnataka, India. She is currently based in San Francisco.