



APRIL 20-22, 2021 | FREE VIRTUAL CONFERENCE

ARCTIC SUSTAINABLE ENERGY RESEARCH CONFERENCE

Research and community needs in the context of a global energy transition

SPEAKERS



Sponsored by the US Arctic Research Commission with cosponsorship by the Cold Climate Housing Research Center, the National Renewable Energy Laboratory, the Alaska Native Tribal Health Consortium, and the Alaska Center for Energy and Power.



DAY 1. Tuesday, April 20

Sonny Adams

Director of Energy, NANA Regional Corporation

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Sonny Adams has worked for NANA Regional Corporation as a Projects Manager since 2007, and is currently the Director of Alternative Energy. He is a graduate of Montana Tech and has a degree in Metallurgical and Materials Engineering. Mr. Adams' past experiences include technical oversight of the Red Dog Mine, NANA gravel issues, and shareholder development. Prior to working for NANA, Adams worked as an operator and metallurgical engineer at the Red Dog Mine. His milling experience includes water treatment, flotation, grinding, and control room operation.

Dr. Brian Hirsch

President and Co-Founder, DeerStone Consulting LLC

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Dr. Brian Hirsch is the President and Founder of DeerStone Consulting LLC, a renewable energy consulting firm focused on microgrid, utility, and community development in remote locations, especially the Arctic and the Tropics. Recent and ongoing projects include developing solar photovoltaic-wind-battery-diesel hybrid systems across Alaska and providing technical support to Alaska Native regional organizations and other groups covering over 120 communities across Alaska. From 2009-2015 he was the Senior Project Leader for the National Renewable Energy Laboratory's (NREL) Alaska Initiative and projects globally.

Chris Deschene

Board Member, National InterTribal Energy Council

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Chris, a member of the Navajo Nation, is an attorney, engineer, and a national leader well respected by his peers, tribal and business leaders within Indian Country. Chris is the owner and founder of Deschene, PLLC, a tribal energy and legal firm based out of Washington, DC. Chris also founded Tosidoh, LLC, a tribal energy development company working within Indian Country. He is also a co-founder of the National Inter-Tribal Energy Council, a national tribal energy trade association. Chris recently completed a distinguished term as the Director of the Office of Indian Energy within the U.S. Department of Energy. His responsibilities included working with tribal communities in Alaska and the Lower 48. Prior to serving in D.C., Chris served as general counsel and advisor to tribes, tribal energy partnerships and non-Indian energy and business entities working in Indian Country. As a former member of the Arizona House of Representatives, Chris has extensive government and legislative experience to help tribes maximize their government affairs, strategies and relationships. Finally, Chris has also served honorably within the U.S. Marine Corps, completing two tours in the Persian Gulf, first in the infantry and then with reconnaissance units. He holds the rank of Major, U.S.M.C.R. (ret.).

Dr. Elizabeth Doris

Senior Advisor on Energy Justice, National Renewable Energy Laboratory

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Elizabeth Doris is on detail from the National Renewable Energy Laboratory to the US DOE Office of Energy Efficiency and Renewable Energy as the Senior Advisor on Energy Justice. With NREL since 2005, since 2015, she's been the Laboratory Program Manager for State Local, and Tribal Governments at the National Renewable Energy Laboratory. In this capacity, she is responsible for developing and directing all aspects of NREL's relationship with these audiences and coordinating these activities across the laboratory. Liz has 20 years of program development and management experience in energy efficiency and renewable energy policy research and content expertise in energy policy, including over 50 publications on effective policies for clean energy development. Her research interests include mixed methods approaches to understanding how clean energy technologies enter the marketplace. She holds a B.S. degree in Environmental Science from Boston University, an M.A. in Environmental Policy from Johns Hopkins, and a Doctorate in Law and Policy from Northeastern University.

Michael McEleney

Senior Advisor, US Department of Energy's Arctic Energy Office

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Michael McEleney joins the Arctic Energy Office from the Office of International Affairs, where he serves as the Senior Policy Advisor with responsibility for Arctic issues. He coordinated the first senior DOE visits to Iceland and Greenland and assisted in the planning and creation of AEO. Prior to his service in the Department of Energy he served as a Policy and Strategy Analyst for the Under Secretary of the Navy with responsibility for Arctic and Nuclear issues. He also served as the Director of Congressional Affairs for the Department of the Navy Program Executive Office for Aircraft Carriers and as a professional staff member in the U.S. House of Representatives. Mr. McEleney holds a M.A. in Security Studies from Georgetown University and a B.A. from Johns Hopkins University.

Wahleah Johns

Senior Advisor, US Department of Energy's Office of Indian Energy Policy and Programs

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Johns is a member of the Navajo (Dine) tribe and comes from northeastern Arizona. Her background is in renewable energy and community organizing, having co-founded Native Renewables, a nonprofit that builds renewable energy tribal capacity while addressing energy access. Her work with the Black Mesa Water Coalition and Navajo Green Economy Coalition has led to groundbreaking legislative victories for groundwater protection, green jobs, and environmental justice.

Daisy Weinard

General Manager, Ipnatchiaq Electric Company

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Daisy Weinard is the General Manager of the Ipnatchiaq Electric Company which serves the remote community of Deering in Northwest Alaska. The utility that Daisy manages has a hybrid wind-diesel system and has been testing the integration of solar photovoltaics and a battery system to further decrease the reliance on diesel fuel. Daisy also serves as a utility representative on the Northwest Arctic Energy Steering Committee.

DAY 2. Wednesday, April 21

Jack Hébert

Chief Executive Officer and Founder, Cold Climate Housing Research Center

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For the past 45 years, Jack Hébert has been designing and building homes in Alaska. His houses and planned communities have created many high-quality, well-designed, environmentally appropriate, and energy-efficient buildings. He has received numerous honors, including the U.S. Green Building Council Cascadia Fellowship; the State of Alaska Governor's Award in Energy Efficient Design; the Energy Rated Homes President's Award and has twice been honored as the Alaska State Home Builder of the Year. In 1999 Jack founded the Cold Climate Housing Research Center (CCHRC) in Fairbanks, Alaska with a mission of "promoting and advancing the development of health, durable and sustainable shelter for Alaskans and other circumpolar people." Under his leadership, CCHRC is now recognized to be a premier contributor to Northern Building Science. One of several CCHRC programs, Sustainable Northern Communities, has worked collaboratively with many Indigenous Villages to design housing that reflects culture and traditional life. These healthy homes have reduced energy use by close to 80% for their owners. CCHRC has recently become a partner of the National Renewable Energy Lab (NREL) and looks forward to many years of working together with NREL to find solutions that insure a healthy future for the planet.

Dustin Madden

Program Manager, Alaska Native Tribal Health Consortium's Rural Energy Program

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Dustin grew up in Northwest Alaska and has family roots in the Norton Sound region. He currently manages the Alaska Native Tribal Health Consortium's Rural Energy Program, which develops and implements energy efficiency and renewable energy projects in partnership with rural Alaskan communities to reduce energy costs for water and sewer systems. He previously was with the Cold Climate Housing Research Center where he worked in a variety of areas including evaluating energy efficiency retrofit programs, researching efficiency of public facilities, and developing and updating energy efficiency standards for Alaska.

Bailey Gambel

Mechanical Engineer II, Alaska Native Tribal Health Consortium

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Bailey works with rural Alaska communities to make water and sanitation service more affordable through energy efficiency and incorporation of renewable energy sources. She conducts energy audits and applies the energy rating program, AkWarm, to help communities prioritize energy related retrofits and projects based upon impact and payback.

Bill Livingood

Group Manager, Commercial Buildings, National Renewable Energy Laboratory

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Bill is an expert in building energy analysis, computational thermal analysis, and data acquisition and an inventor on three patents for power generation technologies. As manager of the commercial buildings research team, he oversees the development of next generation simulation capabilities and guidance documents such as the Advanced Energy Design Guides (AEDG) that provide building- and U.S. climate zone-specific design recommendations.

Dr. Tom Marsik

Chief Scientist at the National Renewable Energy Laboratory's Cold Climate Housing Research Center; Associate Professor, University of Alaska Fairbanks, Bristol Bay Campus, and Alaska Center for Energy and Power

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Tom Marsik is the Chief Scientist at the National Renewable Energy Laboratory's Cold Climate Housing Research Center. He has a joint position with the University of Alaska Fairbanks, where he serves as an Associate Professor of Sustainable Energy for the UAF Bristol Bay Campus and Alaska Center for Energy and Power. He is passionate about research and education in the areas of energy and sustainability, and utilizes the synergies of his joint position to benefit people in Alaska and beyond. His passion is reflected in various honors, including Alaska's Top Forty Under 40 award and a recognition from the World Record Academy for designing and constructing the world's most airtight residential building on record.

Tom has an M.S. in Electrical Engineering from the Czech Technical University in Prague, and a Ph.D. in Engineering from the University of Alaska Fairbanks. He has numerous publications and has served on high profile committees, including Alaska's Governor Bill Walker's Transition Team and its Consumer Energy subcommittee. He has a very precious daughter whose face keeps reminding him to work hard on helping develop a sustainable future.

Michelle Wilber

Research Engineer, Alaska Center for Energy and Power

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Michelle Wilber is a research engineer at ACEP and leads the Beneficial and Equitable Electrification initiative. She has a BS in astronomy from Caltech and an MS in mechanical engineering from UAA. Michelle grew up in Alaska, and she is thrilled to be doing work that she hopes will continue to make Alaska a great place to live for her family and all Alaskans.

Steve Colt

Research Professor, Alaska Center for Energy and Power

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Steve Colt is a research professor at ACEP. Prior to joining ACEP he worked for many years as an applied economist at the Institute of Social and Research (ISER) at the University of Alaska Anchorage, trying to better understand Alaska's energy systems, policies, and challenges. He has also worked – briefly – for public utility commissions in Maine and California. Steve is particularly interested in the integration of efficient energy systems across buildings, heat, power, and transportation for the common good of Arctic dwellers and the global environment.

Dan Sambor

PhD Candidate, Stanford University, and Visiting Researcher, University of Alaska Fairbanks

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Dan Sambor is a PhD Candidate in Civil and Environmental Engineering at Stanford University. He is also a visiting researcher at University of Alaska Fairbanks collaborating on the National Science Foundation project: "Coupling infrastructure improvements to food-energy-water system dynamics in small cold region communities: MicroFEWs." Dan's PhD dissertation, and role on the project, focuses on the optimization of renewable microgrids in remote off-grid regions. Specifically, he has developed a computer model to determine how best to integrate renewable generation and dispatchable loads to improve food-energy-water security. Dan received his Master of Science degree in Civil and Environmental Engineering at Stanford, where he has also served as the lecturer of the course "Energy-Efficient Buildings." He earned his Bachelor of Science degree from Brown University in Mechanical Engineering. In his spare time, Dan enjoys skiing, biking, hiking, and gardening.

Dr. Elizabeth Palchak

Senior Consultant and Social Scientist, Vermont Energy Investment Corporation

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Elizabeth is a social scientist and Senior Consultant at VEIC, a clean energy company that develops decarbonization solutions for universities, utilities, municipalities and state governments. She is a nationally recognized speaker on the human perspective in the energy industry and she develops programs and strategies to reach underserved customer groups like low-income, communities of color, rural customers and the New American community, often leveraging behavioral science to generate insights on the customer perspective. As an author on the Energy Equity Project, she is helping to guide a national approach to data collection on metrics that illuminate the inequities in the energy system. She is also part of a team leading the development of a company-wide diversity, equity and inclusion plan. Prior to VEIC she earned her PhD in Natural Resources and Environment, studying behavioral science and energy in a mixed-methods study that investigated the effects of real-time feedback devices in off-campus student housing.

DAY 3. Thursday, April 22

Jeremy Kasper

Deputy Director, Alaska Center for Energy and Power, and Co-Director, Pacific Marine Energy Center

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Before joining ACEP, Jeremy was a postdoctoral investigator with the Department of Physical Oceanography at the Woods Hole Oceanographic Institution. He holds a PhD in oceanography from the University of Alaska Fairbanks and a BA in physics from Reed College in Portland, Oregon.

Ben Loeffler

Pacific Marine Energy Center Manager, Alaska Center for Energy and Power

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Ben Loeffler has worked in a number of energy-related positions in Alaska. He is currently a research professional working on ACEP's Pacific Marine Energy Center projects. He comes to ACEP after three years as the Fairbanks North Star Borough energy management engineer. Before that, Ben was a research assistant at ACEP, performing data analysis and reporting for remote energy projects.

Chris Pike

Research Engineer, Alaska Center for Energy and Power

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Chris Pike has been working for the Alaska Center for Energy and Power since 2012 and has been involved in projects ranging from studying the performance of solar thermal systems in the Arctic, geothermal exploration in Western Alaska and working as part of the data collection and analysis team. Recently he has been working as part of the Solar Technology Program team to improve our understanding of the performance of solar photovoltaics in Northern locations.

Dr. Michael Ross

Industrial Research Chair in Northern Energy Innovation, Yukon Research Centre, Yukon College

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Dr. Michael Ross is the NSERC Industrial Research Chair in Northern Energy Innovation at Yukon University. His applied research program addresses the needs of the northern energy industry through partnerships with communities, northern electric power utilities, and academic institutions. The research areas for the program focus on integrating a high penetration of renewable generation in remote communities, smart grids, electric vehicle integration, and demand-side management.

Dr. Ross received his Master's and Ph.D. degrees in Electrical Engineering at McGill University and his Bachelor's of Applied Science at the University of Toronto focusing on electric power systems. He is an author and active contributor to the CIGRÉ international working groups on "Hybrid Systems for Off-grid Power Supply", "Rural Electrification", and "Distribution Customer Empowerment". He is a registered Professional Engineer with Engineers Yukon, a member of the IEEE Power and Energy Society, a member of the International Council on Large Electric Systems, the President and Director of the Yukon Science Institute, and is a Level 1 electrician apprentice.

Mark Ruth

Group Manager, Industrial Systems and Fuels Group, NREL's Strategic Energy Analysis Center

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Mark Ruth is the Manager of the Industrial Systems and Fuels Group in the Strategic Energy Analysis Center at the National Renewable Energy Laboratory (NREL) in Golden, Colorado, USA. In that role, Mark leads a group of analysts investigating opportunities to improve energy use in the industrial and transportation sectors. Mark is also leading the multi-laboratory effort to analyze the technical and economic potential of the H2@Scale concept. Mark is also leading analyses of the economic potential to convert existing nuclear power plants to flex between electricity and hydrogen production. Previously, he led an analysis of the optimal configurations and operation of greenfield, tightly-coupled nuclear-renewable hybrid energy systems. Over Mark's 27 years at NREL, he has an extensive history of developing methods to value opportunities in the energy sector as well as technical analyses of hydrogen and bioenergy systems.

Jeremy VanderMeer

Research Assistant Professor, Alaska Center for Energy and Power

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Jeremy VanderMeer is a research assistant professor at the Alaska Center for Energy and Power (ACEP), University of Alaska Fairbanks (UAF). He focuses on solving the challenges of integrating variable and inverter based resources into power systems through appropriate use of energy storage, dispatchable loads, controls, forecasting and complimentary resource planning. He develops and tests hardware and controls in ACEP's 500 kW micro-grid laboratory and with controller-hardware-in-the-loop (C-HIL). He leads the development of the open source modeling tool MiGRIDS which is used to run feasibility and sizing studies.

Mark Glick

Specialist in Energy Policy & Innovation, Hawai'i Natural Energy Institute

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Mark leads the energy policy practice at the University of Hawai'i's Natural Energy Institute (HNEI) that supports global energy transition efforts. He has a forty-year career of public and private sector management and operations in energy, economic development and finance. Before joining HNEI, Mark led Hawai'i's clean energy transformation and energy assurance efforts as the State's Energy Administrator. Among his accomplishments as Energy Administrator were co-drafting and supporting passage of the nation's first 100 percent renewable portfolio standard and establishing Hawai'i's \$150 million green bank. Mark has a Bachelor of Arts in Mathematics from Lamar University, and a Master of Science, Public Management and Policy from Carnegie-Mellon University.

Meaghan Bennett

Deputy Director, Natural Resources Canada

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Meaghan Bennett is the Deputy Director of Northern and Remote Programming in the Office of Energy Research and Development at Natural Resources Canada. In this role, Meaghan manages two clean energy programs, The Impact Canada Indigenous Off-Diesel Initiative (IODI), and The Clean Energy For Rural and Remote Communities Program (CERRC). These programs provide over \$80M in funding to support community and Indigenous-led clean energy projects across Canada, primarily in northern and remote communities. Previously, she served as the Manager of Operations and Programs at the Canadian High Arctic Research Station (CHARS) in Cambridge Bay, Nunavut, and as the Director of Energy with the Government of Nunavut. Meaghan has worked in energy and Northern policy and programming for over 14 years and is passionate about community-led initiatives, sustainability, and youth leadership. Meaghan has a Master of Arts degree in Community Development and Leadership; and a Bachelor's Degree in Political Science. Meaghan lives in Whitehorse, Yukon, with her family.

Ryan Kilpatrick

Research Engineer, Natural Resources Canada / CanmetENERGY

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Ryan is a research engineer at CanmetENERGY-Ottawa, a federal laboratory under Natural Resources Canada. Ryan conducts research on topics spanning wind power forecasting, wind plant performance, offshore wind, grid integration of renewables and renewable energy assessment for northern and remote communities. Ryan is a professional engineer and holds a Master of Engineering Science degree from Western University in London, Ontario, where he investigated flow over complex topography for wind resource assessment applications.
