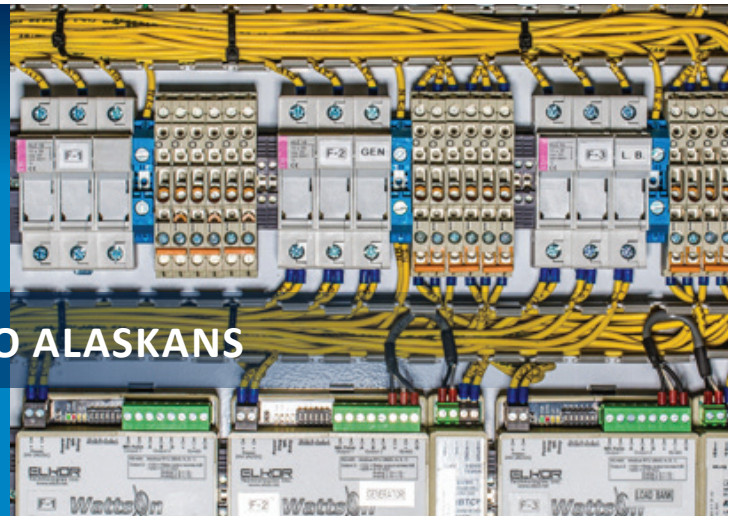




ACEP

Alaska Center for Energy and Power



BRINGING NEW TECHNOLOGIES TO ALASKANS



RESEARCHER SHOWCASE
Erin Whitney

BACKGROUND

Dr. Whitney came to ACEP from the National Renewable Energy Laboratory (NREL) in Golden, Colorado where she led the Dynamic Windows research group and the Dynamic Windows Durability Testing Program, managed technical assistance for a 2 MW Solar America Showcase project, and provided energy analysis for solar thin film technologies. She has research experience in the fabrication and spectroscopy of photovoltaic devices and synthesis and characterization of carbon-based nanostructures and metal oxide nanoparticles for various renewable energy applications.

Erin grew up in Anchorage and is thrilled to be back home in Alaska, bringing along her husband and two children. Together they enjoy all forms of skiing, bike commuting as much as possible, and adventuring in the Alaskan wilderness.

RESEARCH

Erin turned her focus to renewable energy research after initially starting her graduate career in atmospheric chemistry and subsequently realizing she wanted to be part of the solution to global environmental issues.

Her current activities at ACEP include Railbelt utility studies, data collection and analysis for Emerging Energy Technology Fund (EETF) and Renewable Energy Fund (REF) projects, and research into photovoltaic performance and potential in Alaska. Erin is a Researcher that joined ACEP in 2014.

RECENT ENERGY PROJECTS

- Railbelt Utility Studies
- Data Collection and Analysis EETF
- Data Collection and Analysis REF
- Photovoltaic Performance and Potential in Alaska
- Energy Analysis for Solar Thin Film Technologies

RELEVANT PUBLICATIONS

S.H. Lee, Y.H. Kim, R. Deshpande, P.A. Parilla, K.M. Jones, B. To, E. Whitney, A. H. Mahan, S.B. Zhang, and A.C. Dillon. "Anomalous Reversible Lithium-Ion Intercalation in Molybdenum Oxide Nanoparticles," *Advanced Materials*, 20, 3627-3632. 2008.

C.M. White, D.T. Gillaspie, E. Whitney, S.H. Lee, and A.C. Dillon. "Flexible electrochromic devices based on crystalline WO₃ nanostructures produced with hot-wire chemical vapor deposition," *Thin Solid Films*. 2009.

Confidential reports in the area of window durability testing.

EDUCATION

- PhD Physical Chemistry. University of Colorado. 2006
- Science and Environmental Policy Certificate. University of Colorado. 2004
- B.A. Chemistry with Highest Honors. Williams College, Williamstown, MA. 1996

LEADERSHIP ROLES

- Board of Directors, Juneau Icefield Research Program
- 2010 Colorado Governor's Award for High-Impact Research with NREL Dynamic Windows Team



Fostering development of innovative solutions to Alaska's energy challenges through applied energy research at the University of Alaska.

The Alaska Center for Energy and Power (ACEP) is an applied energy research program based at the University of Alaska Fairbanks. ACEP provides leadership in developing energy systems for islanded, non-integrated electric grids and their associated oil-based heating systems. Integration is a central feature of our program. Because many of the issues related to implementing innovative energy solutions are complex, our program must not only address the technical integration of renewables with these small isolated diesel-based energy systems, but must also look at integration from a broader perspective: integration of solutions into the social realities of a community, integration of the cultural fabric into sustainable energy solutions, integration of university researchers across disciplines and with community partners; and integration of our facilities and resources with those of our national partners.

Our Mission: Develop and disseminate practical, cost-effective, and innovative energy solutions for Alaska and beyond.

Our Vision: Alaska leading the way in innovative production, distribution, and management of energy.

ACEP is a gateway for energy related activity at the University of Alaska. Working across campuses and pulling from the University's extensive resources and expertise, ACEP is interdisciplinary, needs-driven, and agile.

ACEP has also developed a wide range of partnerships outside the University at the local, state, national and international level to ensure research conducted through ACEP will be relevant, current and world class.

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