

## NSF BIOGRAPHICAL SKETCH

NAME: Whitney, Erin

POSITION TITLE & INSTITUTION: Research Associate Professor, Alaska Center for Energy and Power, University of Alaska Fairbanks

### (a) PROFESSIONAL PREPARATION

INSTITUTION	LOCATION	MAJOR / AREA OF STUDY	DEGREE (if applicable)	YEAR YYYY
Williams College	Williamstown, MA	Chemistry	BA	1996
University of Colorado at Boulder	Boulder, CO	Certificate in Science and Environmental Policy	OTH	2004
University of Colorado at Boulder	Boulder, CO	Physical Chemistry	PHD	2006

### (b) APPOINTMENTS

2020 - present Research Associate Professor, Alaska Center for Energy and Power, University of Alaska Fairbanks, Fairbanks, AK

2014 - 2020 Research Assistant Professor, Alaska Center for Energy and Power, University of Alaska Fairbanks, Fairbanks, AK

2008 - 2014 Scientist, National Renewable Energy Laboratory, Golden, CO

2006 - 2008 Postdoctoral Researcher, National Renewable Energy Laboratory, Golden, CO

1997 - 2006 Graduate Research and Teaching Assistant, University of Colorado at Boulder, Boulder, CO

1996 - 1997 Research Assistant, Los Alamos National Laboratory, Los Alamos, NM

### (c) PRODUCTS

#### Products Most Closely Related to the Proposed Project

1. Huntington HP, Schmidt JI, Loring PA, Whitney E, Aggarwal S, Byrd A, Dev S, Dotson AD, Huang D, Johnson B, Karenzi J, Penn HJF, Salmon A, Sambor DJ, Schnabel WE, Wies Jr RW, Wilber M. Applying the FEW nexus concept at the local scale. *Nature Sustainability*. 2021 May 13; 4:672. DOI: doi.org/10.1038/s41893-021-00719-1
2. Pike C, Whitney E, Wilber M, Stein JS. Field Performance of South-Facing and East-West Facing Bifacial Modules in the Arctic. *MDPI Energies*. 2021 February 23; 14(4):1210. DOI: doi.org/10.3390/en14041210
3. Sambor DJ, Wilber M, Whitney E, Jacobson MZ. Development of a Tool for Optimizing the Use of Solar and Battery Storage for Container Farming in a Remote Arctic Microgrid. *MDPI Energies*. 2020; 13:5143. DOI: 10.3390/en13195143
4. Whitney E, Schnabel WE, Aggarwal S, Huang D, Wies RW, Karenzi J, Huntington HP, Schmidt JI, Dotson AD. MicroFEWs: A Food-Energy-Water Systems Approach to Renewable Energy Decisions in Islanded Microgrid Communities in Rural Alaska. *Environ Eng Sci*. 2019 Jul 1;36(7):843-849. PubMed Central PMCID: [PMC6653800](https://pubmed.ncbi.nlm.nih.gov/PMC6653800/).
5. Whitney E, Pike C. An Alaska Case Study: Solar Photovoltaic Technology in Remote

Microgrids. *Journal of Renewable and Sustainable Energy*. *Journal of Renewable and Sustainable Energy*. 2017; 9(5):061704. DOI: 10.1063/1.4986577

**Other Significant Products, Whether or Not Related to the Proposed Project**

1. Hauptert C, Leach T, Rosa C, Wilber M, Whitney E, Byrd A. Alaska Electric Vehicle Workshop: Report of the ACEP-USARC Virtual Workshop Held June 16-17, 2020. Technical Report, Alaska Center for Energy and Power. Anchorage, Alaska: U.S. Arctic Research Commission; 2020.
2. Ranta S, Stein JS, Huerta H, Heinonen A, Whitney E. Proceedings of the 36th European Photovoltaic Solar Energy Conference and Exhibition. München, Germany: EU PVSEC; 2019. Self-Consumption Rate Achieved By a Bifacial East-West Vertical PV System Compared to a Conventional South Facing System in Nordic Countries. DOI: 10.4229/EUPVSEC20192019-6CO.15.5
3. Vandermeer JB, Mueller-Stoffels M, Whitney E. An Alaska case study: Cost estimates for integrating renewable technologies. *Journal of Renewable and Sustainable Energy*. 2017; 9(6):061709. DOI: 10.1063/1.4986581
4. Pike C, Whitney E. Heat Pump Technology: An Alaska Case Study. *Journal of Renewable and Sustainable Energy*. 2017; 9(6):061706. DOI: 10.1063/1.4986584
5. Whitney E, Byrd A, Huang D. An Alaska case study: Biomass technology. *Journal of Renewable and Sustainable Energy*. 2017; 9(6):061705. DOI: 10.1063/1.4986578

**(d) SYNERGISTIC ACTIVITIES**

1. Fulbright U.S. Scholar to Germany (Host Institution: Fraunhofer ISE, Freiburg), 2021-2022.
2. Member, Board of Directors, Chugach Electric Association, 2021-present.
3. Creative Award for Best Staff Invention Disclosure, UAF Innovative Disclosures and Entrepreneurial Activities (IDEA) Program), 2019-2020.
4. Invited member, International Energy Agency (IEA) Photovoltaic Power Systems (PVPS) Task 13 Working Group: Performance, Operation, & Reliability of Photovoltaic Systems, 2019-present.
5. Lecturer, Alaska Native Science and Engineering Program (ANSEP) summer energy camp for middle school students, 2019.