



UAA College of Engineering
UNIVERSITY of ALASKA ANCHORAGE



UAA Professional Development Seminar Series

Solar in Alaska

Presented by Michelle Wilber, Research Engineer, Alaska Center for Energy and Power

Solar Photovoltaics (PV) is growing in Alaska. Solar PV technology is a nascent but promising energy option in remote Alaska microgrids. A growing number of community and residential-scale installations in the state give an indication of the production and costs associated with solar PV in the state. Capacity factors for community-scale solar PV installations in Alaska range from 7% to 15%, which can still be economically viable given the high cost of electricity in most communities in Alaska. With remote locations and challenging conditions, total installed costs can be significantly higher than those in the rest of the United States, although trends indicate that costs per kilowatt-hour (kWh) are lower for larger system sizes, and are decreasing with time, as seen elsewhere. These trends and details on selected installations and programs will be presented. We will also look at software that can be used to assess solar potential for a site or community, and discuss challenges with available resource data.

Michelle Wilber is a research engineer at the Alaska Center for Energy and Power (ACEP), working on projects ranging from bringing more rooftop solar to Anchorage, to helping residents in the Bering Straits Region find solutions to the high cost of energy, to developing Raspberry Pi-based solar irradiance loggers. She has a BS in Astronomy from Caltech and an MS in Mechanical Engineering from UAA. She has worked as an engineering geologist, an organic gardening coordinator, in energy efficiency outreach, and as a park ranger in Katmai. All of it comes together in solving problems of finding sustainable energy sources in the Arctic, with the challenges of unstable permafrost for infrastructure foundations, finding the energy to grow food and provide fresh water, and other linkages between energy and the environment. Michelle grew up in Alaska, and is happy to be raising her son here as well. They like to take the dog hiking, camping, ice skating and skiing, but also enjoy a lot of cozy indoor time as well. 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.

Friday, September 27, 2019

11:45 am-12:45 pm

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