

Alaska DOE EPSCoR

Founded in 1992, the [U.S. Department of Energy EPSCoR program](#) supports early-stage research activities in EPSCoR states and territories spanning the range of science and technology programs within DOE. Funding streams include Implementation Grants of up to \$2.5 million a year to build capacity in DOE areas of interest; State/National Laboratory Partnership Grants of \$200,000 a year that enable EPSCoR researchers to work closely with DOE national labs; and Early-Career Awards for researchers in EPSCoR jurisdictions.

Alaska DOE EPSCoR Impacts to Alaska, 2007-2021

- 5 projects funded for a total of 6.1 million
- Projects examined elements of climate system models, membranes for hydrogen separation, sustainable energy for remote villages, and converter-dominated power systems (see below)



DOE EPSCoR project PI Mariko Shirazi (foreground) works with an electric meter in ACEP's Energy Technology Facility on the UAF campus with Facility Manager David Light.

Amount

\$3 million



One of two 900-kilowatt wind turbines tower over the almost 3-megawatt Kotzebue wind farm. The farm is a focus of a proposed renewal of the Converter-Dominated Power Systems award.

Current Project

Development and Validation of Models to Assess Dynamic Response of Converter-Dominated Power Systems across Multiple Spatiotemporal Scales, Dr. Mariko Shirazi, UAF
Effort to develop accurate models of converter-dominated power systems, which are critical for producing electricity from renewable sources like wind and solar

- Project includes key UAF Electrical Engineering faculty hire
- Alaska Center for Energy and Power at UAF is leading the project; partners include University of Puerto Rico Mayaguez and South Dakota State University
- Partners just applied for 2-year, \$4.8 million renewal, also incorporating University of Hawaii at Manoa