FACT SHEET

UNIVERSITY OF ALASKA FAIRBANKS

FY10 UA Capital Budget Request
$15.3 million general fund/$15.3 million nongeneral fund

UAF Energy Technology Building

Background

In 2008, UAF launched the Alaska Center for Energy and Power (ACEP), a new research unit to investigate energy options for the state. ACEP is part of the Institute of Northern Engineering (INE), the research branch of the College of Engineering and Mines. Although its administrative home is UAF, ACEP integrates research projects — and researchers — from across University of Alaska campuses.

ACEP's mission is to meet state and industry demands for applied energy research and development to lower energy costs throughout Alaska, and to develop economic opportunities for the state, its residents and industries.

ACEP does not have any designated space at UAF, and must use limited space in the Duckering Building and other locations on campus for laboratories and offices. With its distribution across campus, there is no central location that brings the university and the community together around energy solutions. In addition, the lack of appropriate space makes it challenging to hire and retain the type of world-class researchers needed to meet ACEP's long-term program goals.

Research that matters for Alaska

ACEP focuses on the needs of the state, its residents and industries, and with state involvement, will be able to target energy solutions from the community to the state level. ACEP focuses on applied research and development, in cooperation with other state agencies, and will test the technologies being proposed for Alaska. The program incorporates all three main campuses of the University of Alaska system, taking advantage of the existing strengths at each campus.

Current ACEP projects include:

- testing new energy storage devices to improve performance on renewable energy systems in rural Alaska.
- working with the Alaska Energy Authority and the National Renewable Energy Laboratory to develop a national wind/diesel test center.

Photo by Gwen Holdmann

For **ACEP** to help **meet the demand** for **applied energy research** in Alaska, the program has to have **designated space** to conduct **research, testing and demonstrations**.

Alaska's First University

Photo courtesy of Mike Craft

- testing a 10kW-flow battery system, a new type of energy-storage system that could be integrated into renewable energy projects in rural Alaska.
- working with TDX power on Saint Paul Island to assess opportunities for using excess power from their wind farm for alternative transportation fuels.
- working with UAA's Institute of Social and Economic Research to complete an economic assessment of a hydrogen/propane fuel project at Chena Hot Springs Resort to determine the feasibility of similar projects elsewhere in Alaska.
- assessing ways to improve the efficiency of existing power plants throughout Alaska.

UAF is proposing construction of a new 30,000-square-foot, $30.6 million facility for ACEP using 50 percent nongeneral funds.

Proposed Facility

UAF graduate Monica Esparza works at the Flint Hills refinery in North Pole as a human resources intern, helping to match company needs with UAF students eager for intern experience.

The proposed site is next to the UAF power plant, where ACEP researchers can take advantage of the plant's large-scale power production capabilities and work closely with plant staff. The site also makes ACEP accessible to business and industry partners, and university undergraduate students participating in various research and testing activities and projects.

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