



ACEP

Alaska Center for Energy and Power

SEEING THE FOREST FOR THE TREES



RESEARCHER SHOWCASE
Amanda Byrd



BACKGROUND

Amanda Byrd joined ACEP in 2008 helping to produce the 2009 Alaska Energy Plan, and the 2010 Alaska Energy Pathway. Amanda brings to ACEP a deep interest in biomass as a potential energy solution for Alaska, and a keen interest in the health and livelihood of communities in Alaska's rural regions.

Amanda grew up in Sydney, Australia and prior to college trained race horses in Australia and Japan for six years. She completed a bachelors degree in Natural Resource Management from the University of New England in Australia, which included one year studying at Colorado State University. After a summer as a Park Ranger in Grand Teton National Park Amanda fell in love with the North American forest. She initially came to Alaska to find adventure in 2002 and found it through her kennel of 18 sprint sled dogs, and her love for cycling, running, and skiing. Amanda is particularly fond of Alaskan's resourcefulness and forest knowledge.

RESEARCH

Amanda's current energy focus is biomass research. Biomass presents the ability for communities to have affordable energy, and energy independence. Energy independence is critical, as Alaska's isolated communities are bearing an increasing financial burden for their energy. Biomass is readily available in many rural communities, thus presents an opportunity for energy independence.

Woody biomass has been burned for heat for millennia. However, recent advances in wood heat technology have made it more efficient, cleaner burning, and therefore more sustainable. Wood heat is now seen as a viable long-term alternative to expensive heating fuel, especially in rural Alaska, where heating fuel is imported at great cost.

RECENT ENERGY PROJECTS

- Coal to Liquids Assessment at Eielson Air Force Base Plant
- Short Rotation of Woody Biomass
- Yakutat Forest Inventory

RELEVANT PUBLICATIONS

R. R. Hopcroft, C. Clarke, A. G. Byrd, A. I. Pinchuk. 2005. The Paradox Of Metridia Spp. Egg Production Rates: A New Technique And Measurements From The Coastal Gulf Of Alaska, Mar Ecol Prog Ser 286: 193–201.

W. E. Schnabel, J. Munk & A. G. Byrd. 2014. Field Note: Comparative Efficacy Of A Woody Evapotranspiration Landfill Cover Following The Removal Of Aboveground Biomass, International Journal of Phytoremediation.

EDUCATION

- M.S. Renewable Energy Science. University of Alaska Fairbanks 2013
- B.S. Natural Resource Management (With Honours). University of New England, Australia 1991

LEADERSHIP ROLES

- Chair Biomass Brown Bag Luncheon



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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