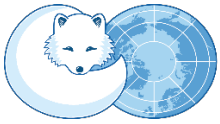
Arctic Remote Energy Networks Academy (ARENA) - Webinar Series and Onsite Program Overview

2016

Sustainable Development Working Group (SDWG)



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Project Overview

ARCTIC REMOTE ENERGY NETWORKS ACADEMY (ARENA)

Webinar Series and Onsite Program – Spring / Summer 2016

Overview - The Arctic Remote Energy Networks Academy (ARENA) seeks to to increase human capacity and promote leadership through the creation of a knowledge exchange program emphasizing the development, operation, and management of remote energy networks (microgrids) incorporating renewable resources. This program is targeted at current or emerging leaders in energy development and is designed to promote exchange of information and ideas across the arctic, as well as between arctic nations and the developing world.

ARENA combines Internet, classroom, laboratory, and field study learning opportunities, drawing from best practices established through the experience of the organizations operating in the arctic, and throughout the world. Participants will bring back to their home areas knowledge, skills and tools that facilitate integrating clean energy technologies in their communities, and improve the management of fossil fuel resources used for power production and other local energy needs.

ARENA Topic Areas

- Remote Energy Networks in the Arctic
- Utility Management Perspectives
- Resource Assessment Data & Tools
- Firm Renewable Resources (Hydropower, Biomass, Geothermal)
- Variable Renewable Resources (Solar, Wind, Hydrokinetic)
- Roles / Impacts of Subsidies & Policies
- Preliminary Design, Economic Analysis & Project Development
- Strategies for Low-, Medium- or High-Contribution Renewable Energy
- Energy Storage - Electrical & Thermal
- Combined Heat and Power
- Emerging Technologies

2016 Pilot Program - The pilot program will begin in April as a series of widely accessible web-based seminars, and conclude in July with a two-track on-site classroom learning and field experience in Fairbanks, Alaska for a cohort of competitively-selected ARENA Fellowship recipients.

Webinar Session - The webinar lecture series will introduce the fundamentals for the design, layout, application and management of remote energy networks in the production of power and heat in isolated communities. All materials will be in English. The webinars will build a common framework and foundation for participants in the onsite program, but will also appeal to a broader, more diverse audience. Webinars will be pre-recorded, and available for viewing via web streaming or download. Speakers, illustrations and case studies will be drawn from multiple arctic locations. Supporting textual material will be downloadable.

Onsite Session - Approximately 20 ARENA Fellows from across the arctic will participate in a series of informational and experiential learning activities as a three-week residential program hosted at the University of Alaska Fairbanks. Based on their background and area of responsibility, Fellows will select a Project Management or Technology, Design, and Operation track. Each Fellow will have a mentor with whom they interact throughout the on-site session, including completion of an application case study project relevant for their home community. Provisions will be made to enable accrual of Continuing Education Units (CEUs).

Collaboration Opportunities – Case studies, digital imagery (still, video), and testimonies are being collected to ensure inclusion of the diverse experience base spanning the arctic. Utilities and communities for the Alaska field visits are being identified for the on-site program. Sponsorships and scholarships to address program execution and Fellow participation expenses are possible.

UAF University of Alaska Fairbanks | ACEP Alaska Center for Energy and Power

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Sustainable Development Working Group