Seeking Solutions

to Arctic Energy Security Locally Through Renewable Energy Transitions

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Energy security in the North remains a challenge for many communities. Increasingly, however, communities are not only participating in energy development but also in knowledge creation, which is crucial in understanding the complexities of energy transitions in the Arctic region. In that pursuit, UArctic's Thematic Network on Renewable Energy is facilitating research and capacity-building activities through collaboration among communities, industry, and academics.

One of the activities of the network is the Community Appropriate Sustainable Energy Security (CASES) SSHRC Partnership Grant. Made up of a large team of academics, northern and Indigenous communities, industry (groups), and local governments across Northern Canada, Alaska, Sweden, and Norway, CASES is working toward reimagining our understanding of energy security in northern and Indigenous communities, as the global transition to low carbon energy systems accelerates. As renewable energy investments grow to combat climate change, the Arctic region has, as the Thematic Network lead Greg Poelzer puts it, "an enormous opportunity … to enhance energy security in Indigenous and northern communities, increase reliability of energy sources, make investments in local energy sources … and also seek employment opportunities."

CASES has direct research partnerships with community members, with projects ranging from highlighting ongoing renewable energy projects to understanding day-to-day energy experiences in remote off-grid communities. There are a number of examples from Arctic communities, where locally sourced and clean energy alternatives are able to enhance energy security. In Galena, Alaska the community has developed a biomass-based heating system that reduces school district and city reliance on imported, high-emission and expensive diesel fuel. In Norway, the network partners are involved in Smart Senja project to solve grid-related challenges with new power systems and renewable energy, as the communities of Senja see growing electrical demand on the back of an expanding fisheries industry. Norwegian partners have also organized Energy Cafes to encourage community participation in new energy activities, and to educate locals about energy and sustainability.

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Driven by the need to advance energy knowledge and expertise at the community level, the Thematic Network is also committed to building capacity within the communities. A large number of students in the Master of Sustainability Energy Security Program, for instance, have come from northern and Indigenous communities. Students are enrolled in doctoral and master's programs in Sweden, Norway, Alaska, Saskatchewan and Manitoba, studying a broad array of northern energy security topics.

In Alaska, the Arctic Remote Energy Networks Academy (ARENA) is an extensive knowledge sharing program designed for individuals in remote Arctic communities.

The Thematic Network, through CASES support, also has extended its reach through a webinar series online, covering several topics relevant to the network, from more technical descriptions of microgrid development in northern and Indigenous communities to broader discussions of policy challenges in building renewable energy partnerships in remote places. Begun during the COVID-19 pandemic, this has expanded to become a regular part of the network's work. All webinars are recorded and made available for everyone at https://renewableenergy.usask.ca/events/cases-webinar-series.php.

Looking forward beyond 2022, the Thematic Network is aiming to expand its reach and impact. In the short term, this is highlighted by the May 2022 CASES International Forum. In the longer term, and certainly up until the end of CASES-funded research in 2026, CASES is committed to stay true to the program's original goals of working alongside a range of public, private and community-based organizations as partners.

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