

CASES PARTNERSHIP

COMMUNITY APPROPRIATE SUSTAINABLE ENERGY SECURITY

INTERNATIONAL FORUM
MAY 10TH & 11TH, 2022



LOCAL IN-PERSON EVENTS AND VIRTUAL GROUP EVENTS



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Welcome!



The Alaska Center for Energy and Power (ACEP) is co-hosting this event together with collaborators on the international CASES partnership. The event will allow for the sharing of preliminary research results from the CASES project, presentations from experts, and opportunities for partners from Alaska, Canada, Sweden, and Norway to connect and build relationships for future collaboration.

We will be combining both virtual group sessions and local in person events. Welcome and thank you for joining us!

Welcome Message

Dr. Terry Fonstad

**Associate Vice President Research
University of Saskatchewan**



CASES

CASES PARTNERSHIP Overview

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CASES Partnership Co-Directors
Dr. Bram Noble and Dr. Greg Poelzer

The CASES Partnership is a consortium of researchers, communities, private sector, and government and nongovernment entities from across northern Canada, Alaska, Sweden, and Norway.

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Welcome to the CASES Partnership



CASES



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INTERNATIONAL FORUM
MAY 10TH, 2022



DAY 1

AGENDA

SK TIME ZONE

10:30-11:00AM - NETWORKING & COFFEE

11:00-11:45AM - WELCOME & OVERVIEW

11:45-12:15PM - PRESENTATION BY GWEN HOLDMANN (ACEP)
SHARING SUCCESS: COMMUNITY CONTEXT

LUNCH BREAK 12:15-12:45PM

12:45-1:00PM - ENERGY FUTURES VIDEO (ACEP)

1:00-1:30PM - ENERGY FUTURES PRESENTATION - CLARK MILLER

1:30-1:45PM - GROUP DISCUSSION

COFFEE BREAK 2:00-2:15PM

2:15-3:45PM - ROUND TABLE DISCUSSIONS

3:45-4:15PM - KNOWLEDGE SHARING

4:15-4:30PM - WRAP UP

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Energy Futures

Video By: ACEP - Kotzebue, AK Wind Energy

Kotzebue Electric Association was the first utility in Alaska to integrate a wind farm into the diesel-fired power plant.



https://www.youtube.com/watch?v=4xna4-PSIUU&list=PLJ_aYEKT8q8wQh2b053stawIn7MRR0gp1&index=41&t=1s

Empowering Imagination and Unleashing Sustainable Energy Futures

Presented by Dr. Clark Miller, ASU

All over the world, people are excited about the potential of sustainable energy futures to solve climate change and transform their communities for the better. Unfortunately, our existing energy institutions impose severe constraints on people's capacities to imagine and explore new and innovative ways of organizing energy systems and unleash the full potential of carbon-neutral energy technologies.

In this talk, I will explain why I think imagination is crucial to achieving the goal of decarbonizing the global economy, present some examples of different kinds of imaginative work that we've done around sustainable energy, and suggest how energy institutions can do a better job of empowering and unleashing new and diverse forms energy imagination in the years ahead.



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Day 1: ROUND TABLE DISCUSSIONS

- 1) What are the biggest energy challenges faced in northern & remote communities?
- 2) When we say "energy security", what does that mean (e.g. dimensions, conditions, youth)?
- 3) What do you want your community's energy future to look like - i.e. goals?
- 4) What could northern communities do (more, differently) with more secure and affordable energy?

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INTERNATIONAL FORUM

MAY 11TH, 2022



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DAY 2

AGENDA

SK TIME ZONE

- 10:30-11:00AM - NETWORKING & COFFEE
- 11:00-11:15AM - WELCOME & OVERVIEW
- 11:15-11:30AM - CASES VIDEO - ENERGY SECURITY
- 11:30-12:15PM - SYNTHESIS OF DAY 1

LUNCH BREAK 12:15-12:45AM

- 12:45-1:05PM - INTRODUCTION TO THE ENERGY GATEWAY
VIKAS MENGHWANI
- 1:05-1:30PM - COMMUNITY PROFILE: GALENA, ALASKA
TIM KALKE & DIANE HIRSHBERG
- 1:30-2:00PM - GROUP DISCUSSION
- 2:00-2:30PM - EVENT WRAP UP AND NEXT STEPS

COFFEE & NETWORKING

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Synthesis of Day 1 - Energy Security & Futures

CASES Video

What we're hearing from the communities

Round table discussion on Energy Security & Futures

1) Alaska

2) Saskatchewan

3) Open discussion on similarities & differences

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Introduction to the Energy Gateway

By: Dr. Vikas Menghwani

We are working to create an Energy Gateway - a northern Circumpolar knowledge sharing platform, comprised of model community energy plans, energy transition tool-kits, and stories from international experience for communities, utilities and researchers to network, exchange knowledge, and facilitate long-term capacity building.



Link to the Gateway can be found on the CASES website:
www.renewable.energy@usask.ca

VIKAS MENGHWANI, USASK
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Community Profile - Galena, AK

By: Dr. Diane Hirshberg and Tim Kalke



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Event Wrap-up

CASES Project Next Steps

Summer Research Activities & Opportunities

Thank you for coming!
We appreciate your participation!

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WAYS TO STAY CONNECTED:

SIGN UP FOR OUR NEWSLETTER

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It takes a village...



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Publications

Journal Articles

- Dutta N, Noble BF, Poelzer G, Hanna K. 2021. From project impacts to strategic decisions: recurring issues and concerns in wind energy environmental assessment. *Environmental Management*
<https://doi.org/10.1007/s00267-021-01518-2>
- Hu B, Gong Y, Chung CY, Noble B, Poelzer G. 2021 Price-maker bidding and offering strategies for networked microgrids in day-ahead electricity markets. *IEEE Transactions on Smart Grid*
<https://doi.org/10.1109/TSG.2021.3109111>
- Lauf, T., Ek, K., Gawel, E., Lehmann, P, and Söderholm, P. 2020. The Regional Heterogeneity of Wind Power Deployment: An Empirical Investigation of Land-Use Policies in Germany and Sweden. *Journal of Environmental Planning and Management* 63(4), 751-787.
- Leonhardt R, Noble BF, Poelzer G, Belcher K, Fitzpatrick P, Holdmann G. 2022. Advancing local energy transitions: A global review of government instruments supporting community energy. *Energy Research and Social Sciences* 83:<https://doi.org/10.1016/j.erss.2021.102350>
- McMaster, R., Noble, BF., Poelzer, G. & Hanna, K. (2021). Wind energy environmental assessment requirements and processes: an uneven landscape. *Impact Assessment and Project Appraisal*, 39(1): 11-23.<https://doi.org/10.1080/14615517.2020.1815271>
- Nwanekezie K, Noble BF, Poelzer G. 2021. Transitions-based strategic environmental assessment. *Environmental Impact Assessment Review*
<https://doi.org/10.1016/j.eiar.2021.106643>
- Rizzo, A., Ekelund, B., Bergström, J., and Ek, K. 2020. Participatory design as a tool to create resourceful communities in Sweden. In *Co-creation of Public Open Places: Practice - Reflection – Learning*, Editors Carlos Smaniotto Costa, Monika Mačiulienė, Marluci Menezes, Barbara Goličnik Marušić, *Edições Universitárias Lusófonas*, pp. 95-107. Layout 1 (grupolusofona.pt)

Publications

Technical Reports & Other Publications

- Bespflug, C., Leonhardt, R., McMaster, R., Thompson, S., and Yoursy, A. 2020. Aklavik: Energy Profile Background Technical Report. Saskatoon, SK: CASES.
- Bespflug, C., Leonhardt, R., McMaster, R., Thompson, S., and Yoursy, A. 2020. Fort McPherson: Energy Profile Background Technical Report. Saskatoon, SK: CASES.
- Bespflug, C., Leonhardt, R., McMaster, R., Thompson, S., and Yoursy, A. 2020. Inuvik: Energy Profile Background Technical Report. Saskatoon, SK: CASES.
- Bespflug, C., Leonhardt, R., McMaster, R., Thompson, S., and Yoursy, A. 2020. Tsiigehtchic: Energy Profile Background Technical Report. Saskatoon, SK: CASES.
- Brinley, K. 2021. A comparative analysis of the advancement of biomass energy in Alaska, Finland, Sweden, and Canada. Background Technical Report. Saskatoon, SK: CASES.
- Holdmann G., Wies R., Vandermeer J. 2019. Paper published in the Proceedings of the IEEE (Volume: 107, Issue: 9, September 2019, p. 1820-1837) "Renewable Energy Integration in Alaska's Remote Islanded Microgrids: Economic Drivers, Technical Strategies, Technological Niche Development, and Policy Implications" by. DOI: 10.1109/JPROC.2019.2932755
- Robb, K., Fitzpatrick, P., & Desorcy, G. (2020, July). Re- Envisioning an Energy Strategy for Manitoba: Planning for 2030 and Beyond. Conference Proceedings: International Conference on Sustainable Development. <https://ic-sd.org/wp-content/uploads/2020/11/Kate-Robb.pdf>
- Sigurdson, P., Ibrahim, O., Fernandes, L. and Balicki, B. 2020. Community Energy Profile: Preliminary Assessment. PBCN Communities of Deschambault Lake, Pelican Narrows, Southend, and Kinoosao. Saskatoon, SK: CASES.

Resources

Student Thesis

- Brinley K., 2021 Bio-energy advances: a comparative analysis. Undergraduate Honors thesis. Department of Geography & Planning, University of Saskatchewan.
- Dutta N., 2021. Off-ramping strategic issues from project EA in the renewable energy sector. MSc thesis. Department of Geography & Planning, University of Saskatchewan.
- Fernandes de Sousa Moura L.. Renewable energy and energy efficient toolkit. MSEM Project Report. School of Environment & Sustainability, University of Saskatchewan.
- Gebre-Mehdin, A. 2020. Swedish FES-related policy: integration of national objectives and factors affecting local actors' policy response, Master's Thesis in Forest policy, Swedish University of Agricultural Sciences in collaboration with Luleå University of Technology. This thesis addresses the intersection of forest-, energy, climate- and nature conservation policies, particularly synergies and conflicts related to increased production of forest-based bioenergy.
- Godinho Martins. 2022. Understanding the impacts of, and mitigation actions for, renewable energy projects: case study of wind energy in western Canada. MSc thesis. Department of Geography & Planning, University of Saskatchewan.
- Häggbom, G. 2020. Aktörskoalitioner och strategier i policyprocessen: En fallstudie av Jokkmokks energipolitik (Actor coalitions and energy policy strategies: A case study of energy policy in Jokkmokk municipality), Bachelor's Thesis in Political Science, Luleå University of Technology. FULLTEXT02.pdf (diva-portal.org)
- Kvern, M. 2020. Strengthening Energy Security through Community Energy Planning in Churchill, Manitoba [Unpublished undergraduate honours thesis]. University of Winnipeg.
- Leonhardt, R. 2022. Advancing Energy Transitions: A Review of Government Instrument Supporting Community Energy. MSc thesis. Department of Geography & Planning, University of Saskatchewan.
- Nordlund, L. 2020. Att ta tempen på klimatpolitiska ramverk: Ett fall av påverkansfaktorer för klimatpolicyintegrering på lokal nivå (Assessing climate policy instruments: factors affecting local level climate policy integration), Master's Thesis in Political Science, Luleå University of Technology.
- Robb, K. 2021. MSc thesis. Nation-to-Nation Engagement and Meaningful Public Participation in Canadian Water Power Licensing. Development Practice in Indigenous Development, University of Winnipeg.
- Ronnerfors, R., and Svensson, E. 2020. Viljan att investera i en bostadsnära solcellsanläggning: Undersökning av investeringsviljan (The willingness to invest in solar power in residential areas), Master's Thesis in Economics, Luleå University of Technology.

Other Resources

- **ACEP Resource Overviews**

- Brief summary documents on energy resources available in Alaska - biomass, diesel, energy integration, energy storage, global applications, heat pumps, organic rankine cycle, power systems integration, solar, transmission, wind
- <https://acep.uaf.edu/publications/resource-overview.aspx>

- **ACEP Research Briefings**

- Highlighted project synopses covering some of ACEP's applied energy research.
- <https://acep.uaf.edu/publications/research-briefings.aspx>

- **ACEP Project Snapshots**

- Two page summaries of ACEP's research projects, findings, and recommendations.
- <https://acep.uaf.edu/publications/project-snapshots.aspx>

- **ACEP Videos and Vodcasts**

- Videos include energy technology applications, conference and lecture recordings, project spotlights and intern vodcasts.
- <https://acep.uaf.edu/publications/video-and-vodcasts.aspx>

- **Three Nations Energy Learning Resources**

- Free learning resources available for PDF download including fact sheets, posters, and education guides on various energy topics.
- <https://www.3ne.ca/learning-resources/>



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