

SSHRC Engage Executive Summary:
4RIGHT Community Energy Planning in NunatuKavut, Labrador
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Introduction:

The NunatuKavut Community Council [NCC] represents several off-grid diesel-powered communities in Southern Labrador.

Building upon NCCs ongoing ‘*Community Sustainability Initiative*’ : the goal of our research is work with three NunatuKavut communities (Black Tickle, Norman Bay, St. Lewis) to determine:

- 1) From Southern Inuit Perspectives, how do existing energy systems (diesel-generated electricity and home heat) affect the economic, environmental, and societal sustainability of communities?
- 2) How can a participatory and community-based assessment of sustainable energy technologies facilitate the improvement of Southern Inuit energy sustainability?

Methodology:

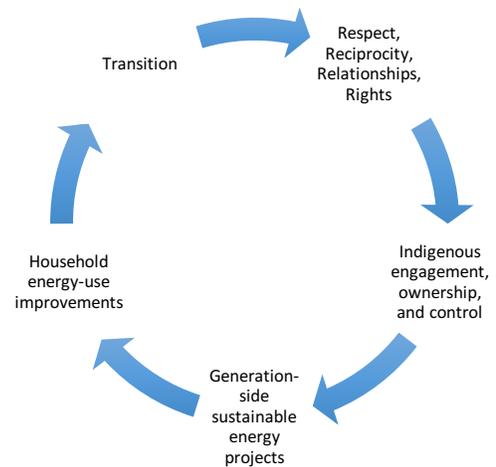
In collaboration with Southern Inuit scholars, we developed an approach termed the ‘4RIGHT Community Energy Planning Framework’ [Fig 1].

The framework asserts that energy planning research must be grounded in the Indigenous worldviews of respect, reciprocity, relationships, and rights (Louis, 2007).

The approach emphasizes Indigenous engagement, ownership, and control over sustainable energy projects and research. We rely on the ‘OCAP’ research principles, being Indigenous ownership, control, access, and possession of data, to assert self-determination in research (Schnarch, 2004). This stage of the framework identifies community-priorities, and empowers community-members to steer their energy futures.

Generation-side sustainable energy projects, and household efficiency technologies, must be pursued simultaneously. While significant scholarly focus has been on renewable energy projects, research suggests that efficiency measures can reduce electricity demand by upwards of 40% in off-grid communities (Nunatsiavut Government, 2016).

Figure 1: ‘4RIGHT Community Energy Planning Framework’



We argue that if energy-planning researchers and practitioners can: maintain the 4 R's associated with Indigenous research; implement meaningful processes of Indigenous engagement, ownership, and control; evaluate the socio-economic feasibility of supply-side and end-use energy technologies; that only then may practitioners make recommendations of which approaches are most likely to assist communities in transitioning to sustainable energy futures.

Data Collection:

Conducted 75 community-member interviews on energy sustainability in Black Tickle (n = 33), St. Lewis (n = 36), and Norman Bay (n = 6). Interviews focused on: identifying community-needs, sustainable energy preferences, and establishing energy priorities.

Conducted 7 key informant interviews with utility employees, community leaders, and sustainable energy experts to determine sustainability-impacts and sustainable energy feasibility.

Key Findings:

- Heat security was the greatest energy-challenge identified in Black Tickle. 24% of respondents reported living in an 'inadequately heated home'.
- Desire for energy autonomy emerged as a key challenge in St. Lewis. Community-members fear escalating energy prices, and expressed desire for more consultation and control over their energy-system.
- Reliable transportation and employment emerged as the key challenge in Norman Bay.
- NunatuKavut communities do not necessarily oppose diesel-generation. Community-members value the familiarity, reliability, and employment benefits associated with the diesel system. However, community-members expressed desire to improve environmental aspects of energy-systems.
- Wind and solar power emerged as the most preferred sustainable energy technologies (71% and 57% in favour, respectively). Community-members desire more information and mitigation of concerns regarding tidal, wave, and biomass-energy, prior to the advancement of any project.
- Community-members opposed small-scale hydroelectricity, large-scale hydroelectricity, and small-scale nuclear generation (44%, 55%, and 55% in opposition, respectively).
- Community-members support pumped-hydro and grid-extension as means to store electricity. Community-members expressed some level of concern about battery-storage.
- Energy efficiency technologies generally maintain higher levels of social acceptance than renewable energy resources. Community support is attributed to: cost savings as a result

of technologies, incremental vs. disruptive change, and positive experiences with previous projects.

- Wood-heat is the most preferred heating alternative across communities, followed by electric heat, and then heat pumps.
- Community-members identified: (a) job creation; (b) educational and training opportunities; and (c) revenue generation, as priorities for future sustainable energy projects.

Recommendations and Next Steps Based on Analysis:

Our community-energy planning process identified several potential pilot projects to improve energy sustainability in the communities, including:

Expansion of energy efficiency programming to include household insulation, window and door upgrades, and building envelope measures.

Assist homes in Black Tickle convert to electric heat/heat pumps to address fuel access challenges.

St. Lewis identified as a potential pilot community for a demonstration renewable energy (wind or solar) project.

Community education and awareness opportunities are desired in the areas of: energy efficiency technologies, wind and solar energy, emerging renewable energy technologies (tidal, wave, biomass).

Wood is the most preferred source of home heating. High efficiency woodstoves and the establishment of a community-oriented firewood service may help maintain this important cultural tradition, while also improving access and environmental impacts of wood-use.