

Powering Independence: Pathways to Energy Resilience in Remote and Indigenous Communities

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Remote and Indigenous communities across Canada face persistent energy challenges, including reliance on costly and carbon-intensive diesel, limited grid connectivity, and vulnerability to climate impacts. At the same time, these communities are rich in renewable resources and knowledge that can underpin resilient, self-determined energy futures. This panel brings together industry, academia, and First Nations leadership to explore how innovative tools, partnerships, and community-driven approaches can accelerate energy resilience and independence. A digital specialist from AECOM will demonstrate how GIS-based mapping of renewable resources (such as wind, solar, geothermal, and hydro) combined with infrastructure and land-use data can support informed, holistic decision-making for energy infrastructure planning in remote settings. This work is grounded in data governance aligned with the OCAP principles established by the First Nations Information Governance Centre, ensuring First Nations ownership, control, access, and possession of their data. In multi-stakeholder environments, these principles are implemented through secure architectures, role-based access, and transparent data-sharing, ensuring digital tools support community authority. A representative from the University of Victoria's PRIMED group will discuss their work partnering clean-energy technology developers with First Nations communities to co-develop locally appropriate energy solutions and build long-term capacity. A First Nations representative will ground the discussion by sharing community perspectives, priorities, and the social, cultural, and economic considerations that must shape successful energy projects. Together, the panel will highlight pathways to align technology, data, and partnerships with Indigenous rights and governance frameworks, advancing resilient, sustainable, and community-owned energy systems across remote Canada.