

Transforming the Utility Business Model

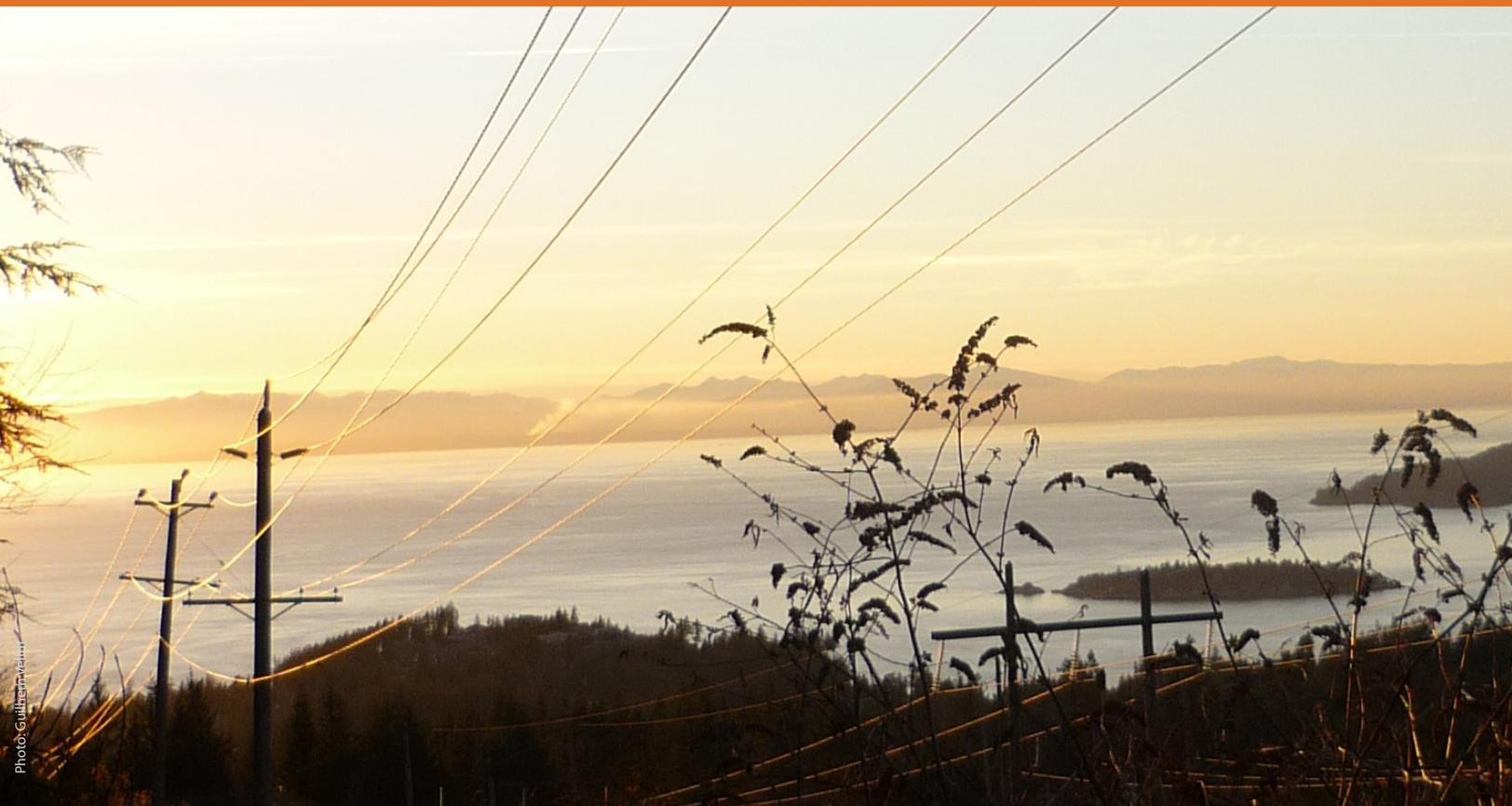
Options to improve services and opportunities for clean
energy in remote communities

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EXECUTIVE SUMMARY



Executive summary

Canada's national and international commitments to address climate change will require significant, sector-wide declines in greenhouse gas emissions. Climate action to drive down carbon will include the implementation of clean energy projects in remote communities which in turn need to rapidly accelerate. Moreover, the energy transition in remote communities, from diesel fuel to clean energy, must be inclusive. Indigenous businesses, entrepreneurs, and communities have been leading efforts to support energy-efficient housing and provide renewable energy in place of diesel, asserting their rights to self-determination and economic agency as well as taking on leadership roles in their community's clean energy transition.

Despite the growing number of renewable energy and energy efficiency projects in remote communities, projects are not being implemented at the speed and scale needed to meet provincial, territorial, and federal commitments to reduce the use of diesel power. A lack of opportunities for Indigenous proponents to implement clean energy projects, due to factors such as unfavourable and/or unavailable revenue streams, has slowed clean energy deployment as have barriers to project development including regulations that fail to support renewable energy coupled with pricing structures that favour diesel energy.

These barriers are embedded in the Cost-of-Service (CoS) business model that underpins how utilities operate. The CoS model financially rewards ownership of infrastructure and ties revenue to the amount of energy sold. This means that any non utility-owned renewable energy systems, as would be the case for Indigenous and/or community-owned projects, or reductions in energy demand due to an increase in energy efficiency projects, result in revenue losses for utilities. Consequently, utility business models need to be restructured so that revenue is not lost due to energy efficiency improvements and the introduction of clean sources of energy. Instead, utilities should be incentivized to support, and be active partners in, clean energy development.

Reforms to the utility business model can change the way utilities earn revenue and can modernize billing structures to better suit service offerings. Restructuring revenue generation will require endorsement and support from utilities, utility regulators, and different levels of government. Government must also initiate changes to policies that regulators are bound by. Policy revisions must be informed by climate action policies, energy innovation, greater customer engagement in the energy sector, and the

prioritization of Indigenous-led projects recognizing the imperative of reconciliation and Indigenous rights while still ensuring that energy supply remains safe, reliable, and affordable.

The focus of this research is to identify the challenges that utilities face in servicing remote communities and to apply utility reform options that are now in effect in grid-tied jurisdictions to the remote community context.

Sixteen alternatives to the utility business model employed in remote communities were considered. Of those, four were identified as the best means of restructuring utilities servicing remote communities in support of policy priorities and Indigenous-led clean energy projects. The four options for utility reform are:

- 1. Performance Incentive Mechanisms (PIMs)** – Through this option, regulators establish key performance indicators (KPIs) such as a KPI on the implementation of energy efficiency programs. If, for example energy efficiency uptake exceeds or, conversely, does not meet the pre-determined business-as-usual threshold, revenue to the utility will increase or decline accordingly. Utilities are thus incentivized to improve environmental performance, level of customer satisfaction, or other actions as determined by the regulator-defined metrics.
Primary advantage: PIMs support alignment between utility operations and climate policy and can also support reconciliation goals if they are designed to reflect the community's priorities.
- 2. Revenue Decoupling** – Under this option, units of energy sold do not determine the revenue realized by the utility. Instead, rates charged to customers fluctuate to reflect actual sales volumes. A ceiling on rate increases can be imposed to minimize increases. Additionally, the amount of revenue that a utility is required to generate can be adjusted to reflect actual spending or other market influences.
Primary advantage: decoupling revenue from rates removes utility reluctance to support renewable energy and energy efficiency projects that would have reduced revenue under CoS, as a decline in energy sales no longer means lower revenues for utilities.
- 3. Total Expenditure Approach (TOTEX)** – Through this option, utilities earn a return on capital and operating costs (currently, utilities only earn a return on capital costs), incentivizing utilities to choose the most economical option rather than prioritizing capital expenditures.

Primary advantage: after implementation of TOTEX, utilities can earn a return on Independent Power Producer (IPP) contracts, creating opportunities for Indigenous companies and communities to develop renewable energy projects.

4. **Platform Service Revenues** – This option allows utilities to serve as a “platform” operator for third-party energy service companies that can supply energy in addition to other energy-related services to customers, coordinating energy resources into the distribution system in exchange for fees that third parties pay the utility.

Primary advantage: Platform Service Revenues benefit the utility, third parties, and customers – utilities secure a new revenue stream, barriers to market entry are lowered for third parties, and customers get a greater range of services to choose from.

Each of these reform options targets a different combination of objectives, as shown in the table below (more check marks mean better alignment with the reform objective).

Summary of utility reform options evaluated

	Reform objective	Utility reform option			
		PIMs	Revenue Decoupling	TOTEX	Platform Service Revenues
Reform Objective	Align utility operations with government climate policy objectives	✓✓✓	✓✓✓		✓✓
	Support distributed energy resource/energy efficiency implementation	✓✓✓	✓✓✓	✓✓	✓✓✓
	Remove utilities' incentive to grow energy sales so as to encourage energy efficiency projects	✓✓	✓✓✓		
	Support Indigenous reconciliation	✓✓✓		✓✓✓	✓✓✓
	Distribute risk and value sharing between utilities and third parties	✓✓	✓✓		✓✓

	Encourage cost containment			✓	
Pathway for Change	Change how rates are determined and/or structured		■		■
	New revenue opportunities	■		■	■

Determining which reform option(s) to adopt depends on the goals associated with the jurisdiction where a utility is located. Identifying those goals entails consideration of provincial and territorial climate and energy targets, in addition to regulator and utility mandates as dictated by provincial and territorial governments. Updating mandates should be a collaborative process between governments, regulators, and utilities to best reflect shared priorities.

Next steps: Working group on utility reform

Listed below are guidelines for a working group made up of government officials, regulators, representatives from utilities, and members of Indigenous communities to collaborate on opportunities for utility reform.

1. Identify and categorize new responsibilities for utilities to address climate change; reconciliation and Indigenous rights; and innovation and customer satisfaction.
2. Prioritize responsibilities and align with the intended outcomes of utility reform.
3. Identify the biggest challenges to adopting new responsibilities under the CoS model and existing regulations.
4. Identify and prioritize which of the following six utility reform objectives are most important for the jurisdiction:
 - Align utility operations with climate policy objectives
 - Support DER/energy efficiency implementation
 - Remove utilities' incentive to grow energy sales
 - Support Indigenous reconciliation
 - Distributed risk and value sharing
 - Cost containment
5. Identify which of the four options for reform best satisfy the selected objectives.
6. Revisit the main challenges in Step 3 to ensure that the selected reform options will address these challenges.
7. Map out what utility reform will look like in your jurisdiction. Determine which reform option to explore first. Study the impacts of reform on rates and revenues, conduct pilot projects, and evaluate how best to implement reform and whether it should be done in one or multiple stages. Identify the actions required from governments, regulators, and utilities to implement utility reform.
8. Coordinate next steps amongst working group members and stakeholders.

Recommendations

For governments

Eleven policy recommendations for provincial, territorial, and federal governments were identified to advance utility reform:

Provincial/territorial governments

1. **Expand the mandates of regulatory bodies overseeing utilities so that regulators can ensure that the way utilities operate is aligned with reform objectives such as climate change, reconciliation, and customer choice.** Regulators need to allow utilities to factor in costs associated with addressing reform objectives in rate applications. As such, regulator mandates should be extended beyond simply ensuring utilities are supplying the lowest cost of service. To avoid rate increases that may result if utilities implement new programs under the Cost-of-Service model, this will force both regulators and utilities to evaluate and implement utility reform.
2. **Create guidelines and new policy tools for regulators to follow and use to ensure that utilities incorporate federal, provincial, and territorial climate and energy plans into their operating practices.** Regulators will need more tools and increased support and guidance on how to undertake these new mandates.
3. **Prioritize Indigenous leadership in the clean energy transition through policy changes.** The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) should be affirmed into provincial and territorial law and embedded in regulatory agencies. Utility and energy policies should be designed to prioritize Indigenous involvement in, and ownership of, projects to support the clean energy transition.
4. **Reform financial support systems for utilities.** Government funding should be targeted at supporting the economics of renewable energy and energy efficiency and should shift subsidies from diesel to lowering energy costs more broadly.
5. **Direct regulators to re-evaluate how utilities set consumer rates.** Utilities must be given agency to evaluate new and innovative methods of meeting their revenue requirements beyond charges for energy use on customer bills. For example, new charges could be included if the utility is acting as a Platform Service for a third-party provider.

6. **Implement Renewable Portfolio Standards (RPS) and increase funding and programming for renewable energy projects.** An RPS requires utilities to generate a percentage of their electricity from renewable sources. Under an RPS, a utility is required to purchase or generate renewable energy even if purchasing or generating diesel is cheaper. This will require utilities to re-evaluate their business models to adapt to these new costs and will reduce barriers for implementing certain reform options. Government support for implementation should come in the form of funding and programs that increase the penetration of renewable energy, allow utilities to create plans to meet standards, and increase opportunities for community engagement.
7. **Implement Energy Efficiency Resource Standards (EERS) and increase funding and programming for energy efficiency programs.** Establishing energy efficiency standards incentivizes utilities to offer programs that will reduce energy consumption by the end user. Current practice mitigates against this as less energy consumed means less revenue is generated for the utility. A new business model will be required so that selling less energy does not result in revenue losses. Like RPS policies, EERSs will require increased funding for energy efficiency projects.
8. **Increase funding to encourage utilities to explore different options to restructure their business practices.** Utilities and regulators need funding outside of their operating budget to test reform options in their jurisdictions.
9. **Establish a utility reform working group with representation from provincial/territorial and Indigenous governments, regulators, and utilities.**

Federal government actions

10. **Increase funding to spur innovation and support utilities to explore reform options.** Utilities and regulators need funding outside of their operating budget to test reform options in their jurisdictions.
11. **Establish a nation-wide government/utility collaborative process to support utility reform in remote communities.** The federal government can support reform by initiating the conversation in remote communities.

For regulators

Four recommendations on how regulators can support utility reform:

12. **Ensure early and active Indigenous participation in the regulatory process.** Regulators should hire Indigenous staff for decision-making roles and/or reform regulatory review processes to include local Indigenous governing authorities.
13. **Update rate structures and charges.** Regulations need to be revised and allow for more flexibility so that utilities have more agency over the rates charged to end users.
14. **Support the implementation of distributed energy resources (DERs) by updating renewable energy interconnection policies and increasing Independent Power Producer and net metering rates to accurately reflect the value of distributed energy resources.** To increase renewable energy penetration and increase opportunities for Platform Service Revenues, pricing structures and policies for ease of integration need to be adjusted so that financial and capacity barriers to project implementation are reduced or eliminated.
15. **Establish funding programs for pilot projects (often referred to as innovation sandboxes) to test the applicability of utility reform options for remote communities.**

For utilities

Three recommendations on how utilities can launch utility reform:

1. **Using the perspectives of both the utility and the customer, identify the objectives that reforms to the business model are intended to support. Based on those objectives, determine which reform options to implement.**
2. **Commit to Indigenous reconciliation and partnership.** Utilities will need to fully commit to reconciliation and forming strong, long-lasting partnerships with the communities they service.
3. **Assess the feasibility of new utility business models and propose these new business models to regulators.** Utility proposals are a concrete method to trigger the utility reform process by presenting the options to regulators and prompting a review.

Governments, regulators, and utilities must be proactive in evaluating and adapting their operations, and the regulations that govern them, to meet the evolving needs of

customers and facilitate government commitments to decarbonizing the electricity grid. Working groups that include Indigenous community leaders should be formed to advance utility reform and jointly implement recommendations.

Altering the utility business model will allow communities to fully transition to clean energy. This way, utilities can enable rather than prevent project implementation. Whether the focus is climate and energy policy action, a decarbonized grid, equitable energy systems that prioritize Indigenous involvement and respects Indigenous rights, or customer demand for more services and a better experience, utility reform is a tool for these new responsibilities to be realized.