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restoring the flow

Policies to support Indigenous-led clean energy in remote communities

September 2025

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The Pembina Institute recognizes that the work we steward and those we serve span the lands of many Indigenous Peoples. We respectfully acknowledge that our organization is headquartered in the traditional territories of Treaty 7, comprising the Blackfoot Confederacy (Siksika, Piikani and Kainai Nations); the Stoney Nakoda Nations (Goodstoney, Chiniki and Bearspaw First Nations); and the Tsuut'ina Nation. These lands are also home to the Otipemisiwak Métis Government (Districts 5 and 6).

These acknowledgements are part of the start of a journey of several generations. We share them in the spirit of truth, justice and reconciliation, and to contribute to a more equitable and inclusive future for all.

Contents

Executive summary

Restoring the Flow catalogues and evaluates policy action taken by federal, provincial, and territorial governments to support diesel reduction and Indigenous clean energy leadership. We identify and evaluate policies and programs within five categories that have proven to be critical for enabling community-led clean energy projects and restoring the flow of clean electricity, economic benefits of energy ownership, and decision-making power back to remote Indigenous communities.

The five categories of policies and programs are: (1) collaboration between Canadian governments and Indigenous rights-holders; (2) plans and strategies for diesel reduction and community renewable energy; (3) funding for community clean energy projects; (4) programs for efficient buildings in remote communities; and (5) the market for independent power producers to generate clean electricity and establish a revenue stream for the community.

Strong collaboration and partnership with Indigenous clean energy leaders and deep respect for Indigenous rights is a necessary foundation for robust, tailored policies that address the unique challenges of communities in each region.

Strategies that highlight the unique challenge of energy development in remote communities, make commitments, and coordinate governments' efforts to deliver the requisite funding and policy reforms have proven to be effective for enabling community-owned renewable energy projects that displace diesel and provide a long-term source of revenue for the community.

Photo: Pembina Institute/Archbould Photography.

Several common challenges and trends have shaped the policy landscape in remote communities:

- **B.C., Quebec, and the Yukon** are the three jurisdictions making the most progress on supporting Indigenous-led clean energy development, guided by frequent collaboration and ambitious plans to tackle diesel reduction.
- **Renewable energy development in the Territories is uniquely challenging.** High costs, small tax bases, outdated technology, and other constraints make developing and funding renewable energy extremely challenging, highlighting the importance of federal investment.
- **Ontario, Manitoba, Nunavut, and the Yukon** are pursuing grid connection to provide energy to remote communities where feasible. Like community clean energy projects, ownership of transmission infrastructure provides a pathway for economic opportunity, energy security, and diesel reduction in rural and remote communities.
- Most community projects rely on **both federal and provincial/territorial funding** to advance local energy priorities. Federal programs focused on remote communities have supported nearly 500 major clean energy projects and initiatives. Provincial/territorial programs generally support the smaller community initiatives and early stages of large energy projects.
- Most jurisdictions have strong programs to **support energy efficiency** in remote community houses and buildings, but progress is limited in part due to a lack of federal investment in this area.

No jurisdiction can say the work is done. However, increased collaboration on projects and policy reform has led to meaningful progress in advancing remote community energy priorities in the past decade. This includes the development of clean energy generating projects and building upgrades, with many lessons learned and best practices emerging.

Across remote communities in Canada, there are many stories of success: clean energy projects that are Indigenous community-owned, displacing diesel, and generating revenue, with many more in development. These successes confirm that policies and programs to support remote community energy are working and should be expanded. This is especially true on the federal level; federal funding to support remote community energy has been very successful in the period from 2018-2025, though many of the most impactful programs are not accepting additional applications, and the federal government has not announced any reinvestment into the programs.

As Canadian jurisdictions advance their goals of growing the clean economy and pursuing reconciliation with Indigenous Peoples, supporting remote community energy must remain a central priority: restoring the flow of clean electricity and economic benefits to remote Indigenous communities.

Introduction

Restoring the flow

Since time immemorial, rivers have served as sustainers of life, providing Indigenous communities across what is now known as Canada with a critical source of food, water, and nutrients to maintain healthy ecosystems. As the modern-day nation of Canada developed through colonization, it harnessed the flow of rivers to power and sustain the growth of settler populations at the expense of Indigenous communities.

This process often blocked the natural life-bringing flow of rivers to extract and export that power to the developing urban centres, leaving behind reservoirs that destroy ecosystems, submerge sacred sites, and displace entire communities, in some cases leaving those displaced communities without any access to the power generated from these reservoirs.[1]

This colonial decision-making, which prioritized Canada's growing population over Indigenous communities, has created immeasurable harm, entrenched diesel dependency, and left systemic barriers that disenfranchise remote communities and continue to undermine Indigenous rights.

Most Canadians take our secure, abundant electricity resources for granted; when we flip a switch our lights will turn on and our food stays fresh in our freezers all year round. This same guarantee of energy security is not available to remote communities; the majority of whose residents are Indigenous Peoples living on their traditional territories.

Remote communities are largely still powered by diesel generators, which are expensive, noisy, and polluting. Transporting and storing diesel fuel carries the ever-present risk of an environmentally catastrophic spill, or long-term slow leaks.[2] Remote communities pay the highest electricity rates in Canada but still face issues with power quality and blackouts.[3] Energy availability limits community growth and economic development.

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[1] Luke Gleeson, "DƏNE YI'INJETL, The Scattering of Man," *Mesilinka Films*, Tsay Keh Dene First Nation, 2021. https://gem.cbc.ca/dne-yiinjetl-the-scattering-of-man

Denis Paquette, Carmen Henriquez, "Power to the People Episode 13: Gull Bay, ON," *RealWorld Media*, 2019. https://powertothepeople.tv/gull-bay/

[2] Dave Lovekin and Dylan Hereema, *The True Cost of Energy in Remote Communities* (Pembina Institute 2019). https://www.pembina.org/pub/diesel-true-cost

[3] Dave Lovekin, *Diesel Subsidies – Simplified, Part I* (Pembina Institute 2021). https://www.pembina.org/pub/diesel-subsidies-simplified-part-i

In response to these issues, Indigenous leaders across Canada have built community-scale clean energy solutions that not only mitigate the harmful effects of imported diesel, but also create local economic opportunity for First Nations, Métis, and Inuit communities through energy ownership.

While these initiatives have faced multiple barriers such as high capital costs, limited construction seasons, and limited community capacity, Indigenous energy leaders have advanced their projects and advocated for policies and programs to remove barriers for others. The increase of diesel-reducing projects is, in part, the result of an evolving ecosystem of policies and reforms that address these specific barriers and make community-led renewable energy projects a viable endeavour for Indigenous governments, development corporations, and businesses.

This report catalogues existing initiatives at the federal level and in each province and territory. These initiatives are helping to restore the flow of clean power back to communities, whether through transmission lines or local renewable generation projects such as hydro, wind, or solar power developments. But it's about more than just electricity: restoring the flow also refers to the flow of benefits of energy development, and the flow of decision-making power, returning to the community.

The policies and programs included in this report are successful when they are rooted in the recognition of Indigenous rights as defined by the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), motivated by the authentic desire of the Canadian government to reconcile its relations with Indigenous Peoples. These policies build capacity and opportunity for Indigenous communities to step towards energy sovereignty, which creates better outcomes for community growth, self-sufficiency, and climate action.

Photo: Green Sun Rising, Paulatuk, NWT.

Purpose

This research catalogues and evaluates policies, programs, and actions taken by governments across Canada to remove barriers and support Indigenous leaders in diesel reduction, highlighting successes as examples for policy makers to learn from and apply in their own jurisdictions. It also brings attention to some priorities for action in each jurisdiction that would help remove persistent barriers. Successful policies create the conditions for community-led diesel reduction to thrive.

Most diesel-dependent remote communities are Indigenous communities, so the work of diesel reduction is intimately tied to respecting Indigenous rights. This includes implementing legal frameworks for upholding UNDRIP, building Indigenous energy sovereignty, and advancing economic reconciliation through revenue-generating opportunities in clean energy.

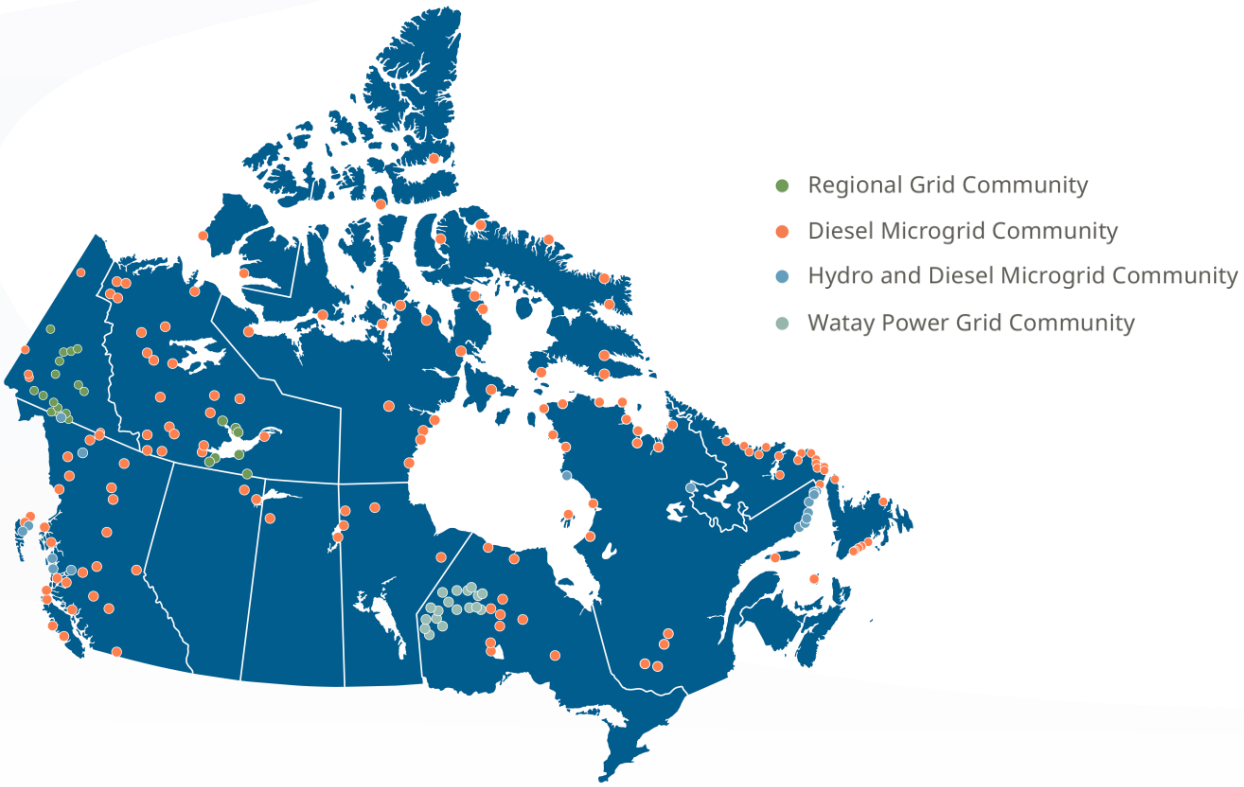
Highlighting progress on these policies spreads awareness of the different strategies and common components to step towards the shared goals: diesel reduction for remote communities and reconciliation with remote Indigenous communities. This report is meant to be a reference for jurisdictions developing policies, as well as a tool for Indigenous leaders and allies as they advocate for more government action.

Methodology

Research

This report's findings come from a scan of published information such as plans, strategies, news releases, and documentation about energy, climate, and diesel reduction priorities in each jurisdiction.

This information is supplemented by interviews with key stakeholders such as utilities; provincial, territorial, and federal government officials; energy policy experts; and representatives of remote First Nations, Inuit, and Métis communities, and affiliated clean energy developers.



Scope

This report examines policies within all Canadian jurisdictions that have remote communities; that is, communities not connected to central North American utility grids. There are remote communities in nearly every Canadian province and all three of the territories. There are also three isolated electrical grids that serve larger populations across many communities: one in Yukon and two in the Northwest Territories.[4]

Remote communities across Canada are mostly Indigenous, and policy action to support remote energy projects is often driven by the advocacy of Indigenous governments and development corporations. While the report highlights Indigenous governments and organizations involved in action and advocacy, policies and actions of Indigenous organizations and governments are not within the scope of the evaluation section of this report.

For each jurisdiction, this report surveyed existing government programs, initiatives, and policies in five key areas, or streams: collaboration with rights-holders; plans and strategies; clean energy project funding and financing; the independent power producer (IPP) market; and programs for efficient buildings.

[4] Emily He, Arthur Bledsoe, Fibha Nazim, Rosa Brown, *Decarbonizing Remote Indigenous Communities - Regulatory reform in B.C. and the territories* (Pembina Institute, 2025). https://www.pembina.org/pub/decarbonizing-remote-indigenous-communities

Evaluation

Along with a list of existing policies and programs in each stream, this report evaluates their relative efficacy in removing barriers and creating a supportive environment for diesel reduction. These evaluations are not intended to prescribe a strict set of actions for communities and governments; rather, they are designed to reflect and account for the unique context and conditions in each jurisdiction.

To summarize the evaluation, we assign a rating that indicates the relative flow of each stream, reflecting the relative efficacy, progress, and momentum of each jurisdiction in that area.

Strong flow

The highest rating we assign is a set of three green waves to indicate that there is a lot of positive progress and action in a given stream. The job isn't done, but the stream has a strong flow: i.e., there is a supportive environment for Indigenous leadership to thrive and strong progress towards diesel reduction that is aligned with community preferences.

Medium flow

The middle ground is a set of two yellow waves. This indicates there is some progress in this stream, but barriers remain that are inhibiting further progress. Jurisdictions that score this rating are doing good work to advance diesel reduction and create opportunities for Indigenous leadership, but they may not be as comprehensive or effective as they need to be.

In practice, the yellow wave rating is flexible and context dependent.

Just a trickle

The third rating is a single red wave, indicating only a trickle. In these streams, the flow of progress is still blocked; but the ambition is there, just waiting to be unleashed. Jurisdictions with red wave ratings have not yet addressed the barriers that restrict Indigenous leadership and reinforce the diesel-dependent status quo.

The ratings are intended to highlight successful policies and point to areas where more attention is needed. We chose to indicate our flow ratings with wave symbols to illustrate that none of these evaluations are static; there is progress in all these areas in each jurisdiction with varying levels of priority, attention, and momentum.

Streams of supportive policies

Through the Pembina Institute's research, advocacy, and work with Indigenous clean energy leaders, utilities, and governments, we have identified five categories, or streams, of policies or initiatives that have emerged as consistent indicators for meaningful diesel reduction progress. Here we explain why each stream is important to supporting diesel reduction and Indigenous leadership.

	Stream of policies	Description
	Collaboration with rights-holders	Recurring collaboration platforms between Indigenous governments and Canadian provinces and territories with a focus on remote renewable energy, diesel reduction, or community preferences for energy.
	Plans and strategies	Plans and strategies (e.g., energy strategies, climate strategies) published by governments and utilities in Canadian provinces and territories to outline actions for meaningfully advancing diesel reduction and remote community energy priorities.
	Funding and financing	Financial support provided by Canadian governments to advance diesel-reducing clean energy projects and community capacity-building (e.g., grants and or guaranteed loans).
	Programs for efficient buildings	Programs to help remote-community buildings consume less energy through retrofits, energy efficient technologies, and net metering.
	Independent power producer (IPP) market	Government and utility policies that create a market opportunity for IPPs to develop diesel-displacing clean energy projects.

Collaboration with rights-holders

Indigenous participation in decision-making is the foundational step for restoring the flow of clean power and benefits to communities. Indigenous leaders from remote communities are the experts on their territories, their communities, and the experience of living with their remote energy system. They hold relationships with community members and understand the customs, traditions, norms, and processes their community needs to thrive.

Indigenous governments and organizations are driving clean energy development and diesel reduction efforts in remote communities through community energy planning, implementation of energy efficiency initiatives, and development of community-led renewable energy projects. Given the unique circumstances of each remote community, their energy and growth goals, and the hyper-local nature of remote energy grids, collaboration with leaders from the community on energy solutions is a practical necessity to advance long-term energy solutions.

This collaboration is both practical and a matter of rights. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) articulates the right of Indigenous Peoples to determine priorities for development on their territories in Article 23, and to participate in decision-making matters that affect their rights in Article 18. Article 19 articulates that states should consult and cooperate with Indigenous peoples before adopting administrative and legislative measures that may affect them.[5] The Canadian government has passed legislation, the UN Declaration Act (UNDA) which mandates the government to ensure all its laws are consistent with UNDRIP.[6] Several provinces and territories have also legislated requirements to align with UNDRIP, such as B.C. and the Northwest Territories.

This legislation means that Indigenous participation in decision making about policies affecting them and projects on their territories is legally mandated, though specific requirements and practices have yet to be established. This is necessarily a slow process, as these requirements and practices must be co-developed with Indigenous groups, and that process must recognize the unique conditions and features of each First Nation, Inuit government, and Métis government. Therefore, extensive consultation and collaboration with each of these groups is required.[7]

While the process of enshrining UNDRIP in Canadian law is in progress, regular, meaningful collaboration with rights-holder groups creates opportunities for Indigenous participation in decision making about policies affecting them. Meaningful collaboration is more than simply being informed about opportunities or upcoming changes to policies or planning. Meaningful collaboration involves

[5] United Nations, *United Nations Declaration on the Rights of Indigenous Peoples,* (2007). 15, 16, 18. https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

[6] Government of Canada, "About the Act," 2025. https://www.justice.gc.ca/eng/declaration/legislation.html

[7] Government of Canada, "Chapter 1: Shared Priorities," 2023. https://www.justice.gc.ca/eng/declaration/ap-pa/ah/p2.html

working together on policy design, ensuring Indigenous voices are at the table when decisions are made, and that respect for Indigenous knowledge and culture is central to policy and program design.

There is a wide range of possible arrangements that ensure Indigenous voices are at the table. In some cases, negotiated co-governance agreements define the protocol for working together, with structures for shared decision making and conflict resolution. In other cases, informal collaboration and engagement platforms, such as regular working groups between representatives from both Indigenous and Canadian governments and organizations, work well to build consensus and create mutually beneficial outcomes.

There is no one arrangement that guarantees success, but productive arrangements have similar characteristics: they are regular, well resourced, inclusive and respectful, they build trust, and they are rooted in working together in a good way.

Our research identified platforms for collaboration (e.g., governance agreements, working groups, forums, consultations) that are specifically focused on issues such as clean energy development and diesel reduction, and evaluated how effectively these platforms are facilitating collaboration.

Flow level	Collaboration with rights-holders
	Effective well-resourced collaboration, focused on remote community energy priorities, that focus on ensuring policy developments meet the needs of communities and Indigenous leadership. Rooted in legal recognition of Indigenous rights articulated in UNDRIP.
	Collaboration and engagement is happening but is limited in scope and/or not focused on overarching policy or strategy.
	Little to no collaboration between governments and rights-holders.

Plans and strategies

Government plans and strategies are critical indicators of progress and momentum, because policy change requires sustained priority, attention, and resourcing.

Governments commonly publish energy or climate strategies to set goals and identify priorities for the future of the energy sector and to coordinate government efforts to achieve those goals; however, those energy strategies are not guaranteed to address the unique challenges facing remote communities.

To evaluate jurisdictions in this stream, we looked for plans or strategies that specifically identify the priority of addressing energy issues in remote communities, including diesel reduction, clean energy development, energy security, and affordability. Strong strategies identify existing barriers and propose solutions and detailed pathways for action.

We also looked for quantifiable goals, such as diesel reduction targets or clean energy generation targets, and timelines for achieving those goals, as well as instances where Indigenous and remote community representatives were included in the development of plans, strategies, and targets.

Flow level	Plans and strategies
	Comprehensive, detailed plan or strategy specific to remote community microgrids with ambitious targets, timelines, and built-in accountability measures. Acknowledges community priorities for energy, developed with input from communities.
	Plan acknowledges remote community priorities, but is not very ambitious or comprehensive; lacks specific targets, timelines, accountability mechanisms, or funding; or is developed with no input from remote communities.
	No published energy plan or strategy, or published plan does not acknowledge remote communities.

Funding and financing

Government funding for remote energy projects is critical for secure, resilient energy systems and healthy, thriving communities. The funding also helps to build community capacity and ensures the benefits of this development stays in the community. In most cases, projects are supported by a combination of federal and provincial or territorial funds, both of which are important for project execution.

Government funding to meet energy goals through project development is common in any energy system in Canada but is often augmented by private capital. Significant barriers limit access to capital in remote communities, including the low revenue opportunity from these projects due to the small number of customers.[8] Guaranteed financing, where the government backs a loan to de-risk it or offers a low interest loan for clean energy projects, fulfills a critical need to provide access to capital.

Funding can support all phases of project development but can also support critical capacity-building initiatives such as community energy planning and employment for community energy champions, both of which have proven to be effective in facilitating successful clean energy projects. Funding can also support energy efficiency and demand-side management, though that is evaluated separately in the Programs for efficient buildings sections.

Flow level	Funding and financing
	Comprehensive, consistent, dedicated funding for community projects, available to remote communities. Funding for capacity-building and project execution, and microgrid system upgrades.
	Some funding for community projects and/or guaranteed financing, but not enough or not tailored to community project needs.
	No funding dedicated to remote community projects.

[8] Katarina Savic, *The Case for Investing in Clean Energy in Remote Communities* (Pembina Institute, 2022). https://www.pembina.org/pub/case-investing-clean-energy-remote-communities

Programs for efficient buildings

Aging and inadequate houses and community buildings with poor insulation and inefficient technologies drive up diesel use and energy costs. This decreases the quality of life of residents and users of these buildings and exacerbates energy affordability issues.

Programs that fund and/or incentivize energy efficient improvements such as improved appliances, windows, and insulation; major retrofits; and switching from fossil fuels to heat pumps require special considerations to be successful in remote communities. Local staff who can champion these projects and act as community liaisons are an important part of a successful program for efficient buildings, especially housing.

Net metering programs allow building owners to reduce their energy consumption by installing small renewable energy projects, usually solar panels. Net metering programs also benefit from being tailored to remote communities.

Flow level	Programs for efficient buildings
	Comprehensive energy efficiency, retrofits, and fuel switching programs and incentives that are flexible to meet community priorities; tailored for and accessible to remote communities. Programs have funding for community energy champions or community capacity-building around energy efficiency. Additionally, the jurisdiction has an accessible net metering program.
	Jurisdiction has energy efficiency, retrofits, and fuel switching programs or incentives, but these programs are not tailored to remote or Indigenous communities. Net metering program is not tailored to remote communities and does not have much uptake.
	The jurisdiction does not have energy efficiency, retrofits, or fuel switching programs or incentives available to remote communities. There is no net metering program.

Independent power producer (IPP) market

In most cases, community-led clean energy development on remote microgrids hinges on the relationship between the utility and a community-aligned Independent Power Produce (IPP). An IPP is a business that builds and operates a clean energy generation project. Where utilities operate in remote communities, the IPP must sell power to the utility to offset the diesel that would normally power the microgrid.

A community-aligned IPP is one that is partly or wholly owned by the Indigenous government, development corporation, or other local Indigenous-led organization. This arrangement allows Indigenous-owned or partnered renewable energy businesses to see the economic benefits of power generation. The utility, instead of spending money on diesel fuel, buys clean power from the IPP, providing a source of revenue to further community development.

The utility and the IPP accomplish this with a contract called a power purchase agreement (PPA), in some jurisdictions known as an electricity or energy purchase agreement (EPA), which sets the purchase price of the clean energy, as well as outlining details about the technical operation and integration of the project onto the microgrid.

The addition of clean energy projects onto diesel-powered community microgrids is technically complex and requires close collaboration between the IPP and the utility. The best-case scenario is that the IPP and the utility negotiate contracts that result in a mutually beneficial business relationship and technical collaboration.

However, due to regulatory constraints, utility business models, risk aversion, and capacity and funding constraints, these negotiations can be lengthy and challenging. Often these challenges are exacerbated by historically strained relations and a lack of trust between remote communities and utilities.

One strategy for mitigating these challenges is by establishing a clearly defined market for community-led clean energy generation that displaces diesel. This market can be created through an IPP policy with accessible and transparent procedures for technical integration and business negotiation.

Independent power producer (IPP) market *(continued)*

A clearly defined market should include a transparent pricing system for procuring renewable energy on a fixed-term contract that allows an IPP to have a clear picture of what their expected return on their investment will be. It should also have clear indications of who will bear what auxiliary costs, such as the costs of technical studies or upgrades to the microgrid. A strong IPP policy also should have some provisions that ensure the IPP has the full support of the community and that the benefits of energy development flow to the community through ownership or revenue sharing.

Flow level	Independent power producer (IPP) market
	A well-defined IPP policy for diesel reducing projects with a transparent formula for pricing, a favourable price for development, straightforward processes and procedures for developing a community-aligned IPP, technical integration of the project, and power purchase agreement (PPA) negotiation. Clearly defined roles and responsibilities of all parties.
	A partially defined IPP policy, or a policy where the value of rates is too low to support meaningful development. Varying levels of clarity and definition on roles, responsibilities, and procedures.
	No public-facing IPP policy; all PPAs are negotiated on a case-by-case basis.

Shared factors and challenges

Every jurisdiction with remote communities in Canada is unique: politically, geographically, economically, and culturally. These conditions shape the policy landscape for remote communities and the resulting challenges and barriers preventing diesel reduction. However, jurisdictions also face some similar challenges across provincial or territorial borders. The following sections highlight these common challenges, which shape the policy context for our evaluation and future action.

Regulation and utilities

Utilities in each jurisdiction are governed by regulators or public utility boards which ensure that utilities provide safe, reliable power at the lowest possible cost. Integrating renewable energy onto a microgrid is expensive, and regulators scrutinize all the utility's expenditures, especially those that could result in higher rates for customers.

Community clean energy projects result in higher costs for utilities because most microgrids require investments to allow the utility to operate the microgrid with both renewables and diesel at the same time. While these investments are necessary to provide safe and reliable energy that is aligned with community preferences in the long run, utility regulators may not have the mandate to support this additional cost on the utility in the short term.[9]

Remote utilities don't make a profit, and the regulator limits how much they can spend on integrating a community clean energy project onto a microgrid. Recognizing the importance of remote community diesel reduction and reconciliation with Indigenous Peoples, certain jurisdictions have developed specific regulatory conditions to allow utilities to make the investments they need to support remote community projects.

These regulatory limitations are not examined in detail in this report but are significant for shaping the utility's IPP negotiations and the price it can pay for clean energy, as well as any infrastructure investments needed on the microgrids.

For a more in-depth look at regulatory reform, the Pembina Institute studied the regulatory conditions in B.C. and the territories in the 2025 report *Decarbonizing Remote Indigenous Communities*.[10]

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[9] Emily He, Grace Brown, and Dave Lovekin, *Transforming the Utility Business Model* (Pembina Institute, 2022). https://www.pembina.org/pub/transforming-utility-business-model

[10] Emily He, Arthur Bledsoe, and Fibha Nazim, *Decarbonizing Remote Indigenous Communities: Regulatory reform in B.C. and the territories* (Pembina Institute, 2025). https://www.pembina.org/pub/decarbonizing-remote-indigenous-communities

Northern context

The Yukon, Northwest Territories, and Nunavut are geographically and politically distinct from the Canadian provinces in ways that meaningfully shape the policy contexts evaluated in this report. Compared to the provinces, the territories have significantly higher proportions of Indigenous peoples in their population and as such have a more integrated governance structure between Indigenous and colonial governments. Each territory's approach to co-governance varies.

The territories all have relatively small, geographically disparate populations, resulting in high costs to provide government services and small tax bases to fund them. The territories also operate with less financial freedom than the provinces, as their borrowing limits are set by an order in council under direction from the federal minister of Finance, which is not the case for the provinces.[11]

Utilities in the provinces generate revenue through their on-grid operations that supply power to large customer bases. They can also sell power to neighbouring jurisdictions. These revenues are used to help cover fixed and operational costs of running the utility.

In the territories, where utilities only operate isolated grids, the cost to generate and distribute electricity is higher, the customer base is small and there is no export potential. This makes the business of operating utilities much more challenging, even before factoring in the additional costs associated with renewable energy integration. To make matters worse, much of the generation infrastructure was inherited from the federal government in the 1950s and is now reaching the end of its life, requiring significant investments from utilities and governments to maintain safe and reliable microgrids.[12]

Additional challenges to renewable energy integration in the North are short construction seasons, extreme weather conditions, and limitations with local capacity, which drive up the cost and complexity of projects. The North is also warming at a faster rate than the rest of the world and the impacts of climate change, such as melting permafrost, more volatile weather systems, and less reliable ice roads create more uncertainty and increase costs for projects.

[11] Government of Canada, "Territorial Borrowing Limits," 2025. https://www.canada.ca/en/department-finance/programs/federal-transfers/territorial-borrowing-limits.html

[12] Standing Committee on Energy, Environment and Natural Resources, *Powering Canada's Territories,* 2015, 9. https://sencanada.ca/content/sen/committee/412/enev/rep/rep14jun15-e.pdf

Energy security in rural and remote communities

Remote communities often experience energy insecurity: high energy costs relative to incomes, frequent outages, and low power quality, which can damage appliances.

These concerns about energy security that motivate clean energy ambitions in remote communities are also present in rural Indigenous communities that are grid-connected. While these communities are not on isolated microgrids, they are located far from population centres and are usually serviced by long transmission lines. Utilities servicing these communities face similar challenges to remote utilities in providing reliable power at the lowest cost.

The prairie provinces — Alberta, Saskatchewan, and Manitoba — have a few remote, diesel-dependent communities, but many rural, grid-connected northern Indigenous communities that experience energy insecurity.

Given that these jurisdictions have only a handful of non-grid-connected communities, it is unsurprising that policies to address remote communities are limited. However, there is an opportunity in these jurisdictions to prioritize Indigenous energy security and create programs that support community-led energy projects that are accessible to all rural and remote communities. For this reason, we included policies to support rural Indigenous communities in these jurisdictions in the scope of our evaluation.

The focus on energy security is an important framing for all rural and remote communities, not just the prairies. The consequences of energy insecurity are severe: limited community growth, entrenched poverty and inequality, and reduced quality of life for residents. Healthy, thriving communities require secure, affordable, reliable energy.

Grid connection

Even though remote grid-connected communities still face issues with energy security, grid connection is the most effective strategy for reducing diesel consumption and can create a strong pathway towards energy security. Ontario, Manitoba, Nunavut, and the Yukon are all exploring grid connection to reduce reliance on diesel and increase the energy supply to enable community growth.

Remote transmission lines span thousands of kilometres across traditional territories, and their routing can impact wildlife and ecosystems that are valuable to community members. It is therefore important for grid connection projects to be done in partnership with Indigenous governments and communities, and it is not the best solution for all remote communities. Grid connection comes with significant capital costs, but ownership of transmission infrastructure provides Indigenous communities an opportunity for long-term, stable, economic growth.

In recent years, many formerly remote communities have been connected to the grid, notably 17 communities in Ontario through the Indigenous-led and -owned Wataynikaneyap Power project.[13] When grid connection is done in true partnership with remote communities, it can powerfully advance diesel reduction and economic reconciliation.

[13] Wataynikaneyap Power, "Wataynikaneyap Power Completes Construction of "the Line that Brings Light"," news release, December 13, 2024. https://www.wataypower.ca/updates/wataynikaneyap-power-completes-construction-of-the-line-that-brings-light

Photo: Wataynikaneyap Power, Muskrat Dam First Nation Homelands, Ontario, 2023