

Reconciliation and Energy Democracy

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Abstract: *Indigenous clean-energy leaders are moving Canada's sustainable development agenda along at an impressive rate and are setting the stage for the localization of goods and services. Indigenous communities that do not yet have enough energy security should be the first recipients of green infrastructure investments in order to bolster equity as a tenet of Canadian nationalism. A series of key policy drivers to amplify Indigenous inclusion in the energy transition are offered as well as a number of performance indicators that can determine the extent to which Canada is advancing on reconciliation and energy democracy.*

Keywords: *decolonization, equity, feed in tariffs, Indigenous community development, Indigenous moral authority, institutional completeness, renewable energy, set-asides, sustainable development, sustainable development goals*

Résumé : *Les leaders autochtones en énergie renouvelable font avancer le programme de développement durable du Canada à un rythme impressionnant et préparent la localisation de biens et services. Les communautés qui n'ont pas encore suffisamment de sécurité énergétique devraient être les premières à bénéficier d'investissements dans des infrastructures vertes pour renforcer l'équité comme fondement du nationalisme canadien. Pour augmenter l'inclusion autochtone dans la transition énergétique, certains appuis aux politiques publiques sont proposés, de même que divers indicateurs de rendement qui peuvent déterminer la portée du progrès réalisé par le Canada en matière de réconciliation et de démocratie énergétique.*

Mots clé : *décolonisation, équité, tarifs de soutien, développement des communautés autochtones, autorité morale autochtone, intégralité institutionnelle, énergie renouvelable, marchés réservés, développement durable, objectifs de développement durable*

While ecological integrity and balance are roots of traditional Indigenous life, it has been a little over 30 years since sustainable development became mainstream with the report of the Brundtland Commission entitled *Our Common Future* ([World Commission on Environment and Development, 1987](#)). Evolution of the sustainable development discourse over time has resulted in the Sustainable Development Goals (SDGs), with clear targets that support monitoring and evaluation efforts globally. Very basically, the spirit and intent of the SDGs is to inspire all of us toward inclusive and sustainable prosperity; this paper explores

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how Canada's era of reconciliation can be amplified by focusing on energy security (SDG#7), inclusive growth (SDG #8), reduced inequity (SDG #10), and climate action (SDG#13) led by Indigenous communities and their partners. Particular attention is paid to Indigenous power production and its links to the localization of goods and services (i.e., institutional completeness) as well as the reinforcement of energy democracy and Indigenous moral authority. Energy democracy is created when energy production is decentralized and there is movement away from monopoly ownership to community ownership, thereby increasing local and democratic decision-making power over profits, jobs, and investments. Detailed exploration of how the energy transition can advance both reconciliation and sustainable development is shared.

RECONCILIATION IN THE ENERGY TRANSITION

The need for reconciliation is born of a burdensome and often violent history of colonialism that isolated Indigenous peoples socially, culturally, economically, and geographically. Traditionally, abundant life on the land was replaced with purposeful dependence upon the state. Localized food and medicine harvesting were substituted with imported goods and services that sustain life, significantly altering the social and economic roles in the community. More specifically, dependence on imports eroded the power of internal moral authorities. For the sake of clarity, internal moral authorities include any traditional governance or leadership entities such as clan mothers, Elders' councils, and Indigenous governance structures. Contemporary examples of Indigenous moral authority include women's and health organizations as well as some, but not all, Indigenous governance structures created under colonial rule (i.e., the Indian Act) that function with collective interest at heart. Arguably, the disintegration of institutional completeness (or the ability to meet human needs for survival and cultural expression with local resources), together with the resulting associated decline in power of internal moral authorities, was the most devastating colonial impact.

Rendered dependent upon cash economies and federal transfers, by design, traditional moral authorities were left without sanctions for unethical behaviour. Along with the shift to cash economies and reliance upon an import model for all or most goods and services came an *export* model of accountability. Indigenous communities were required to be accountable to external authorities often situated in large bureaucratic glass towers in distant urban centers for funds over which they had no decision-making authority. No longer did leadership have to be accountable to local Elders, clan mothers, or other traditional Indigenous "law"-making authorities. Although there have been significant gains to reinforce Indigenous moral authority in monitoring and evaluation over the past decade, progress toward the measurement of morally independent and self-directing goals of Indigenous communities remains weak.

To truly work at purpose with any intervention that supports healthy or successful Indigenous community, evaluation and monitoring should heighten

positive potential in a way that inspires imagination and design rather than spiralling negative diagnosis and account to the local community. The policy implications of focusing upon and measuring community strengths means that a fundamental shift toward optimizing potential rather than averting crisis is possible. While remedial interventions may save a life, they rarely change it. No matter how well designed and effective clinical and programmatic efforts are in the short term, environmental factors have enormous power to override gains. After all, people develop in family units and communities, and measuring the individual *in community* ensures that the inherent weaknesses of a singular focus (either clinical or social) are cancelled.

Reconciliation requires gathering *meaningful* information from an Indigenous moral authority's perspective that decidedly shifts emphasis to outcomes that are germane to community, amplifies and focuses on its strengths, and offers a simple and reasonably broad way to tell a sustainable development story. Furthermore, measuring whatever makes Indigenous communities most alive, most effective, and most constructively capable in human, ecological, and economic terms is long overdue and is the logical approach to understanding what allows Indigenous individuals to thrive. Because energy security and access are pivotal to human development, their roles in Indigenous community life require special attention.

The little known, rarely captured good news story in Canada is that some Indigenous communities are already generating wealth from a range of renewable energy assets and have full employment of their membership as a result. Decentralized and locally owned power generation has given some Indigenous communities morally independent, self-directing freedom and financial self-sufficiency. This kind of decision-making authority and wealth are extraordinary under the burden of colonial structures, and they guarantee a platform for Indigenous moral authorities to function. Indigenous-owned power production has also accelerated energy democracy in Canada, or the ability to choose energy sources and retain profits locally to be used and distributed as determined by internal moral authorities. Canadian firsts such as the fully integrated micro grid developed for Kiashke Zaaging Anishinaabek illustrate that energy participation and independence are possible for Indigenous communities with hospitable policy environments.

Nationally, as many as 152 clean-energy projects have Indigenous community involvement or are Indigenous-owned, and there are an estimated 50–60 projects in development. Indeed, roughly a fifth of all electricity produced in Canada has some Indigenous leadership or partnership. The current production capacity of these projects is 19,516 megawatts, with an estimated \$2.5 billion in revenue for involved Indigenous communities over the next 15 years (Lumos Energy, 2017). It is estimated that \$6.6 billion (B) will be invested in Indigenous renewable energy projects by 2020, and \$33.8B by 2035 in Canada alone (Henderson, 2013). But not enough opportunity exists for other Indigenous communities to do the same, including the opportunity to build the capacity for community power production. This would form a solid foundation for economic reconciliation and inclusion in changing world economies.

As our energy decision making evolves, so too must our imagination about who can and should profit. At no time in human history has there been a larger divide between the rich and the poor. To achieve inclusive prosperity, Canada's energy transition must move us away from centralized models of profit and gain toward distributed power generation and prosperity through community ownership. Amplifying set-asides for community-owned power production eliminates NIMBYism (i.e., not in my back yard) and sets the foundation for the localization of other goods and services, most importantly food production. Greater institutional completeness (or the ability to meet human needs for survival and cultural expression) in Indigenous communities also sparks the resurrection and reinforcement of internal moral authority. Indigenous-owned power production is not only an effective reconciliation opportunity but also powerful climate action and a foundation for energy democracy to flourish through rural and remote areas of Canada.

ADVANCING INDIGENOUS LEADERSHIP IN THE ENERGY TRANSITION

Historically, Canadian climate action and leadership were found primarily at a subnational level, with provinces, municipalities, and communities leading the way. However, over the past three federal budget announcements, there has been a decided shift, with greater investments in green infrastructure and a longer-term view of Canada's contribution to our shared climate reality. Carbon revenues will escalate these investments and markets will continue to see rapidly decreasing costs of many green infrastructure innovations. Globally, renewable energy policies have steadily increased *regardless* of whether states are high-, upper-middle-, lower-middle-, or low-income countries ([Renewable Energy Policy Network for the 21st Century, 2019](#)). The energy transition is under way and unstoppable, and the "Decade of Sustainable Energy for All" has arrived ([International Renewable Energy Association \[IRENA\], 2013](#)). Within reach is *universal* access to modern energy services, along with the creation of millions of jobs in the off-grid electricity sector alone. Hope is also fuelled by the incredible potential of renewable energy sources and disruptive technologies. For example, in under two hours, enough energy falls freely from the sun to replace the use of fossil fuels used by *everyone everywhere* for an entire year ([Cleveland, 2014](#)). Energy markets have been disrupted, with renewables outperforming and outpacing historical sources ([Clean Energy Canada, 2018](#)). This wave has significant implications for Indigenous power production everywhere.

If there is a niche for Canada in this transition, it is in coordinating the direct and tangential funding opportunities for small-grid energy advancements where Indigenous community ownership and engagement are maximized. Most remote Indigenous communities in Canada do not yet have enough stable, safe energy supply and stand to gain the most from green infrastructure investments. Similarly, in scenarios where government-backed monopolies dominate power

production (e.g., in Manitoba and Quebec), little room exists for Indigenous inclusion and contribution to stabilizing the grid. Such investments would amplify Canada's contributions toward several sustainable development goals by reducing inequity, guaranteeing energy security, ensuring inclusive growth, and supporting climate action. Diesel imports from long distances are carbon-intensive and put local water supplies at risk for contamination. The use of diesel affects noise and air quality, and costs are well beyond what most Canadians pay for a kilowatt-hour of electricity. When supplies are delayed, essential services are put at risk and families are left without heat in sometimes harsh and isolated environments.

Ultimately, the characteristics of green infrastructure investments may be less important than the business models used to deploy them. Fair markets for Indigenous energy systems where local ownership and engagement are maximized have enormous reconciliation potential, particularly because this optimizes conditions for the localization of other goods and services and the resurrection of internal moral authority. The economic benefits of Indigenous-owned clean-energy generation are three times better than with absentee-owned systems, and the acceptance of clean energy is dramatically enhanced (Farrell, 2014). Improving prosperity and quality of life has been repeatedly linked to local energy-system ownership, and the transition toward clean energy will have the combined impact of greenhouse gas (GHG) reductions and improved air and water quality. The social, political, and economic reasons to advance the use of clean energy technologies include health, educational, and environmental benefits, improved energy access, security and democracy, poverty reduction, gender equality, as well as job creation and rural economic development (Fischedick et al., 2011; International Energy Agency, 2011; Sathaye et al., 2011).

In other parts of the world, ordinary people are driving the energy transition through cooperative action and have enjoyed the benefits of distributed power generation by reinvesting their profits into kindergartens, sports facilities, community gathering places, and other civic services.¹ When energy democracy is allowed to flourish, everyone has sufficient and affordable energy that prioritizes public interest, fossil fuels stay in the ground, ownership is locally distributed (e.g., by municipalities or cooperatives), and fairly paid green jobs are created.

To follow the example of others who have advanced community-owned power and stabilized and significantly decarbonized their grids, Canada should focus on remote, small-grid, off- and fringe-of-grid applications of renewable energy, not only to reduce GHG but also as a reconciliatory effort to reinstate localized access to goods and services as well as reinforce energy democracy and Indigenous moral authority. Similarly, advancing Indigenous-owned power production everywhere is an excellent platform for economic inclusion in the inevitable energy transition. Enabling conditions for the deployment of renewable energy technologies in Indigenous communities require the following:

- understanding and awareness of renewable energy;
- stable enabling policy frameworks co-created with Indigenous communities, with credible and aspiring targets and clear responsibilities;

- community engagement and ownership;
- fair markets that create sufficient, stable policy with favorable pricing and ample financing products for Indigenous communities;
- rapid expansion of renewable energy **mini-grids** together with transparent, easy permits and grid modifications that absorb Indigenous renewable energy contributions;
- set-asides for Indigenous power production; and
- building capacity for installation and maintenance (IRENA, 2013).

Understanding renewable energy

Misconceptions about the cost, availability, and reliability of community-owned power production requires information campaigns and exchange to raise awareness and acceptance. Such campaigns are best supported by the example of community benefits for early Indigenous clean-energy leaders, including but not limited to the reinforcement of Indigenous moral authority, industry, and agency. These campaigns must include the costs related to fossil-fuel extraction, subsidies, remediation after spills, consequences of fracking, and the illness burden related to air and water quality of maintaining the status quo, not to mention the insurance costs of catastrophic extreme weather events

Stable enabling policy

A clear vision and stable policy commitments that articulate realistic and adaptable targets for Indigenous-owned power production and involve local enterprises are necessary. In scenarios where government-backed renewable energy monopolies exist (e.g., in Manitoba and Quebec), stable policy-advancing energy democracy through Indigenous community ownership and grid integration is necessary.

Community engagement and ownership

Everyone in the Indigenous community power-value chain should be meaningfully engaged, and cooperation between the public and private sectors must be encouraged. Distributed energy generation combined with local ownership creates more sustainable, lower-cost renewable energy systems as well as local jobs that are particularly attractive in Indigenous communities. With a platform for energy security, the localization of other goods and services (e.g., food production) is possible, thereby reducing the need for expensive, unsustainable imports from faraway producers. Localizing power production and profit also indirectly supports the resurrection or reinforcement of Indigenous moral authorities and energy democracy. Indigenous power producers require an incubation platform and access to experienced Indigenous clean-energy leaders who can provide mentorship.

Fair markets

It is the business of government to regulate markets. Subsidies to fossil fuels must be phased out in order to support greater Indigenous inclusion in the energy transition. Government subsidies to fossil fuels are relatively easy to track. However,

the costs of water and overland contamination resulting from oil and gas spills, as well as the human costs of airborne noxious substances and extreme weather events to which fossil fuel use contribute, are not properly integrated in our energy balance sheets. Feed-in tariffs (i.e., a policy mechanism designed to accelerate investments in renewable energy by providing tariffs to power producers who are feeding electricity into the grid from renewable energy systems) may be appropriate in some Indigenous communities that are grid-connected, but they are not attractive in off-, micro-, and mini-grid scenarios that require fair markets for clean energy investment and deployment. In these remote and isolated scenarios, better supports for pre-feasibility, feasibility, and construction phases are needed.

RE mini-grids

There may be a need to consider mini-grids that are suitable to a suite of renewable energy technologies. Key actions in support of mini-grids would necessarily include

- identification of Indigenous communities suitable for mini-grid development;
- reduction of financial risks to Indigenous clean-energy leaders and developers of mini-grid projects;
- consideration of a suite of upstream and downstream incentives that buffer life-cycle costs (i.e., costs to purchase, own, maintain, and dispose of the renewable energy production system);
- use of tariffs that accommodate local socio-economic conditions and commercial viability for mini-grid developers; and
- anticipation and mitigation of the impact that the national grid might have upon the mini-grid if (or when) it arrives, and optimizing conditions for integration.

Set-asides

Set-asides (i.e., special allocations for Indigenous community-owned power production to feed into the grid or establish independent micro-grids) are particularly important to guarantee inclusion in the energy transition and to support equity as a tenet of Canadian nationalism. The unique trials of off-grid renewable energy projects require tailored approaches to lending and funding terms as well as serious consideration of end-user characteristics (e.g., their incomes and energy expenditures) in Indigenous communities. Set-asides could accommodate these unique circumstances.

Capacity

While skills are needed on a national scale (particularly in financing institutions), the focus here is upon the technical capabilities associated with operations and maintenance within Indigenous communities, particularly those who have had the least energy security historically. To that end, the expansion of training

opportunities that support operations and the maintenance of renewable energy systems are needed to meet the needs of Indigenous communities. Training institutions should be adequately equipped to meet this demand. Efforts are also required to share with Indigenous communities the vast training materials that exist within North America and internationally.

This suite of promising policy practices sets a foundation for inclusive prosperity in Canada's energy future, where Indigenous leadership, industry, agency, and energy security and democracy flourish.

MONITORING AND EVALUATING INDIGENOUS INCLUSION IN THE ENERGY TRANSITION

If equity remains a tenet of Canadian nationalism, then there is merit to focusing on Indigenous communities who do not yet have quite enough energy security to meet other development goals. Diesel-dependence must remain a key performance index, as fuel prices have tripled in the past decade, an escalating trend that is likely to continue (Henderson, 2013). Consistent with the spirit and intent of several Sustainable Development Goals (e.g., energy security SDG#7, climate action SDG#13, reducing inequity SDG#10, and inclusive growth SDG#8), mapping the intensity and cost of diesel-dependence (including both the fuel consumed and the distance it must travel) would identify priority Indigenous communities and projects, but policy decision makers must acknowledge that transition efforts may be more time- and resource-intensive in situations of greatest need, where a readiness phase must be cultivated. Collaborative partnerships would be critical in these priority projects and should include provincial/territorial capital, capacity building, and economic development funding sources.

While the work of provinces, municipalities, and Indigenous leadership is laudable, accelerating energy democracy with fair markets requires a whole-of-government approach. Monitoring and evaluation efforts would be most effective if they recorded where pooled resources between public funds nationally and sub-nationally, as well as with private-sector partners, have been secured to advance Indigenous-owned power production. Capturing coordination between economic development and capital infrastructure that has maximized resources for green infrastructure development would illustrate promising practices. Understanding, profiling, and sharing what partnerships have accommodated the local socio-economic conditions and commercial viability for Indigenous power production are also needed. The characteristics of downstream incentives that buffer life-cycle costs of renewable energy installments could support and create more hospitable policy climates to accelerate the energy transition in other remote situations.

Monitoring and evaluation efforts that help us to understand the unique challenges, costs, and opportunities of Indigenous power production allow for the most strategic investments to become clear. Earnest efforts begin by determining which Indigenous communities are suitable for power production by profiling end users, developers, suppliers, and other stakeholders (e.g., where they are

geo-politically, current GHG emissions, local economic conditions, history and extent of diesel dependence and associated costs of transport, fuel-related water-quality remediation efforts, climate-change risks and adaptation plans, burden of utility monopolies that largely exclude community contributions. etc.). Narrow targets based upon greatest need and greatest opportunity would surface in this analysis and identify where incentives must be bolstered. Once these narrowed targets have been established, more generous, fairer subsidies can be offered to fewer communities that better match the developmental costs of renewable energy systems in rural and remote Canadian situations. More generous subsidies can significantly reduce financial risks to communities seeking to develop off- and mini-grid projects and create momentum for early adopters that will affect industry and other policy climates through a contagion effect.

Monitoring and evaluation of key indices would highlight where interest or readiness is apparent. At last, Canada's measurement of energy democracy and equity could be solidified by a clearly articulated vision with realistic, yet ambitious, GHG emissions-reduction and renewable energy targets. Equity and inclusion would be obvious if monitoring and evaluation efforts focused on measuring the degree to which those historically underserved in diesel-dependent scenarios enjoy energy security in the transition. Similarly, energy democracy could be indicated by the extent to which new opportunities were created for Indigenous community-owned power production. Suggested policy objectives and indices to advance reconciliation, energy democracy, and inclusive and sustainable prosperity are offered in [Table 1](#).

Table 1. Reconciliatory energy-democracy performance measures

Policy objective	Performance index
Specific GHG emissions reductions	GHG reductions in megatonnes
Identification of communities and regions suitable for locally owned power production	<ul style="list-style-type: none"> • end user profiles • developers, suppliers working with Indigenous communities • current GHG emissions • local economic conditions • history and extent of diesel dependence and associated costs of transport • fuel-related water-quality remediation efforts • climate-change risks and adaptation plans
Increase access to clean energy	Megawatts of new clean energy produced in historically energy-insecure Indigenous communities
Energy security	Off-, mini-, and integrated renewable energy grid systems replacing diesel-dependent systems
Reduce diesel dependence	Reduced/eliminated costs of importing diesel

Policy objective	Performance index
Maximize meaningful Indigenous engagement and ownership	Percentage of Indigenous ownership of renewable energy system installations
Stable, hospitable policy climates that create a fair market for remote energy systems	Codes and standards for renewable energy technologies in Indigenous communities Models of off-, mini-, and integrated renewable energy grid systems Acceptance, coordination, and partnership with provinces and territories in the development of off-, mini-, and integrated renewable energy grid systems, <i>particularly in utility monopoly scenarios</i> Total \$ set aside, ratio of subsidies to real costs, comparative analysis of government subsidies for fossil-fuel and renewable energy industries Source and dollar amount of downstream incentives to buffer life-cycle costs Characteristics of collaborative partnerships supporting local power production in Indigenous communities
Enhanced knowledge exchange and translation	Off-, mini-, and integrated renewable energy grid-system innovation networks established
Create/sustain off- and mini-grids with set-asides	Number of off- and mini-grid installations; proportion of Indigenous communities with off- and mini-grid installations,
Building capacity	Percentage of community ownership, engagement, and responsibility for system installation and maintenance, local green jobs created
Increase local self-reliance	Number and quality of localized goods and services available to communities after energy security (e.g., food production, cottage industries, jobs, etc.).
Improving understanding and awareness of RE	Uptake of renewable energy as measured by investments, kWh of RE produced by Indigenous clean energy leaders, and percentage of Indigenous ownership
Ease RE system integration	Influence upon regulatory environments for renewable energy system development integration by province and territory

CLOSING REMARKS

While Canada is not the only nation that falls short in climate-change mitigation, it does have one of the worst climate-change performance records in the developed world and very little energy democracy when compared with others internationally. Indigenous communities, already challenged economically by an

import model for almost all goods and services that sustain life, will see increases in basic living costs over time. If Canada accounted for the costs of importing all food, medicine, energy, and expertise to service remote and isolated Indigenous communities, investments in community-owned power would seem inexpensive by comparison.

Still, there are shining examples of Indigenous clean-energy leadership where energy security and democracy have formed the foundation for the development of other local systems that meet human needs (e.g., food production) to emerge. The wealth creation born of Indigenous-owned power production has made these communities alive with possibility and has reinforced the power of internal moral authorities, agency, and industry. The implications of restoring local access to goods and services that sustain life is that internal accountability is also reinforced. When Indigenous moral authority drives the development agenda, there is an immediate and localized evaluation system that allows for interventions that work best and feel right to flourish.

The little-published, rarely mentioned good news story in the development of energy democracy in Canada is that Indigenous clean-energy leaders are significantly moving Canada's needles on several sustainable development goals (namely, energy security SDG#7, inclusive growth SDG#8, reduced inequity SDG#10, and climate action SDG#13). If equity remains a tenet of Canadian nationalism, then Indigenous communities who have had the least energy security historically must be the first recipients of generous Canadian investments in green infrastructure. Following close behind these first recipients of investment would be every other Indigenous community that is largely dependent upon imports to sustain life.

For energy democracy to flourish, Indigenous inclusion in the energy transition must be amplified by fair markets and stable, hospitable policy environments. Without such favorable policy climates, Canada can expect rising Indigenous resistance to runaway extractivism in our quest for climate and energy equity. Ultimately, we have agency over all energy development in Canada, as articulated in the United Nations Declaration on the Rights of Indigenous Peoples, the Treaties, and our Constitution, and we will use all of it in our quest for inclusive and sustainable prosperity.

NOTE

- 1 Personal communication with Dr. Andreas Wieg, director of the executive staff department at German Cooperative and Raiffeisen (Deutscher Genossenschafts – und Raiffeisenverband e. V.; DGRV), head of the German Office for Energy Co-operatives, November 19, 2014.

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