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"Stretch and transform" for energy justice: Indigenous advocacy for electricity institutional transformation in British Columbia, Canada

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“Stretch and transform” for energy justice: Indigenous advocacy for electricity institutional transformation in British Columbia, Canada

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Abstract
A collective of First Nations in British Columbia (BC), Canada, are embracing the adoption of the United Nations Declaration of the Rights of Indigenous People (UNDRIP) to advocate for a regional scale “First Nations Power Authority” (FNPA) that challenges the monopoly utility, BC Hydro. We collate regulatory and advocacy text to characterise the range of FNPA institutions proposed, evaluating the extent to which they “fit and conform” to existing governance and markets or seek to “stretch and transform” the regional electricity institutional setting. Interviews with knowledge holders of 14 First Nations in BC clarify that whereas a “fit and conform” approach would focus on capacity building and improving access to capital, “stretch and transform” FNPA models reflect their worldviews and ambitions while also addressing the identified barriers to self-determined renewable energy development. These First Nations consider the regional and relational dimensions of energy transitions as aligned with goals of self-determination and access to opportunities provided by UNDRIP. To recognise UNDRIP and enable self-determination, pathways must be sought towards far-reaching energy institutional reforms that incorporate relational, regional and control sharing approaches. Much of the groundwork has been laid by the collective, the regulator, and new legislation provides a window of opportunity.

Keywords: First Nations; renewable energy; regional; United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP); community energy; intermediary

Abbreviations
BC - British Columbia
BC Hydro - The British Columbia Hydro and Power Authority
DRIPA - Declaration on the Rights of Indigenous Peoples Act
EPA - Electricity Purchase Agreements
FNPA - First Nation Power Authority
FPIC - Free, Prior and Informed Consent
UNDRIP - United Nations Declaration on the Rights of Indigenous Peoples
INAC - Indigenous and Northern Affairs Canada
IPP - Independent Power Producer
MOU - Memorandum of Understanding
NIA - Non-integrated Area

1 Introduction

Amid the drive for decarbonization of transportation and heating sectors through electrification, electricity grids in Canada require a great deal of expansion to double or even triple the size of the current 145GigaWatt grid (Dion et al., 2022). Rural areas and regions are becoming important locations of renewable energy generation (Balta-Ozkan et al., 2015; Naumann and Rudolph, 2020). As a result, regions, districts, and rural communities are increasingly engaging in a renewable energy transition, many viewing renewable energy resources as a potential local economic development strategy as part of a just energy transition (Berka et al., 2020; Hoicka et al., 2021a). Building renewable energy infrastructure in such a way that it allows for regional local economic development is an important emerging public policy issue (Hoicka et al., 2021b) of broad relevance to communities across Canada and globally (Hoicka et al., 2021c; MacArthur et al., 2020; Savic and Hoicka, 2023). If designed well, such a transition could provide opportunities for citizen participation, equity and justice in workforce transitions, and reconciliation between colonial governments and Indigenous people (MacArthur et al., 2020). Each Indigenous community in Canada, that is First Nation, Inuit or Métis, has a distinct history, culture, governance, and relationships to the land. In settler colonial contexts, decolonizing energy transitions through Indigenous led renewable energy projects is considered an important element of a just transition (Bargh, 2012; Mang-Benza and Baxter, 2021; Rezaei and Dowlatabadi, 2016; Roberts et al., 2023; Stefanelli et al., 2019).

There is a long history of the negative impacts of energy and resource development projects on Indigenous communities in Canada. Yet, while backlash towards renewable energy projects persists in many rural Canadian communities (Comeau, 2022; Comeau et al., 2022; Stokes, 2013), over half of the 203 First Nations in the province of British Columbia in Canada are willing hosts of renewable energy projects (Cook et al., 2017). Despite First Nations interest, only 78 First Nations generation projects are currently operational, with 42 grid-connected, and First Nations renewable energy projects have faced a range of institutional, financial, and cultural barriers (Bullock and Zurba, 2017; Cook et al., 2017; Lovekin et al., 2021). One key barrier to grid-connected generation projects has been the acquisition of independent power producers (IPP) contracts, with windows of opportunity created by sporadic procurement programs that allow First Nation community involvement in renewable energy, subject to the political dynamics and policy priorities of the provincial government and the monopoly utility. In this study, we focus on articulating how the lack of institutional control at the regional scale is viewed by British Columbia First Nations as one of the key barriers to generating renewable energy for socioeconomic development and self-determination.

Amongst the factors that shape the emergence of community energy ecosystems, the formation of 'intermediaries' in the form of advocacy coalitions, intermediaries, umbrella organisations, and joint initiatives has been shown to be important to facilitate knowledge exchange, develop sector identity, a unified voice for lobbying of enabling policies and to overcome systemic barriers to community-led energy (Brisbois, 2020; Schoor et al., 2016; Vernay and Sebi, 2020). Intermediaries that operate at the meso-level across a range of communities often at the regional or national scale, can help community energy initiatives to become more broadly adopted and embedded in society by influencing resource mobilisation, visibility of these initiatives, and shaping how single initiatives are transported and transformed beyond their original sites and configurations (Turnheim et al., 2018). Grassroots energy actors often take pragmatic approaches to overcoming challenges and constraints through strategies between two ends: "fit and conform" strategies adapt to existing governance and sociotechnical market structures and supply chains, often isolating or excluding grassroots actors in the process, whereas in "stretch and transform" strategies influence changes to the institutional structure and energy value chains leading to a reconfiguration of practices and structures that support grassroot energy initiatives (Scharnigg and Sareen, 2023; Smith and Raven, 2012; Turnheim et al., 2018).

While there is widespread international precedence for community energy intermediaries at the regional scale, there is little precedent for them taking rights-based approaches, where the starting premise is an appeal to international legal frameworks for human or Indigenous rights that provide a political opportunity to pursue advocacy centred on the extent to which these rights are being neglected in the status quo. To date, there have been few opportunities for meso-level collective forms of leadership in renewable energy by Indigenous communities (Cambou and Poelzer, 2022; Hoicka et al., 2021d).

The Province of British Columbia (BC) passed the Declaration on the Rights of Indigenous Peoples Act (DRIPA) on 28 November 2019 (Nichols and Morales, 2021) adopting aspects of the United Nations Declaration of the Rights of Indigenous People (UNDRIP). Within this context, First Nations in British Columbia, Canada, are embracing the implementation of UNDRIP to advocate for the development of a regional scale "First Nations Power Authority" (FNPA) (Lovekin et al., 2021). Various models of an FNPA have been deliberated and proposed by the BC Utilities Commission, as well as by intermediaries of advocacy groups, First Nations led groups, First Nations and Tribal Councils.

This study explores the rationale and potential models of Indigenous collective leadership in renewable energy that offer a potential pathway for just policy design[1]. Specifically, we draw on regulatory, policy, media, and advocacy text analysis to characterise the range of ways the FNPA institutional strategy is taking form in current advocacy efforts, and the extent to which each model follows a fit and conform or stretch and transform approach. We incorporate findings from interviews with knowledge holders of First Nations in British Columbia who have direct experience with renewable energy projects in their nations, drawing lessons and learnings likely relevant for other settler-colonial contexts and for community energy more broadly.

2. Background and Literature Review

2.1 Pre-Conditions for Community Led Energy Projects

There are a number of preconditions for communities and citizens to become full-fledged market actors in provision of electricity network-bound services, in turn allowing them to leverage energy markets and generate revenue streams for community development. Community energy projects must have market access and access to policy support mechanisms that make projects viable, with legal frameworks and market regulation designed to encompass social enterprise (Berka et al., 2022). Beyond these foundational institutional preconditions, citizen and community led energy activities benefit from localised planning and facilitation, for example in the form of spatial energy planning, local authority provisions for resources, in-kind support, and coordination and brokering between community organisations, land owners and technical and service providers (Berka et al., 2022). For community-led energy to flourish, there must be existing social ties, grassroots financial resources, technical, legal and financial expertise, leadership and time, in addition to political alignment, leverage and access to resources and information across relevant external networks, which can range from key policy makers, intermediaries and financing platforms, to industry and academic experts (Berka et al., 2022).

However, where these enabling pre-conditions do not exist, community led energy initiatives are often found to challenge existing practices, social relations and regulations. A rich literature documents barriers for community led energy in relation to policy settings and legacy institutional arrangements designed for incumbent utilities (Berka and Dreyfus, 2021; Brummer, 2018; Judson et al., 2020; Mignon and Rüdinger, 2016; Oteman et al., 2014). The resulting power struggles and contestations over policies and regulations between advocates of community led energy and established incumbent energy utilities has been documented in a multitude of contexts globally, such as Ontario (Canada), the United States and France, including power struggles over the dismantling of policies that support community energy (Brisbois, 2020; Greenberg and McKendry, 2021; Hess, 2018, 2016; Poupeau, 2020; Stokes, 2020).

[1] Several studies have documented the political power struggles towards the goal of Indigenous collective leadership in renewable energy (Cook et al., 2017; Fitzgerald, 2018). In another part of this research program, we document the benefits of renewable energy for some First Nations in British Columbia.

2.2The role of intermediaries in facilitating collective action by communities

Intermediaries operating at the meso-level, that is, across a range of communities at the regional or national scale–can help community energy initiatives to become more broadly adopted and embedded in society by influencing resource mobilisation, visibility of these initiatives, and shaping how single initiatives are transported and transformed beyond their original sites and configurations (Turnheim et al., 2018). Internationally, intermediaries have served a number of different roles to support community energy (Warbroek et al., 2018). First, they may build community capacity to develop community-led energy projects by aggregating knowledge and directly distributing financial, technical, knowledge resources, skills training, and advice (Warbroek et al., 2018). For example, Local Energy Scotland provides toolkits and matches community projects to partners that can provide projects necessary legal, technical or financial services they may need (Local Energy Scotland, n.d.). Second, intermediaries can alleviate barriers, frame and embed community led energy projects into the institutional context by advocating, negotiating and lobbying with relevant stakeholders, including policy makers (Warbroek et al., 2018). Key to this is the intermediary's ability to mediate across consumers, suppliers and regulators by spanning the knowledge, interests and language of these actors to address human and financial resource deficiencies, such as seed funding, financing permanent staff, access to capital funding, and unsupportive institutional settings (Warbroek et al., 2018; Bird and Barnes, 2014; Hargreaves et al, 2013; Moss, 2009; Kivimaa 2014, Seyfang et al. 2013). Third, intermediaries can open up new opportunities for the adoption of community led energy projects by enabling trials for new business models or technology applications and engaging in new ways to collectively overcome systemic barriers (Bird and Barnes, 2014; Lacey-Barnacle and Bird, 2018; Schoor et al., 2016; Warbroek et al., 2018).

2.3 Intermediary strategies toward "Stretch and Transform"

In many cases, grassroots energy actors take pragmatic approaches to overcoming challenges and constraints by adapting to existing governance practices, market structures and supply chains ("fit and conform"), as opposed to influencing changes to the institutional structure and energy value chains ("stretch and transform") (Smith and Raven, 2012). The selection of these approaches depends on the strategies employed that shape the extent to which grassroots initiatives are adapted to existing governance and socio-technical structures, often isolating or excluding grassroots actors in the process ("fit and conform"), or whether they lead to a reconfiguration of practices and structures that support grassroot energy initiatives ("stretch and transform") (Scharnigg and Sareen, 2023; Smith and Raven, 2012; Turnheim et al., 2018). In countries where renewable energy deployment is dominated by established utilities, meso-level collective action presents coordination challenges and is itself challenged by resource and capacity constraints (Berka et al., 2020). In these contexts, decentralised energy solutions, such as peer-to-peer services, may be acquired and deployed by utilities (Berka et al., 2020). Schnarrigg and Sareen (2023) describe the roll out of solar PV into energy communities in Portugal, describing the activities non-profit organisations, municipalities, new entrant companies, where some were found to "fit and conform" by leveraging existing networks while others demonstrated "stretch and transform" by combining innovative business models with the facilitation of energy infrastructure to advance replicable prototypes that affected the market structure to enable the diffusion of solar photovoltaics into energy communities. In another illustration of "stretch and transform", co-operatives in the Netherlands forged partnerships with established energy companies and utilities to modify the energy value chain and scale-up, resulting in a new hybrid form of energy company that combines cooperative and commercial mechanisms and drivers (De Bakker et al., 2020). Community energy organisations have worked collectively at regional level to strategically develop a community retailer that can service them and their members collectively in contexts in which access to electricity supply licences is complex and beyond the capacity of single community organisations, transforming the value chain and market place (Schoor et al., 2016).

2.2 Study Context

2.2.1 British Columbia Electricity Institutions and Infrastructure

Globally, many energy sectors with a longstanding legacy of large-scale hydropower remain highly centralised and exhibit infrastructural, institutional and discursive inertia towards decentralisation (Berka et al., 2020; Kooij et al., 2018). The electricity sector in British Columbia is unique in that it is dominated by a provincially owned and regulated monopoly utility, the British Columbia Hydro and Power Authority (BC Hydro). BC Hydro is the main owner and operator of the province's (mainly hydropower) generation, and of high voltage transmission and low voltage distribution networks, and is also the largest electricity retailer in the province, serving 95% of the province's population (BC Hydro, 2022). In 2022, the utility reported 12,204MW of installed capacity, including 12,026MW of hydroelectric generating capacity. BC Hydro also owns and operates an extensive network of transmission and distribution infrastructure including over 80,000 km of power lines and 300 substations (BC Hydro, 2022).

The political momentum to privatise parts of BC's power sector gathered pace from 2010 onwards, later than many other jurisdictions. This required BC Hydro to reorient to source renewable electricity from IPPs and to provide opportunities for electricity generation by the private sector and third parties to achieve competition, job creation and accelerated investment in renewable energy (Davidson, 2019; Hoberg and Rowlands, 2012). Nevertheless, the BC power sector remains characterised by a narrow scope of technology, lack of diversity of delivery models, and monopolisation by public ownership.

2.2.2 First Nations and Renewable Energy in British Columbia

Many BC First Nations see renewable energy development as a means to achieving community objectives such as producing electricity for community buildings, generating revenue and jobs in alignment with community values and priorities, contributing to energy self-sufficiency, and reducing dependence on diesel (Cook et al., 2017). Ownership of renewable energy projects as IPPs can help Indigenous communities develop consistent and long-term streams of own-source revenue (Yunker, 2022; Zurba and Bullock, 2020, 2018), supporting their ability to rely less on colonial government financial support and improve prospects for self-determination (Hoicka et al., 2021b; Savic and Hoicka, 2023). A 2017 survey of BCs 203 First Nations received responses from 105 Nations and identified 78 operational renewable energy projects with ownership or involvement of First Nations, of which 42 were selling electricity to BC Hydro, and a further 48 projects were under development (Cook et al., 2017). 98% of responding First Nations reported ongoing participation in renewable energy development or a desire to get involved in the renewable energy industry.

Within BC, IPPs seeking to export or trade power must either apply to procurement generation programmes controlled by BC Hydro or interact directly with the wholesale market. However, changes in the government's priorities have significantly impacted whether First Nations can act as IPPs and participate in the electricity market. The design and outcomes of BC Hydro's procurement programs from 1989 (the earliest year we could document) and 2024 are outlined in Table 1. Specifications for First Nation involvement in the awarding of power contracts by BC Hydro's procurement programs is outlined in Table 2. This overview demonstrates a number of inconsistencies in IPP procurement policies that First Nations could participate in. Until 2016, First Nation involvement was either not specified, or taken into consideration, and only sometimes was consultation with First Nations required. The 2016 BC Hydro micro-standing offer program for small-scale (>100kW, <1MW) clean energy projects was the first energy procurement program requiring substantial involvement from First Nation communities. The inconsistencies in BC's procurement programmes over the period 2013-7 were the result of changes in the commitment by the government and BC Hydro to support publicly owned hydro-electricity, versus independent power production (Davidson, 2019, p. 41; Fitzgerald, 2018).

As this research was conducted, in 2023, BC Hydro announced a new call for power will seek to acquire 3,000 GWh per year from new greenfield facilities from "100% clean, renewable energy" to be commercially operational by the end of 2028 (BC Hydro, 2023d; Ministry of Energy, Mines and Low Carbon Innovation, 2023). The announcement identifies the important role First Nations can play in ownership for generating renewable electricity, in assisting in the province's decarbonization effort and the opportunity to support Indigenous self-determination (BC Hydro, 2023d, p. 202; Ministry of Energy, Mines and Low Carbon Innovation, 2023). The announcement provides $140 million contribution to the BC Indigenous Clean Energy Initiative–a funding partnership between the Province of British Columbia, the Government of Canada, and the New Relationship Trust, that provides support and capacity-building funds to First Nations communities for clean-energy projects-will support smaller Indigenous-led power projects that may otherwise not be competitive due to their smaller size (Ministry of Energy, Mines and Low Carbon Innovation, 2023). In 2024 a plan for $36 billion of investment for community and regional infrastructure projects to deliver clean electricity to consumers and related infrastructure for decarbonization was announced. This includes new high-voltage transmission lines, upgraded generating facilities, and infrastructure to support high-growth areas with residential housing and transit electrification (Ministry of Energy Mines and Low Carbon Innovation, 2024).

Table 1: BC Hydro Energy ProcurementPrograms 1988-2024.
Legend: **a** = (Davidson, 2019); **b** = (BC Hydro, 2023a); **c** = (Office of the Premier, et al., 2003) **d** = (BC Hydro, 2023b) **e** = (BC Hydro, 2023c) **f** = (BC Hydro, 2006) **g** = (BC Hydro, 2008) **h** = (BC Hydro, 2010) **i** = (Danard, 2009) **j** =(BC Hydro, 2014) **k** = (BC Hydro, 2016a) **l** = (Ministry of Energy, Mines and Petroleum Resources, 2007) **m** = (BC Hydro, 2006) **n** = (BC Hydro, 2017) **o** = (BC Hydro, 2016b) **p** = (Ministry of Energy, Mines and Low Carbon Innovation, 2023) **q** = (BC Hydro, 2023d) **r** = (Ministry of Energy Mines and Low Carbon Innovation, 2024)

Year	Program Name	Details	Outcomes
1988	1988 > 5MW Call	Program details unavailable	2 hydroelectric and one natural gas Electricity Purchase Agreements (EPA) active as of April 1, 2023 [ab]
1989	1989 <5MW Call	Program details unavailable	12 EPAs[a], 2 hydroelectricity EPAs active as of April 1, 2023[b]
1994	BC Hydro 1994 Request for Proposals	Program details unavailable	2 EPAs [a] (Davidson, 2019), No EPA's active as of April 1, 2023[b]
2000	BC Hydro 2000 Request for Proposals	Program details unavailable	Resulted in 3 biogas and hydroelectricity EPA's[a] active as of April 1, 2023[b]
2001	2001 > 40 MW	Program details unavailable	Resulted in 3 hydroelectricity EPA's[a] active as of April 1, 2023[b]
2001	2001 < 40 MW	Program details unavailable	Resulted in 21 EPAs [a] 8 hydroelectricity EPA's active as of April 1, 2023[b]
2002-2003	BC Hydro 2003 Green Power Generation Call	"Green[2]" projects [ac] Initial production cap of 800 GWh per year [c]	70 project applications submitted [a] EPAs for 16 projects signed including hydro, landfill gas, and wind power [ac], 5 EPAs active as of April 1, 2023[b] ~1,800 GWh/year contracted [ac] one project operated by a First Nation [c]
2004 - present	BC Hydro Net-Metering Program	Generation beyond customer usage provided to the grid, recorded as generation credits that offset future bills [e]. Every year, unused generation credit is paid out to customers according to the set energy price [e]. Project size 10kW to 100kW [d].	6,546 participating customers; 6,513 solar, 17 hydro, 9 wind, 5 wind/solar, 2 hydro/solar, 1 biogas power [e], Combined generating capacity of 55MW[d] 93% residential, 7% commercial customers [d] 84% under 10 kW, 13% 10-27kW, 1% 27-50kW, 1% 50-100kW [d]

[2] Available documentation for the 2003 Green Power Generation Call defines green energy as "energy generated from renewable resources through licensable and environmentally and socially responsible developments" (BC Hydro, 2002, p. 10).

2005-2006	BC Hydro 2006 Open Call for Tenders	Targeted 2,500 GWh/year from large projects (≥10 MW) and 200 GWh/year from small projects (<10 MW)[af] Open to all technologies/fuels except nuclear [f]	28 EPAs awarded for hydro, wind, biomass, coal, waste heat power projects [f] 1,800MW in capacity and production of 6,500 - 7,000 GWh/ year contracted [a] 18 EPAs active as of April 1, 2023[b]
2008 - 2010	BC Hydro 2010 Clean Power Call	Biomass, biogas, geothermal heat, hydro, solar, ocean, wind or any biogenic waste, waste heat projects and any additional prescribed resources [g] Minimum delivery of 25 GWh/year per project [g]	25 EPAs awarded for hydro, wind, and waste heat projects [h] 1,168 MW capacity and 3,266GWh/year contracted, Project capacities ranging from 6-142 MW or 27-434 GWh/year 20 EPAs still active as of April 1, 2023[b]
2008 - 2010	BC Hydro Bioenergy Phase 1 and 2 request for Proposals	Part of BC's bioenergy strategy [a], Electricity from logging debris and timber killed by mountain pine beetle [a] Flexible project conditions, Offered hourly and seasonally "firm[3]" energy options [a]	8 EPAs awarded for bioenergy projects [a] 579GWh/year contracted in Phase 1 [i] 104 MW and 800GWh/year contracted in Phase 2[b] Four EPA's, all from phase 2 are still active as of April 1, 2023[b]
2008-2019	BC Hydro Standing Offer Program	Streamlined process for developers of biomass, biogas, geothermal heat, hydro, solar, ocean, wind or any biogenic waste, waste heat projects and any additional prescribed resources [jk] 2008: Target 10 MW and 50GWh/year; 2013: <15 MW and 150GWh/year [jl], price: $62.7-89.5/MWh [a] 2010: price adjusted to include regional base price plus Consumer Price and delivery adjustment factor [k]	28 EPAs awarded for biogas, wind, hydro, and solar projects [bn] 25 EPAs active as of April 1, 2023 [b] Indefinitely suspended in 2019 [a]
2016-2019	BC Hydro 2016 Micro-standing offer program	Small-scale (>100kW, <1MW) clean energy projects particularly by First Nations [o] Biomass, biogas, geothermal heat, hydro, solar, ocean, wind biogenic waste, waste heat, and waste hydrogen power [o] more streamlined process and simplified contract than 2008 Standard Offer Program [o]	Number of EPAs awarded unclear 1 active EPA (solar project) as of April 1, 2023 [b] Indefinitely suspended in 2019 with SOP [a]
2024	BC Hydro 2024 Call for Power	Details to be determined by consulting relevant stakeholders [p] Purchase "100% clean, renewable energy"[p] Plans to acquire 3,000 GWh per year from new greenfield facilities with acquisition timeline[q] Call will be issued spring 2024, contracts awarded by summer 2025, commercial operation as early as Fall 2028 [q]	
2024	Power Pathway: Building BC's energy	$36-billion investment for community and regional clean electricity projects including wind and solar [r]	

[3] "Firm energy refers to the ability of an energy resource to reliably deliver a specified amount of energy within specified time periods. (Davidson, 2019, p. 3).

	future	Build new transmission lines, infrastructure to support residential housing growth and transit electrification in high-growth areas, upgrade generating facilities for improved safety, efficiency, and reliability [r]	

Table 2: Indigenous Involvement in BC Hydro Energy Procurement Programs 2002-2024 (no information available for 1988-2001).

Year	Program	Mentions of Indigenous communities in the program documents
2002-2003	BC Hydro 2003 Green Power Generation Call	Follow-up report mentioned one project operated by a First Nation (Office of the Premier, et al., 2003).
2004 to present	BC Hydro Net-Metering Program	As of 2023 BC Hydro proposed an engagement plan for the year to hear feedback regarding the program that includes Indigenous nations (BC Hydro, 2023b)
2005-2006	BC Hydro 2006 Open Call for Tenders	Consultation, engagement and impacts on First Nations considered as part of risk assessment to project category and relevant to project eligibility but not a criteria. First Nations offered the opportunity to comment on program design prior to the program launch. (BC Hydro, 2006)
2008 - 2010	BC Hydro 2010 Clean Power Call	Consultation, engagement and impacts on First Nations considered as potentially relevant to project eligibility but not a criteria – "BC Hydro may further consider some or all of the following criteria (which are not necessarily set out in order of relative importance)" (BC Hydro, 2008)
2008 - 2010	BC Hydro Bioenergy Phase 1 and 2 request for Proposals	No specific mention of Indigenous communities or First Nations in program design.
2008-2019	BC Hydro Standing Offer Program	Projects assessed for “adequacy of First Nations consultation” before offering electricity purchase agreements. guidelines for projects developed by First Nations are considered for eligibility. (BC Hydro, 2016a)
2016-2019	BC Hydro 2016 Micro-standing offer program	“Eligible Projects must have First Nations or community involvement” (p.4) Adequacy of First Nations consultation is considered for projects prior to an EPA offer Projects required meaningful involvement of either First Nation or community groups for eligibility. A First Nation applying under the program must demonstrate beneficial ownership and active participation in the project by the FN Royalties or financial benefits from a developer to a nation are not considered involvement in the project. Projects involving community groups are assessed for adequate consultation of First Nations before offering electricity purchase agreements (BC Hydro, 2016b)

2024	BC Hydro 2024 Call for Power	First Nations will be involved in program design and the announcements say renewable energy is a path for reconciliation and economic development for First Nations Communities (Ministry of Energy, Mines and Low Carbon Innovation, 2023) with a particular focus on a role for First Nations ownership in all projects (BC Hydro, 2023d).
2024	Power Pathway: Building BC's energy future	No specific mention of Indigenous communities or First Nations.

2.2.3 UNDRIP and First Nations Electricity Utilities

The UNDRIP Act received royal assent on June 21, 2021 in Canada (Duhamel, 2022). The Act affirms UNDRIP as an important source for interpreting Canadian law and declares that the laws of Canada will be made consistent with UNDRIP (Duhamel, 2022). It also sets out timelines for the government to create and implement an action plan "to achieve the objectives of the Declaration." (Duhamel, 2022). The Province of BC passed DRIPA on 28 November 2019 (Nichols and Morales, 2021) adopting aspects of the UNDRIP and focusing on enabling Indigenous self-determination and the right of Indigenous communities to improve their economic and social conditions without discrimination (Fraser, 2019).

Despite calls to action to all sectors in society in the Truth and Reconciliation Commission report, until recently, few renewable energy projects with Indigenous involvement had a controlling share of ownership, particularly those on First Nations traditional lands (Hoicka et al., 2021b). There are arguments that implementing UNDRIP and Free, Prior and Informed Consent (FPIC) for decision making about resource projects on Indigenous lands could increase the control that Indigenous communities hold over projects (Scott, 2020).

Lack of access to capital and the ability to minimise risks of borrowing to a First Nation has been a commonly documented barrier to Indigenous community involvement in renewable energy projects (First Nations Major Projects Coalition, 2019, 2024a; Krupa, 2012; Savic and Hoicka, 2023). As such, a "fit and conform" approach would see First Nations communities accept established colonial legacy institutional structures and procurement programs controlled by BC Hydro, the BC Utilities Commission (that regulates energy utilities in BC), and the BC government, with the goal of both increasing the share of ownership of renewable energy generation and demand management projects as well as the number of projects owned by increasing access to capital within the prescribed market access. For example, the First Nations Major Project Coalition has developed for First Nations and governments a range of resources about how to work with utilities and how increased access to capital can be developed (First Nations Major Projects Coalition, 2024b, 2024a, 2023, 2019).

Instead, however, there are strong indications that "stretch and transform" strategies are emerging in Canada. For example, in the Province of Ontario, the Wataynikaneyap Transmission Project "Watay Power" has been developed as a novel ownership structure in the form of a private partnership, where 51% of an 1800 Km transmission line that connects 17 remote communities to the power grid will be owned by 24 First Nations and 49% by private investors (Wataynikaneyap Power, n.d.). In BC, one First Nation challenged electricity sector institutional structures by seeking to start their own electricity utility. In 2016, a limited partnership company with 51% ownership by Beecher Bay First Nation, called Spirit Bay Utilities, filed an application with the BC Utilities Commission for an exemption to Section 88. Section 88 of the Utilities Commission Act allows municipalities, local, colonial governments, in BC to operate and self-regulate electric utilities (BC Utilities Commission, 2020). Currently, five municipalities in BC exercise this right[4] (BC Utilities Commission, 2020). The exemption request was denied as the Commission found that the nation did not qualify as a municipality, nor did the nation qualify to be excluded from the

[4] These municipalities are Grand Forks, Nelson, New Westminster, Penticton and the District of Summerland.

jurisdiction of the Commission (BC Utilities Commission, 2020), demonstrating the discrepancies in how Indigenous and non-Indigenous communities are addressed by colonial institutions.

Although they are both local governments, First Nations are formed and governed differently than municipalities, illustrating the many ways in which "settler colonialism continues to structure the broader set of relations in which renewable energy projects are situated." (Smith and Scott, 2018). Many First Nations are located on reserves delineated by the colonial government that may not overlap with their traditional land or culture. In BC, municipal governments are established and governed by the provincial legislature as determined by the Canadian Constitution (Intergovernmental Affairs Government of Canada, 2021) whereas, though each First Nation community are unique, and may be governed in a number of ways including by communities' own legal orders and traditions, they are for the most part also governed by colonial institutions such as treaties, the Indian Act, the Constitution and the extent to which UNDRIP and DRIPA are consistent with Canadian law (Duhamel, 2022; Hoicka et al., 2021d; Scott, 2020; Smith and Scott, 2018). These laws and agreements affect First Nations rights, governance structures, and their access to both traditional and unceded land claims.

However, the Commission's denial of Spirit Bay Utilities' application raised questions within the Commission itself, about "whether First Nation utilities ought to be regulated differently under the *Utilities Commission Act*, and if special provisions may be needed" (BC Utilities Commission, 2020, p. 1). The Commission established an inquiry to explore the possibility of regulation of First Nations electric utilities in British Columbia (BC Utilities Commission, 2020) based on the understanding that preventing First Nations from participating in the clean energy economy undermines the UNDRIP which requires that governments ensure Indigenous communities have the opportunity for economic development. The final report advised that First Nations were lacking opportunity in the clean energy economy and that First Nations should be able to create their own utilities and power authorities, that Indigenous-controlled power projects should be able to access transmission systems and sell directly to customers both inside and outside the borders of First Nation reserves or treaty lands, and provide guidelines for how First Nations could own, and operate utilities to provide electricity services on reserve land, how they could be regulated, and offered 35 recommendations towards their implementation (BC Utilities Commission, 2020). Although none of these guidelines have been formally adopted, the inquiry has provided support for advocacy for increased Indigenous involvement in the British Columbian clean energy economy.

However, the inquiry also outlined that, despite the potential benefits of utility ownership, there are also inherent risks to taking a utility ownership based approach. Key risks identified were around the economic viability of utilities facing high fixed costs for infrastructure (including grid connection), issues around securing financing, the need for attracting a substantial customer base and sufficient economies of scale to distribute fixed costs, the need for developing rate structures that can recover operating costs, and compete with self-generation by customers by delivering reliable electricity supply, and the need for sufficient humanesources, including highly specialised personnel.

3.4 BC First Nations Organise Collectively

A number of advocacy groups have raised concerns regarding the lack of access for First Nation involvement as IPPs. In 2017, 30 First Nations members of Clean Energy BC[5] formed the First Nations Clean Energy Working Group. Between 2017 and 2020, based on Cook et al.'s (2017) survey of First Nations documenting their aspirations for involvement in renewable electricity development, the Working Group produced a discussion paper on clean energy opportunities for First Nations in BC. The report advised that provincial policy failed to capitalize on the willingness of First Nations and needed to improve their policy framework in order to facilitate and encourage Indigenous involvement in renewable energy (Cook et al., 2017). The Working Group began organising First Nations Energy Summits, annual in-person gatherings of workshops and policy dialogue sessions for communities, governments, organizations and businesses working to advance First Nations participation in the renewable energy sector in BC.

A coalition emerged from these organising activities that provided leadership and structure in support of First Nations to collectively self-organise to simultaneously address the predicted regional electricity shortages, and the rights afforded to First Nations under UNDRIP and DRIPA. The coalition included the Working Group, the New Relationship Trust[6], the Pembina Institute's Renewables in Remote Communities Program[7], and the Nuu-Chan-nulth Tribal Council[8] that represents 14 First Nations in BC, eventually joined by the First Nations Power Authority that originated in Saskatchewan[9]. In 2021, the New Relationship Trust commissioned a report to advance the interests of First Nations in renewable electricity through the establishment of a "First Nations Power Authority" (Keppel Gate Consulting, 2021). This was developed into a public-facing advocacy report co-authored by the New Relationship Trust and the Pembina Institute (Lovekin et al., 2021). The report estimated a looming electricity supply shortage in the province

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[5] The Clean Energy Association of BC, otherwise called Clean Energy BC, is a not-for profit organisation whose mission is to promote the development of a cost-effect clean energy economy by assisting the manufacturing, supply, and service industries that shape clean energy production in the province of BC by advocating for responsible and viable power generation, transmission, and management resources (Clean Energy BC, 2023).

[6] "The NRT was established in 2006 through the enactment of the New Relationship Trust Act, Bill 11 – 2006 and was capitalised with an investment of $100 million from the Province of B.C. as an outcome of a Transformative Change Accord Agreement (the "Accord") signed on November 25th, 2005, between the First Nation Leadership Council (comprised of British Columbia Assembly of First Nations, First Nations Summit, the Union of BC Indian Chiefs), the government of B.C., and the government of Canada….The purpose of the New Relationship Trust is to provide resources to assist First Nations to build their own capacity to participate in the processes and activities envisioned by, and that evolved from, the New Relationship between the Government of B.C. and First Nations in B.C. by enhancing First Nation governance, leadership and institutional and human resources capacity to address social, cultural, and economic needs and priorities. These include, shared decision making, land use planning and resource management, revenue and benefit sharing, community planning and consultation and other interactions.``(New Relationship Trust, 2023)

[7] The Pembina Institute is a charity and think-tank that seeks to advance the development of a prosperous clean energy future in Canada through policy solutions (Lovekin, 2023). Pembina's Renewables in Remote Communities program supports communities that are both remote and Indigenous to pursue energy sovereignty and independence to transition off diesel and towards clean and renewable energy (Pembina Institute, n.d).

[8] A tribal council is a group of First Nations with a common interest who work together to provide services for their members (Government of Canada, 2023).

[9] The First Nations Power Authority is a First Nations governed, not-for-profit, membership-based development company that was originally formed to facilitate First Nations-led projects in the Saskatchewan energy sector (First Nations Power Authority, n.d.; SaskPower, n.d.).

between planned electricity supply and electricity demand by 2030 between 10.9 and 19.1TWh (Lovekin et al., 2021), with potential that electricity would be imported from the United States, and result in stronger regional competition for electricity. It estimated that offering contracts to First Nations for 50% of the generation required to meet the supply shortage would attract over $8 billion in investment to First Nations and double the size of the First Nation renewable electricity sector. The coalition argued this would provide an opportunity to develop and implement a policy framework that could align the goals of DRIPA and the provincial climate plan's (CleanBC) targets, simultaneously addressing supply and creating opportunities for First Nations in BC to provide leadership in the renewable energy sector. Referencing the report by the Utilities Commission the coalition argued that "The establishment of a First Nation Power Authority in B.C. will build expertise, capacity, and policy advocacy experience among First Nations. All are critical to advancing First Nations energy sovereignty, economic reconciliation, and providing crucial input to provincial energy policy[…].A First Nation Power Authority will bridge new energy policies in which First Nations act as broker and seller, and advocate for more aggressive energy policies in B.C." (Lovekin et al., 2021, pp. 13–14).

3.5 Study Focus

Historically, Indigenous engagement with energy across Canada has tended towards "fit and conform" strategies, characterised as working within existing institutional structures by forging partnerships with mainstream energy developers, developing their own unique business models of Indigenous economic development corporations as a bridge between First Nations and markets, and to seek sources of capital for investment (Hoicka et al., 2021b; Savic and Hoicka, 2023; Walker et al., 2021). Now, First Nations are collectively organising through intermediaries to "stretch and Transform" regional institutional settings using a rights-based approach of the United Nations Declaration of the Rights of Indigenous People (UNDRIP). While there is increasing evidence of the barriers and enabling policies for energy projects led by First Nations or Indigenous peoples, we know little about the mechanisms by which First Nations energy advocates organise themselves and build stakeholder coalitions at the "meso-level" (regional or national) in order to to influence institutions and overcome barriers inherent to policy settings. Smith and Raven (2012) argue that in "empowerment stretch and conform" strategies, niche actors need to link to wider processes of social change. In what follows, we characterise how and why a " stretch and transform" strategy took hold aligning with DRIPA's rights based approach as the basis to challenge existing electricity institutions.

3. Methodology

3.1 Partnership research and funding

This study was designed as co-created research between research partners that work directly with First Nations across British Columbia–through Clean Energy BC and the New Relationship Trust– and the academic researchers. Clean Energy BC and the New Relationship Trust hired the researchers through funds provided by the federal government, Natural Resources Canada's Clean Energy for Rural and Remote Communities Program, Capacity Building Stream funding program designed to support advocacy for First Nations in the renewable energy sector to conduct academic research to design and conduct research that focused on the impacts and benefits of renewable energy to First Nations in BC to support their advocacy And to extend a survey the organisations had conducted by Clean Energy BC in 2021 of 72 First Nations.

Under ownership, control, access, and possession principles (The First Nations Information Governance Centre, n.d.), First Nations have control over the data collection process, own any data collected about them, and have control over how this data is used. The partners directed and controlled the research design, and was consulted and involved in each stage of the research. To ensure that data collection, analysis and dissemination was directed by a coalition of Indigenous communities and designed to advance the interests of First Nations in the colonial context of Canada.

3.2 Regulatory, policy, media, and advocacy text analysis

FNPA models were identified by reviewing organising and advocacy documents produced by the coalition, such as conference presentations and reports. Proposed models were analysed for their characteristics, considerations and examples to understand the extent of fit and conform or stretch and transform strategies.

3.3 Interviews

3.3.1 Recruitment

This research focused on recruiting members of Nations who had direct involvement in the development of an operational renewable energy project although First Nations with projects under development engaged in interviews to share their experience with the process of project development.

Interview participants were recruited through Clean Energy BC by inviting participants of previous research. The researchers also presented the research project at a First Nations Energy Summit, inviting participants to an on-site interview during the event or to schedule an interview on a later date.

3.3.2 Ethics

The ethics process was two-tiered, in which the researchers sought consent from both the nation, according to their own protocols, as well as from the interview participant. Some First Nations have an ethics staff, others rely on elected officials for consent and it is different in every Nation. Communities and participants had the option to waive anonymity.

3.3.3 Process

The interview was semi-structured, with questions informed by existing literature, impact evaluation materials, and existing interview instruments to assess the impacts of First Nation renewable energy projects (Berka, n.d.; Clean Energy BC, n.d.; Savic and Hoicka, 2021) (see Appendix 1). Participants were asked about their personal involvement and motivation in the project, how the project came about and evolved in the community (challenges, turning points and milestones), how the community was involved, and critical partnerships and support. The interviews also asked participants about the benefits and impacts that the community may have experienced as a result of the project, how the project changed or benefitted the community, and the wider influence projects may have had on the regional or national renewable energy contex, and allowed for the discussion of critical barriers communities face in the electricity sector preventing the development of new or further projects.

Interviews were conducted between December 2, 2022 and March 29, 2023. Interviews with Indigenous communities should be inclusive and accommodative of Indigenous culture, often in-person, conversational, relational, and land-based (Phatshwane, 2024). The researchers were directed by the partner to conduct interviews virtually, as had been done during the earlier phase of the research that was conducted during the pandemic. The three researchers who conducted interviews each had past experience and training in conducting interviews with Indigenous participants in a research context. Interviews were conducted and recorded over Zoom or in-person in a hotel boardroom at the Clean Energy BC First Nations Energy Summit. Interviews were typically between 1-1.5 hours in length.

Transcripts were emailed to the interview participant to confirm content, and to provide feedback. Where anonymity was not waived, all identifying information (location, names) were removed from the analysis and the community was renamed with a number (eg. "Community #1).

3.3.4 Overview of Interview Participants

20 interviews were conducted, representing 17 communities (1 community had 2 participants, 1 organisation, and 1 consultant). Of these, 17 participants consented to peer-reviewed research (14 communities, 1 organisation, 1 consultant). Interviewees included the chief of the Nation, council members, climate action team members, and consultants. The locations of the Nations that consented to being named are identified in Figure 1 and in Table 3.

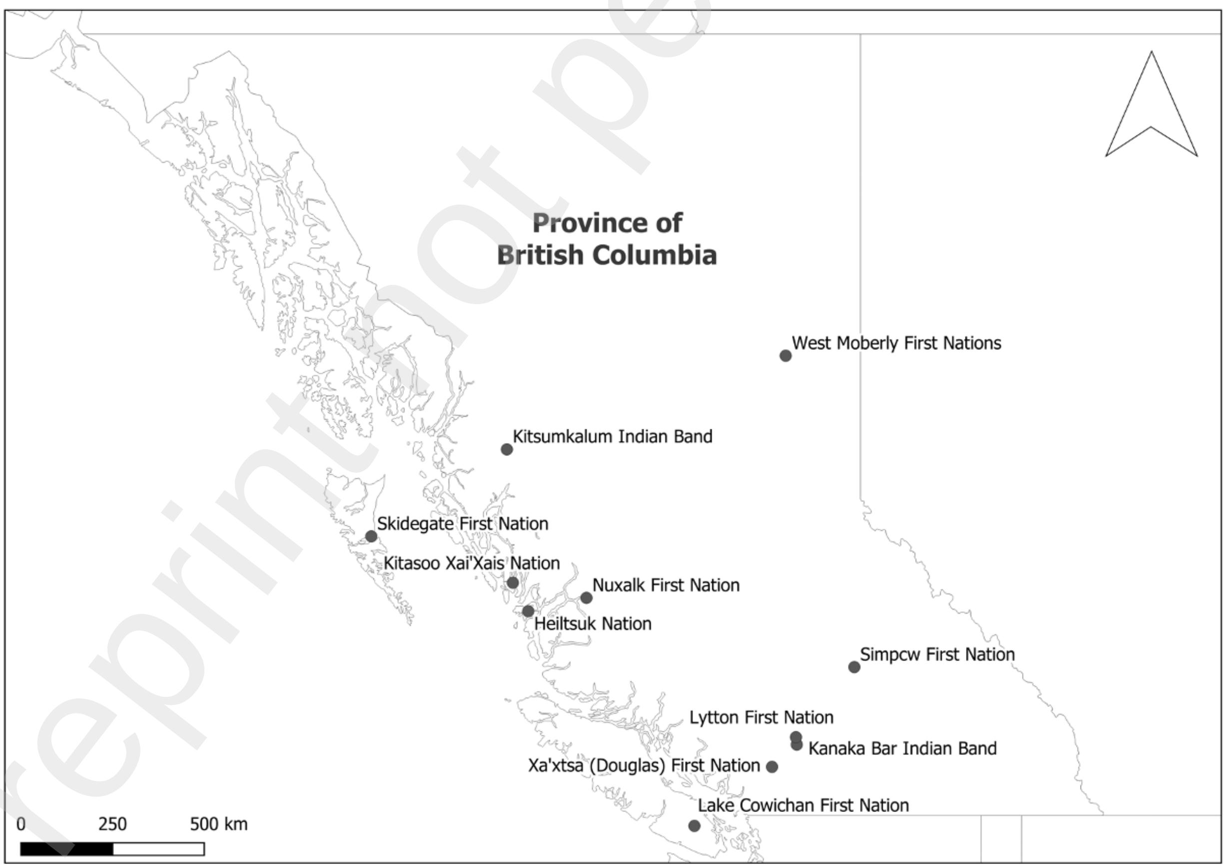

Figure 1: First Nations research participants

Table 3: Summary of First Nation Communities and Projects

	Community Name	Active Projects	Year Active	Planned Projects
1	Community #1	1	2021	1
2	Community #2	3	2010, 2016, NA	
3	Community #3	1	2017	
4	Heiltsuk Nation	1	2018	6
5	Kanaka Bar	3	2014, 2016, 2019	2
6	Kitasoo Xai'Xais Nation	3	2015, 2021, 2022	
7	Kitsumkalum Indian Band	-	-	2
8	Lake Cowichan First Nation	-	-	2
9	Lytton First Nation	1	2019	
10	Nuxalk First Nation	-	-	4
11	Simpcw First Nation	1	2011	
12	Skidegate Band Council	2	2015	2
13	West Moberly First Nation	1	2021	1
14	Xa'xtsa (Douglas) First Nation	4	2009, 2015, 2016, 2022	
	Total	21	-	20

3.4 Coding & Analysis

Consensus codes were used to code all transcripts and documents, comprising a total of 21 transcripts (1 participant did 2 interviews) and 5 additional documents including a Community Energy Plan, presentation decks, reports, videos, and summary documents using qualitative coding software. Code definitions were developed through consensus on interpretations and definitions between two researchers, and were based on the questions from the interview templates, organising responses following themes such as high level barriers, motivations, and impacts in the literature, with room to adapt and add codes based on the interview data.

Coded excerpts for the interviews with consent for peer reviewed research were organised into summary tables compiled for themes such as motivations for renewable energy, motivations related to sovereignty or DRIPA, institutional and actor barriers, institutional support, and specific experiences with the incumbent utility Interviewee quotes were in some cases paraphrased to clarify meaning for analysis. For example, "they" might be replaced with the organisation being referred to, and details from another portion of the transcript would be used to clarify the meaning of the quotes for analysis.

4 Results and Discussion

4.1 First Nation Power Authority Models

The coalition for First Nations in BC debated six potential models for a First Nation Power Authority (FNPA)–capacity building, industrial interconnection, "golden ticket" opportunities, "put" contracts, wheeling agreements, and regional vertically-integrated power authority– each outlined in detail for their characteristics, considerations and examples in Table 4. The models vary in both complexity and in the roles played by the FNPA itself, and in that sense, some of these models follow a fit and conform approach, while others exemplify a stretch and transform approach.

The least complex "fit and conform" model is as a capacity building organisation that serves to support the streamlining for First Nation renewable energy projects. This model currently exists in another province of Canada, the First Nation Power Authority in Saskatchewan, Canada that was set up by the incumbent utility, SaskPower. The most complex model exemplifies a "stretch and transform" approach and is a regional vertically-integrated approach that replaces the existing provincial monopoly in certain regions with a First Nation controlled utility. In this approach, the FNPA would be responsible for all aspects of energy services ranging from generation, to distribution, to customer service.

The remaining FNPA models fall somewhere between these two models, often involving specific aspects of the electricity system. The industrial interconnection FNPA model controls the expansion of infrastructure connecting the BC Hydro system beyond its current boundaries. The "Golden ticket" opportunities model allows First Nation priority on opportunities in the electricity system, with the flexibility to allow First Nations to respond to context specific opportunities as they arise. The put contract model ensures that a portion of the generation needed to meet new demand is filled by the FNPA, which would serve as an "operator" or "collector" for First Nation IPPs. Under the wheeling model, the FNPA becomes a retailer, selling power to their customers on behalf of First Nation IPP's while using the connecting infrastructure and billing services of BC Hydro through a wheeling agreement. These models are not mutually exclusive and could be implemented in parallel or be implemented on a case by case basis to suit specific needs in different contexts.

Table 4: Potential First Nation Power Authority Models

Model	Characteristics	Considerations	Examples
Capacity building point of contact	Bridges gaps and leverages project development expertise, network of industry experts, and technical advisors to evaluate and develop projects resulting in increased economic benefits for First Nations.(Lonechild, 2023) Works with incumbent utility to promote Indigenous projects. (SaskPower, n.d.)	Meets the need for streamlined process to increase power. (SaskPower, n.d.)	BC Indigenous Clean Energy Initiative provides support and capacity-building funds to First Nations communities toward the planning and implementation of clean-energy projects (Ministry of Energy, Mines and Low Carbon Innovation, 2023) FNPA in Province of Saskatchewan, Canada A memorandum of understanding signed between the Government of Saskatchewan and the FNPA designates that First Nation power producers use the FNPA as the first point of contact for any power project proposals for the incumbent utility SaskPower. Advances Indigenous power generation projects through a streamlined process to SaskPower. All 74 First Nations in the province are eligible for FNPA membership. (SaskPower, n.d.) First Nations Major Projects Coalition resources for First Nations participation in electricity infrastructure development. (First Nations Major Projects Coalition, 2024b, 2024a, 2023, 2019).
Industrial Inter-connection	Single nations or small groups of nations create and operate connection infrastructure (transmission lines), building beyond the BC Hydro grid (i.e., "edge of system") to allow remote industrial facilities to access the BC Hydro grid. (Lusztig, 2023)	Least complex model. Requires decision whether Indigenous utilities would be regulated under the Utilities Commission Act or another regulatory body. Industrial customers must agree to be serviced by a new operator and regulator. Industry and regulatory reaction have been generally supportive. Provides broader opportunity than the interconnection model while much simpler to develop. No need to create a complex entity up front. Allows FN to attract investment from developers looking to take advantage of the	Wataynikaneyap Transmission line in Ontario, 24 First Nations own 51%, private investors own 49%. (Lusztig, 2023) The Indigenous government of a territory is the owner/operator and regulator of an electric distribution utility in this territory. It subsequently acquires all transmission assets on its territory, including the transmission lines and transformer stations from which its distribution utility takes service (p.27). (BC Utilities Commission, 2020)

		allowed opportunities through a partnership. (Lusztig, 2023) Must cover cost of connecting to existing transmission or distribution infrastructure Must meet Mandatory Reliability Standards. (BC Utilities Commission, 2020)	
Local or Regional "Golden ticket" opportuniti es	FNPA receives advantages through regulatory, commercial, and system"golden ticket" opportunities. Provides First Nations with a unique opportunity that allows them to earn economic value on their own terms. (Lusztig, 2023)	Provides broader opportunity than the interconnection model while much simpler to develop. No need to create a complex entity up front. Allows FN to attract investment from developers looking to take advantage of the allowed opportunities through a partnership. (Lusztig, 2023)	Procurement opportunities to sell power to BC Hydro with First Nation involvement. Use of the transmission system for wheeling power to specific customers. The ability to capture benefits for First Nations from BC Hydro's large dams that have infringed First Nations' traditional territories. Premiums for decarbonization initiatives in First Nations or remote communities. (Lusztig, 2023)
"Put" Contract	Agreement that grants a First Nation Power Authority representing numerous First Nation independent power projects the right, but not the obligation, to supply electricity to BC Hydro according to specified terms and conditions. (Keppel Gate Consulting, 2021)	A portion of new demand be set aside to create opportunity for First Nations. Terms of the put agreement developed to meet the needs of BC Hydro in regards of price, volume, technology, and location. Provide a consistent demand to attract capital for First Nation investment in developing electricity projects. (Keppel Gate Consulting, 2021)	First Nation IPP's make a notional delivery to the First Nation Power Authority which delivers electricity to BC Hydro according to put agreement. FNPA would then make payments back to the First Nation IPP's. (Keppel Gate Consulting, 2021)
Retailer or "Wheeling agreement"	Allows a First Nation's utility to transfer electricity through the incumbent utility's existing wires in order to distribute electricity to customers. (BC Utilities Commission, 2020) The FNPA sells electricity for IPPs and pays a wheeling & ancillary services fee to BC Hydro. (Keppel Gate Consulting, 2021)	Requires decision whether Indigenous utilities would be regulated under the Utilities Commission Act or another regulatory body. Need to determine whether territorial restrictions limit which customers can be served. IPP rates may be higher than BC Hydro Current legislation prevents retail sales across transmission lines. (BC Utilities Commission, 2020) Opportunity for First Nation to First Nation energy sales, facilitates energy exports, and	A First Nation with a number of relatively widely dispersed reserves situated in a rural, on-grid area within BC Hydro or Fortis BC's service territory, wants to develop, own and operate a geothermal cogeneration plant in or near its largest community to generate electricity for distribution to all of its reserves and provide heat and hot water to the immediately adjacent community. Both the plant and the community are located on the reserve land. As all of the First Nation's communities are connected to the incumbent utility's electricity distribution and/or transmission grid, the First Nation does not plan to

		the sale of power to domestic industries. (Keppel Gate Consulting, 2021)	build any new wires to connect them to the geo-thermal plant (p.25). A First Nation seeks to develop a renewable generation plant (e.g. run of river, wind) on its territory and has a customer in the incumbent utility's service territory several hundred miles away. The electricity can be delivered to that customer by wheeling it across the incumbent utility's transmission system (p.26). (BC Utilities Commission, 2020) Nova Scotia Power's Green Choice program sees a crown utility serve as an intermediary between IPP's and end-use customers. (Keppel Gate Consulting, 2021).

Regional Vertically-Integrated Power Authority	Third provincial vertically integrated utility that owns and operates generation, transmission, and distribution services as well as the standard customer services in a specific region of British Columbia. (BC Utilities Commission, 2020; Lusztig, 2023)	Could address complex reconciliation, rights, and titles issues, needs and opportunities for First Nations. Can be complex relative to actor capacity Requires bands, governments, industry, to agree on a common model, including cost and benefits allocations.(BC Utilities Commission, 2020) Significant upfront investment and challenges to secure financing. Strategic planning for capital investments. Must attract customers, develop rate structure and rate setting to recover operating costs. Must provide services to customers; billing, complaints, differential rate setting, operations, maintenance, safety, responding to outages. Will Indigenous utilities be regulated under the Utilities Commission Act or another regulatory body? Customers may lose subsidised BC Hydro electricity rate. Risk of stranded assets for BC Hydro.(Lusztig, 2023)	BC Hydro owns the diesel generation and the distribution system that serves a remote, off grid, First Nation. The First Nation wants to develop a clean energy source as a replacement for the diesel generated electricity. The First Nation can act as a public utility, either by selling the electricity to BC Hydro to distribute and sell back to the community or by acquiring the distribution system from BC Hydro and operating its own utility (p.24). A First Nation in an urban area seeks to develop market housing and commercial lots on designated lands within its reserve. For the development to be zero emission and affordable the First Nation would build, own and operate a district heating system powered by geoexchange to provide heat and hot water. As the owner/operator of the geo-exchange system, the First Nation is acting as a public utility under the Utilities Commission Act (p.25). A First Nation plans to build and operate a geo-thermal utility to provide heat and hot water to all residents on the reserve, who may or may not be members of the band. The First Nation has received a number of grants that cover construction costs and it can cover the maintenance costs in its annual budget. Therefore, it does not plan to charge its customers (p.26). (BC Utilities Commission, 2020)

4.2 Motivations for a First Nations Power Authority

Control over electricity system development, as outlined in most proposed FNPA models, can be dismissed as being of minimal importance, in favour of improving access to capital or capacity building to develop community led energy projects, outlined in the capacity building point of contact FNPA model. However, the interviews revealed that some communities see renewable energy as an opportunity for more than just lowering energy bills or creating local economic development. It is a way for communities to achieve self-determination and self-reliance by offering the potential to address structural injustices faced by First Nations communities since settlers arrived. Revenue from energy infrastructure projects is viewed as having the potential to help communities regain their energy sovereignty and reduce their dependence on colonial systems.

Interview participants connected renewable energy projects to reconciliation, self-determination, and community resilience, through the opportunity for energy to support water, food, shelter, energy, transportation, communications, waste management systems (Kanaka Bar Indian Band), to do projects their own way, rebuilding language, history, culture (Simpcw First Nation, Heiltsuk First Nation, Nuxalk First Nation) to make other community decisions (Community #1), and reduce dependence on expensive BC Hydro bills to members (Nuxalk First Nation). For example, Heiltsuk First Nation shared that the community had an intricate system of economy and governance prior to colonialism. The community is working to overcome systemic racism through powerful collaborative leadership and circling back to systems of governance prior to colonialism.

Renewable energy projects have also led to non-Indigenous communities and businesses in the region that the community works with to recognize the community as the true owners of the land (Simpcw First Nation).

4.2.1 Relationships and experiences with colonial institutions

First Nation experiences with the incumbent monopoly BC Hydro contribute to the perception that the limitations and barriers put up by colonial institutions are preventing many First Nations from working towards their desired futures. For example, Heiltsuk Nation was displaced by a hydroelectric dam in the early 1900s, and received a mouth promise (verbal agreement) that the dam would be returned to the community. Instead of community control, however, the community now has an MOU with the publicly traded company, Borelex, that now owns the dam. Heiltsuk Nation describes being excluded from conversations and negotiations about retriggering the MOU, about fulfilling the potential of the hydroelectric dam to increase its power output and about addressing that the transmission lines into Heiltsuk Nation are antiquated and require updating.

> "Borelex, who is a current owner of the hydroelectric dam. BC Hydro is the one that sells our power back to us. BCUC [BC Utilities Commission] sets the rate. And we're in this, excluded, and any negotiations around -, this triangle that totally omits, recognizing DRIPA, recognizing our history in that territory."

Kanaka Bar Indian Band hoped to develop a run-of-river hydroelectricity dam on their territory as early as 1988 when BC Hydro announced the IPP policy. They filed their application to develop a project on the creek, however, three other developers had already applied to develop a project on the same creek. None of the developers were interested in partnership or relationship with Kanaka Bar. Due to a "first in line first in right" provincial policy, it took 10 years for the province to set a "use it or lose it" principle for applications, so that the developers withdrew and Kanaka Bar was able to develop hydroelectricity on their own territory.

Kitsumkalum Indian Band was developing a biomass project with a joint venture partner that was ready when BC Hydro withdrew and said that it was too expensive. They described that BC Hydro has remained closed to their reports that advances in technology have the potential to facilitate new clean energy projects and create new opportunities. In their experience,"Well, from being at one moment enthusiastic and excited and totally thrilled to just sort of have this BC Hydro monstrosity just sort of slam everything shut. It was like pretty deflating".

One remote (off-grid) community managed their own electricity system through Indigenous and Northern Affairs Canada (INAC) for about 50 years since the 1960s. This is because BC Hydro chose to not invest in putting in distribution lines to Community #1, despite community members being shareholders of BC Hydro.

> "Well, there are other words for non-integrated. Ignored, marginalized, oppressed, disenfranchised or otherwise non-integrated – and it's forgotten and that's what we were."

While the diesel system faced constant blackouts and outages, the INAC funding agreement allowed the redistribution of "extra" money across areas of community service, and the Nation took spending from other services to support electricity needs.

> "So what we did, as many communities did, and some still do is, we took money from education, social development, economic development, other needed infrastructure, and put it into electricity…... If you want to know the impact of not having clean energy or energy provided by the system that is provided to the rest of the province, those are the impacts."

Skidegate Band Council and Nuxalk First Nation both describe a good rapport with BC Hydro. Despite this, they also describe a lot of red tape with BC Hydro and the BC Utilities Commission, that they don't have a lot of opportunities to be at events like the Commission's processes (Skidegate) and difficulties getting past BC Hydro's compartmentalization to come to solutions for complex grid connection problems (Nuxalk).

4.2.2 Grid limitations and regional ambitions for First Nations

Most First Nations interviewed, whether grid connected or remote, described power quality issues as an influencing factor on their wider ambitions and the need to take electricity planning into their own hands due to their current energy system's lack of reliability.

Nuxalk described the challenge ahead of BC Hydro in upgrading the electricity grid for growing communities on a regional scale.

> "Electrification of our great infrastructure is also going to cause BC Hydro to upgrade their NIA [non-integrated area] here. That will be a pretty big wake up call. There are at minimum 3 other communities, I know they're NIA, that are looking at massive service electrical upgrades and if every other NIA continues to increase in population, they're going to run into the exact same upgrades that we're looking at that these other communities are looking at, and instead of each community being looked at from BC Hydro's perspective as a pilot project, and as a new thing, I'm hoping that we can work together to make sure that there is an easier process for communities to follow instead of what we've experienced in other communities. It's been - you get bounced around from department to department because provincial - BC Hydro is very compartmentalized …. You can't just get everybody into one room and say, "I need this". And then everybody figures out, discusses amongst themselves productively on what needs to happen. You need to have a 10,000 micro conversations before you can get to a macro conversation. A lot of these."

Community #1 describes that when they switched from INAC to BC Hydro as their provider in 2014, in the hopes of developing a renewable electricity project, not only was their project not financed, but BC Hydro charged discriminatory rates for "marginalised/forgotten" communities that are 25-30% more expensive than grid connected rates and the community emphasised that they do not want to pay these punitive rates. In Kitsumkalum Indian Band, the Chief has heard from community members that they pay up to $800 per month for electricity.

Heiltsuk First Nation experienced power outages during the 2021 winter of the pandemic. The world was locked out of the community and there was no backup heat for homes. Due to their exclusion from electricity decision making, Heiltsuk First Nation has partnered with a range of legal and other partners to develop a strategy to have a say in whatever goes forward with the hydroelectric dam.

Kanaka Bar is concerned about the risk to the community relying entirely on BC Hydro as poles are often damaged or destroyed by extreme weather events. The community wants to be connected to the grid but needs to have the lights stay on if the grid goes down. Frequency of extreme weather events will increase with climate change. Kitasoo/ Xai'xais Nation also described the limitations the BC Hydro distribution grid places on their ability to stay warm: there are electrical issues in community homes that lead back to the entire electricity distribution system needing upgrades. It is difficult to put a heat pump into a home that needs all its electrical needs to be rewired and renovated.

Skidegate Band Council described that their community wants more stable energy with less power quality issues, and their plan to increase demand-side projects and IPPs while eliminating dependence on diesel fuel.

4.2.3 Linking Regional Electricity Change with FNPA Models

As a result, several First Nations are making their own connections to regional change through the electricity industry. Many communities want to be independent of BC Hydro and provide their own power to their own people, but BC Hydro being the monopoly for transmission and production of power is the biggest hurdle for the community.

Kitsumkalum Indian Band mentioned that BC Hydro charges a wheeling fee, so if the community wanted to sell to nearby communities, they would have to pay for use of the power grid as if power was going to Vancouver and back. The monopoly is creating a barrier to entry for opportunities that are reflective of the “retailer or wheeling agreement” FNPA model.

Kitsumkalum Indian Band is hoping that because of the project planning related to clean energy, there could be wider collaboration between regional First Nations and communities to get together and make a regional power management plan facilitated by shared infrastructure and information, reflective of the both the “Industrial Interconnection” and the “Regional Vertically- Integrated” FNPA models.

Xa’xtsa First Nation is now working to have provincial regulations changed so that the community can become a utility and sell electricity to the wider grid. The community is trying to have the BC Utilities Commission lift BC Hydro’s monopoly on transmission lines in the province as a first step to establishing a First Nations utility. This way they can become their own utility that operates similar to a municipality where they can provide the energy to the municipality or to another community, reflective of the “Regional Vertically- Integrated” FNPA model. At this time there is a lot of work to do to try and get the BC Utilities Commission to get BC Hydro monopoly off the transmission lines (Xa’xtsa First Nation).

Community # 2 drew a direct connection between the development of the community’s renewable energy projects and BC’s wider energy transition. Given that the province currently lacks the electricity needed to meet its energy goals, the province needs more renewable energy projects. Community #2 shared that if First Nations are allowed to participate as equals as energy producers, it would further facilitate the meeting of provincial energy goals, with an opportunity for First Nations to sell energy without requiring BC Hydro approval. This is reflective of the “golden ticket” or “put contract” FNPA model.

Coastal First Nations Great Bear Initiative have already been working regionally to support the capacity of Indigenous communities through a peer network and training for communities to develop their own, nation-led clean energy projects. For the last 10 years they have supported coastal First Nations in their clean energy program with paid community positions, networking, knowledge sharing, and capacity development opportunities. The organisation was asked to expand its network beyond coastal First Nations and are in initial phases of this. The network will grow from eight to 24 communities. This is reflective of the “capacity building point of contact” FNPA model.

Across the approaches outlined by the interview participants as a way forward for the electricity sector, each type of FNPA model identified in Table 4 are reflected.

4.3 Discussion Summary

Interviews about the development of renewable energy projects by First Nations in BC revealed how communities observe critical internal organisational disconnections and infrastructural challenges ahead of BC Hydro. These are observed as longstanding challenges that BC Hydro has not yet been able to resolve, within the broader context of its relationships with BC Utilities Commission and Ministry of Energy Mines and Low-Carbon Innovation.

Many of the Nations interviewed are used to self-reliance, observe wider connections between electricity development, the land and other communities in the region, and are embracing self-determination in forms of governance and decision making. BC Hydro's monopoly over energy systems is perceived as a barrier in world views and approaches to problems that are relational and institutional, and this is what limits First Nations from engaging energy transitions as a way to work towards their desired futures and their visions for the region.

The "stretch and transform" FNPA models presented by the collective organising by the coalition are reflective of the range of needs and ambitions of many of the First Nations that participated in interviews. These models address the identified barriers and solutions to renewable energy development, in which they consider the regional and relational dimensions of energy transitions as having the potential to be aligned with goals of self-determination and access to opportunities provided by DRIPA.

5 Conclusion and Policy Implications

This study documents a unique case of meso-level collective action by First Nations aimed at aligning energy institutional reforms to the United Nations Declaration of the Rights of Indigenous People (UNDRIP). Given the limited knowledge about Indigenous meso-level collective action for energy institutional reform, this case, led by First Nations in British Columbia, is informative for Indigenous rights holders, energy actors, energy researchers and policy practitioners in settler colonial contexts worldwide. Specifically, using document analysis, this study characterises six proposed institutional innovations aimed at enabling First Nations to lead renewable energy projects, but five of which seek to do so through a "stretch and transform" approach that leads to a reconfiguration of practices, institutional structure and value chains, increasing the range of possibilities of First Nations participation and control in the electricity sector as utilities, owners of transmission lines, and in electricity retail.

A previous survey identified that among the 203 First Nations in BC, there are at least 78 operational renewable energy projects with First Nations ownership or involvement of which 42 sell electricity to the grid, with at least 48 in the pipeline across 105 survey respondents (Cook et al., 2017). This study provides the results of in-depth interviews with knowledge holders of 14 First Nations in BC who have direct experience with a renewable energy project in their community. These interviews provide a deeper understanding of how the proposed "stretch and transform" FNPA models address the challenges they have experienced in developing renewable energy projects.

The study findings point to several policy implications within BC's broader policy agenda towards realising a just energy transition, which has been argued to disproportionately focus on skills development and infrastructural projects in communities affected by the phasing out of traditional oil and gas industries, ahead of empowering and enabling collective action at the margins (Dobrusin, 2021).

To date, policy makers in British Columbia have focused on meeting the energy needs of the province within the structures of colonial institutions such as the provincial government and the BC Hydro monopoly. Policy makers' efforts to include First Nations in the energy system by addressing capacity building, providing information about potential projects, and improving access to capital through the calls for power and standing offer program are offered within the existing governance and sociotechnical structures; the provincial policy approach to energy has confined itself to a "fit and conform" strategy.

However, our findings show that many First Nations directly involved in the electricity sector consider the wider regional and relational dimensions of energy transitions as aligned with goals of self-determination and access to opportunities provided by UNDRIP and DRIPA. Underlying the five more ambitious FNPA models that have been proposed by First Nations is the perspective that as long as control over energy systems sits fully in the hands of colonial institutions like BC Hydro, the BC Utilities Commission and the BC government, the opportunity provided by renewable energy cannot be fully realised. This implies that in order to recognise UNDRIP and enable self-determination, policy pathways must be sought towards far-reaching "stretch and transform" structural reforms to the existing energy system that can incorporate relational and regional approaches, control sharing with Nations, and Nation's self-determination into institutional design to decarbonize the energy system. The development and adoption of policy that allows and encourages the implementation of any of the more ambitious FNPA models proposed by First Nations would represent a significant departure from the incumbent "fit and conform" strategies implemented by policy makers and represented by BC Hydro.

While there is an inherent challenge posed by developing and implementing a novel policy framework for the BC electricity system, significant groundwork has already been laid by a variety of actors within the energy and governance system providing opportunity for policy makers to transition towards "stretch and transform" approaches. First Nations have worked to develop relational approaches within their coalition, in sub-regions of BC, and with the institutions of the BC government and with the BC Utilities Commission. The BC Utilities Commission has concluded that preventing First Nations from participating in the clean energy economy undermines UNDRIP and DRIPA. The least ambitious FNPA model is already underway: First Nations continue to build capacity through collective organising and the development of business and policy resources (First Nations Major Projects Coalition, 2024b, 2024a, 2023, 2019) and plans for utilities ownership, and the BC and federal governments have already created the capacity building BC Indigenous Clean Energy Initiative to support the development of Indigenous clean energy projects. The BC Utilities Commission has already outlined possible regulatory changes in their extensive report about First Nation utility design, offering 35 recommendations to support the implementation of First Nations ownership of utilities both inside and outside the borders of First Nation reserves or treaty lands (BC Utilities Commission, 2020). The more ambitious proposed FNPA models are not mutually exclusive and could be implemented in parallel or on a case by case basis designed for specific needs depending on the context.

The current announcements of a $36 billion investment in electricity infrastructure in BC provides an important window of opportunity to develop and implement a policy framework that aligns the goals of DRIPA and the provincial climate targets. Such a framework could build on the groundwork completed by First Nations, governments, and the BC Utilities Commission to simultaneously address supply and create opportunities for First Nations to provide leadership in the renewable energy sector. Several of the proposed FNPAs outline ambitions for regional control over portions of the electricity system, which requires engagement with BC Hydro to extend, connect to, and retail through transmission and distribution lines. What remains unclear is whether and how BC Hydro might approach such a change.

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References

Balta-Ozkan, N., Watson, T., Mocca, E., 2015. Spatially uneven development and low carbon transitions: Insights from urban and regional planning. Energy Policy 85, 500–510. https://doi.org/10.1016/j.enpol.2015.05.013

Bargh, M., 2012. Rethinking and re-shaping indigenous economies: Māori geothermal energy enterprises. J. Enterprising Communities People Places Glob. Econ. 6, 271–283. https://doi.org/10.1108/17506201211258423

BC Hydro, 2023a. Independent Power Producer (IPP) Supply List - In Operation.

BC Hydro, 2023b. Net metering Rate application.

BC Hydro, 2023c. Net Metering Rate Design Workshop.

BC Hydro, 2023d. BC Hydro and Power Authority: 2021 Integrated Resource Plan - 2023 Update. BC Hydro.

BC Hydro, 2022. BC Hydro quick facts 2022.

BC Hydro, 2017. SOP: Current applications [WWW Document]. Home › Work Us › Sell Clean Energy › Closed Offers › Standing Offer Program › Curr. Appl. URL https://www.bchydro.com/work-with-us/selling-clean-energy/closed-offerings/standing-offer-program/current-applications.html (accessed 7.26.23).

BC Hydro, 2016a. Standing Offer Program Rules.

BC Hydro, 2016b. MICRO-SOP Program Rules.

BC Hydro, 2014. Standing Offer Program Review: Engagement Guide April 2014.

BC Hydro, 2010. CLEAN POWER CALL REQUEST FOR PROPOSALS Report on the RFP Process.

BC Hydro, 2008. Request for Proposals, Issue Date: June 11, 2008.

BC Hydro, 2006. REPORT ON THE F2006 CALL FOR TENDER PROCESS CONDUCTED BY BC HYDRO. BC Hydro.

BC Hydro, 2002. BC HYDRO GREEN & ALTERNATIVE ENERGY DIVISION: GREEN ENERGY STUDY FOR BRITISH COLUMBIA PHASE 2: MAINLAND: Report No. E44.

BC Utilities Commission, 2020. British Columbia Utilities Commission Indigenous Utilities Regulation Inquiry - Final Report, BCUC Indigenous Utilities Regulation Inquiry. British Columbia Utilities Commission, Vancouver, BC.

Berka, A., n.d. Interview schedule.

Berka, A., Dreyfus, M., 2021. Decentralisation and inclusivity in the energy sector: Preconditions, impacts and avenues for further research. Renew. Sustain. Energy Rev. 138, 110663. https://doi.org/10.1016/j.rser.2020.110663

Berka, A.L., Hoicka, C.E., Sperling, K., Turner, J., MacArthur, J.L., Hytten, K., 2022. Just Transitions in context: A universal framework for comparing transition pathways and policy mixes in terms of inclusivity. http://dx.doi.org/10.2139/ssrn.4071205

Berka, A.L., MacArthur, J.L., Gonnelli, C., 2020. Explaining inclusivity in energy transitions: Local and community energy in Aotearoa New Zealand. Environ. Innov. Soc. Transit. 34, 165–182. https://doi.org/10.1016/j.eist.2020.01.006

Bird, C., Barnes, J., 2014. Scaling up community activism: the role of intermediaries in collective approaches to community energy. People Place Policy Online 8, 208–221. https://doi.org/10.3351/ppp.0008.0003.0006

Brisbois, M.C., 2020. Shifting political power in an era of electricity decentralization: Rescaling, reorganization and battles for influence. Environ. Innov. Soc. Transit. 36, 49–69.

https://doi.org/10.1016/j.eist.2020.04.007
Brummer, V., 2018. Community energy – benefits and barriers: A comparative literature review of Community Energy in the UK, Germany and the USA, the benefits it provides for society and the barriers it faces. Renew. Sustain. Energy Rev. 94, 187–196. https://doi.org/10.1016/j.rser.2018.06.013
Bullock, R., Zurba, M., 2017. Framing Indigenous Partnerships in Energy and Allied Renewable Resource Sectors (Knowledge Synthesis Report for Social Sciences and Humanities Research Council of Canada). Centre for Forest Interdisciplinary Research, University of Winnipeg, Winnipeg, MB.
Cambou, D., Poelzer, G., 2022. Enhancing energy justice in the Arctic. An appraisal of the participation of Arctic indigenous peoples in the transition to renewable energy, in: Natcher, D.C., Koivurova, T. (Eds.), Renewable Economies in the Arctic, Routledge Research in Polar Regions. Routledge, University of Saskatchewan, pp. 184–202.
Clean Energy BC, 2023. About Us - Clean Energy BC [WWW Document]. Us - Clean Energy BC. URL https://cleanenergybc.org/about-us/ (accessed 4.6.23).
Clean Energy BC, n.d. First Nations Clean Energy BC Survey Responses from Clean Energy BC.
Comeau, L., 2022. Factors Affecting Social acceptance of renewable energy and transmission projects. Conservation Council of New Brunswick, St John, Fredericton.
Comeau, L., Gresh, E., Vaillancourt, L.-C., 2022. WHY DO WIND ENERGY PROJECTS FAIL? Conservation Council of New Brunswick, Fredericton, New Brunswick.
Cook, D., Fitzgerald, E., Sayers, J., Shaw, K., 2017. Survey Report: First Nations and Renewable Energy Development in British Columbia (Survey). B.C. First Nations Clean Energy Working Group, University of Victoria.
Danard, S., 2009. Bioenergy projects given green light to start producing clean, made-in-BC energy.pdf.
Davidson, K., 2019. Zapped: A Review of BC Hydro's Purchase of Power from Independent Power Producers conducted for the Minister of Energy, Mines and Petroleum Resources. BC Hydro.
De Bakker, M., Lagendijk, A., Wiering, M., 2020. Cooperatives, incumbency, or market hybridity: New alliances in the Dutch energy provision. Energy Res. Soc. Sci. 61, 101345. https://doi.org/10.1016/j.erss.2019.101345
Dion, J., Lee, C., Kanduth, A., Guertin, C., Beugin, D., 2022. The Big Switch: Powering Canada's net zero future. Canadian Climate Institute, Ottawa, Canada.
Dobrusin, B., 2021. A Just Transition for All? A Debate on the Limits and Potentials of a Just Transition in Canada, in: Räthzel, N., Stevis, D., Uzzell, D. (Eds.), The Palgrave Handbook of Environmental Labour Studies. Springer International Publishing, Cham, pp. 295–316. https://doi.org/10.1007/978-3-030-71909-8_13
Duhamel, K., 2022. The United Nations Declaration on the Rights of Indigenous Peoples The struggle to recognize Indigenous rights in Canadian law. Can. Mus. Hum. Rights. URL https://humanrights.ca/story/the-united-nations-declaration-on-the-rights-of-indigenous-peoples (accessed 4.13.24).
First Nations Major Projects Coalition, 2024a. Government Loan Guarantees for First Nation Equity Participation: A Primer. First Nations Major Projects Coalition.
First Nations Major Projects Coalition, 2024b. Regulated Electricity in Canada: What do First Nations need to know? First Nations Major Projects Coalition.

First Nations Major Projects Coalition, 2023. What Does BC Hydro's Call for Power Mean for First Nations in BC? First Nations Major Projects Coalition.
First Nations Major Projects Coalition, 2019. Ownership Model Handbook: First Nations Project Ownership and Access to Capital for Investment in Major Infrastructure Projects: FIRST NATIONS MAJOR PROJECTS COALITION.
First Nations Power Authority, n.d. About FNPA - First Nations Power Authority [WWW Document]. URL https://fnpa.ca/about-fnpa/#ourhistory (accessed 12.6.23).
Fitzgerald, E., 2018. Powering Self-Determination: Indigenous Renewable Energy Developments in British Columbia. University of Victoria, Victoria, BC.
Fraser, S., 2019. Declaration on the Rights of Indigenous Peoples Act, SBC 2019.
Government of Canada, 2023. Tribal Councils Location - Open Government Portal [WWW Document]. URL https://open.canada.ca/data/en/dataset/73dbaaca-24b6-4c04-bd52-e7b7ab0c3d8f (accessed 6.19.24).
Greenberg, E., McKendry, C., 2021. Contested power: Energy democracy and the repoliticization of electricity in the western U.S. Energy Res. Soc. Sci. 73, 101942. https://doi.org/10.1016/j.erss.2021.101942
Hess, D.J., 2018. Energy democracy and social movements: A multi-coalition perspective on the politics of sustainability transitions. Energy Res. Soc. Sci. 40, 177–189. https://doi.org/10.1016/j.erss.2018.01.003
Hess, D.J., 2016. The politics of niche-regime conflicts: Distributed solar energy in the United States. Environ. Innov. Soc. Transit. 19, 42–50. https://doi.org/10.1016/j.eist.2015.09.002
Hoberg, G., Rowlands, I.H., 2012. Green Energy Politics in Canada: Comparing Electricity Policies in BC and Ontario, in: APSA 2012 Annual Meeting Paper.
Hoicka, C.E., Conroy, J., Berka, A.L., 2021a. Reconfiguring actors and infrastructure in city renewable energy transitions: A regional perspective. Energy Policy 158, 16. https://doi.org/10.1016/j.enpol.2021.112544
Hoicka, C.E., Conroy, J., Berka, A.L., 2021b. Reconfiguring actors and infrastructure in city renewable energy transitions: A regional perspective. Energy Policy 158, 112544. https://doi.org/10.1016/j.enpol.2021.112544
Hoicka, C.E., Savic, K., Campney, A., 2021c. Reconciliation through renewable energy? A survey of Indigenous communities, involvement, and peoples in Canada. Energy Res. Soc. Sci. 74, 101897. https://doi.org/10.1016/j.erss.2020.101897
Hoicka, C.E., Savic, K., Campney, A., 2021d. Reconciliation through renewable energy? A survey of Indigenous communities, involvement, and peoples in Canada. Energy Res. Soc. Sci. 74, 101897. https://doi.org/10.1016/j.erss.2020.101897
Intergovernmental Affairs Government of Canada, 2021. The constitutional distribution of legislative powers [WWW Document]. URL https://www.canada.ca/en/intergovernmental-affairs/services/federation/distribution-legislative-powers.html (accessed 6.19.24).
Judson, E., Fitch-Roy, O., Pownall, T., Bray, R., Poulter, H., Soutar, I., Lowes, R., Connor, P.M., Britton, J., Woodman, B., Mitchell, C., 2020. The centre cannot (always) hold: Examining pathways towards energy system de-centralisation. Renew. Sustain. Energy Rev. 118, 109499. https://doi.org/10.1016/j.rser.2019.109499
Keppel Gate Consulting, 2021. Creating Consistent, Predictable Opportunities for First Nations in BC's Clean Energy Economy. Follow-up Discussion Paper from the BC First Nations Clean Energy Summit (Nov 12-13, 2020). New Relationship Trust.

Kooij, H.-J., Oteman, M., Veenman, S., Sperling, K., Magnusson, D., Palm, J., Hvelplund, F., 2018. Between grassroots and treetops: Community power and institutional dependence in the renewable energy sector in Denmark, Sweden and the Netherlands. Energy Res. Soc. Sci. 37, 52–64. https://doi.org/10.1016/j.erss.2017.09.019

Krupa, J., 2012. Identifying barriers to aboriginal renewable energy deployment in Canada. Energy Policy 42, 710–714. https://doi.org/10.1016/j.enpol.2011.12.051

Lacey-Barnacle, M., Bird, C.M., 2018. Intermediating energy justice? The role of intermediaries in the civic energy sector in a time of austerity. Appl. Energy 226, 71–81. https://doi.org/10.1016/j.apenergy.2018.05.088

Local Energy Scotland, n.d. Community-led local energy plan toolkit. Local Energy Scotl. URL https://localenergy.scot/resources-overview/community-led-local-energy-plan-toolkit/ (accessed 6.21.24).

Lonechild, G., 2023. Why establish a power authority?

Lovekin, D., 2023. Future Opportunities in clean energy.

Lovekin, D., Whitestone, M., Kasteel, C., 2021. Finding a Path Forward First Nation leadership in BC renewable energy future. Pembina Institute, Calgary, AB.

Lusztig, C., 2023. Indigenous Utilities Workshop.

MacArthur, J.L., Hoicka, C.E., Castleden, H., Das, R., Lieu, J., 2020. Canada's Green New Deal: Forging the socio-political foundations of climate resilient infrastructure? Energy Res. Soc. Sci. 65, 101442. https://doi.org/10.1016/j.erss.2020.101442

Mang-Benza, C., Baxter, J., 2021. Not paid to dance at the powwow: Power relations, community benefits, and wind energy in M'Chigeeng First Nation, Ontario, Canada. Energy Res. Soc. Sci. 82, 9. https://doi.org/10.1016/j.erss.2021.102301

Mignon, I., Rüdinger, A., 2016. The impact of systemic factors on the deployment of cooperative projects within renewable electricity production – An international comparison. Renew. Sustain. Energy Rev. 65, 478–488. https://doi.org/10.1016/j.rser.2016.07.026

Ministry of Energy Mines and Low Carbon Innovation, 2024. Premier announces new actions to build electricity system, create jobs [WWW Document]. URL https://news.gov.bc.ca/releases/2024EMLI0002-000049 (accessed 1.28.24).

Ministry of Energy, Mines and Low Carbon Innovation, 2023. Clean power to electrify B.C.'s future [WWW Document]. BC Gov News. URL https://news.gov.bc.ca/releases/2023EMLI0036-000941 (accessed 6.19.23).

Ministry of Energy, Mines and Petroleum Resources, 2007. The BC Energy Plan A Vision for Clean Energy Leadership.

Naumann, M., Rudolph, D., 2020. Conceptualizing rural energy transitions: Energizing rural studies, ruralizing energy research. J. Rural Stud. 73, 97–104. https://doi.org/10.1016/j.jrurstud.2019.12.011

New Relationship Trust, 2023. Our Story - New Relationship Trust [WWW Document]. Our Story - New Relatsh. Trust. URL https://newrelationshiptrust.ca/about/about-us/our-story/ (accessed 5.6.23).

Nichols, J., Morales, S., 2021. Finding Reconciliation in Dark Territory: Coastal Gaslink, Coldwater, and the Possible Futures of DRIPA. UBC Law Rev. 53, 1185–1236.

Office of the Premier, BC Hydro, Ministry of Energy and Mines, 2003. SUCCESSFUL PROJECTS UNDER BC HYDRO'S 2002/03 GREEN POWER GENERATION CALL.

Oteman, M., Wiering, M., Helderman, J.-K., 2014. The institutional space of community initiatives for renewable energy: a comparative case study of the Netherlands, Germany

and Denmark. Energy Sustain. Soc. 4, 11. https://doi.org/10.1186/2192-0567-4-11
Pembina Institute, n.d. Renewables in Remote Communities [WWW Document]. Renew. Remote Communities - Pembina Inst. URL https://www.pembina.org/rirc#:~:text=The%20Pembina%20Institute's%20Renewables%20in,of%20energy%20sovereignty%20and%20independence. (accessed 5.6.23).
Phatshwane, K., 2024. The art of talks and conversations in Indigenous research: decolonising interview methods, in: Cox, L., Szolucha, A., Arribas Lozano, A., Chattopadhyay, S. (Eds.), Handbook of Research Methods and Applications for Social Movements. Edward Elgar Publishing, pp. 214–229. https://doi.org/10.4337/9781803922027.00023
Poupeau, F.-M., 2020. Everything must change in order to stay as it is. The impossible decentralization of the electricity sector in France. Renew. Sustain. Energy Rev. 120, 109597. https://doi.org/10.1016/j.rser.2019.109597
Rezaei, M., Dowlatabadi, H., 2016. Off-grid: community energy and the pursuit of self-sufficiency in British Columbia's remote and First Nations communities. Local Environ. 21, 789–807. https://doi.org/10.1080/13549839.2015.1031730
Roberts, R., C. Brent, A., T. Hinkley, J., Shedlock, K., 2023. Energy innovations in iwi communities of Aotearoa New Zealand, in: Díaz López, F.J., Mazzanti, M., Zoboli, R. (Eds.), Handbook on Innovation, Society and the Environment. Edward Elgar Publishing, pp. 196–210. https://doi.org/10.4337/9781802200065.00022
SaskPower, n.d. First Nations Power Authority [WWW Document]. URL https://www.saskpower.com/about-us/Our-Company/First-Nations-Power-Authority (accessed 12.6.23).
Savic, K., Hoicka, C.E., 2023. Indigenous legal forms and governance structures in renewable energy: Assessing the role and perspectives of First Nations economic development corporations. Energy Res. Soc. Sci. 101, 103121. https://doi.org/10.1016/j.erss.2023.103121
Savic, K., Hoicka, C.E., 2021. Reconciliation and self-determination through renewable energy? The perspective of economic development corporations of grid-connected First Nations communities. Clean Econ. Work. Pap. Ser.
Scharnigg, R., Sareen, S., 2023. Accountability implications for intermediaries in upscaling: Energy community rollouts in Portugal. Technol. Forecast. Soc. Change 197, 122911. https://doi.org/10.1016/j.techfore.2023.122911
Schoor, T.V.D., Lente, H.V., Scholtens, B., Peine, A., 2016. Challenging obduracy: How local communities transform the energy system. Energy Res. Soc. Sci. 13, 94–105. https://doi.org/10.1016/j.erss.2015.12.009
Scott, D.N., 2020. Extraction Contracting: The Struggle for Control of Indigenous Lands. South Atl. Q. 119, 269–299. https://doi.org/10.1215/00382876-8177759
Smith, A., Raven, R., 2012. What is protective space? Reconsidering niches in transitions to sustainability. Res. Policy 41, 1025–1036. https://doi.org/10.1016/j.respol.2011.12.012
Smith, A.A., Scott, D.N., 2018. 'Energy Without Injustice'? Indigenous Ownership of Renewable Energy Generation.
Stefanelli, R.D., Walker, C., Kornelsen, D., Lewis, D., Martin, D.H., Masuda, J., Richmond, C.A.M., Root, E., Tait Neufeld, H., Castleden, H., 2019. Renewable energy and energy autonomy: how Indigenous peoples in Canada are shaping an energy future. Environ. Rev. 27, 95–105. https://doi.org/10.1139/er-2018-0024
Stokes, L.C., 2020. Short circuiting policy : interest groups and the battle over clean energy and

climate policy in the American states., Studies in postwar American political development. Oxford University Press.
Stokes, L.C., 2013. The politics of renewable energy policies: The case of feed-in tariffs in Ontario, Canada. Energy Policy 56, 490–500. https://doi.org/10.1016/j.enpol.2013.01.009
The First Nations Information Governance Centre, n.d. The First Nations Principles of OCAP® [WWW Document]. First Nations Inf. Gov. Cent. URL https://fnigc.ca/ocap-training/ (accessed 6.21.24).
Turnheim, B., Kivimaa, P., Berkhout, F., 2018. Beyond Experiments: Innovation in Climate Governance, in: Turnheim, B., Kivimaa, P., Berkhout, F. (Eds.), Innovating Climate Governance. Cambridge University Press, pp. 1–26. https://doi.org/10.1017/9781108277679.002
Vernay, A.-L., Sebi, C., 2020. Energy communities and their ecosystems: A comparison of France and the Netherlands. Technol. Forecast. Soc. Change 158, 120123. https://doi.org/10.1016/j.techfore.2020.120123
Warbroek, B., Hoppe, T., Coenen, F., Bressers, H., 2018. The Role of Intermediaries in Supporting Local Low-Carbon Energy Initiatives. Sustainability 10, 2450. https://doi.org/10.3390/su10072450
Wataynikaneyap Power, n.d. Home - Watay Power [WWW Document]. Line Brings Light Powering Our Future. URL https://www.wataypower.ca/ (accessed 5.1.24).