Indigenous Participation in Clean Energy Activities in Canada: Passive Participation or 'Community Energy'?

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Acknowledgments

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Foreword

My mother began educating herself about climate change when I was a teenager and brought me along on that journey. This, coupled with our Mohawk ancestry, have shaped my career path and inspired me to pursue a joint Juris Doctor and Master's in Environmental studies. Despite growing up in a non-Indigenous community, my many childhood trips to my family's reserve, Tyendinaga, Ontario, and the time spent in the Mississaugas of Scugog Island First Nation with my grandparents and other relatives instilled in me a profound sense of respect for Mother Earth. The way land was kept and how animals were respected and appreciated in these communities have been very influential on my worldviews. I found value in the culture then, and my appreciation for it continues to grow in my adult life as I learn more.

When I began law school, I was considering practicing Aboriginal law and I was particularly interested in its overlap with Environmental Law. After completing my first year of study in Osgoode Hall Law School's Juris Doctor (JD) program, I reflected on the fact that the vast majority of any reading I had done for leisure during the academic year was about climate change. It is clear that climate change is the most significant and challenging issue of our time. That said, I decided that I wanted to practice environmental and aboriginal law and in particular, that I wanted to contribute to climate change mitigation through legal avenues. As I had not studied environmental science or environmental studies, I decided to enroll in the joint JD/MES program in order to ensure I would be a competent advocate in this field.

I pursued employment as Dr. Hoicka's Graduate Assistant in my first year in the MES program as I understood that climate change mitigation was largely about energy and this was a central focus of her research. Through working with Dr. Hoicka and as a result of the MES courses I took, my understanding of the connection between climate change mitigation and energy expanded to include the importance of concepts such as the low-carbon energy transition, energy efficiency and energy conservation. I also learned about community energy planning. Moreover, I began learning about climate justice and the ways in which the impacts of climate change will not be felt equally especially in relation to Indigenous communities in Canada – many of which have done little to contribute to the problem but bear the burden of the disproportionate impacts of our changing climate (IPCC, 2018). As such, the fourth component of my Plan of Study, "Climate Change Mitigation and Adaptation in an Indigenous Canadian Context", involved a learning objective

geared toward understanding "what environmental and climate justice in an Indigenous context entails" and how we can address climate change equitably.

When it came time to prepare for my Major Research Paper, I knew I wanted to study a topic related to Indigenous peoples in Canada and clean energy, which would relate to the second component of my Plan of Study, which is focused on "Mitigation and Adaptation Strategies". Dr. Hoicka suggested I look into the forms of ownership and control of Indigenous energy projects in Canada. As I began learning more about this project, I began to see how prominent and important the trend toward "bottom up climate action" (Hoicka and MacArthur, 2018, pp. 162) is to climate change mitigation, especially in Indigenous communities and those that are off-grid/remote. I also began to understand how community energy could be particularly useful to Indigenous communities in terms of capacity building and the development of own-source revenue (Scott and Smith, forthcoming, 2019) (which can lead to a transition away from federal government funding dependency which can assist in the shift toward self-governance), in addition to climate change mitigation. As a result of the knowledge that arose in my literature review (and in particular, from a study by Stefanelli et al., 2018), although not originally planned, my research turned toward an exploration of how Indigenous participation in clean energy projects in Canada (and in particular, community energy) may be linked with reconciliation, which aids in addressing my aforementioned learning objective regarding how we can mitigate climate change equitably.

Abstract

The trend toward bottom-up energy action through community clean energy projects has important implications for climate change mitigation in both non-Indigenous and Indigenous communities. As a result of a literature review, this paper defines "community energy" as activities – including initiatives with a variety of functions such as generation, retail, distribution and demand – that involve a high degree of community participation, ownership and control, where collective benefits are shared throughout the community (Hoicka and MacArthur, 2018, pp. 6). Many clean energy projects involving Indigenous participation exist in Canada with various forms of ownership and structures (Indigenous Clean Energy Social Enterprise, 2019; Hoicka and MacArthur, 2018) and it is likely, that those projects that meet the threshold of CE will make the best vehicles for reconciliation because the principles of CE and reconciliation align.

This paper uses two secondary datasets by Indigenous Clean Energy Social Enterprise (2019) and Hoicka and MacArthur (2018) (the latter has been updated in the present study) to explore the Indigenous models of ownership and control of clean energy projects that exist in Canada and their potential link to reconciliation. This is believed to be a complete dataset of >1MW clean energy projects in Canada with Indigenous participation. It also parallels the models present in Indigenous communities with non-Indigenous communities. Additionally, the paper explores the aforementioned two datasets on clean energy projects involving Indigenous participation and a third secondary dataset by Wyse and Hoicka (2019), which is focused on local energy plans, along with some primary data to analyze the number and location of both projects and plans, the Indigenous groups (First Nations, Inuit and Métis) involved as well as their corresponding community types (off-grid/remote vs. grid-connected).

A total of 198 active clean energy projects in Canada with Indigenous participation and 167 Local Energy Plans for Indigenous communities were identified. The majority of the Indigenous communities involved with both projects and plans were First Nations, grid-connected communities, with few Inuit and mixed Indigenous communities, and 0 Métis communities. For the projects, forms of ownership and control and corresponding structures are difficult to determine without significant additional research and analysis. The majority of the projects explored in this study are partnerships between Indigenous communities and non-Indigenous corporations, and there is a small number (6) that are fully Indigenous government-owned. Additionally, 1 energy

co-operative was identified. The structures of these partnerships are largely unknown as this information was only available for 25 out of 198 projects in the datasets, but it is clear that structures can vary from majority Indigenous-ownership or 50/50 joint ventures, to minority Indigenous-ownership, for example. The inclusion or exclusion of all major Indigenous groups in Canada along with whether clean energy projects involving Indigenous communities reaches the off-grid, diesel-dependent communities that need it most also has important implications for reconciliation.

Keywords:

Indigenous, Climate Change, Climate Change Mitigation, Community Energy, Clean Energy

Introduction

According to the most recent Intergovernmental Panel on Climate Change (IPCC) (2018) report, it is estimated that "Global warming is *likely* to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate" (pp. 6). The IPCC also estimated that human activities have caused **"**approximately 1.0°C of global warming above pre-industrial levels" (2018, pp. 6). Although adverse impacts on "health, livelihoods, food security, water supply, human security, and economic growth" are expected to increase with even 1.5°C of warming, matters become considerably more dire with 2°C of warming (IPCC, 2018, pp. 11). Moreover, the consequences of climate change will not be felt equally; there will be disparate impacts among "disadvantaged and vulnerable populations, [including] Indigenous peoples, and local communities [which are] dependent on agricultural or coastal livelihoods" (IPCC, 2018, pp. 11).

Given the likely anthropogenic nature of climate change and the imminent threat of 1.5°C warming in the near future, it is clear that mitigation strategies are needed on a global scale – and indeed, Canada has an important role to play. Although Canada was only ranked ninth out of the "top ten emitting regions" worldwide in 2013 and its emissions comprised a seemingly mere 1.6% of global greenhouse gas (GHG) emissions (Environment and Climate Change Canada, 2017), it has extremely high per capita GHG emission rates (MacArthur, 2017; Wyse and Hoicka, 2019). Boothe and Boudreault (2016) note that:

> According to the latest statistics, Canada emits about 1.6 percent of the world's GHG emissions. Despite this relatively low share, Canada is among the top 10 global emitters on an absolute basis…By way of comparison, Canada's population makes up about 0.5 percent of the world total so that our emissions' share is about 3 times our population share. (pp. 4)

Moreover, the Organization for Economic Cooperation and Development (OECD) (2017) notes that Canada has the third highest per capita GHG emissions globally.

Additionally, as will be discussed further in the literature review portion of this paper, Canada has a high Indigenous population and over 600 Indigenous communities. These communities further elucidate the need for Canada to reduce its GHG emissions in that they face various unique challenges in relation to our changing climate such as:

> […] addressing the high and often fluctuating costs of energy, and promoting sustainable development that balances consideration of environmental, social and economic well-being. Indigenous and northern communities in Canada are particularly susceptible to these challenges due to factors such as remoteness and inaccessibility, cold climate, aging and inefficient infrastructure, and reliance of diesel for electricity generation and space heating. (Indigenous and Northern Affairs, 2016).

Climate change mitigation strategies can be embedded within and given life through environmental law and policy, and in Canada this could occur at both the provincial and federal levels depending on jurisdiction[1]. However, Canada has been criticized for lacking "comprehensive greenhouse gas regimes at the federal level", and some scholars have found that the breadth of Canada's climate change action has occurred at subnational levels (Wright, 2016, pp. 10478). Interestingly, there is an increasing trend toward "bottom up climate action" which has manifested through "local 'community energy' systems in diverse resource and political contexts" (Hoicka and MacArthur, 2018, pp. 162). In Canada specifically, an array of community

[1] In Canada, environmental law and policy are created by both our federal and provincial governments. This is because Canada has a federal constitution whereby "sovereignty is divided between two orders of government, with each level of government being restricted to the areas of jurisdiction assigned to it" (Monahan and Shaw, 2013, pp. 10). Sections 91 and 92 of the *Constitution Act, 1867*, ascribe powers over specific subject matter to either the federal Parliament or provincial legislatures. However, as neither section includes "environment" as a subject matter, "the "environment" is a collective term referring to numerous issues, including some of the various subject matters the Constitution *does* assign to either Parliament or the provincial legislatures" (Becklumb, 2013). Becklumb (2013) notes the following sections as the basis for most federal jurisdiction over environmental issues: public property (section 91(1A)), sea coast and inland fisheries (section 91(12)), navigation and shipping (Section 91(10)), criminal law (section 91(27)), and Indians and lands reserved for Indians (section 91(24)). Additionally, further jurisdiction has arisen from case law, such as marine pollution and interprovincial water pollution, and section 132 of the *Constitution Act, 1867* "gives Parliament and the federal government the powers necessary for meeting Canadian obligations towards foreign countries arising under treaties between the British Empire and foreign countries" which also encompasses some aspects of climate change given its international nature (Becklumb, 2013). The provincial governments are also given a broad list of powers that encompass elements of climate change, including: property and civil rights (section 92(13)), management of provincial Crown lands (section 92(5)), municipal institutions in the province (section 92(8)), and all matters of a purely local or private nature in the province (section 92(16)).

energy activities (e.g. local energy planning, various types of community energy projects involving clean energy) exists (Hoicka and MacArthur, 2018; Wyse and Hoicka, 2019; Lumos Clean Energy Advisors, 2017) demonstrating sub-state and even sub-provincial efforts toward climate change mitigation. These activities exist in both non-Indigenous and Indigenous communities within Canada (Hoicka and MacArthur, 2018; Wyse and Hoicka, 2019). The latter is the focus of this paper.

There are varying definitions of what constitutes 'community energy' (hereinafter, "CE"), and as argued by Walker and Devine-Wright (2008), an "ideal" CE project is "driven and carried through by a group of local people and which brings collective benefits to the local community (however that might be defined)—a project that is both by and for local people" (as cited by Wyse and Hoicka, 2019, pp. 5). Inherent in this definition is concern over the participation in and control over clean energy projects.

Stefanelli et al. (2018) note that part 2 of the 92nd call to action of the Truth and Reconciliation Commission (TRC) emphasizes ensuring "Aboriginal peoples have equitable access to jobs, training, and education opportunities in the corporate sector, and that Aboriginal communities gain long-term sustainable benefits from economic development projects" (2015b, pp. 10). That said, it may be tempting to conclude as some have (McDiarmid, 2017), that Indigenous participation in clean energy projects in general are a pathway toward reconciliation[2] (Lumos Clean Energy Advisors, 2017) as they can build capacity in communities and may strengthen local economies (McDiarmid, 2017).

On the other side of this debate, however, scholars are critical of the notion that Indigenous participation in renewable energy is inherently good (Stefanelli et al., 2018). They cite examples of CE projects being exploitative of communities and caution us to assess projects on a case-by-case basis (Stefanelli et al., 2018).

While research focusing on non-Indigenous CE activities in Canada exists, there is a gap in the literature with respect to the involvement of Indigenous communities in clean energy

[2] The TRC views "reconciliation" as being "about establishing and maintaining a mutually respectful relationship between Aboriginal and non-Aboriginal peoples in this country." Acknowledgment and awareness of the past and the harms that have resulted from various colonial projects as well as atonement and appropriate behavioural changes are required. (TRC, 2015c, pp. 113)

activities within Canada. Recent research by Wyse and Hoicka (2019) explores Indigenous and non-Indigenous LEPs in Canada and reports the quantity and location of said plans. Research by Hoicka and MacArthur (2018) focuses on non-Indigenous communities and identifies that Indigenous involvement in clean energy activities in Canada accounts for 5% of Canada's clean energy activities. Lumos Clean Energy Advisors (hereinafter "Lumos Energy"), a consulting firm that focuses on advising Indigenous communities within Canada, has published data regarding 152 medium-large scale projects Indigenous clean energy projects that are a minimum of one megawatt in size that may or may not be CE. However, there is yet to be any research that focuses specifically on the forms of ownership or control of Indigenous energy activities in Canada, nor is there a consolidated list of Indigenous clean energy activities in Canada in addition to an exploration of the Indigenous groups (e.g. First Nations, Métis, and Inuit) and the types of Indigenous communities (off-grid/remote and grid-connected communities) involved. Additionally, there has not been an exploration of whether the Indigenous clean energy activities in Canada constitute CE (in the manner it was just described), and whether there is a link between CE and reconciliation.

This paper adopts and expands upon the former definition and describes CE as activities – including initiatives with a variety of functions such as generation, retail, distribution and demand – that involve a high degree of community participation, ownership and control, where collective benefits are shared throughout the community (Hoicka and MacArthur, 2018, pp. 6). This paper will explore Indigenous participation in clean energy activities in Canada from the perspective that projects that are true CE – that is, projects that are "by and for local people", which involve high degrees of participation in and control over these projects (Wyse and Hoicka, 2019) – are likely to contribute to reconciliation, and even then projects must be assessed on a case-by-case basis. This paper seeks to answer the question "What are the Indigenous models of ownership and control of clean energy projects that exist in Canada as a means of exploring whether Indigenous participation in clean energy activities amounts to CE and contributes to reconciliation?" The paper will parallel the models present in Indigenous communities in Canada with non-Indigenous communities in Canada. Some of the Indigenous participation seen in clean energy projects may be passive participation (e.g. projects where Indigenous communities may receive economic benefits, but participate minimally and have minimal or no control over the project), while others may involve such high degrees of participation in and control over a given project that it would be classified as CE, and others may be somewhere in between. While models of ownership and their

corresponding structures cannot provide a definitive answer about whether a given project amounts to CE, it can provide clues to what type of involvement has taken place in a particular project. Ultimately, many clean energy projects involving Indigenous participation exist in Canada with various forms of ownership and structures (Indigenous Clean Energy Social Enterprise, 2019; Hoicka and MacArthur, 2018) that are difficult to determine without significant additional research and analysis. It is likely, however, that those projects that meet the threshold of CE will make the best vehicles for reconciliation because the principles of CE and reconciliation align.

Finally, the paper will also fill the aforementioned gaps by exploring and analyzing the number and location of projects and plans, the Indigenous groups involved as well as their corresponding community types, and the energy sources involved with Indigenous clean energy projects (including a comparison with their non-Indigenous counterparts).

Section One: Renewable Energy Projects and Community Energy

This section will explore the concept of CE, forms and functions of renewable energy projects, along with local energy planning and its relationship to CE as they appear in the literature.

1.1 Defining community energy

As noted by Seyfang et al. (2013), "community energy" is somewhat of an elusive concept in that various actors may ascribe differing degrees of participation to it, thus the term lacks a standard definition (as cited by Wyse and Hoicka, 2019, pp. 5). MacArthur (2016), defines CE as "collective action to generate or produce, distribute and manage the energy resources of a community" (pp. 15). However, Walker and Devine-Wright's (2008) raise the standard of what constitutes CE by arguing that an "ideal" CE project is "driven and carried through by a group of local people and which brings collective benefits to the local community (however that might be defined)—a project that is both by and for local people" (as cited by Wyse and Hoicka, 2019, pp. 5). This type of "bottom up climate action", which has manifested through "local 'community energy' systems in diverse resource and political contexts" (Hoicka and MacArthur, 2018, pp. 162), is in contrast to the majority of community energy planning which "is based on top-down decision making approaches which lack effective community engagement to design culturally appropriate, community-centeric energy plans…[and] fail to acknowledge local socio-cultural

drivers as indicators of energy planning" (Rakshit, Shahi, Smith and Cornwell, 2017, pp. 17). The concept of CE can be further elucidated when compared with that of "community power", which as explained by Scott and Smith (forthcoming, 2019), is an umbrella-term that refers to the "sharing of collective benefits" which stem from "enhanced levels of local input and control" of clean energy projects. They go on to explain that those projects that involve the greatest level of participation and control are deemed "community energy."

Some defining characteristics of CE are "community participation, ownership and control" (Wyse and Hoicka, 2019, pp. 6). Scott and Smith (forthcoming, 2019) would extend the analysis to consider whether the process of both planning and implementation of local energy projects are "open and participatory" or "closed and institutional". They also call for an analysis of how and where the project is managed once it is completed – e.g. is it ""local and collective" or distantly and privately run?"

1.2 Forms and Functions

Functions of CE refers to the type of activity, while forms refer to models of ownership (Hoicka and MacArthur, 2018, pp. 163). Functions can include energy supply (e.g. generation); demand side management programs that aim to facilitate energy efficiency or conservation; distribution activities (e.g. microgrids, traditional distribution or district energy); and retail activities such as the bulk purchasing of energy for resale or energy trading (Hoicka and MacArthur, 2018, pp. 165).

Hoicka and MacArthur (2018) note that forms of ownership can include municipal government ownership, co-operatives, community trusts, community associations, charities, Indigenous trusts and co-operatives, and partnerships and joint ventures (pp. 166). As will be discussed subsequently, this paper expands on how municipal ownership has an Indigenous community counterpart[3] – that being, Indigenous local government ownership. Further exploration of partnerships and joint ventures, trusts and co-operatives are warranted.

[3] While this paper draws comparisons between Municipal ownership of clean energy projects in non-Indigenous communities and Indigenous local governance ownership of clean energy projects, it should be noted that there is a fundamental difference between the two. Canada has a federal constitution that divided sovereignty between only the federal and provincial governments (Monahan and Shaw, 2013). Provincial governments were ascribed legislative power over municipalities in section 92(8) of the *Constitution Act, 1867*, and so municipalities

With respect to partnerships, it is important to note that structures can vary. A local community or community organization can own any amount – it can be low (e.g. 5% while a corporate entity owns 95%), 50%, or the majority could be locally owned. Joint ventures are partnerships between entities where all economic benefits, risks and costs are shared equally (BluEarth Renewables Inc., n.d.). *Chinodin Chigumi Nodin Kitagan* (Bow Lake Wind Farm) is an example of an Indigenous joint venture, in that the Indigenous community – Batchewana First Nation – is a full equity partner with BluEarth Renewables Inc., which together formed *Nodin Kitagan Limited Partnership* (Scott and Smith, forthcoming, 2019).

Community trusts are bodies where revenue, dividends and royalties from a clean energy project can be stored. Community trusts can be applicable in both non-Indigenous and Indigenous communities, and their structure can vary. Henderson (2013), suggests that in an Indigenous context, community clean energy trusts would be tasked with investing "earnings wisely for the benefit of the broader community" (Henderson, 2013, pp. 150). Henderson goes on to explain that the trust would be 100% owned by the Indigenous community, and that it would "be governed by a board of trustees made up of a mix of elected members, elders and expert external advisors, who are appointed by the band council or a community governance entity", who would be responsible for distributing funds "to designated purposes as agreed to by community members" (Henderson, 2013, pp. 150).

While Hoicka and MacArthur (2018) explore trusts, Indigenous trusts and co-operatives, and partnerships/joint ventures as three different forms of ownership, Scott and Smith's research (forthcoming, 2019) involves a case study of Bow Lake Wind Farm, which is a partnership/joint venture between an Indigenous community and a non-Indigenous corporate entity that also involves the establishment of "a trust to hold the revenues from the Bow Lake Project collectively." Whether or not such arrangements exist in non-Indigenous communities as well as Indigenous communities and how commonplace they may be is beyond the scope of this paper, but it is important to note that such arrangements can exist.

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merely draw their authority from provincial enabling statutes. Indigenous governments, however, have an "inherent right to self-government" which is rooted in their "original sovereignty which the Aboriginal nations exercised over their own peoples and territories prior to being colonized and integrated into the Canadian state" (McNeil, 1996, pp. 63-64).

Co-operatives, as stated by McMurtry (2018), is the most diverse model in Canada. In general, they have participatory decision-making processes built-in to their structure, and they involve a collective sharing of benefits. However, there are eight different types of renewable energy co-operatives that have been identified in Canada:

1) Generation (Renewable Energy) Co-ops: generating electricity, heat and/or fuels from renewable energy sources;
2) Renewable Fuel Co-ops: mobility and/or heating fuels generation and supply, usually from biofuels;
3) Distribution or Utility Co-ops: distributing electricity generated from renewable energy and possibly other sources;
4) District Heating Co-ops: heat generation and distribution from renewable energy sources;
5) Service Co-ops: service provision related to renewable energy and conservation;
6) Education Co-ops: providing education in regard to renewable energy;
7) Financing and Investment Co-ops: focusing on financing renewable energy co-op projects;
8) Project Development Co-ops: Instead of owning shares, some co-ops help renew- able energy projects with promotion and community outreach activities. (McMurtry, 2018, pp. 976-977)

1.3 Local Energy Planning

Similar to CE, various definitions of local energy planning exist in the literature. As noted by Wyse and Hoicka (2019):

> In Canada, the creation of local energy plans has been an emerging trend in recent years, where such plans are extolled as precursors to a transition from large, centralized energy systems to a more distributed network of energy generation (St. Denis and Parker, 2009). According to QUEST (2015)—a Canadian non-profit organization in the field of community energy planning—LEPs are tools that help to "define community priorities around energy with a view to improving efficiency, cutting emissions, and driving

economic development." They state that developing such a plan allows communities to document local priorities for how energy should be generated, delivered and used (QUEST, 2015). (pp. 13)

Finally, it should be noted that "while local energy planning is commonly referred to alongside the term "community energy" by policymakers, the relationship between local energy planning and community energy remains unclear" (Wyse and Hoicka, 2019, pp. 12). It can, however, be said that the majority of community energy planning "is based on top-down decision-making approaches which lack effective community engagement to design culturally appropriate, community-centeric energy plans…[and] fail to acknowledge local socio-cultural drivers as indicators of energy planning" (Rakshit, Shahi, Smith and Cornwell, 2017, pp. 17). Canadian local energy plans (hereinafter, "LEPs") are discussed in greater detail subsequently.

1.3 Definition adopted in this paper

For the purposes of this paper, CE is defined as energy activities — including initiatives with a variety of functions such as generation, retail, distribution and demand – that involves a high degree of community participation, ownership and control, where collective benefits are shared throughout the community (Hoicka and MacArthur, 2018, pp. 6). LEPs are an additional clean energy initiative that this paper is concerned with, but as per the literature, it is not under the umbrella of CE, nor is it considered one of its functions, although research has considered whether LEPs can contribute to CE (Wyse and Hoicka, 2019). Likewise, while LEPs can have many different names (some of which are tied to their funding sources), the term "LEPs" is adopted in this paper.

Section Two: Community energy landscape in Canada

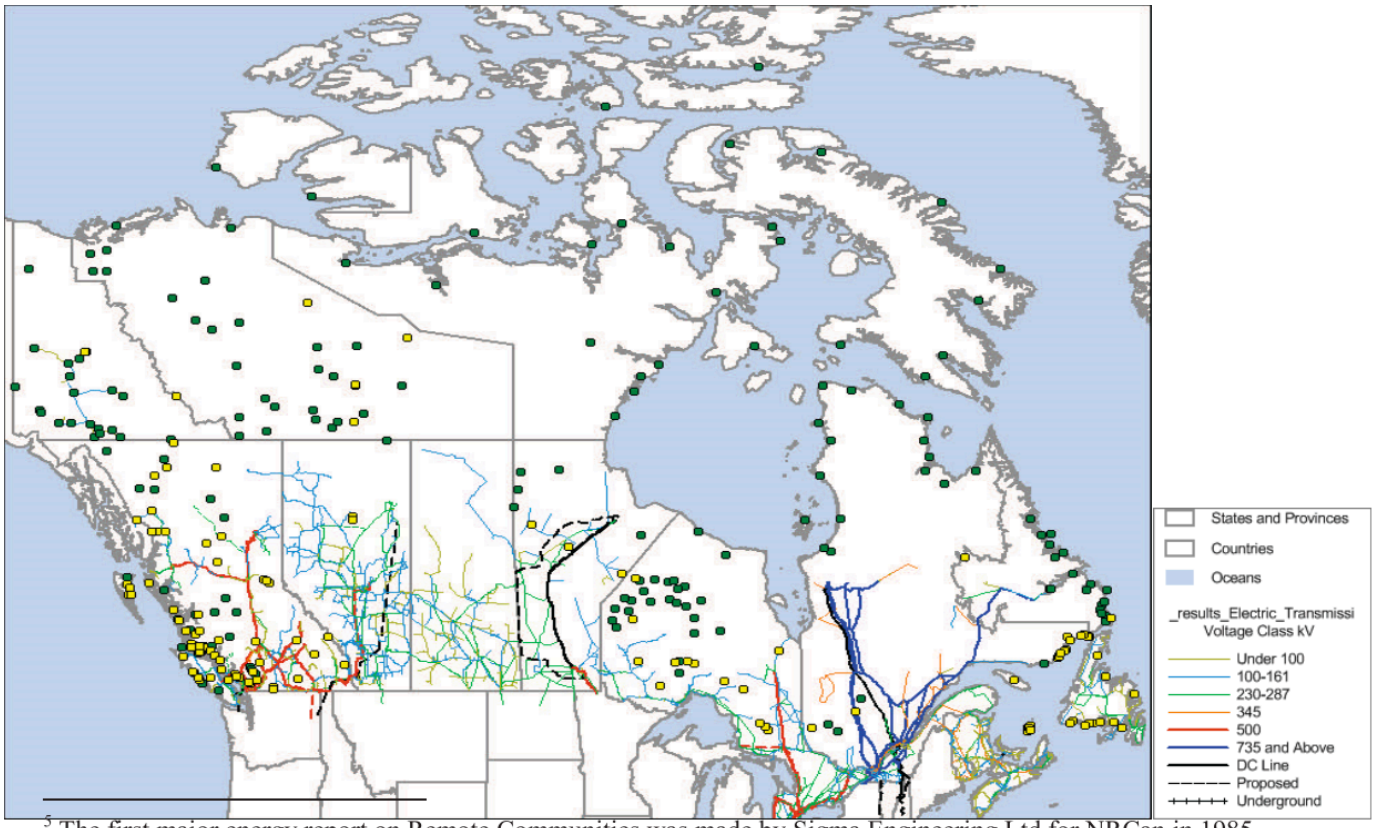
This section explores the literature in relation to Canada's troubling legacy of both energy poverty and high per capita energy use. It also explores Canada's challenges related to its energy supply and demand in its different regions, and how that relates to geographically-determined renewable energy potential.

2.1 Dual realities: energy poverty vs. high per capita energy use

A recurrent theme in the literature is that Canada has extremely high per capita greenhouse gas emissions[4] (MacArthur, 2017; Wyse and Hoicka, 2019), and that it is a unique landscape for CE given its relationships with Indigenous peoples, its wealth, and the fact that it "is an arctic nation with significant fossil fuel extraction, processing and consumption activities" (MacArthur, 2017, pp. 2). Indeed, Canada is a resource-rich nation (MacArthur, 2017), that also has a widespread energy poverty crisis. According to the Government of Canada's 2011 report (which is based on data from the 2006 Statistics Canada Census), Canada has 292 remote communities, of which 170 are Indigenous (see *Figure 1* below). These communities are off-grid, meaning they are "not currently connected to the North-American electrical grid nor to the piped natural gas network" and are classified as long-term (e.g. a minimum of five years) or permanent and there are at least 10 dwellings present in each community (pp. 3).

The majority of these communities rely on diesel generation, an expensive and environmentally detrimental source of energy. The majority (251 out of 292) of the aforementioned off-grid communities have local fossil fuel power plants which amounts to a total of 453.3MW (Government of Canada, 2011). Diesel fuel is the dominant energy source (e.g. in 176 of 251 communities), while two communities are powered by natural gas and 73 communities have unknown energy sources (Government of Canada, 2011). With respect to the latter, it is suspected that diesel or gasoline generators are being utilized (Government of Canada, 2011). Of the remaining 41 communities not just accounted for, only 11 have clean energy sources (hydro) (Government of Canada, 2011, pp. 6-7).

[4] The OECD (2017) states Canada has the third highest per capita GHG emissions globally.



[5] The first major energy report on Remote Communities was made by Sigma Engineering Ltd for NRCan in 1985, followed by an update by CANMET-Varennes' RETScreen group in 1999.

Figure 1: Indigenous (green) and non-Indigenous (yellow) off-grid communities in Canada. (Government of Canada, 2011, pp. 5).

Reliance on diesel is an issue in terms of costs because diesel fuel must be flown, shipped, or driven into communities on winter roads, which means high transportation costs will translate into high energy expenditures (Government of Canada, 2011, pp. 11-12). Moreover, since many of Canada's off-grid communities are in the northern part of the country where it is colder, a large proportion of these communities will utilize significant amounts of energy for heat, which contributes to high energy expenditures (Government of Canada, 2011, pp. 11-12). This also translates into ecological concerns because burning large quantities of diesel emits greenhouse gases, which contributes to climate change (Government of Canada, 2011, pp. 11-12). The United States Energy Information Administration (EIA) (2018) explains that "Different fuels emit different amounts of carbon dioxide in relation to the energy they produce when burned." Diesel and heating oil produce more carbon dioxide (157.2 pounds of CO2 emitted per million British

thermal units (Btu) of energy) than gasoline (without ethanol) (157.2), propane (139.0) and natural gas (117.0) (EIA, 2018).

2.2 Regional Challenges: Renewable Energy Potential

There exist various sources of renewable energy such as but not limited to on or off-shore wind, hydro, solar, and biomass (Barrington-Leigh & Ouliaris, 2016, pp. 22). Developing a clean energy project does not involve a simple choice over a preferred energy source; certain geographic locations will possess "renewable energy potential" for certain energy sources and not others (e.g. not every location will be conducive to wind projects) (Barrington-Leigh & Ouliaris, 2016). Barrington-Leigh & Ouliaris (2016) explain how Canada's geographic context can create barriers to fully transitioning to renewable energy sources:

> Canada's extensive geography and existing reliance on hydropower make it a likely candidate for shifting to an entirely renewable domestic energy system. On the other hand, the concentration of Canada's population over a relatively small region makes the practical availability of renewable energy resources less obvious. Moreover, the diversity of potential renewable energy forms and their different geographic distributions poses two challenges. First, energy policy is largely devolved to the provincial level in Canada, necessitating provincial-level assessments of demand and potential supply. (pp. 4)

Matters are further complicated by Canada's "uneven regional distribution of energy supply and demand":

> Areas of high renewable energy potential do not correlate with areas of high energy use. Ontario and Alberta cannot meet their energy needs entirely through renewables and Newfoundland and Labrador has 15 times its energy demand in renewables. Even within provinces, tidal, hydroelectric, and some of the most high potential wind sites are not necessarily located near the large population centers. This unbalanced distribution of energy supply and demand has important policy implications. For example, it does not make sense for Newfoundland and Labrador to fully develop its sizeable wind resource based only on its own low energy demand. Meanwhile, nearby Quebec and Ontario have

> poor renewable potential relative to their large consumption of energy. (Barrington-Leigh & Ouliaris, 2016, pp. 25)

The results of Barrington-Leigh & Ouliaris's (2016) study suggest that "onshore wind is able to deliver almost half of Canada's 2010 energy demand, eclipsing the contribution from hydropower", with offshore wind resources having the second largest potential in the country (pp. 21). The study notes there is sufficient potential for hydroelectricity "to more than double its current contribution to Canada's energy budget, with important contributions in every province except P.E.I." (pp. 22). Solar farming was also found to be quite promising (although less so than on/offshore wind and hydroelectricity), in that it could "contribute 13% of the national energy budget" (Barrington-Leigh & Ouliaris, 2016, pp. 23).

Section Three: Profile of Indigenous communities in Canada

This section explores the 2016 Statistics Canada Census data as it relates to Indigenous communities in Canada.

3.1 The 2016 Census Data

In the 2016 Census, 1.67 million people identified as Indigenous, which means Indigenous people may account for 4.9% of the Canadian population (Government of Canada, 2017a). In the 2016 Census, 977,230 people identified as First Nations (76% had status and 24% were non-status), 65,025 identified as Inuit, and 587,545 people identified as Métis (Statistics Canada, 2017).

There are over 50 First Nations in Canada and over 630 First Nations communities (Government of Canada, 2017a). According to the Government of Canada (2018), "[m]any Inuit live in 53 communities across the northern regions of Canada in Inuit Nunangat, which means "the place where the Inuit live." Inuit Nunangat has four regions: Inuvialuit (the Northwest Territories and Yukon), Nunavik (Northern Québec), Nunatsiavut (Labrador), and Nunavut (Government of Canada, 2018b). The Government of Canada's Métis webpage (the counterpart to their First Nations and Inuit webpages, where much of the above information was pulled from) does not provide information on Métis communities in Canada. However, *Aboriginal Peoples in Canada: Key Results from the 2016 Census* notes that "there were 587,545 Métis in Canada in 2016,

accounting for 1.7% of the total population," the largest proportion (80.3%) of which were found to have been residing in Ontario (pp. 4).

3.2 Lack of Government Recognition of Modern Métis Communities

Unlike First Nations and Inuit, there is a lack of easily accessible information regarding the existence of geographic Métis communities, which is evident in the previously noted lack of information contained in the 2016 Census on Métis communities. Métis emerged in west central North America as an Indigenous group with distinct culture from the interracial relations of Indigenous women and European men (Métis National Council, n.d.). However, it is important to note that Métis peoples are more than a product of interracial relations; a "post-contact ethnogenesis" ensued (*R. v. Powley,* 2003, para 14). The SCC in *Powley* cites the RCAP report, and describes the evolution:

> Intermarriage between First Nations and Inuit women and European fur traders and fishermen produced children, but the birth of new Aboriginal cultures took longer. At first, the children of mixed unions were brought up in the traditions of their mothers or (less often) their fathers. Gradually, however, distinct Métis cultures emerged, combining European and First Nations or Inuit heritages in unique ways. (*R. v. Powley*, 2003, para 10)

Ultimately, "The Métis developed separate and distinct identities, not reducible to the mere fact of their mixed ancestry" (*R. v. Powley*, 2003, para 10).

Métis settlements developed in the Northwest, and in Ontario, historic settlements developed along the rivers and watersheds of the province, including around the great lakes and throughout northwestern Ontario (Métis National Council, n.d.). At least some historic settlements in Ontario are documented, and it is clear that Métis communities exist in present-day in the sense that there are national and provincial Métis Nations, including the Métis Nation of Ontario (MNO), and certainly there is a sense of community in terms of shared culture (Métis Nation of Ontario, 2019). In Ontario, the MNO has a list of Chartered Community Councils, but it appears that these councils are situated in what can be classified as non-Indigenous communities (e.g. Toronto,

Georgian Bay, Sault Ste Marie) (Métis Nation of Ontario, 2019), which indicates that Métis peoples in the province are dispersed throughout non-Indigenous communities.

Some of the difficulty with this issue is at least partially explained by the limited number of legislated Métis land bases, in contrast to the Inuit and First Nations (Teillet, 2013, pp. 8-1), which will be discussed in greater detail below. The only clearly documented exception to this is the case of Alberta, as "it currently has the only legislated regime that recognizes and gives effect to Métis land and local governance" (Teillet, 2013, pp. 8-1), which will also be discussed further subsequently.

Section Four: Indigenous Rights

This section will explore the root of Indigenous rights in section 35 of the *Constitution Act, 1982* as well as the land and self-governance rights that First Nations, Métis and Inuit nations possess in Canada, along with governance structures in First Nations, Métis and Inuit communities.

4.1 Section 35 of the *Constitution Act, 1982*

Section 35(1) of the *Constitution Act, 1982*, recognizes and affirms "existing aboriginal and treaty rights of the aboriginal peoples of Canada", and subsection (2) defines "aboriginal peoples of Canada" as including "Indian" (e.g. First Nations), Inuit and Métis peoples of Canada. Subsection (3) states "For greater certainty, in subsection (1) "treaty rights" includes rights that now exist by way of land claims agreements or may be so acquired." In *R v. Van der Peet* (1996), the Supreme Court of Canada (hereinafter, "SCC") defined "aboriginal rights" as "an activity that has an element of a practice, custom or tradition integral to the distinctive culture to the Aboriginal group claiming the right." Some examples of aboriginal rights are hunting, fishing and harvesting rights.

Treaty rights are explained by the Canadian government (2010) in the below quote:

> Treaty rights refer to Aboriginal rights set out in a treaty. Starting in 1701, in what was to eventually become Canada, the British Crown entered into treaties to encourage peaceful relations with First Nations. Some early treaties, like the Peace and Friendship Treaties in

> the Atlantic region, were strategic alliances. Other later treaties, such as the Numbered Treaties in Ontario, Prairies, as well as parts of the Northwest Territories (1871 to 1921), involved First Nations ceding or surrendering rights to the land in exchange for treaty rights. While no two treaties are identical, examples of treaty rights across Canada included such things as reserve lands, farming equipment and animals, annual payments, ammunition, clothing and certain rights to hunt & fish.

It is important to remember, however, that "the written text of [treaties, and particularly, historic treaties,[5]] only contains the Crown's perspective on what the parties agreed to" (OKT, 2018, pp. 52-53). Moreover, it can be said that "Governments have insisted on the written document as embodying the entire agreement between the parties; Aboriginal parties have considered the oral arrangement, whether reflected in the written document or not, as reflecting the true consensus reached by the parties" (RCAP, 1996, pp. 3). Indigenous perspectives on this matter are largely absent from the former quote from the Canadian Government. Ultimately, Indigenous people state:

> […] that they never consented to be governed by the French or the British or the government of Canada. Indeed, they were never consulted and had no say in the matter. Nor, they allege, did European powers assert authority over them on any valid grounds. Canada was not uninhabited when the Europeans came, nor was it 'discovered' by them. It has been the homeland of Canada's First Peoples for millennia. (RCAP, 1996, pp. 4)

4.2 First Nations, Inuit and Métis Land Rights

Reserves are Crown lands (e.g. the Crown owns title to the land, which are governed by the *Indian Act*[6] and treaties that are held in trust for First Nations bands (*Indian Act,* 1985, s. 2(1)). Olthuis Kleer Townshend LLP (hereinafter, "OKT") notes that "[s]ometimes [reserve] lands were

[5] Historic treaties are those that were negotiated prior to 1921. One type of historic treaty is "land cession" treaties, "where the terms are significantly less favourable to the Indigenous parties" (Jai, 2017, pp. 104).

[6] Section 91(24) of the *Constitution Act, 1867* provides the federal government of Canada with jurisdiction over "Indians and Lands Reserved for Indians", which is where it finds its authority to create legislation such as the *Indian Act*. While First Nations and Inuit were deemed "Indian"

set aside under a treaty, and sometimes they were established to move First Nations out of the way of expanding non-Aboriginal settlements" (2018, pp. 88). Band members[7] have rights to their respective reserve lands such as the right to reside there, and bands often have local governments and law-making powers on reserves (Hanson, 2009) which will be discussed in more detail subsequently.

Reserves almost exclusively apply to "Indians" (which are typically First Nations Band Members) as defined under the *Indian Act*, and the legislation in general does not apply to Inuit or Métis peoples (Crey and Hanson, 2009). Only an "Indian" who is a band member, with the approval of the Minister of Indigenous and Northern Affairs Canada who has been allotted a plot of land by the council[8] of their band may possess land on a reserve (*Indian Act, 1985*, section

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for the purposes of section 91(24) of the *Constitution Act, 1867,* Métis were not recognized as one of the three Aboriginal groups for legal purposes by Canada until the *Constitution Act, 1982* (*Alberta (Aboriginal Affairs and Northern Development) v. Cunningham*, 2011). Section 35 of the *Constitution Act, 1982* concerns the "Rights of Aboriginal Peoples in Canada", and it applies to First Nations, Métis and Inuit as per section 35(2). More recently, in 2016 there was another SCC decision whereby the Courts clarified that Métis and non-status peoples are "Indian" within the meaning of section 91(24) of the *Constitution Act, 1867* (*Daniels v. Canada (Indian Affairs and Northern Development)*).

[7] Band members are defined in section 2(1) of the *Indian Act* as "a person whose name appears on a Band List or who is entitled to have his name appear on a band List." Band membership is about defining who belongs to a particular First Nations community (Âpihtawikosisân, 2011b), and said members have certain rights such as the ability to live on their band's reserve and to vote in a local election for chief and council (Furi & Wherrett, 1996). Band membership can be contrasted with "status". "Status Indians", which is another concept created under the *Indian* Act, refers to those Indigenous persons who "are registered or are entitled to be registered as Indians" with the Federal Government, and "[a]ll registered Indians have their names on the Indian roll, which is administered by Aboriginal Affairs and Northern Development Canada (AANDC)" (Âpihtawikosisân, 2011b). Having status affords Indigenous peoples the ability "to access certain programs and services which are not available" to their non-status counterparts (Âpihtawikosisân, 2011b), such as but not limited to tax exemption (Âpihtawikosisân, 2011a). Before 1985, Indigenous persons who were registered "Status Indians" were often automatically entitled to band membership, but in the 1985 *Indian Act* amendments, bands were afforded more control over their membership (Furi & Wherrett, 1996). The result of this is that now it is possible for Indigenous people to have status, but not be a member of their nation's band (Furi & Wherrett, 1996). It should be noted however, that most bands have not taken control of their membership in this manner as only 229 out of ~600 bands had done so as of June 17, 2017 (Government of Canada, 2018a), which means that for the most part, status and band membership are still, in a sense, linked.

[8] The Chief and Council comprise the elected government of most First Nations bands in Canada (Government of Canada, 2018c), which will be discussed further subsequently.

20(1)). Likewise, "according to the *Indian Act,* only registered Nation members may live permanently on a reserve unless the Nation has adopted a residency by-law that regulates who has the right to live on the reserve" (Indigenous Corporate Training Inc., 2015). There are some exceptions for non-Indigenous people, non-status First Nations people, Inuit and Métis people to reside on a reserve as well. For example, section 18.1 of the *Indian Act* allows for children to reside with band members who reside on reserve, and it is possible for children of band members to not be band members themselves and they may or may not have Indian status. Likewise, a spouse of a band member who resides on reserve and who is him or herself not a band member, not First Nations or overall not Indigenous could reside with that band member, but as per section 20(1) of the *Indian Act*, they would not be able to possess reserve lands, as that is typically a right reserved for band members.

Reserves are to be distinguished from traditional lands/territories. As noted by Hanson (2009):

> Although reserve borders were imposed on First Nations, many First Nations have continued hunting, gathering, and fishing in off-reserve locations that they have used for many generations. In addition, important ceremonial sites may be located outside a reserve but continue to be significant for a band's cultural and spiritual practices. When a First Nation describes its traditional territory, it is describing this larger land base that it has occupied and utilized for many generations, before reserve borders were imposed and drawn on maps.

Reserves are typically fairly small plots of land in comparison to the size of traditional territories and as such, they "provide the bands with minimal resources or economic opportunities (Hanson, 2009). Some reserves only comprise a small portion of a band's traditional lands, and many are not on a band's traditional lands at all (Hanson, 2009).

Finally, title rights – a higher spectrum right than harvesting rights or treaty rights that led to the creation of reserves – is quite similar to fee simple or "absolute ownership" (*Barron's Canadian Law Dictionary*, 2009) of land by an Indigenous community. This is in contrast to reserve lands which, as noted above, the Crown holds title to, and consequently, "almost all decisions relating to reserve land need the approval of the federal government" (OKT, 2018, pp.

88). Title rights may exist where an Indigenous nation's traditional lands are unceded (e.g. where they have not surrendered their lands through a treaty to the Government); whereas reserve lands are said to have been surrendered by the Indigenous group to the Crown thus in a sense, transferring any concept of ownership to the Crown, which then provides the Crown with the authority to legislate the use of the lands to a particular group through the creation of reserves.

Title rights, unlike reserves, can be held by the Inuit, as well as First Nations (Henderson and Bell, 2006) and Métis (Teillet, 2017). Title rights can be established through the negotiation of land claims agreements and treaties (Henderson and Bell, 2006). Land claims agreements have been settled in all four regions of Inuit Nunangat, through which Inuit were granted title to specific plots of land (Government of Canada, 2018b). Additionally, a declaration of title can be sought through the courts, as was done in the *Tsilhqot'in* SCC case. *Tsilhqot'in* is the only declaration of Aboriginal by a Canadian court to date.

In *Delgamuukw v. British Columbia* (1997), the SCC defined "Aboriginal title" as "the right to exclusive use and occupation of the land held pursuant to that title for a variety of purposes, which need not be aspects of those aboriginal practices, customs and traditions which are integral to distinctive aboriginal cultures." The Court also explained that in order for an Indigenous group to prove they hold title to land, they must provide evidence to show that:

1. "The land was occupied prior to the assertion of British sovereignty;
2. If present occupation is relied on as proof of occupation pre-sovereignty, there must be a continuity between present and pre-sovereignty occupation; and
3. The occupation must have been exclusive" (OKT, 2019, pp. 86).

That said, it should be noted that Aboriginal title is tied at least in part to the notion of traditional lands. This is again in contrast to reserve lands, which as noted above, may not only be located on a fragment – if any – of an Indigenous group's traditional lands.

The SCC further fleshed out the legal characteristics of Aboriginal title in *Tsilhqot'in Nation v. British Columbia* (2014), which are: decision-making power over how land is to be used, enjoyment and occupancy of the land, possession of the land, rights to the economic benefits arising from the land, and pro-active management of the land. Unlike reserve lands which are held in trust for a band by the Crown, title is held collectively by an Indigenous group, and there are restrictions on how the band can use the land as there is a requirement to preserve it for the future generations of the band.

Rights conferred to Canada's Indigenous peoples in relation to title or reserve lands are relevant in the context of CE because they provide spaces for Indigenous communities to develop clean energy projects in their respective communities, and on traditional lands (which may or may not be occupied by Indigenous communities in present-day).

The rights of Métis peoples have been fairly absent from this discussion as there is a perception that they have limited rights to land aside from harvesting rights and communal fishing licenses (Teillet, 2013).[9] Likewise, as explained above, Métis do not have reserve lands, and "the courts have not made any definitive declaration that the Métis hold land rights under s. 35" of the *Constitution Act, 1982* (OKT, 2018, pp. 116). They do have settlements in Alberta, however. Teillet (2013) explains that the province:

> currently has the only legislated regime that recognizes and gives effect to Métis land and local governance [in Canada]. This has been accomplished through the Métis Settlements Accord Implementation Act, Métis Settlements Land Protection Act, Métis Settlements Act (MSA) and the Constitution of Alberta Amendment Act. These are collectively referred to as the Métis Settlements legislation…The Métis Settlements legislation is delegated authority from the provincial government. It provides a framework within which Métis Settlement institutions can develop laws concerning membership, land, financial accounting, resource development and other issues pursuant to settlement council bylaws, General Council policies and ministerial regulations. (pp. 8-1 – 8-2)

4.3 First Nations Governance

According to the Assembly of First Nations (n.d.), there are 634 First Nation communities (also known as reserves) in Canada, with First Nation governments." These Nations span from

[9] Much of the Métis-specific jurisprudence has focused on harvesting rights and communal fishing licenses (Teillet, 2013), and so it may be tempting to conclude that the Métis have more limited rights than First Nations or Inuit. However, this is a myth in that the broader body of jurisprudence pertaining to Aboriginal rights under section 35 of the *Constitution Act, 1982*, pertains equally to Métis peoples, First Nations and Inuit; there does not exist a hierarchy, meaning that the Métis do not, in fact, have lesser rights under section 35 of the *Constitution* than Inuit or First Nations peoples (Isaac, 2016).

coast to coast and are present in almost every province/territory in Canada (see *Figure 2* below) (Assembly of First Nations, n.d.).

Figure 2: Map showing First Nations across Canada (Assembly of First Nations, n.d.)

Most First Nations govern their communities with a band and council, as prescribed by the *Indian Act*, however more recently, an option for self-governance has been introduced (Government of Canada, 2018c) which will be discussed further subsequently. Under the *Indian Act* governance structure, a "chief and a number of councillors are elected for each band", and said elections "are usually by secret ballot, although procedures can be authorized either by "band custom" or by the *Indian Act*" (OKT, 2018, pp. 240). Band councils possess the power to make by-laws under the *Indian Act*, although they have not been used with much frequency, but for in the case taxation matters, which is more common (OKT, 2018, pp. 241). Contrarily, band councils most often:

> […] act formally by passing resolutions, known as band council resolutions (BCRs). These decisions must be made by a quorum of chief and council at a duly convened meeting…BCRs can bind the band, are necessary to make a contract binding on the band, and may affect the rights of band members." (OKT, 2018, pp. 240)

OKT states that the "*Indian Act* is the embodiment of the colonial aims of Canada" in that "when it was enacted in 1876, it was intended to provide a framework to control and dominate First Nations, and to extinguish Aboriginal cultural and governance practices" (2018, pp. 238). Indeed, there were many forms of governance present in Indigenous nations pre-contact, and "it is unlikely that any First Nation structured its society in the way prescribed by the *Indian Act*" (pp. 294). That said:

> Not all members of the band necessarily accept the authority of band councils. On a number of reserves, there are strong traditions of hostility to the governing structure imposed by the *Indian Act.* In Six Nations in Ontario, for example, many people refuse to vote in *Indian Act* elections, and the traditional Haudenosaunee Confederacy has a strong following. (OKT, 2018, pp. 294)

Many Indigenous peoples are dissatisfied with the authority and exercise of power by chief and council for several reasons:

> The Indian Act has been criticized for giving the Chief and Council too little power to make their own decisions. The Royal Commission on Aboriginal Peoples counted nearly 90 provisions that give the Minister of Indian Affairs powers over the Band and Band Council. But the Indian Act has also been criticized for giving the Chief and Council too much power to make decisions. Some people point out that Chief and Council do not have enough accountability to members of the community. In sum, the Indian Act is criticized for giving Chief and Council too little authority and with giving Chief and Council too much authority. (Imai, 2007, pp. 1)

While powers such as the surrender of land, which cannot be exercised by Chief and Council alone (OKT, 2018, pp. 238) exist, Chief and Council do have some powers that can be exercised without input from band members, and yet, these powers can be overridden in some instances by the Minister of Indian Affairs (Imai, 2007, pp. 1). For example, were Chief and Council to issue a certificate of possession (of reserve land) to someone, which is an area the *Indian Act* does not provide guidance on, they can do so autonomously, without seeking consent of band members (Imai, 2007, pp. 2), although the Minister of Indian Affairs could choose to override this decision as the legislation gives them broad powers to do so (Imai, 2007, pp. 2).

It is said that First Nations that are governing their communities according to the *Indian Act* model face issues because the power in the community "only flows one way", from the Federal Government, to the Chief and Council, and lastly, to the community members (Imai, 2007, pp. 1), which may cause issues in a CE context as the actions of Chief and Council (if acting without consent from the community) may not reflect the desires of the band members collectively. It is

important to recognize that the participation of an Indigenous nation in energy projects is also not enough to assume widespread community support.

The federal government of Canada acknowledges that there does exist an inherent right to self-government for Indigenous peoples in section 35 of the *Constitution Act, 1982* (OKT, 2018, pp. 184), and given the long history of paternalism inherent in the *Indian Act,* it is no surprise that many Indigenous nations favor transitioning away from its prescribed governance model. When a First Nations opts for the latter, they negotiate an agreement for self-government with the Federal government and the outcome can be a variety of models of self-government according to the unique goals of a given nation (Government of Canada, 2018c).

A potential solution to the governance issue noted above is for First Nations that transition to self-governance to develop a system that ensures "Chief and Council use their powers in a good way" by creating "a policy that distinguishes routine decisions, which do not require consultation, from important decisions that should involve the whole community" so as to allow for increased accountability to band members (Imai, 2007, pp. 1-2).

However, most First Nations are still following the governance model in the *Indian Act*, which may be due to reliance on core funding which is provided by the department of Indigenous Affairs and Northern Affairs Canada (INAC) to Indian act bands (Indigenous and Northern Affairs Canada, 2010). For self-governing bands, however, INAC has a controversial own-source revenue policy that seeks to:

> [..] take into account the ability of self-governing groups to contribute to the costs of their own government activities when determining the level of federal transfers. Over time, and based on ability, an Aboriginal government's reliance on federal transfers may be expected to decline. (as cited by Scott and Smith, forthcoming, 2019, pp. 18)

Uncertainties around the security of core funding and potential reductions calculations for bands that transition to self-governance means that said bands would benefit from development strong consistent streams of own-source revenue. This is one potential benefit of Indigenous participation in clean energy projects. Moreover, Scott and Smith (forthcoming, 2019) note that:

> The major benefit that Indigenous communities see in this revenue is that it can be put to the priorities that they themselves determine, in contrast to federal transfers that are usually ear-marked for certain programs with strict parameters for how funds will be spent. (pp. 18)

4.4 Métis Governance

As was previously noted, Alberta is home to "the only legislated regime that recognizes and gives effect to Métis land and local governance" in Canada,[10] [11] which was accomplished through Métis settlement legislation[12] (Teillet, 2013, pp. 8-1 – 8-2). The legislation led to the transfer of lands from the provincial government to eight Métis settlements[13] within the province (Government of Alberta, 2019) and provided "a framework within which Métis Settlement institutions can develop laws concerning membership, land, financial accounting, resource development and other issues pursuant to settlement council bylaws, General Council policies and ministerial regulations (Teillet, 2013, pp. 8-1 – 8-2).

The governance structure, as was just eluded to, differs from that of First Nations bands under the *Indian Act*, and is comprised of three main bodies (see *Figure 3* below): 1) local governments which are termed Settlement Councils; 2) the Métis Settlements General Council; and 3) The Métis Settlements Appeal Tribunal (MSAT) (Graham, 2007, pp. 2-3).

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[10] While the Métis do not have legislated land bases in Ontario, as was previously mentioned, there does exist a Métis Nation of Ontario, a sense of community in terms of shared culture, and the MNO does have Chartered Community Councils throughout what can be classified as non-Indigenous communities (Métis Nation of Ontario, 2019). Moreover, in 2015, Ontario implemented the *Métis Nation of Ontario Secretariat Act,* acknowledging the MNO and its Chartered Community Councils (Teillet, 2017).

[11] It should also be noted that in 2015, Canada signed an agreement in principle with the Northwest Territories Métis Nation. When completed, it will give rise to further legislated land bases for the Métis as ownership to 25,194 square kilometres will be transferred to the nation (Teillet, 2017).

[12] Together, the *Métis Settlements Accord Implementation Act*, *Métis Settlements Land Protection Act*, *Métis Settlements Act* (MSA) and the *Constitution of Alberta Amendment Act* comprise Métis settlement legislation in the province of Alberta (Teillet, 2013, pp. 8-1 – 8-2).

[13] The following are the eight Métis Settlements in Alberta: Buffalo Lake Métis Settlement, East Prairie Métis Settlement, Elizabeth Métis Settlement, Fishing Lake Métis Settlement, Gift Lake Métis Settlement, Kikino Métis Settlement, Paddle Prairie Métis Settlement and Peavine Métis Settlement (Government of Alberta, 1995).

Each of the eight Métis Settlements has its own Settlement Council, comprised of five elected councillors (Graham, 2007, pp. 2). Prior to the passing of the Métis settlement legislation, councils existed but had limited power and basically acted as advisors to a Minister of the Crown (Graham, 2007, pp. 2). Now they can create by-laws within settlement areas (which can govern "members, non-members, oil companies, and anyone else operating in the area"), although they are only passed after consent from members in a general meeting (Graham, 2007, pp. 2).

The Métis Settlements General Council is considered the "institution for collective action" and gives "legal power to what had developed over time as "the Federation"" (Graham, 2007, pp. 2). It is comprised of elected General Council Officers which are elected by the Settlement Councils (Graham, 2007, pp. 2). It is this body that holds fee simple title to the land that was transferred to the eight settlements and can also enact "framework laws" that apply to all eight Settlements (but also must be approved by the Settlement Councils by a minimum of six out of eight majority), and "it manages collective interests such as resource development" and consolidated funds from settlement-related moneys (Graham, 2007, pp. 2).

The MSAT is the judicial component of the government. It exists because the Settlements would not be able to effectively engage in meaningful self-government if a Minister of the Crown remained responsible for resolving land and membership disputes, for example (Graham, 2007, pp. 2-3). The MSAT is a quasi-judicial body that is considered a "Métis court" and is tasked with hearing complaints over these types of issues as well as other settlement-related matters (Graham, 2007, pp. 3).

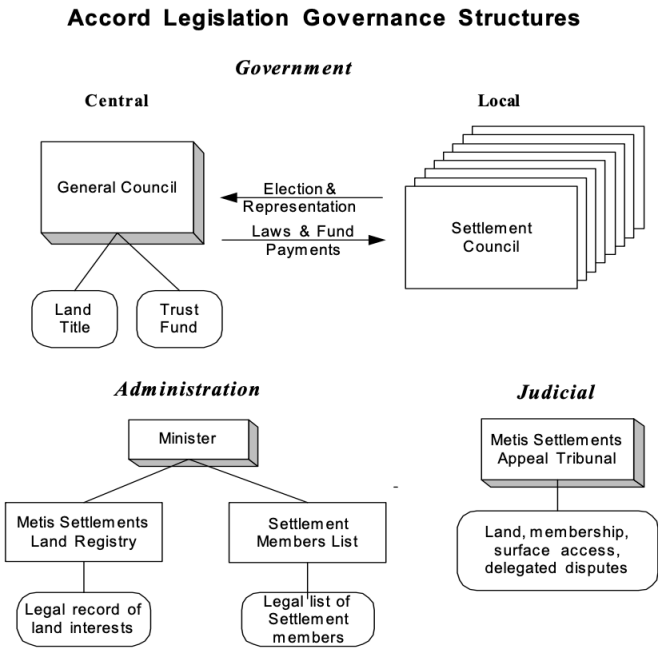

Figure 3: Métis Settlement governance model (Graham, 2007, pp. 1).

Finally, there is still a need for an administrative body and so there still exists a place for a Minister of the Crown in relation to the Settlements, although it

is technically not a part of the governance model of the eight Settlements or their Federation (Graham, 2007, pp. 3). The Métis Settlement legislation:

> […] created two administrative institutions crucial to Settlement operations—a land registry and membership list. The first, the Metis Settlements Land Registry, provided a clear, accessible and legally binding record of all interests in land in the Settlement areas. The second, the Settlement Members List, provided a similar record of who was a member of each of the Settlements. The overall structure is shown in the diagram above. We deal with each of these institutions in more detail below. (Graham, 2007, pp. 3)

4.5 Inuit Governance

In Canada, there are four Inuit regions: Nunavut (a territory in the central and eastern Arctic), Nunavik (northern Québec), Inuvialuit (northwestern coast of Canada's Arctic in the Northwest Territories and the Yukon), and Nunatsiavut (the northeast coast of Labrador) (OKT, 2018, pp. 131-132). Together, these regions are known as "Inuit Nunangat" (OKT, 2018, pp. 131). The Inuit have achieved "a measure of self-government over the lands across their entire territory" and were the first Indigenous group to do so (OKT, 2018, pp. 131). The Inuit from these four regions "cooperate politically at the national level (through the national organization, *Inuit Tapiriit Kanatami*) and internationally with Inuit groups from the United States, Greenland, and Russia (through the *Inuit Circumpolar Council*)" (OKT, 2018, pp. 132).

The federal government of Canada had forced Inuit communities to relocate at various points in time "for convenience of government administration and a perceived need to industrialize and assimilate Inuit" (OKT, 2018, pp. 132). These forced relocations led to adverse effects on Inuit including but not limited to "dependence on government, declining health, cultural disintegration and loss of self-sufficiency" (OKT, 2018, pp. 133). The Inuit never actually gave up rights to their traditional lands, however, which led to a series of land claims agreements, eventually resulting in settlements for the above four noted Inuit regions, and in some cases, title and rights to self-government (OKT, 2018, pp. 133).

The first of the Inuit land claims agreements involved the Nunavik Inuit in 1975, which was later renegotiated in 2008, resulting in some aspects of self-government through the James Bay and Northern Québec Agreement (JBNQA) (OKT, 2018, pp. 133; 139). The province has title

to most of the land in Nunavik and the Inuit have title to a portion of about 8,158 km (OKT, 2018, pp. 141). Under the JBNQA, Inuit communities are incorporated as municipalities and some specific powers are delegated them under Québec legislation (OKT, 2018, pp. 142). There was an agreement in principle signed in 2007 that could have led to a Nunavik regional government which would have expanded their powers (by, for example, giving them jurisdiction over local school boards, health and social services councils), but Nunavik residents rejected the proposed agreement, so the Nunavik Inuit are still working towards "when and how to establish their own Inuit regional government" (OKT, 2018, pp. 142).

The second Inuit land claim agreement was with the Inuvialuit (OKT, 2018, pp. 133), and recognized their title to "approximately 91,000 square kilometres out of the 435,000 square kilometre area that the Inuvialuit in the western arctic traditionally used and occupied" (OKT, 2018, pp. 144). The land claim agreement did not include self-government, although this is now being negotiated between the Inuvialuit, the Northwest Territories and the federal government (OKT, 2018, pp. 133), and in 2015, a separate self-government agreement-in-principle (e.g. an agreement that is not yet finalized) was signed with the Northwest Territories and Canada (OKT, 2018, pp. 145). If finalized, the agreement will allow for the Inuvialuit to establish a government "that can act on behalf of Inuvialuit through the creation of a Council, to which community councillors will be elected" (OKT, 2018, pp. 145). The agreement would result in law-making powers regarding "healthcare (with restrictions), adoption, marriage, income assistance, social housing, wills and estates, trespass on Inuvialuit lands, day care centres, and universities" (OKT, 2018, pp. 145).

The third and largest of the land claims agreements was over Nunavut (OKT, 2018, pp. 133). Interestingly, the "Nunavut government is not an Inuit self-government structure, but a public government with a number of constitutional guarantees that ensure Inuit play a leadership role in decision-making, and that Inuit cultural rights are protected (OKT, 2018, pp. 133). The *Nunavut Land Claims Agreement* (NLCA) recognized Inuit title to a large portion of land, including mineral rights (OKT, 2018, pp. 134). Although they do not have self-government, they did successfully negotiate the right "to have as many Inuit working in Government as there are Inuit as a general proportion of the population (right now, about 85 per cent)" (OKT, 2018, pp. 135). The NLCA also allows for "preferential contracting opportunities for Inuit businesses providing goods and services to the Government", and a requirement for "any companies

conducting development on Inuit lands [to] enter into an Inuit Impact and Benefit Agreement" (OKT, 2018, pp. 135).

The fourth involved the Inuit of Northern Labrador and established the first Inuit self-government (the Nunatsiavut regional government) (OKT, 2018, pp. 133). The Settlement Area "consists of 72,500 square kilometres of land", of which 15,800 square kilometres are "owned by Labrador Inuit as Labrador Inuit Lands" (OKT, 2018, pp. 146). The Nunatsiavut Government has "jurisdiction over its internal affairs, Inuit citizenship and the management of Inuit rights and benefits" (OKT, 2018, pp. 148). It can also make laws in relation to education, health and social services (OKT, 2018, pp. 148). The Labrador Inuit have also created their own constitution which allowed for the establishment of two levels of government: "the central Nunatsiavut Government and five Inuit community governments for each of the Inuit communities" in the area (OKT, 2018, pp. 148). The governance structure is explained in the below quote:

> The community level of Nunatsiavut Government is comprised of five Inuit Community Governments representing the Inuit communities of Nain, Hopedale, Postville, Makkovik and Rigolet. Inuit Community Governments are responsible for serving all residents of their communities. The AngajukKâk of each Inuit Community Government represents his or her constituency in the Nunatsiavut Assembly.
>
> Nunatsiavut is a consensus form of parliamentary democracy designed to ensure a separation of power between the political and operational levels of government.
>
> At the political level, the democratically elected representatives of the Nunatsiavut Assembly make laws and provide broad policy direction for the government. The community of Hopedale is the legislative capital of Nunatsiavut. (Nunatsiavut Government, 2019)

Section Five: Indigenous Participation in Clean Energy Projects: A Pathway to Reconciliation?

5.1 The Concept of Reconciliation

The Truth and Reconciliation Commission (TRC) views "reconciliation" as being "about establishing and maintaining a mutually respectful relationship between Aboriginal and non-

Aboriginal peoples in this country," in addition to "acknowledgment and awareness of the past and the harms that have resulted from various colonial projects as well as atonement and appropriate behavioural changes are required" (TRC, 2015c, pp. 113).[14][15] The TRC's "Final Report of the Truth and Reconciliation Commission of Canada" (2015), analyzes the concept of reconciliation contained in the Report of the Royal Commission on Aboriginal Peoples (RCAP) (1996). The RCAP report is said to have "put forward a bold and comprehensive vision of reconciliation…[and] observed that if Canada was to thrive in the future, the relationship between Aboriginal peoples and the Crown must be transformed" (TRC, 2015a, pp. 22). In order to realize this transformation, the RCAP report made numerous recommendations, focusing on the following key themes, which can be viewed as a framework for reconciliation:

> First, Aboriginal nations have to be reconstituted. Second, a process must be established for the assumption of powers by Aboriginal nations. Third, there must be a fundamental reallocation of lands and resources. Fourth, Aboriginal people need education and crucial skills for governance and self-reliance. Finally, economic development must be addressed

[14] Although this paper relies primarily on TRC resources and UNDRIP to define and explore reconciliation, it should be noted that there does exist a scholarly discussion on this topic, and various different definitions of the term (Borrows and Tully, 2018). For example, Gutmann and Thompson (2000) and Philpott (2006) note that "[r]econciliation is sometimes said to undermine liberal values by permitting the sacrifice of justice and the rule of law in favour of amnesty and truth, or by allowing personal moral convictions into the public institutional domain" (as cited by Walters, 2008, pp. 165). Moreover, Walters (2008) uses jurisprudence to explore reconciliation from a legal perspective, while referencing the fact that it is seldom considered as a legal concept.

[15] While the present study explores the link between community energy and reconciliation, the literature elucidates that reconciliation is only one possible response to the harms that have ensued from colonization, whereas others, such as "resurgence", exist as well (Borrows and Tully, 2018). While both concepts "have become ways of describing the field of activities, relationships, and possible futures between Indigenous and settler people," for some, reconciliation is merely "a new form of recolonization" and "must be resisted" (Borrows and Tully, 2018, pp. 10). Resurgence, however, often speaks to "Indigenous peoples exercising powers of self-determination outside of state structures and paradigms" and more so emphasizes reclamation of nationhood through "resurgence of governance, Indigenous legal systems and languages, economic and social self-reliance, and sustainable relationships with the ecosystems that co-sustain all life and well-being" (Borrows and Tully, 2008, pp. 10-11).

> if the poverty and despondency of lives defined by unemployment and welfare are to change. (As cited by TRC, 2015a, pp. 22)

In essence, the RCAP report believes reconciliation to be largely about the Canadian Government changing its conduct toward Indigenous peoples and it calls for said changes to be pursued in a manner consistent with Indigenous perspectives regarding "how the relationship should be in the future" (TRC, 2015a, pp. 23). However, the TRC's Final Report notes that the Crown and Indigenous peoples still have differing views on what reconciliation entails:

> The Government of Canada appears to believe that reconciliation entails Aboriginal peoples' accepting the reality and validity of Crown sovereignty and parliamentary supremacy in order to allow the government to get on with business. Aboriginal people, on the other hand, see reconciliation as an opportunity to affirm their own sovereignty and return to the 'partnership' ambitions they held after Confederation. (TRC, 2015a, pp. 25)

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) contains information that can be viewed as a framework for reconciliation with Indigenous peoples around the world (TRC, 2015a, pp. 25). A prominent underlying theme of UNDRIP is self-determination, which is paramount to reconciliation. S. James Anaya, UN Special Rapporteur on the Rights of Indigenous Peoples, notes that:

> It is perhaps best to understand the Declaration and the right of self-determination it affirms as instruments of reconciliation. Properly understood, self-determination is an animating force for efforts toward reconciliation—or, perhaps, more accurately, conciliation—with peoples that have suffered oppression at the hands of others. Self-determination requires confronting and reversing the legacies of empire, discrimination, and cultural suffocation. It does not do so to condone vengefulness or spite for past evils, or to foster divisiveness but rather to build a social and political order based on relations of mutual understanding and respect. That is what the right of self-determination of indigenous peoples, and all other peoples, is about. (As cited by TRC, 2015a, pp. 25)

Although there are many that could be explored, this paper emphasizes one call to action and two articles of UNDRIP that concern economic development on Indigenous lands in a preliminary exploration of the link between community energy and reconciliation. The TRC's 92nd call to action encourages corporations to:

1) Commit to meaningful consultation, building respectful relationships, and obtaining the free, prior, and informed consent of Indigenous peoples before proceeding with economic development projects; [and]

2) Ensure that Aboriginal peoples have equitable access to jobs, training, and education opportunities in the corporate sector, and that Aboriginal communities gain long-term sustainable benefits from economic development projects (as cited by Stefanelli et al., 2018, pp. 8).

Articles 3 and 4 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (2007) recognize the following:

> Article 3
> Indigenous peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development.
>
> Article 4
> Indigenous peoples, in exercising their right to self-determination, have the right to autonomy or self-government in matters relating to their internal and local affairs, as well as ways and means for financing their autonomous functions.

This paper is approached from the perspective that the 92nd call to action and Articles 3 and 4 of UNDRIP are an appropriate starting point for an exploration of the link between community energy and reconciliation because the concepts of consent and self-determination contained therein represent the fundamental spirit of reconciliation. Notions of sovereignty (which

is justified because of the inherent jurisdiction of Indigenous peoples in Canada, given their history of occupancy and use of the land prior to European contact) (McNeil, 1996, pp. 63-64) can be said to be underlying the themes in the RCAP report that were previously mentioned, and self-determination, as well as consent regarding economic development on Indigenous lands, are important to that end.

5.2 Cautious Optimism

Clean energy can be viewed as complimentary to Indigenous cultures, which commonly entail values and worldviews concerned with respecting the environment, and as per Jaffar (2015) and Wildcat (2009), this is a motivation for some communities, driving their involvement in clean energy projects (Hunter-Loubert, 2016). Métis scholar, Lowan-Trudeau (2017) argues in his paper "that Indigenous communities' recent embrace of renewable energy across Canada as a potential source of political and economic sovereignty is a type of reclamation of land and environmental rights" (pp. 602). However, he also cites Bargh (2010), in cautioning that we ought not:

> […] overly romanticize such developments as cultural and ecological issues are rapidly rising as projects develop around the world; concerns and controversies have arisen in some jurisdictions related to, for example, disruption of streams and rivers by hydroelectric installations, use of agricultural land for solar panels, and danger to avian species from wind turbines. (as cited by Lowan-Trudeau, 2017, pp. 606-607)

Stefanelli et al. (2018) echo this concern, noting that "Settler peoples are beginning to view energy efficiency, conservation, and renewable energy development as a potential path towards necessary reconciliation", which can be problematic as "potential exists whereby energy initiatives can perpetuate the colonial structures of exploitation," as stated by Bombay et al. (2014) and Finley-Brook & Thomas (2011) (as cited by Stefanelli et al., 2018, pp. 6).

To reiterate, the TRC's 92nd call to action encourages corporations to:

1) Commit to meaningful consultation, building respectful relationships, and obtaining the free, prior, and informed consent of Indigenous peoples before proceeding with economic development projects; [and]

2) Ensure that Aboriginal peoples have equitable access to jobs, training, and education opportunities in the corporate sector, and that Aboriginal communities gain long-term sustainable benefits from economic development projects (as cited by Stefanelli et al., 2018, pp. 8).

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Natural Resources Canada (2016) states that renewable energy constitutes an increasingly greater proportion of electricity in the country (as cited by Stefanelli et al., 2018), which may seem promising. Moreover, Indigenous participation in clean energy activities has generated "15,300 direct jobs for Indigenous workers who have earned $842 million in employment income in the last 8 years" (McDiarmid, 2017), which certainly sounds as though some aspects of the 92nd call to action and articles 3 and 4 of UNDRIP are being met. However, Ansar et al. (2014) and Cizek (2004) point out that there are social and environmental issues associated with certain types of renewable energy initiatives such as large-scale hydro project (as cited by Stefanelli et al., 2018). Additionally, Weis and Ilinca (2010) highlight that while renewable energy is increasing in Canada, this clean energy seldom reaches or benefits the off-grid communities who need it most (as cited by Stefanelli et al., 2018, pp. 7). Examples of projects that have managed to reach some remote communities in Canada are the "825 MW Muskrat Falls and the 2,250 MW Gull Island site developed downstream of the 5,428 MW Churchill Falls project, and the 1,100 km Labrador-

Island link transmission" (Karanasios & Parker, 2016, pp. 114) – and yet, these are exactly the types of projects that can lead to the aforementioned social and environmental problems. Indeed, as noted by Wyse and Hoicka (2019):

> A major challenge in the transition to low-carbon energy systems is developing sufficient new energy sources without the destruction of local environments, large cost overruns, negative social impacts and significant public opposition—all of which have been seen with large, centralized low-carbon energy projects in Canada. As was outlined in the Preface of this MRP, the Muskrat Falls hydroelectric project has seen considerable public opposition due to huge cost overruns and potential harm to local communities through methylmercury contamination and loss of access to traditional food sources. These issues, however, are not unique to Muskrat Falls, and there are numerous other Canadian examples of public opposition to low-carbon energy projects. Another large provincially-owned hydroelectric project, the Site C dam in British Columbia, has seen substantial backlash from local communities. (pp. 4)

Indigenous communities are certainly cognizant of the overall sustainability issues that result from diesel reliance, which was demonstrated in Karanasios & Parker's (2016) paper through mention of the Nunatsiavut Inuit Regional Government's concerns regarding energy security in their communities. However, perhaps another barrier to the development of clean energy projects in these communities is that they may be more interested in pursuing 'community energy' projects. Karanasios and Parker (2018) note that:

> […] remote indigenous communities now reject the role of passive recipients of technologies promoted by non-aboriginal interests. Instead, active participation in transforming electrical systems is sought, based on local sustainability agendas which further their goals of economic development and self- governance. (pp. 169)

Interestingly, the federal government of Canada very recently announced they would allocate "$20 million in funding aimed at reducing diesel reliance in Canada's rural and remote Indigenous communities" (Wyld, 2019). The "Natural Resources Minister Amarjeet Sohi said the

money will help ensure isolated communities have the capacity to develop their own solutions led by local people as they move toward renewable sources of energy" (Wyld, 2019). The latter statement sounds as though it could be moving in a direction that is more in keeping with reconciliation, although "Nicholas Mercer, a PhD candidate at the University of Waterloo and an expert on remote off-grid communities throughout Canada" agrees that "developing local expertise to transition off the fuel used for electricity and heating is the way to go", they expressed concerns over the funding being insufficient to make a full transition away from diesel (Wyld, 2019).

That said, "renewable energy development is not an inherently positive action, and if developments proceed without the collective community's free, prior, and informed consent, the potential for failure and the perpetuation of the colonial encounter increases" (Stefanelli et al., 2018, pp. 19). Moreover, although "Indigenous peoples are partnering with industries and developing renewable energy sources as well as conservation and efficiency strategies, this does not equate to uniform levels of support for all renewable energy initiatives across all communities (Stefanelli et al., 2018, pp. 18). A participant in Scott and Smith's study (forthcoming, 2019) offered the view that in general, the source of an Indigenous community's legal authority "*is the community, the people*", rather than "the authority of Chief and Council as set out in the *Indian Act*" (pp. 17). Many Indigenous and non-Indigenous people rightly recognize the current governance structures of Bands as a perpetuation of colonialism, but in reality, the authority often does reside more so with the Chief and Council. This ties in with a previous point that arose in the literature regarding the many forms of governance present in Indigenous nations pre-contact, and the dissatisfaction of many Indigenous peoples with the authority and exercise of power by Chief and Council, as well as their ability to exercise certain powers without input from band members (Imai, 2007, pp. 1). That said, it is important to recognize that the participation of an Indigenous nation in energy projects is not necessarily enough to assume widespread community support. A possible solution to this potentially misleading analysis of Indigenous involvement of renewable energy is presented in Stefanelli et al.'s (2018) research:

> Bargh (2010) suggests that instead of viewing total project numbers to calculate support for renewable energy initiatives, levels of community involvement within the project from design through to completion and maintenance (Henderson, 2013; Krupa, 2012a; Krupa et al. 2015), can serve as the better indicator. (pp. 18).

5.3 Parallel Principles: Community Energy and Reconciliation

As was previously discussed, there are various definitions of what constitutes CE, but commonly held characteristics are that the community has high degrees of control over and participation in a clean energy project (Wyse and Hoicka, 2019). A feature from Walker and Devine-Wright's (2008) description of CE is that it is community-led and that benefits are collective, throughout a community (as cited by Wyse and Hoicka, 2019). These principles coincide well with principles of reconciliation. There are many facets to and characteristics of reconciliation, but in relation to renewable energy, some important and relevant concepts are autonomy and self-determination. These concepts are explicitly mentioned in articles 3 and 4 of UNDRIP (2007) (as quoted in the previous subsection), which discuss the need for communities to be able to "autonomously pursue their economic, social and political development", but they are also arguably implicit in subsection 1 of the 92nd Call to Action. The latter discusses the need for "meaningful consultation, building respectful relationships, and obtaining the free, prior, and informed consent of Indigenous peoples before proceeding with economic development projects". It can be said that what is underpinning this call to action is a need for community autonomy (and respect thereof) and a recognition of the will of communities regarding development projects. These principles of autonomy (or sovereignty) and self-determination are complimentary to CE, since CE is about community-led projects and that represent the will of communities and serves their needs. Autonomy is inherent in CE.

Other principles of reconciliation pertain to strengthening local economies and capacity-building as per subsection 2 of the 92nd Call to Action, which discusses the need for Indigenous people to "have equitable access to jobs, training, and education opportunities in the corporate sector, and that Aboriginal communities gain long-term sustainable benefits from economic development projects" (as cited by Stefanelli et al., 2018). While any renewable energy project with Indigenous participation can be said to contribute to this call so long as there are some capacity-building features and economic benefits for the community derived from it, benefits may be maximized in instances where a nation has high degrees of control over a project, which is necessary for a project to be considered CE. For example, jobs will be created from the development of a renewable energy project. If a nation has control of the project, it can choose to

keep as many of those jobs as it wishes in the community. Where there is less control (perhaps due to a partnership with a private, non-Indigenous company), this would need to be negotiated for and outcomes will vary from project to project and as noted by MacArthur (2016), partnerships will often "dilute the community control and return" (pp. 161). That said, projects that meet the threshold for CE will be ideal vehicles for reconciliation.

Section Six: Indigenous Clean Energy in Canada

This section explores the three studies/datasets that are central to the present paper.

6.1 Hoicka & MacArthur's Research on CE

Hoicka and MacArthur's (2018) study explores the forms and functions of CE projects in Canada and New Zealand. It focuses on active non-Indigenous and Indigenous projects that perform a variety of functions, including supply, demand, distribution and retail. In terms of the Canadian results, Municipal ownership is the most common form identified in Canada (35%), and Co-operatives are the second most common form (32%). These were followed by community associations (11%), charities (10%), partnerships and joint ventures (6%), and Indigenous trusts and co-operatives (5%). In terms of functions, 45% of identified activities were distribution; 28% were demand; 15% were generation; 7% were generation and distribution; 3% were generation and demand; 2% were generation, demand and distribution, and 0% were retail. (Hoicka & MacArthur, 2018, pp. 169)

6.2 Indigenous Clean Energy (ICE) and Lumos Energy's Research on Medium to Large-Scale Indigenous Clean Energy Projects

Lumos Energy conducted a national survey and used its own database of medium to large-scale Indigenous clean energy projects to produce a report that provides a snapshot of Indigenous CE projects in Canada (Lumos Energy, 2017). The survey identified 152 medium-large scale (>1MW) ICE projects that are currently in operation, and their survey led to the identification of 1,200 small scale ICE projects in Canada, although the report focuses on the former. The report tells us that the norm in terms of Indigenous participation is for "Indigenous communities/partners to hold 25% of ownership in clean energy projects." MacArthur (2016) discusses energy co-

operatives in Canada, and contrasts this form of ownership of clean energy projects partnerships, noting both the "promise[s] and pitfall[s]" of the latter:

> Partnerships with organizations that have experience and funding access allow for the development of larger, more lucrative projects, and often a more streamlined process, since private partners tend to have development experience… but they also (in most cases) dilute the community control and return. Many are left hoping that "angel" development companies interested in their public profile will develop the projects and allow for increasing levels of community investment over the life of the project (Loring 2007; N. Meyer 2007). (pp. 161)

While this statement appears to have been made about community participation in renewable energy projects in general, it certainly applies to Indigenous participation as well.

Lumos Energy's report also tells us that most clean energy projects involving Indigenous participation have the following characteristics:

- Develop a renewable resource on traditional Indigenous territory
- Involve partnership with energy development companies or utilities
- Structures as a Limited Partnership
- Operate as an independent clean energy business
- Include at least one, and sometimes several [local Indigenous governments] as partners
- Sells power to provincial electricity systems/grids
- Often receives development support from the federal and provincial/territorial governments
- Is constructed through long-term commercial financing

(pp. 4)

6.3 Wyse and Hoicka's Research on LEPs

Wyse and Hoicka's (2019) research explore how Canadian LEPs enable or contribute to conditions for CE. The sampling frame was LEPs in communities within Canadian provinces and territories. Ultimately, the research was underpinned by a claim by QUEST, that 384 LEPs exist

across Canada, however 244 LEPs were identified and 77 were obtained. The location of the identified plans, the proportion of completed plans to plans under development, and the proportion of the plans that are for Indigenous communities versus non-Indigenous communities are most relevant in terms of the purposes of this paper. Of the 244 identified plans, Wyse and Hoicka found that 94 were still under development, 96 were complete, and 53 had unknown status. The majority (168) of the plans were Indigenous LEPs, and all of the plans Indigenous plans (identified and obtained) were for communities located in Ontario, British Columbia, and the Northwest Territories.

Section Seven: Data and Methods

According to the literature review, CE is defined in this paper as activities – including initiatives with a variety of functions such as generation, retail, distribution and demand – that involve a high degree of community participation, ownership and control, where collective benefits are shared throughout the community (Hoicka and MacArthur, 2018, pp. 6). The primary research question asks, "What are the Indigenous models of ownership and control of clean energy projects that exist in Canada as a means of exploring whether Indigenous participation in clean energy activities amounts to CE and contributes to reconciliation?" The paper parallels the models present in Indigenous communities in Canada with non-Indigenous communities in Canada. Some of the Indigenous participation seen in clean energy projects may be passive participation, while others may involve such high degrees of participation in and control over a given project that it would be classified as CE, and others may be somewhere in between. While models of ownership and their corresponding structures cannot provide a definitive answer about whether a given project amounts to CE, it can provide clues to what type of involvement has taken place in a particular project. Ultimately, many clean energy projects involving Indigenous participation exist in Canada with various forms of ownership and structures (Indigenous Clean Energy Social Enterprise, 2019; Hoicka and MacArthur, 2018) that are difficult to determine without significant additional research and analysis. It is likely, however, that those projects that meet the threshold of CE will make the best vehicles for reconciliation because the principles of CE and reconciliation align.

The sampling frame for this research is Indigenous LEPs and active projects in Canada. Relevant projects are not limited to generation; additional functions such as demand (e.g. "energy

efficiency retrofit programs and projects that influence energy use in local communities"), distribution systems (e.g. "district energy, micro-grids and traditional distribution systems"), and retail (e.g. electricity trading or bulk purchasing for resale") (Hoicka & MacArthur, 2018, pp. 164) were also considered. Three secondary datasets were explored. Primary data on the Indigenous groups (First Nations, Métis and Inuit) and community types (off-grid/remote and grid-connected) were collected for all three datasets. Data on the type of Indigenous group were collected through keyword searches using internet search engines. Data on the type of Indigenous communities were obtained by cross-referencing the Nation's name in the Government of Canada's 2011 report "Status of Remote/Off-Grid Communities in Canada" (which uses 2006 Statistics Canada Census data). We believe this is a complete dataset of Indigenous clean energy plans and medium-large scale (>1MW) clean energy projects (as well as some smaller-scale projects) in Canada that involve Indigenous participation. However, Lumos Energy's (2018) national survey has identified (but not yet produced publicly available data) on another 1,200 small-scale (<1MW) clean energy projects involving Indigenous participation.

In order to identify Indigenous clean energy projects and plans, a literature review was conducted to locate publicly available sources such as secondary datasets of projects and plans and studies involving primary and secondary datasets of projects and plans. One publicly available dataset produced by Indigenous Clean Energy Social Enterprise[16] (ICE) (2019) that focuses on 152 medium-large scale (>1MW) Indigenous clean energy projects in Canada was used and adapted. Only the 144 active projects were included in this study. Lumos Energy's 2017 report, "Powering Reconciliation: A Survey of Indigenous Participation in Canada's Growing Clean Energy Economy", analyzes the ICE data and is referenced in the discussion portion of this paper.

Another study by Hoicka and MacArthur (2018) that focused on non-Indigenous and Indigenous CE projects in Canada and New Zealand was also used. The operational status (complete, under development, stalled, etc.) of identified projects involving Indigenous participation were updated for the present study in 2018 so as to allow for inclusion of all currently active projects in the present study. The non-Indigenous projects are referenced in the present study as a basis for comparison. Since this study focused on a broad type of functions, projects that were not focused on supply/generation were coded as "other" in terms of energy source.

[16] Indigenous Clean Energy Social Enterprise is affiliated with Lumos Clean Energy Advisors.

Finally, a study by Wyse and Hoicka (2019), which explored both non-Indigenous and Indigenous LEPs in Canada was used. Data regarding the Indigenous plans and corresponding analysis of ownership/control of the plans were integrated into the present study.

Secondary research questions pertain to whether Indigenous clean energy projects constitute CE as per the definition adopted herein, and whether Indigenous participation in clean energy activities contributes to reconciliation. Based on information in the literature review regarding definitions and principles of CE and reconciliation, these questions are explored through an analysis of the number and location of Indigenous clean energy projects and plans, the models of ownership/control of the projects, the Indigenous groups involved as well as their corresponding community types, and the energy sources involved in the projects. For example, findings related to the models of ownership and control is a potential indicator of whether a given project is truly "by and for local people" (Wyse and Hoicka, 2019, pp. 5). Likewise, findings related to the models of ownership and control, Indigenous groups (First Nations, Métis and Inuit) and community types (off-grid/remote or grid-connected) involved in Indigenous clean energy activities are potential indicators of whether projects are truly advancing or contributing to reconciliation. This is to say that if the trend is for Indigenous groups to have low levels of control or participation in projects, if certain groups are not participating, and/or if few clean energy projects involve the communities that need them most (e.g. off-grid/remote communities), an adverse inference may be drawn in relation to their contribution to reconciliation.

Section Eight: Results

8.1 Projects: Quantity, Location, Indigenous Groups and Community Types

A total of 198 active clean energy projects involving Indigenous participation were identified. There were 144 projects identified in ICE's (2019) data, and 71 were identified in Hoicka and MacArthur's (2018) data. There was overlap between the two datasets of 17 active projects, thus resulting in the 198 total. The energy sources involved were hydro (48%), solar (21%), wind (17%), biomass (8%), other (e.g. geothermal, district energy, etc.) (6%) and projects that involved hybrids of more than one energy source such as solar and wind or wind and diesel (1%). While the functions (e.g. generation, retail, distribution, etc.) of the projects in Hoicka and

MacArthur's (2018) study varied, functions of the projects contained in the ICE (2019) dataset are unknown.

Most of the projects were located in British Columbia and Ontario (see *Figure 4* below). The most dominant type of energy project in British Columbia is hydro, whereas in Ontario, the majority of projects are solar. In the subsequent section, Table 1 shows the number of projects per province/territory and the number of projects involving a given energy source per region. In terms of the Indigenous groups involved in the projects, 191 involved First Nations, 0 involved Métis communities, 5 involved Inuit communities, and 2 involved mixed communities that have a majority Indigenous population consisting of Inuit, Métis and First Nations people. In terms of community type, 36 projects of projects involved remote/off-grid communities (18%), 160 projects involved grid-connected communities (81%) and 2 projects involved both remote/off-grid and

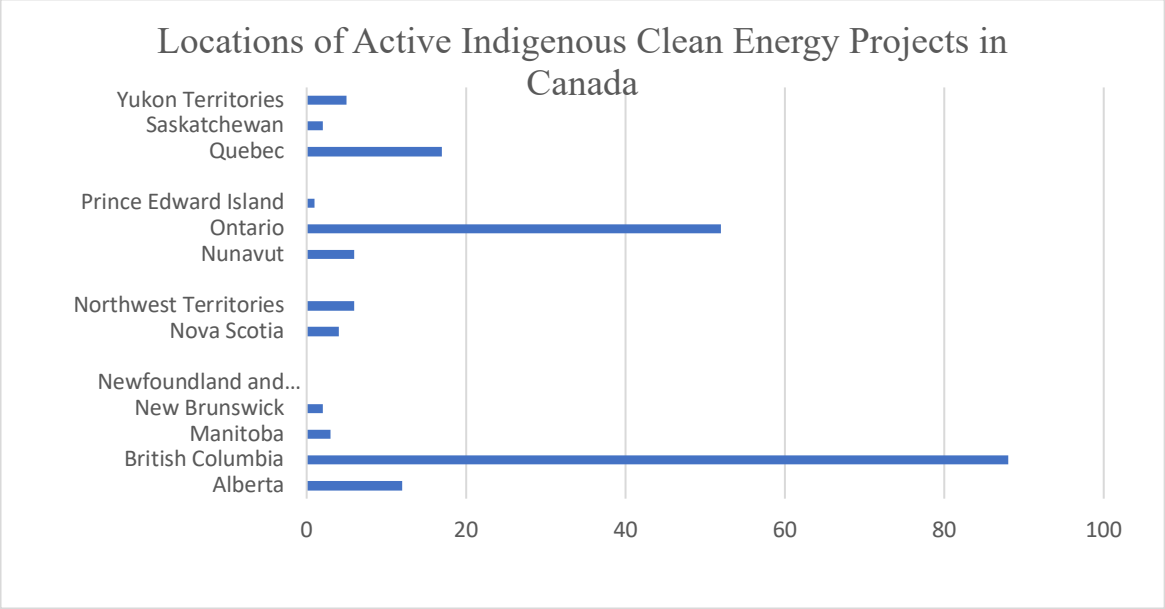

Figure 4: Active Indigenous clean energy projects in Canada by location based on data from Indigenous Clean Energy Social Enterprise (2018) and Hoicka and MacArthur (2018).

grid-connected communities (1%). Table 2 shows the number of projects per province/territory and the number of projects involving First Nations, Inuit and Métis per region and Table 3 shows the number of projects involving remote/off-grid and grid-connected communities per region.

8.2 Models of Ownership/Control and Corresponding Structures: Indigenous Clean Energy Social Enterprise Projects

Due to time constraints and limited information about the forms of ownership/control of the active Indigenous projects and corresponding structures being available in the ICE dataset, limited data on these points is presented in the current study. Notably, while the ICE dataset does contain information about the model of ownership of most of the 144 active projects explored in the present study, this information was not available for 5 projects. As will be discussed in further detail below, the dominant model of ownership is partnerships, and in terms of analysis, the structure of said partnerships is very important. Unfortunately, however, the ICE dataset only has information about the structure of 22 out of 133 identified partnerships. It is possible that more data regarding structures could be collected with keyword searches, but project information of this nature is not always publicly available.

The ICE's website (2019) notes that Indigenous involvement in the clean energy projects within their dataset ranges from Impacts and Benefits Agreements[17] to full ownership of projects. While each individual project and some corresponding information can be viewed on their "Indigenous Clean Energy Projects" map (ICE, 2019), limited information about ownership models and structures is available. Lumos Clean Energy Advisors' report "Powering Reconciliation" describes this data and notes that the majority of the projects involve "partnerships with energy development companies or utilities", and "at least one, and sometimes several Indigenous partners" (pp. 4).

When viewing the projects on the map, there is a subheading for every project titled "partner". Of the 144 active projects:

- 98 projects have one or more organization(s) (often utility companies) listed as a partner.

[17] Impacts and Benefits Agreements are contractual agreements that are often negotiated between natural resource development companies and Indigenous groups regarding a proposed development project. Impacts and Benefits Agreements usually entail acknowledgment from the industry proponent of the potential adverse impacts on Indigenous rights and interests that may ensue from the project, along with the negotiated benefits the that the Indigenous group will receive, in order to secure the support of the community for the project. (OKT, 2018, pp. 390-391)

- 30 projects have a limited partnership between at least one Indigenous organization and another non-Indigenous organization (e.g. “Bear Hydro Limited Partnership”)
- 6 projects may be 100% owned by an Indigenous government (the Indigenous group involved in the project is also listed under the “partner” subheading within the entry, which likely indicates that the respective Indigenous communities own 100% of the projects)
- 5 projects list both at least one Indigenous government and an organization (e.g. such as a utility company) under the “partner” subheading
- 5 projects do not contain information regarding the ownership model

A total of 22 of the 144 ICE projects have a description of the structure of the ownership model. A company named AltaGas owns 100% of 2 projects, and 97.3% of a third project, leaving a maximum of 2.7% for the Indigenous community. There are an additional 9 projects where 100% of ownership is divided amongst two or more companies. In some instances, it appears that this may mean the Indigenous community does not own any of the project (e.g. 1 project is owned by TransAlta (83%) and Natural Forces Technologies Inc. (17%), whereas in some cases, it is not clear if an organization similar to but named differently than a limited partnership has been formed between the Indigenous group(s) and the involved companies. For example, 1 project is owned by Innergex Inc. (50%) and Harrison Hydro Project (50%) – it is not clear whether “Harrison Hydro Project” is an organization/entity such as or similar to a Limited Partnership, whereby the Indigenous group and Innergex Inc. may have formed a separate organization and to some extent, are sharing the 50% profit.

A total of 6 projects reference the portion of Indigenous ownership and the corporate ownership. The Canoe Creek Hydro Project in British Columbia the Tla-o-qui-aht First Nation, which owns 75% of the project, whereas their corporate partner owns 25%. The Kwoiek Creek Hydro Project is a joint venture (50/50 ownership) between 7 First Nations and a corporate partner. The Ehattesaht Tribe (First Nation) owns 20% of the Barr Creek Hydro Project in British Columbia, and their corporate partner owns 80%. The Umbata Falls Limited Partnership owns 51% of the Umbata Falls Hydroelectric Project in Ontario, and their corporate partner owns 49%. Northland Power, a utility company, owns 50% of The Grand Bend Wind Farm in Ontario, and another organization (ecoENERGY) and Giiwedin Noodin First Nation Energy Corporation

(comprised of the Aamjiwnaang and Bkejwanong First Nations) own an unspecified amount. Finally, the Wawatay Station Hydroelectric Project (Black River) was developed with a corporate partner and involves the Ojibways of the Pic River First Nation in Ontario. No figures are presented; the data merely tells us that the First Nation owns a minority.

Finally, there are an additional 4 projects where the percentage owned by one or corporations, which does not equate to a full 100%, is noted. This may indicate that the remaining amount is owned by the Indigenous Nation(s).

8.3 Models of Ownership/Control and Corresponding Structures: Hoicka and MacArthur's Projects

Due to time constraints and limited information about the forms of ownership/control of the active Indigenous projects and corresponding structures being present in the Hoicka and MacArthur's dataset, minimal information regarding models of ownership of the 54 Indigenous projects in Canada is included in the present study. Of the 54 active projects (which excludes the 17 that overlapped with the ICE data), the dataset only contained ownership/control information for 3 projects, and no information about their structure was included. It is possible that more data regarding structures could be collected with keyword searches, but project information of this nature is not always publicly available.

There is 1 project in the Northwest Territories that has a single utility company listed as a partner, 1 project (located in Ontario) where both a First Nation and two corporations are noted as being involved, and 1 wind project (located in Ontario) is an energy co-operative – the only energy co-operative to be identified among the 198 active projects. The vast majority (51 projects) do not have information about forms of ownership/control noted. Finally, none of the 54 active projects (again, this excludes the 17 projects that overlapped with the ICE data) has a description of the structure of the ownership model.

8.4 Project Tables

Province/Territory	Total Number of Active Projects	Biomass Projects	Hydro Projects	Solar Projects	Wind Projects	Other Projects	Hybrid Projects (solar/wind, wind/diesel)
Alberta	12	0	2	4	1	4	1
British Columbia	88	11	60	5	7	5	0
Manitoba	3	0	2	0	1	0	0
New Brunswick	2	0	0	0	2	0	0
Newfoundland and Labrador	0	0	0	0	0	0	0
Nova Scotia	4	0	0	1	3	0	0
Northwest Territories	6	1	1	4	0	0	0
Nunavut	6	0	0	4	0	2	0
Ontario	52	1	15	21	14	1	0
Prince Edward Island	1	0	0	1	0	0	0
Quebec	17	1	12	0	4	0	0
Saskatchewan	2	0	0	1	1	0	0
Yukon Territories	5	1	3	0	0	0	1

Table 1: Active Indigenous clean energy projects in Canada by number and energy source, per province/territory based on data from Indigenous Clean Energy Social Enterprise (2018) and Hoicka and MacArthur (2018).

Province/Territory	Projects	First Nations	Métis	Inuit	Mixed Communities (Majority Indigenous: Inuit, First Nations and Métis)
Alberta	12	12	0	0	0
British Columbia	88	88	0	0	
Manitoba	3	3	0	0	0
New Brunswick	2	2	0	0	0
Newfoundland and Labrador	0	0	0	0	0
Nova Scotia	4	4	0	0	0
Northwest Territories	6	5	0	1	0
Nunavut	6	0	0	4	2
Ontario	52	52	0	0	0
Prince Edward Island	1	1	0	0	0
Quebec	17	17	0	0	0
Saskatchewan	2	2	0	0	0
Yukon Territories	5	5	0	0	0

Table 2: Active Indigenous clean energy projects in Canada involving First Nations, Inuit and Métis communities per province/territory.

Province/Territory	Projects	Off-grid/Remote Communities	Grid-connected Communities	Off-grid and Grid-Connected Communities
Alberta	12	0	12	0
British Columbia	88	17	70	1
Manitoba	3	1	2	0
New Brunswick	2	0	2	0
Newfoundland and Labrador	0	0	0	0
Nova Scotia	4	0	4	0
Northwest Territories	6	2	4	0
Nunavut	6	6	0	0
Ontario	52	7	45	0
Prince Edward Island	1	0	1	0
Quebec	17	0	16	1
Saskatchewan	2	0	2	0
Yukon Territories	5	3	2	0

Table 3: Active Indigenous clean energy projects in Canada by community type (remote/off-grid, grid-connected or a combination of the two) per province/territory.

8.5 Plans

A total of 167 Indigenous LEPs were identified by Wyse and Hoicka (2019). Their research sought to obtain as many of the plans as possible for analysis, however only 10 Indigenous plans were able to be obtained.

All of the identified Indigenous plans were from either Ontario (100 plans), British Columbia (37 plans) or the Northwest Territories (30 plans). In terms of the Indigenous groups involved, 152 plans were for First Nations communities, 0 were for Métis communities, 5 were for Inuit communities. There were also a small number of plans for mixed communities where Indigenous groups constitute a majority: 4 for communities with First Nations and Métis residents; 5 for communities with First Nations, Inuit, Métis and non-Indigenous residents; and 1 for a

community with First Nations and non-Indigenous residents. All of the plans located in Ontario and British Columbia involved First Nations communities, whereas all of the Inuit and mixed community plans were located in the Northwest Territories.

In terms of community type, 45 plans were for remote/off-grid communities (27%), and 122 were for grid-connected communities (73%). Most plans involving remote/off-grid communities were located in the Northwest Territories (60%), Ontario (31%) and lastly, British Columbia (9%). *Figure 5* (below) shows the percentage of Indigenous LEPs in Canada by Indigenous group and *Table 4* (below) shows the group and community types by province/territory.

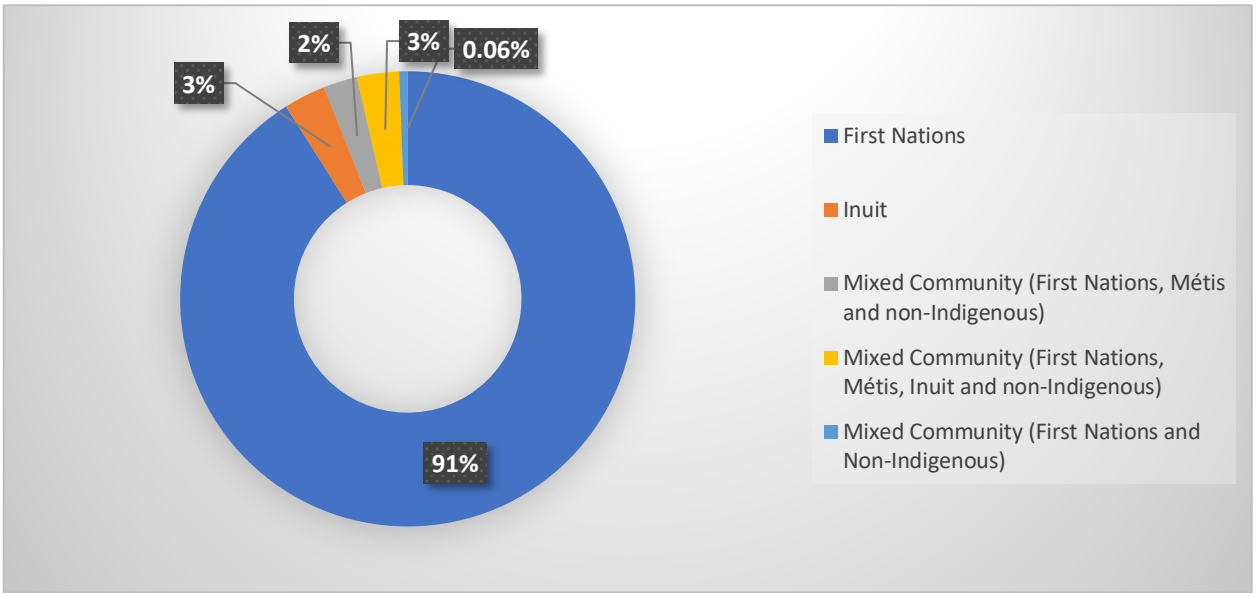

Figure 5: Indigenous local energy plans in Canada by group

8.5 Plan Tables

Province/Territory	Number of Plans	First Nations Plans	Métis Plans	Inuit Plans	Mixed Community (First Nations, Métis and non-Indigenous)	Mixed Community (First Nations, Métis, Inuit and non-Indigenous)	Mixed Community (First Nations and Non-Indigenous)	Off-grid/Remote Communities	Grid-connected Communities
Alberta	0	0	0	0	0	0	0	0	0
British Columbia	37	37	0	0	0	0	0	4	33
Manitoba	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0
Northwest Territories	30	15	0	5	4	5	1	27	3
Nunavut	0	0	0	0	0	0	0	0	0
Ontario	100	100	0	0	0	0	0	14	86
Prince Edward Island	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0
Saskatchewan	0	0	0	0	0	0	0	0	0
Yukon Territories	0	0	0	0	0	0	0	0	0

Table 4: Indigenous local energy plans in Canada by group and community types per province/territory

Section Nine: Discussion

9.1 Ownership/Control of Indigenous Clean Energy Projects

The main finding regarding the forms of ownership is that there are many clean energy projects involving Indigenous participation in Canada with various forms of ownership and structures (Indigenous Clean Energy Social Enterprise, 2019; Hoicka and MacArthur, 2018) that are difficult to determine without exhaustive research. As was discussed in the preceding section, although the ICE data for each project includes a subheading titled “partner”, there are projects included that have forms of ownership other than partnerships. A small number of projects may be fully owned by Indigenous Nations and a small number appear to be joint ventures (50/50). Additionally, in some instances, Indigenous groups appear not to own any of a given project and so their involvement and the prospective benefits they would receive from being involved in such a project are unclear. ICE’s website discusses the range of Indigenous involvement in clean energy

projects briefly and references Impacts and Benefits Agreements. There was no mention of Impacts and Benefits Agreements in the ICE data, but so it is very unclear how commonly these were used. It is possible, however, that in instances where an Indigenous group does not own a portion of the project that there is an Impacts and Benefits Agreements in place that outlines some sort of economic benefit to the community. Finally, as was identified in the literature, Henderson (2016), who is the founder and President of Lumos Clean Energy Advisors which is the parent organization of ICE, discusses the use of community trusts as a body to store revenue, dividends and royalties from projects. There were no mention community trusts in the ICE dataset, although they may have been used in some of the projects.

That said, while there is some uncertainty around the models of ownerships/structure of the identified 198 Indigenous clean energy projects in Canada, the majority (144 projects) were identified through ICE, and Lumos Clean Energy Advisors states that the norm in terms of Indigenous participation is for "Indigenous communities/partners to hold 25% of ownership in clean energy projects" (2018, pp. 4). Likewise, two of the three projects from Hoicka and MacArthur's data that have ownership information are partnerships. That said, it is likely that the majority of the 198 projects explored in this study involve partnerships – but the structure of these partnerships and the frequency with which Impacts and Benefits Agreements and/or community trusts are used is largely unknown.

Some additional areas where clarification is needed pertains to the structure of limited partnerships between Indigenous communities and corporations. For example, the Umbata Falls Limited Partnership owns a majority (51%) of the Umbata Falls Hydroelectric Project in Ontario, and their corporate partner owns 49%. However, since the limited partnership is comprised of both the Indigenous Nation(s) and likely the corporate partner, it is unclear how much of the 51% is truly owned by the Indigenous community. It is possible that the corporate partner owns 49% in addition to a given amount of the 51% owned by the limited partnership, which makes it unclear whether the Indigenous community actually owns a majority of this project.

9.2 Project Comparisons to Non-Indigenous clean energy projects in Canada

In terms of generation, there are significant differences between the non-Indigenous projects seen in Hoicka and MacArthur's research and the Indigenous projects from both their data

and the ICE data. It is important to note that in Hoicka and MacArthur's research, 5% of projects were found to have Indigenous involvement and these projects were still included in the generation analysis, thus the data deemed "non-Indigenous" which being used in this section as a basis of comparison with respect to generation does include a small number of Indigenous projects.

For non-Indigenous communities in Canada, the most common type of generation is a mixture. Following this are solar and biomass projects. For Indigenous communities in Canada, the most common type of generation is hydro – which comprises nearly half of the 198 Indigenous clean energy projects explored in the present study. We see the same percentage (21%) of solar projects, but unlike for non-Indigenous communities, wind projects are the third most common type, and biomass follows this. *Figures 6* and *7* show the percentage of the both Indigenous and non-Indigenous projects.

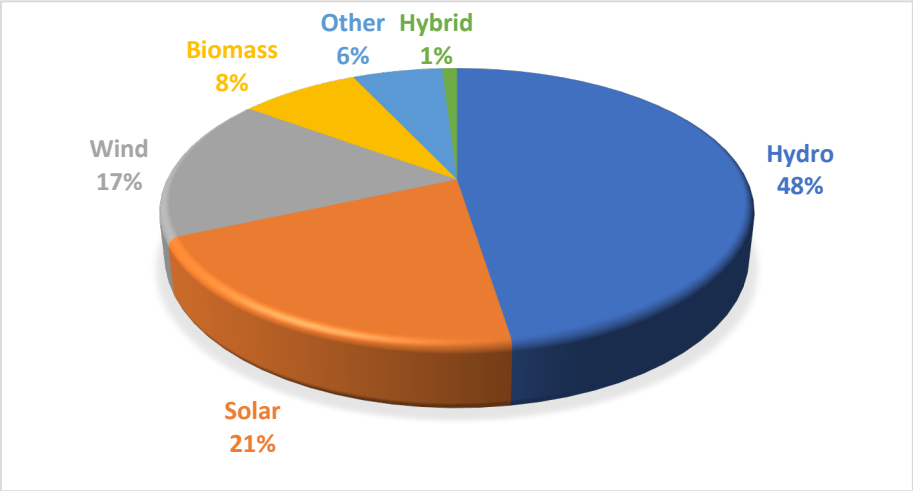

Figure 6: Active Indigenous clean energy projects in Canada by energy source

Perhaps the most interesting comparison between Indigenous and non-Indigenous projects is with respect to the forms of ownership. As was mentioned in the literature review, the most common type of ownership/control over non-Indigenous projects are municipal ownership, energy co-operatives and community associations. Partnerships and joint ventures only accounted for only 6%. Contrarily, although we cannot say this with absolute certainty, it is likely that the most common form of ownership over Indigenous clean energy projects in Canada is partnerships (50/50 joint ventures are expected to be less common given the small number listed in the ICE data). Similarly, small numbers of other models of ownership such as joint ventures and 100% Indigenous ownership appeared in the ICE data, such that it is difficult to predict which form is likely to second and third most common among Indigenous plans. It appears, however, that energy co-operatives will likely be least common given that only 1 was identified in all of the 198 projects.

Full ownership of an energy project (whether by local government or by members of a community through a co-operative) likely results in higher degrees of community participation in and control over said project. As a result of this control and ownership, it is quite possible that these models of ownership may ensure communities receive the maximum amount of benefits from a project. For example, it can be said that the greater control a community has, the more likely it may be that the project will be tailored to the needs of the specific community. Moreover, benefits such as own-source revenue can be maximized, and any jobs/training opportunities created can potentially be kept entirely within the community as well. Partnerships may afford Indigenous nations some of these benefits as well, but it would likely be something that must be negotiated which is why it is more likely that community benefits may be maximized with 100% Indigenous ownership (whether through Indigenous government ownership or an energy co-operative). That said, it is interesting that there appear to be so few projects that are fully owned by Indigenous Nations and energy co-operatives. It is unclear why this is the case. Have Indigenous communities rejected these models of ownership, or are there barriers that make it implausible or too difficult to have full ownership or co-operative ownership? These are questions that are beyond the scope of the present paper but could be explored in future research.

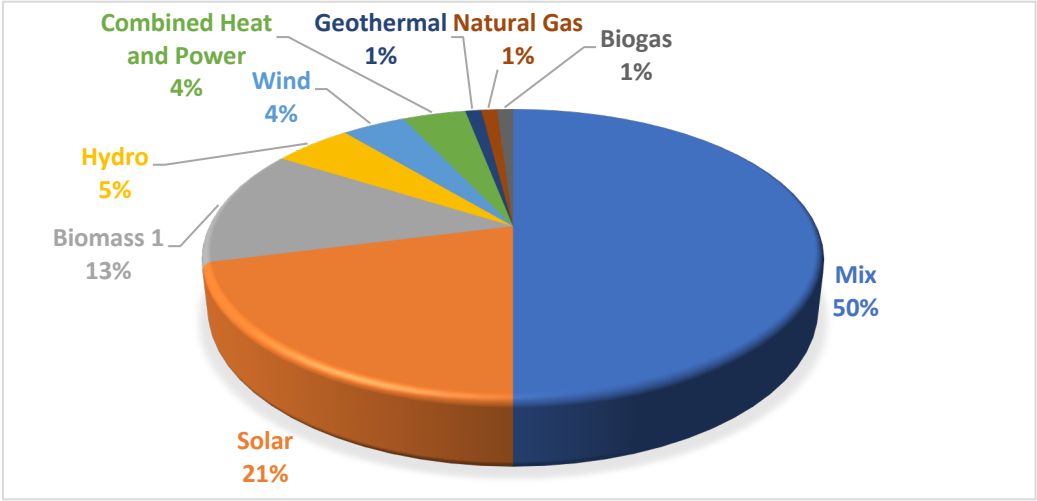

Figure 7: Active clean energy projects in Canada based on Hoicka and MacArthur, (2018). The majority of these projects involve non-Indigenous communities (5 % involve Indigenous communities and what energy sources were involved in projects involving Indigenous communities was not explored in this study).

9.3 Projects and Plans: Indigenous Groups, Community Types, Reconciliation and Community Energy

Two significant findings of this study pertain to the lack of projects and plans involving remote/off-grid communities and the limited Inuit and almost complete absence of Métis involvement. One of the secondary research questions of this study relates to whether Indigenous renewable energy projects are contributing to reconciliation. It should be noted that reconciliation, as previously discussed, concerns all three major Indigenous groups in Canada, and so the limited/lack of participation from Inuit and Métis communities in Canada certainly casts doubt on the notion that in a macro sense, Indigenous involvement in clean energy projects is contributing to reconciliation. While the majority of Indigenous communities in Canada are First Nations communities so one would expect to see more engagement from this group than the others, only 3% of plans and 3% of projects involving Inuit communities and 0% of both plans and projects involving Métis-only communities are low figures.

Among the three Indigenous groups, the Métis appear to have the most limited legislated land bases as per the literature. To reiterate, while there are Métis communities in present day, with the exception of some settlements in Alberta, these communities are not located on legislated lands similar to reserves. This coupled with the lack of government recognition and documentation of modern Métis communities (in a geographic sense), may help to explain the lack of Métis participation in clean energy projects. However, it is interesting that not a single project or plan for the Alberta Métis communities that do have legislated lands was identified.

Also important in the context of reconciliation is whether clean energy activities are reaching the Indigenous communities that need it most – that being, remote/off-grid communities (Stefanelli et al., 2018). As per the literature, these communities are faced with "high and often fluctuating costs of energy" and may struggle to promote "sustainable development that balances consideration for environmental, social and economic well-being" (Indigenous and Northern Affairs, 2016). That said, it is troubling that remote/off-grid Indigenous communities have fairly low engagement in both the plans (27%) and projects (18%).

9.4 Community Energy and Reconciliation

There are various ownership models (mostly in a non-Indigenous context) that are present in the literature, such as: municipal government ownership, co-operatives, community trusts, community associations, charities, Indigenous trusts and co-operatives, and partnerships and joint ventures (Hoicka and MacArthur, 2018, pp. 166). Many of these models can apply in an Indigenous context as well. For example, 6 projects were identified in this study that are likely 100% First Nations-owned (e.g. owned by the local First Nations Government, which in most cases will consist of Chief and Council because the majority of First Nations bands still follow the *Indian Act* model of governance (Government of Canada, 2018c). This model of ownership can be described as the Indigenous counterpart to non-Indigenous municipal government ownership of a clean energy project.

Some of these models will be more conducive to CE than others. For example, one can imagine how full Indigenous Band Council ownership or an energy co-operative among First Nations band members would allow for a higher degree of control over and participation in an energy project than, say, a partnership where an Indigenous nation owns a small minority share of a project. Likewise, projects that may not amount to CE could, on the opposite end of the scale, amount to passive participation of Indigenous communities, or something in between the two. This paper.

It should also be noted that because of the elements of colonialism that are embedded within the dominant form of governance in most First Nations communities which are still using the governance model required in the *Indian Act* (Indigenous and Northern Affairs Canada, 2010), and because of the variations of self- governance models that were negotiated for among First Nations, Métis and Inuit communities (Government of Canada, 2018c; Graham, 2007; OKT, 2018), it can be said that Indigenous forms of governance cannot be assumed to be conducive to CE. That is to say, it is unclear how much community support or community participation/control a given nation has over a particular energy project, even when fully Indigenous-owned. For example, since First Nations that are using the *Indian Act* model of governance have band councils that are allowed to make various decisions without input from the community, it is possible that the presence of an energy project in such a community may not necessarily be representative of

what the majority of the community wanted. Both this and the degree of participation among community members can vary from project to project.

Based on the literature that explores CE, it appears that the more a given project is truly "by and for local people" – that is, the extent to which the community participates in and has control over a project, the more said project may be in keeping with principles of reconciliation. Projects that increase capacity in communities, projects that are led by Indigenous Nations rather than being perpetuated onto them in a patriarchal manner, and projects that contribute to self-determination (including by maximizing economic benefits thus contributing to a Nation's pursuit of own-source revenue) are helping to fulfill principles of UNDRIP and of the TRC's 92nd call to action.

That said, it can be difficult to identify which partnership structures are and are not conducive to CE. Each project likely needs to be assessed individually as it is possible for Indigenous nations to negotiate various benefits and roles in the project even when owning minority shares of a project. Nevertheless, the model of ownership and corresponding structure can give us important clues about whether a project may be likely to be classified as CE.

The results from this study, particularly regarding ownership models, are somewhat concerning in the context of reconciliation. If the norm is for partnerships that are structured such that Indigenous Nations tend to own 25% on average (Lumos Energy, 2017), then whether the majority of Indigenous clean energy projects in Canada are CE is questionable as they may not involve high degrees of participation and control over a project, although this cannot be deduced purely from identifying the ownership model and its structure. Again, those projects that are CE will be ideal vehicles for reconciliation.

The level of control a Nation may have with 25% ownership is unclear, and I suspect it may vary depending on the project and the corporate partners. Perhaps in some cases 25% ownership does allow for a high degree of participation and control over a project. In others, 25% or less may result in extremely limited control/participation. In the latter case, it is possible that Indigenous participation in clean energy projects are stifled by what may feel like a perpetuation of colonialism and patriarchy. Indeed, a case-by-case analysis is warranted. To reiterate a previous point by MacArthur (2016):

> Partnerships with organizations that have experience and funding access allow for the development of larger, more lucrative projects, and often a more streamlined process, since private partners tend to have development experience… but they also (in most cases) dilute the community control and return. Many are left hoping that "angel" development companies interested in their public profile will develop the projects and allow for increasing levels of community investment over the life of the project (Loring 2007; N. Meyer 2007). (pp. 161)

Additionally, on the latter point, there is no mention within the ICE (2019) or Hoicka and MacArthur's (2018) dataset, as to whether any of the projects were developed in such a manner to allow for larger portions of community investment over time. It is possible that some of the projects in the datasets explored in this study may involve this type of arrangement.

As was noted previously, an important feature of CE pertains to the location of the project. If the project is located in or nearby the involved Indigenous community (in addition to other factors), it may be more likely that a given project is actually intended to serve said community. However, Lumos Energy's finding that most projects are located on traditional lands warrants further exploration in that it may mean that the trend is for the projects not to be located in currently existing Indigenous communities, since many modern-day Indigenous communities are either not located on their traditional lands or are located on small fragments of their traditional lands. If this were to be the case, it too casts doubt on whether these projects can be categorized as CE and whether they can be said to be meaningfully contributing to reconciliation.

This is not to say that the existing projects are bad; contrarily, as noted by Stefanelli et al. (2018), each project ought to be analyzed individually, and many may have positive results such as the creation of own-source revenue for an Indigenous community that would not otherwise exist, job creation, and a reduction in fossil-fuel reliance. Moreover, the experience a Nation gains from participating in a clean energy project (even if it does not reach the threshold of CE) can be invaluable and may help the community build capacity, which can result in a Nation embarking in future clean energy endeavors in the future – and possibly having a greater degree of participation in and control over future projects. Indeed, many communities may be lacking the capacity (whether financial and/or skills-based) that is necessary to develop a clean energy project independently, or that will be majority-owned by the Nation. If the appetite for risk is lacking as a

result, then the partnerships that are so common in the data explored in this paper may still represent the will of the community. That said, it is indeed possible for these projects that may not amount to CE to still contribute to reconciliation, but the closer to CE they get, the more they can be said to contribute to this end. However, cautious optimism is warranted: the sentiment contained in Stefanelli et al. (2018) is echoed here in that Indigenous involvement in clean energy projects should not be presumed to be inherently good or automatically contributing to reconciliation.

Conclusions

This paper has explored Indigenous participation in clean energy activities (both projects and plans) in Canada. Specifically, it sought to answer the question "What are the Indigenous models of ownership and control of clean energy projects that exist in Canada as a means of exploring whether Indigenous participation in clean energy activities amounts to CE and contributes to reconciliation?" The paper paralleled the models present in Indigenous communities in Canada with non-Indigenous communities in Canada. There are four main findings. First, many clean energy projects involving Indigenous participation exist in Canada with various forms of ownership and structures (Indigenous Clean Energy Social Enterprise, 2019; Hoicka and MacArthur, 2018) that are difficult to determine without exhaustive research. Second, it is likely that the dominant model of ownership (particularly for projects that are >1MW) is partnerships. Third, the model of ownerships present in non-Indigenous communities (full municipal ownership and co-operatives were the most common) differs greatly from that of Indigenous communities, which appear to be almost exclusively comprised of partnerships with various structures. However, Lumos Energy (2018) notes that on average, the structure is such that Indigenous communities own a minority around 25%. Lastly, while there are many benefits to Indigenous involvement in clean energy activities, the dominance of partnerships with minority Indigenous ownership is concerning and may mean that the majority of projects explored in this paper do not amount to CE. As has been previously discussed, the principles of CE and reconciliation align such that those projects that do meet the threshold for CE are likely ideal vehicles for reconciliation.

This study has consolidated secondary datasets to create a list of clean energy plans and projects in Canada that involve Indigenous participation, focusing on medium-large scale (>1MW) projects. An exploration of the data has shown that the plans are limited to British Columbia, Ontario and the Northwest Territories, and that the majority of the projects are located in British

Columbia, Ontario, and Québec. Overall with respect to both plans and projects, the involvement of Indigenous communities was largely limited to First Nations, and mostly grid-connected communities.

However, there is yet to be any research on the forms of ownership or control of Indigenous energy activities in Canada, nor is there a consolidated list of Indigenous clean energy activities in Canada in addition to an exploration of the Indigenous groups (e.g. First Nations, Métis, and Inuit) and the types of Indigenous communities (off-grid/remote and grid-connected communities) involved. Additionally, there has not been an exploration of whether the Indigenous renewable energy activities in Canada constitute the aforementioned definition of CE, or how projects that can be categorized as CE in this sense may be contributing to reconciliation.

The main limitation of this research is the lack of exploration of forms of ownership/control and corresponding ownership structures of the Indigenous clean energy projects. Future research could complete this task and quantify the results for greater certainty of the most common forms of ownership and structures. Another potential limitation of this study pertains to the completion rates and sparse information pertaining to project completion. Lumos Energy alone expects that another 50-60 medium-large scale (>1MW) projects involving Indigenous participation will become active over the next 5-6 years (Lumos Energy, 2017, pp. 3). While it is certainly a good thing that more clean energy projects are becoming active every year in Canada, it also renders the results of a given study perpetually out-of-date, and because it can be so difficult to locate information about Indigenous clean energy projects in general, confirming the operational status of a given project can be difficult and time-consuming. Future research might also consider expanding the search of clean energy projects in Canada to include more small-scale (<1MW) projects, as Lumos Energy identified the existence of another 1,200 projects in their national survey (Lumos Energy, 2017).

Future research could also explore the functions of the Indigenous clean energy projects and compare them to the non-Indigenous data in Hoicka and MacArthur's study, in addition to the location of the projects to help assess whether the project is intended to serve the involved Indigenous Nation(s). Additional research is also needed to help explain the lack of participation among Inuit, Métis and remote/off-grid communities in Canada, so that strategies to increase participation can be developed and implemented in the future.

Bibliography

Alberta (Aboriginal Affairs and Northern Development) v. Cunningham, 2011 SCC 37. Retrieved from: https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/7952/index.do

Âpihtawikosisân (Chelsea Vowel). (2011a, December 3). First Nations taxation. *Âpihtawikosisân. Law. Language. Culture.* Retrieved from: https://apihtawikosisan.wordpress.com/2011/12/03/first-nations-taxation/

Âpihtawikosisân (Chelsea Vowel). (2011b, December 14). Got Status? Indian Status in Canada, sort of explained. *Âpihtawikosisân. Law. Language. Culture.* Retrieved from: https://apihtawikosisan.com/2011/12/got-status-indian-status-in-canada-sort-of-explained/

Assembly of First Nations. (2019). "About AFN". Retrieved from: http://www.afn.ca/description-of-the-afn/

Barrington-Leigh, Christopher, & Ouliaris, M. (2016). The renewable energy landscape in Canada: a spatial analysis. *Renewable & Sustainable Energy Reviews.* http://doi.org/10.1016/j.rser.2016.11.061

Barron's Canadian Law Dictionary, 6th ed. (2019). *sub verbo* "fee simple". Retrieved from: http://www.lexisnexis.com/ca/legal/results/docview/docview.do?docLinkInd=true&risb=21_T28501973468&format=GNBFULL&sort=RELEVANCE&startDocNo=1&resultsUrlKey=29_T28501973471&cisb=22_T28501973470&treeMax=true&treeWidth=0&csi=327825&docNo=8

Becklumb, P. (2013). *Federal and Provincial Jurisdiction to Regulate Environmental Issues*. Economics, Resources and International Affairs Division. Retrieved from: https://lop.parl.ca/staticfiles/PublicWebsite/Home/ResearchPublications/BackgroundPapers/PDF/2013-86-e.pdf

Boothe, P., & Boudreault, F-A. (2016). *By The Numbers: Canadian GHG Emissions.* Lawrence National Centre for Policy Management, Ivey Business School at Western University. Retrieved from: https://www.ivey.uwo.ca/cmsmedia/2112500/4462-ghg-emissions-report-v03f.pdf

Borrows, J. and Tully, J. (2018). Introduction, Reconciliation and Resurgence in Practice and in Question. In Asch, M., Borrows, J., and Tully, J. (Eds.), *Resurgence and Reconciliation: Indigenous-settler Relations and Earth Teachings* (pp. 10-23). Toronto: University of Toronto Press.

Constitution Act, 1982, being Schedule B to the Canada Act 1982 (UK), 1982, c11. Retrieved from: https://laws-lois.justice.gc.ca/eng/const/

Crey, K., & Hanson, E. (2009). Indian Status. *Indigenous Foundations.* First Nations Studies Program. Retrieved from: https://indigenousfoundations.arts.ubc.ca/indian_status/

Environment and Climate Change Canada. (2017). *Canadian Environmental Sustainability Indicators: Global greenhouse gas emissions*. Retrieved from: https://www.canada.ca/content/dam/eccc/migration/main/indicateurs-indicators/54c061b5-44f7-4a93-a3ec-5f8b253a7235/globalghgemissions_en.pdf

Daniels v. Canada (Indian Affairs and Northern Development), 2016 SCC 12, [2016] 1 S.C.R. 99. Retrieved from: https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/15858/index.do

Delgamuukw v. British Columbia, [1997] 3 SCR 1010. Retrieved from: https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/1569/index.do

Furi, M., & Wherrett, J. (1996). *Indian Status and Band Membership Issues.* Political and Social Affairs Division. Retrieved from: http://publications.gc.ca/Collection-R/LoPBdP/BP/bp410-e.htm

Government of Alberta. (1995). "The Metis Settlements of Alberta". Retrieved from: http://www.mslr.gov.ab.ca/map.asp

Government of Alberta. (2019). "About Metis Settlements. Initiatives that support effective governance, enhanced accountability and long-term sustainability". Retrieved from: https://www.alberta.ca/about-metis-settlements.aspx?utm_source=redirector

Government of Canada. (2010). "Treaty Rights". Retrieved from: https://www.aadnc-aandc.gc.ca/eng/1100100028602/1100100028603

Government of Canada. (2011). *Status of Remote/Off-Grid Communities in Canada*. Retrieved from: https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/canmetenergy/files/pubs/2013-118_en.pdf

Government of Canada. (2017a). "First Nations". Retrieved from: https://www.rcaanc-cirnac.gc.ca/eng/1100100013791/1535470872302

Government of Canada. (2017c). "Métis and Non-Status Indians". Retrieved from: https://www.aadnc-aandc.gc.ca/eng/1100100014271/1100100014275

Government of Canada. (2018a). "About band membership and how to transfer or create a band". Retrieved from: https://www.aadnc-aandc.gc.ca/eng/1100100032469/1100100032470

Government of Canada. (2018b). "Inuit". Retrieved from: https://www.rcaanc-cirnac.gc.ca/eng/1100100014187/1534785248701

Government of Canada. (2018c). "Self-government". Retrieved from: https://www.rcaanc-cirnac.gc.ca/eng/1100100032275/1529354547314

Hanson, E. (2009). "Reserves". Retrieved from: https://indigenousfoundations.arts.ubc.ca/reserves/

Henderson, C. (2013). *Aboriginal Power: Clean Energy & the Future of Canada's First Peoples*. Erin, Ont.: Rainforest Editions

Henderson, W.B., & Bell, C. (2006). Rights of Indigenous Peoples in Canada. In *The Canadian Encyclopedia.* Retrieved from: https://www.thecanadianencyclopedia.ca/en/article/aboriginal-rights

Hunter-Loubert, H. (2016). *Indigenous Renewable Energy Literature Review*. Unpublished literature review, Faculty of Social Work, University of Calgary.

Hoicka, C.E. & MacArthur, J.L. (2018). From Tip to Toes: Mapping Community Energy Models in Canada and New Zealand, *Energy Policy, 121*:162-174. Retrieved https://doi.org/10.1016/j.enpol.2018.06.002

Imai, S. (2007). *The Structure of the Indian Act: Accountability in Governance.* National Centre for First Nations Governance. Retrieved from: http://fngovernance.org/ncfng_research/shin_imai.pdf

Indian Act, Revised Statutes of Canada (1985, c. I-5). Retrieved from the Justice Laws website: https://laws-lois.justice.gc.ca/PDF/I-5.pdf

Indigenous and Northern Affairs Canada. (2010). *Differences between Self-Governing First Nations and Indian Act Bands.* Retrieved from: https://www.aadnc-aandc.gc.ca/eng/1100100028429/1100100028430

Indigenous and Northern Affairs. (2016, June 7). *Climate Change.* Government of Canada. Retrieved from: http://www.aadncaandc.gc.ca/eng/1100100034249/1100100034253?utm_source=climate&utm_medium=url

Indigenous Clean Energy Social Enterprise (ICE). (2019). Indigenous Clean Energy Projects. Retrieved from *Indigenous Clean Energy* online: https://indigenouscleanenergy.com/ice-projects/

Indigenous Corporate Training Inc. (2015, March 6). 8 First Nation reserve FAQs. *Indigenous Corporate Training Inc. Working Effectively with Indigenous Peoples.* Retrieved from: https://www.ictinc.ca/blog/8-first-nation-reserve-faqs

Isaac, T. (2016). *A Matter of National and Constitutional Import: Report of the Minister's*

Special Representative on Reconciliation with Métis: Section 35 Métis Rights and the Manitoba Metis Federation Decision. Retrieved from: http://publications.gc.ca/collections/collection_2016/aanc-inac/R5-123-2016-eng.pdf

IPCC. (2018). Summary for Policymakers. In *Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P. R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)]. World Meteorological Organization, Geneva, Switzerland, 32 pp. Retrieved from: https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/SR15_SPM_High_Res.pdf

Jai, J. (2017). Bargains Made in Bad Times: How Principles from Modern Treaties Can Reinvigorate Historic Treaties. In "Canada's Colonial Constitution" in John Borrows and Michael Coyle, *The Right Relationship: Reimagining the Implementation of Historic Treaties*. Toronto: University of Toronto Press.

Karanasios, K., & Parker, P. (2016). Recent Developments in Renewable Energy in Remote Aboriginal Communities, Newfoundland and Labrador, Canada. *Papers in Canadian Economic Development, 16*, 109-118. Retrieved from: http://pced.uwaterloo.ca/index.php/pced/article/view/73

Karanasios, K., & Parker, P. (2018). Tracking the transition to renewable electricity in remote indigenous communities in Canada. *Energy Policy, 118*, 169-181. https://doi.org/10.1016/j.enpol.2018.03.032

Lowan-Trudeau, G. (2017). Indigenous Environmental Education: The Case of Renewable Energy Projects. *Educational Studies, 53*(6), 601-613. *http://dx.doi.org/10.1080/00131946.2017.1369084*

Lumos Clean Energy Advisors (Lumos Energy). (2017). *Powering Reconciliation: A Survey of Indigenous Participation in Canada's Growing Clean Energy Economy*. Retrieved online: https://indigenouscleanenergy.com/wp-content/uploads/2017/10/Powering-Reconciliation-A-Survey-of-Indigenous-Participation-in-Canadas-Growing-Clean-Energy-Economy.pdf

MacArthur, J.L. (2016). Empowering Electricity: Co-Operatives, Sustainability, and Power Sector Reform in Canada. Vancouver, BC: UBC Press.

MacArthur, J. (2017). Trade, Tarsands and Treaties: The Political Economy Context of Community Energy in Canada. *Sustainability, 9*(3), 464-484. https://ideas.repec.org/a/gam/jsusta/v9y2017i3p464-d93551.html

Ménard, M. (2005). *Canada, A Big Energy Consumer: A Regional Perspective.* Statistics

Canada. Retrieved from: https://www150.statcan.gc.ca/n1/en/pub/11-621-m/11-621-m2005023-eng.pdf?st=Ioxiel4z

Métis Nation of Ontario. (2019). Governing Structure, the Métis Nation of Ontario. Retrieved from: http://www.metisnation.org/governance/governing-structure/

Métis Nation of Ontario Secretariat Act, 2015, S.O. 2015, c. 39 - Bill 153. Retrieved from: https://www.ontario.ca/laws/statute/S15039

Métis National Council. (n.d.). The Métis National Council. Retrieved from: http://www.metisnation.ca/index.php/who-are-the-metis/mnc

McDiarmid, M. (2017, Oct 11). Indigenous communities embracing clean energy, creating thousands of jobs. *CBC News*. Retrieved from http://www.cbc.ca/news/politics/first-nations-renewable-energy-projects-1.4348595

McMurtry, J.J. (2018). "Canadian Community Energy: Policy, Practice, and Problems" in *Handbuch Energiewende und Partizipation*, 975-996.

McNeil, K. (1996). Aboriginal Governments and the Canadian Charter of Rights and Freedoms. *Osgoode Hall Law Journal, 34*(1), 61-99. https://digitalcommons.osgoode.yorku.ca/cgi/viewcontent.cgi?article=1632&context=ohlj

Monahan, P., and Shaw, B. (2013). *Constitutional Law*, 4th ed. Toronto, ON: Irwin Law.

Nunatsiavut Government. (2019). "About Nunatsiavut Government. A leader for the Inuit people" Retrieved from: http://www.nunatsiavut.com/government/about-nunatsiavut-government/

Organization for Economic Cooperation and Development (OECD). (2017). OECD Environmental Performance Reviews: Canada 2017. Retrieved from: http://www.oecd.org/canada/oecd-environmental-performance-reviews-canada-2017-9789264279612-en.htm

Olthuis Kleer Townshend LLP (OKT). (2018). *Aboriginal Law Handbook* (5th ed.), Toronto, ON: Thompson Reuters Canada Limited.

R. v. Van der Peet, [1996] 2 SCR 507. Retrieved from: https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/1407/index.do

R. v. Powley, [2003] 2 SCR 207. Retrieved from: https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/2076/index.do

Rakshit, R., Shahi, S., Smith, M.A.P., Cornwell, A. (2018). Bridging Gaps In Energy Planning

for First Nation Communities. *Strategic Planning for Energy and the Environment, 37*(3), 17-42. http://dx.doi.org/10.1080/10485236.2018.11958658

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 Environment, 21*(7), 789-807. http://dx.doi.org/10.1080/13549839.2015.1031730

Royal Commission on Aboriginal Peoples (RCAP). (1996). *Report of the Royal Commission on Aboriginal Peoples Volume 2 - Restructuring the Relationship.* Retrieved from: http://www.bac-lac.gc.ca/eng/discover/aboriginal-heritage/royal-commission-aboriginal-peoples/Pages/item.aspx?IdNumber=401

Scott, N.D. & Smith, A.A. (forthcoming, 2019). "Energy without Injustice? Green Energy Projects as Expressions of Indigenous Jurisdiction" *Environmental Justice and Sustainable Development, Critical Perspectives,* Sumudu Attaptu, Sara Seck and Carmen Gonzalez (eds.) (Cambridge University Press).

Statistics Canada. (2017a). "Aboriginal Peoples in Canada: Key Results from the 2016 Census" https://www150.statcan.gc.ca/n1/en/daily-quotidien/171025/dq171025a-eng.pdf?st=KRvPq1St

Statistics Canada. (2017b). "The Aboriginal population in Canada, 2016 Census of Population". Retrieved from: https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2017027-eng.htm

Stefanelli, R.D., Walker, C., Kornelsen, D., Lewis, D., Martin, D.H., Masuda, J., Richmond, C.A.M., Root, E., Tait Neufeld, H., and Castleden, H. (2018). Renewable Energy and Energy Autonomy: How Indigenous Peoples in Canada are Shaping an Energy Future, *Energy Reviews*.

Teillet, J. (2013). *Métis Law in Canada*. Retrieved from: http://www.pstlaw.ca/resources/Metis-Law-in-Canada-2013.pdf

Teillet, J. (2017). *Métis Law in Canada*. Vancouver, BC: Pape Salter Teillet LLP.

Truth and Reconciliation Commission of Canada (TRC). (2015a). *Canada's Residential Schools: Reconciliation, The Final Report of the Truth and Reconciliation Commission of Canada Volume 6.* Retrieved from: http://trc.ca/assets/pdf/Volume_6_Reconciliation_English_Web.pdf

Truth and Reconciliation Commission of Canada (TRC). (2015b). *Truth and Reconciliation Commission of Canada: Calls to Action.* Retrieved from: http://nctr.ca/assets/reports/Calls_to_Action_English2.pdf

Truth and Reconciliation Commission of Canada (TRC). (2015c). *What We Have Learned: Principles of Truth and Reconciliation.* Retrieved from: http://nctr.ca/assets/reports/Final%20Reports/Principles_English_Web.pdf

Tsilhqot'in Nation v. British Columbia, 2014 SCC 44. Retrieved from: https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/14246/index.do

United Nations. (2007). *United Nations Declaration on the Rights of Indigenous Peoples.* Retrieved from: https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

United States Energy Information Administration (EIA). (2018). "How much carbon dioxide is produced when different fuels are burned?" Retrieved from: https://www.eia.gov/tools/faqs/index.php#conversion%20equivalents

Walters, M.D. (2008). The Jurisprudence of Reconciliation: Aboriginal Rights in Canada. In Kymlicka , W. & Bashir, B. (Eds.), *The Politics of Reconciliation in Multicultural Societies* (pp. 165-191). Oxford: Oxford University Press.

Wright, D. (2016). Cross-Border Constraints on Climate Change Agreements: Legal Risks in the California-Quebec Cap-and-Trade Linkage. *Environmental Law Reporter: News & Analysis, 46*(6), 10478-10495. Retrieved from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3017009

Wyld, A. (2019, February 4). Feds announce $20 million to reduce diesel use in remote Indigenous communities. *CTV News.* Retrieved from: https://www.ctvnews.ca/politics/feds-announce-20-million-to-reduce-diesel-use-in-remote-indigenous-communities-1.4296365

Wyse, S.M., & Hoicka, C.E. (2019). *How Local People Participate in LEPs*. Network of Early Career Researchers in Sustainability Transitions Conference (NEST), NOVA University, Lisbon, Portugal.