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Integrating Indigenous perspectives for a just energy transition of Saskatchewan

Guilhem CHIARELLO COUPINOT

Supervisor

Lena Neij

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Tel: +46 – 46 222 02 00, Fax: +46 – 46 222 02 10, e-mail: iiiee@iiiee.lu.se.

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Abstract

Canada pledged to achieve net zero by 2050 and important efforts revolving around the energy transition of electricity generation systems toward renewables sources are being carried. Currently, most renewable systems developed are occurring on Indigenous communities' lands for various reasons. Climatic conditions are suitable for solar and wind-based solutions, space is available, and this trend constitutes an opportunity for the economic development and diversification of Indigenous communities.

However, several scholars argue that renewable electricity production projects do not integrate sufficiently Indigenous perspectives as Indigenous communities are still more considered stakeholders that must be consulted rather than partners involved in decision making. According to energy justice scholars, this results in the occultation of several environmental and cultural impacts while the integration of Indigenous views could lead to higher sustainability thanks to higher considerations for nature and benefits for the community. These researchers question the sustainability of an energy transition maintaining Indigenous communities in a situation of dependency and increasing inequalities, instead of becoming participants to their own electric systems, as a crucial step towards the respect of their right to self-determination.

This thesis explores the impacts of provincial policies on shaping the conditions of the dialogue among actors involved in renewable electricity generation projects. Using the concepts of "shared visions" and "collaboration" developed by Transition Management scholars, this paper interrogates the challenges and success of the different provinces in integrating Indigenous communities as partners. A comparative study, based on interviews and a review of documents made by provincial governments and energy developers, has been carried to assess how Saskatchewan, a province located in the center south of Canada, could improve its existing supportive mechanisms toward a better integration of Indigenous perspectives in renewable electricity generation projects.

This thesis demonstrates that important efforts have been carried by developmental agencies, provincial governments, and advocacy groups across Canada, including Saskatchewan, to advance Indigenous inclusion in renewable energy projects. They have contributed to change stakeholders' perceptions on Indigenous communities which are increasingly considered. Moreover, Indigenous capacities to get involved in projects have largerly improved in the recent years thanks to provincial and federal programs.

Nevertheless, in Sasaktchewan, actors' sensitivity to Indigenous perspectives is still limited to experts and frontrunners. Compared to northern provinces and British Columbia, collaboration is still at its early stages and most times Indigenous communities must acquire a majority shares in projects to be integrated in decision making. The idea of a shared vision on sustainability is still far along the road and a stronger political stance promoting Indigenous involvement into renewable electricity projects is needed. In Saskatchewan compared to other provinces, indigenous communities face a stronger lack of interests and trust from energy developers to engage in partnerships due to lower public policies incentives. While provincial characteristics play a crucial role in defining political landscapes and interventionism possibilities, it seems that Saskatchewan could implement more ambitious mechanisms to promote shared sustainability visions and collaboration in renewable electricity projects.

Keywords: *Indigenous communities' perspectives, shared sustainability vision, collaboration, renewable energy transition, Canada, Saskatchewan.*

Executive Summary

Imperatives of the energy transition associated with commitments to tackle climate change are supported by a strong green growth narrative and the funding of important programs dedicated to support investments in renewable electric systems. Indigenous communities appropriate land locations for solar and wind energy, combined with the issues they face in terms of energy poverty and security, have led decision makers favor the development of renewable electric systems on Indigenous territories.

While this could be seen as a favorable advancement for Indigenous communities, several scholars have already denounced the negative social and environmental impacts carried by green development projects. Mainly, energy justice scholars argue that Indigenous communities are not integrated enough to the design of projects leading to limited shared vision of sustainability, and even the repetition of mistakes and patterns of inequalities decried in the fossil fuel sector.

Therefore, a challenge emerged regarding how to conduct the energy transition of Indigenous communities in a sustainable way. Energy justice scholars advocate for the integration of Indigenous perspectives to both respect their right of sovereignty recognized in the Canadian constitution, and to limit the social and environmental negative impacts of projects. Indeed, previous works on Indigenous ontologies shows that most Indigenous communities take better consideration of both their environment and the societal effects of development projects, notably for future generations. However, it seems that while the right of Indigenous communities to free, prior and informed consent to project development is increasingly accepted and implemented, projects are still not modified to fit indigenous perspectives. Moreover, the lack of participation of Indigenous people as decision makers within projects limit the integration of their perspectives.

Authors of the transition management school acknowledge the role of policies in shapping the behavior and set of relations among actors. They stress the need for shared visions and tools for collaboration to improve the socio and environmental sustainability of projects.

As a result, the aim of this paper is to determine how to improve public policies related to the development of renewable electricity project, so that Indigenous communities would take part in their energy transition as main actors instead of citizen which energy developers are obligated to consult and compensate.

Taking into consideration the wideness of the Canadian territory and the importance of context in renewable electricity development due to the decentralization of decision making at the provincial level, this thesis focus on the state of Saskatchewan using a comparative analysis from other provinces to draw recommendations. A mixed method involving document analysis from provincial government and energy developers, and interviews was used to gather information. Interviews were carried in a holistic manner including Indigenous communities' members, energy developers' representatives, civil servants working for institutions supporting the energy transition of Indigenous communities, experts and members of various NGOs.

The concepts of shared vision and collaboration developped by transition management scholars were used to assess the extent of cooperation among stakeholders, understanding of each other perspectives, but also incentives and barriers to engagement in partnerships with Indigenous communities.

This study has shown that, in Saskatchewan, despite important progress in terms of actor's understanding that the views of Indigenous communities in energy projects should be considered, ideas of indigenous engagement are still dissociated from the notion of a shared

vision on sustainability. Indigenous communities appear to have gained the capability to engage in project through capacity building programs and the provision of funds dedicated to this purpose. However, energy developers limited views on the benefits that could emerged from partnerships with Indigenous communities, combined with the market approach promoted by public utilities on behalf of provincial governments, limit greatly the integration of Indigenous perspectives under the pretext of preserving consumers from increased costs and risks. Partnerships are still very limited and only fewly encouraged by the provincial government through its public utility. On the contrary, northern provinces appears much more advanced in the integration of Indigenous perspectives into renewable electricy projects as Indigenous communities are provided a position forcing energy developers to build partnerships with them.

Undoubtably, the demographic differences among regions have led Indigenous issues to take different degree of importance. While the Northwest territories present a share of Indigenous people within the population around 50%, Saskatchewan only shows 17% of Indigenous people. Nevertheless, the example of Yukon with 25% of Indigenous people demonstrating some of the most progressive policies in terms of Indigenous engagement shows the way for Saskatchewan to adopt more ambitious policies on the matter. For instance, a minimal Indigenous communities ownership rate could be required for projects occurring on Indigenous lands, to go beyond simple consultation mechanisms and include Indigenous as participants in decision making.

Recommendations that have been identified for Saskatchewan to move toward a shared vision of sustainability with Indigenous communities in renewable energy developments include:

- increase the minimal rate of Indigenous community ownership required for projects occurring on Indigenous lands to provide Indigenous communities with the possibilities of integrating their perspectives on the topic;
- pursue sensibilization efforts to demystify what Indigenous community engagement means for non-indigenous staekholders and highlight the benefits that could arise from joint ventures;
- implement mandatory training for civil servants on the notion of Indigenous perspectives and introduce voluntary certifications to private actors having followed such training;
- allocate physical spaces dedicated to collaboration and introduce a platform to facilitate exchanges between energy developers and Indigenous communities corporations;
- adopt a stronger juridical posture against abuses of Indigenous rights and create an agency with sufficient funding to ensure monitoring and investigating duties;
- create a special fund dedicated to cover the administrative expenses of Indigenous communities so that it would be possible for them to engage in discussions for the development of the communities;
- renunciate to a market-approach currently only valorizing costs and reliability factors and integrate indigenous engagement indicators going beyong simple consultations;
- adjust the purchase power agreement for new projects and remove the 20% independent power producers ceiling limiting investments in Indigenous communities;
- pursue mechanisms of derisking both technically and financially to facilitate Indigenous ownerships in projects.

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1 Introduction

Canadian policies have historically placed Indigenous communities in a situation of dependency by depriving them from the same opportunities as their non-Indigenous counterparts and framing negotiating agreements in favor of incumbents (Wolfe, 2006a). Modern settler colonialism,[1] embedded in provincial and federal development programs, has been denounced by many researchers as responsible for the socio-economic hardship Indigenous populations have been facing (Escobar, 2018). The energy sector, as one of the key infrastructure components, is fully affected by this trend. It involves many actors and generates important revenues. It is crucial to a country experiencing long and harsh winters.

In Canada, Indigenous communities, only represent 5% of the population (Government of Canada; Crown-Indigenous Relations and Northern Affairs, 2009). However, they constitute one of the groups facing the most important needs when it comes to energy systems (Armagan, 2023). Many communities still rely on heavily polluting diesel generators which constitute a determining factor in systemic poverty and energy insecurity. Dependency to diesel also constitutes a pollution source which Canadian authorities have pledged in 2021 to tackle by transitioning to renewable energy systems all Indigenous communities not connected to the grid by 2030 (Prime Minister of Canada, 2021). While not all Indigenous communities are off grid, most Indigenous people live on reserve which are lands targeted by the provincial public utilities in charge of producing the electricity for the entire province, for their potential in terms of renewable energy development. Indeed, Canada has pledged to reach net zero by 2050 and generating electricity from renewable sources constitutes ones of the main axis of the strategy built to achieve this goal. Therefore, energy transition projects in the territories of Indigenous communities could represent a great turn in Canadian politics toward the recognition of Indigenous rights and opportunities of development.

But conducting a sustainable energy transition requires thinking about the social fabric[2] framing transformative efforts (Miller et al., 2015), and Canada constitutes a particular context, where settler colonialism is a contemporary phenomenon (Castillo Jara & Bruns, 2022). Researchers have highlighted the needs for energy justice as renewable energy development often resulted in both social and environmental issues. Specifically, scholars have demonstrated that programs supporting the energy transition were following Canadian institutions design, which carries "the same potential for inequalities" as traditional energy systems (Ramasar et al., 2022).

When looking at energy policies it is important to take into consideration the context structuring the energy debate. Discourses on green growth (Witoszek, 2016) following international agreements to limit climate change (Schunz et al., 2021) have created an increased pressure on

[1] Settler colonialism can be defined as a system perpetuating the displacement and elimination of Indigenous people and cultures, to appropriate the land. "It includes multiple forms of oppression notably racism, white supremacy, heteropatriarchy and capitalism". It is based on the "belief that European values are superior and therefore inevitable and natural". It provides the "necessary conditions for establishing the present-day ideology of multicultural neoliberalism" (Wolfe, 2006a).

[2] Social fabric can be defined as social threads defining values and culture. They constitute an invisible template determining people behavior (Cohen, 2023). It is produced by collective experience and observation (Penven, 2013).

government to act (Vågenes, 2023). The volatility, and excepted price increase of fossil fuels, has also contributed to this turn toward green energy systems deemed more stable and competitive on the long run (Dusyk & Toft Christensen, 2022). A narrative stressing an urgency to provide communities with sustainable energy systems has emerged and provide legitimacy to energy developers involved in the green transition (Hagbert et al., 2021). However this movement has attracted private investors prioritizing economic benefits over the needs and desires of communities (McMaster et al., 2023). The "Green Deal", which Canada committed to through international agreements (Messetchkova, 2021), is pushing for a quick expansion of the "renewable frontier" (Andreucci et al., 2023), through a stop of subsidies for fossil fuel (IISD, 2022), and the allocation of funds for the implementation of renewable energy systems (Scarpaleggia, 2023). This process creates a pressure on communities which are stressed to accept the implementation of green projects following energy developers' terms. Concepts of modernization and technological advancements are at the core of this policy narrative (Carrigan, 2022). It often takes the form of bargains where rights of exploitation of the territories for mining purposes for instance are obtained (Sörlin, 2022). Therefore, the question on how to incorporate local terms or preferences into the design and implementation of community energy transitions arise.

Progress have been made through an increasing integration of the energy justice concept (include a few words here (see section 2)[3]. Following a series of Supreme Court decisions (Coates, 2016), "A trend to allocate benefits from energy projects (…) has emerged" through "impact and benefits agreements" often resulting in small temporary benefits, and "resource revenue sharing agreements" sharing royalties and taxes (Hoicka et al., 2021). Canadian institutions accompanying the energy transition of Indigenous people, such as Natural Resources Canada, have used the Energy justice framework to advocate for the recognition of Indigenous rights (Krawchenko & Gordon, 2021). It has led to a democratization of the different notions such as "consultation", "informed consent", "benefits redistribution" and "compensation" (Heffron & McCauley, 2018), but also to a loss of their meaning. The institutional conception of energy justice is limited by preventing Indigenous communities ambition to become the primary actors of their energy systems (Bruyneel, 2007).

Thus, communities are pursuing a daily struggle for the implementation of sustainable energy systems under their terms, the respect of their sovereignty while aiming to protect an environment intrinsically linked to their culture and traditions (Awasis, 2020). Certainly, some Indigenous communities are taking advantage of energy policies, while several others are also working towards transitioning to renewable energy. Indeed, some renewable energy systems have been implemented through which communities have become autonomous, sold energy surplus, and use these profits to cover other communities' expenses (O. Zapata, communication personnelle, 15 décembre 2023). But this movement is limited to a few communities only, and" Indigenous communities seek equity and control in renewables energy projects on their land" (Hoicka et al., 2021).

As an environmental science student with a social science background, I focus on the intersection between ecological and socio-political struggles. The notion of sustainability refers to joint improvements within these spheres (OECD, 2001). It is especially important in the case of Indigenous communities, which ontologies tie socio acceptability to environmental

[3] Further explanations on the concept of energy justice are provided in chapter II.

considerations[4]. However, current energy targets are still conflicting with social and environmental objectives (Nwanekezie et al., 2022). Ambitions to reduce various gas emissions are not necessarily combined with an analysis of other environmental and cultural negative impacts that may results from renewable energy developments.

Indigenous understanding of a sustainable transition to renewable electricity production often differs from the ones of non-Indigenous actors (Velasco-Herrejón et al., 2022). Indigenous communities tend to take decision in a more collective way, consider better impacts on both future generations and their environment, which they consider as the source of life. Moreover, they often aim at developing infrastructures in a more inclusive way (Awasis, 2020) limiting the development of inequalities. This difference of perspectives introduces the need for an approach to development that integrates Indigenous communities' perspectives. Establishing policies, fostering a shared vision of sustainability among stakeholders, and acting as a bridge between actors' perspectives, appears to be an essential first step toward stakedholers' mutual understanding and collaboration (Loorbach et al., 2017).

1.1 Problem Definition

Scholars questioning the sustainability of the energy transition, have so far mainly focused on measuring the impacts and benefits of energy transition projects, along with advocating for increased Indigenous consultations (Martinez, 2020). A few scholars have recently questioned the assumptions pertained in the design of projects by non-Indigenous actors (Martinez, 2020). According to them, Indigenous communities are not yet integrated as decision makers in project development which is a major infringement to their right to self-determination. Certainly Indigenous communities are increasingly offered to express themselves but their views are often not integrated to a degree that would result in an adaption of projects (Fjellheim, 2023). This is doubly problematic as Indigenous communities' perspectives on sustainability are not aligned with the ones of non-Indigenous actors, which results in different ways of thinking about problems and designing solutions (Velasco-Herrejón et al., 2022). While researchers have repeatedly shown the benefits of integrating Indigenous views, they have not yet offered concrete strategies to turn this critical view into practice (Awasis, 2020).

1.2 Aim and objective

The objective of this thesis is to explore how to advance the integration of Indigenous communities as actors of their energy transition in the province of Saskatchewan. An applied focus is chosen to provide recommendations on how to improve Indigenous communities' engagement as decision makers. Saskatchewan was selected among all Canadian provinces for the former partnership between University of Saskatchewan and the Mespom program I follow.

The study is framed under the theory of energy justice (see section 2) and its constructivist current stressing the importance of integrating Indigenous perspectives to achieve sustainable transition. Aligned with the framing of energy justice theory, literature in transition management has been used to develop a framework for the analysis (see section 3). This research field under sustainable

[4] I will detail the specificity of Indigenous ontologies in chapter II.

transition research focuses on processes promoting transformative change in society. Transition management scholars define transformative change as disruptive mechanisms addressing the in-depth roots of problems by questioning the narrative supporting current ways of thinking, doing and ideals. The goal of these processes is to deconstruct the legitimacy of established ruling actor's and promote alternatives. In this paper transformative change is understood as providing Indigenous communities with the possibility to integrate their perspectives in the development of renewable energy projects. The concepts of shared visions and collaboration will be used as a framework for analysing transformative change. Indeed, these concepts are comprehended as initiating tools and markers of a socially just transition.

Saskatchewan policies and achievements will be compared to four other provinces in a constructive approach to identify best practices toward Indigenous communities' engagement. These provinces are British Columbia, Alberta, Yukon, and the Northwest Territories. However, Canada presents an important variety of context, therefore every comparison should consider the specificities and differences between provinces in terms of demography, climate, economy, geography, etc. A comparison of provinces characteristics is provided at the beginning of the analysis section to provide the reader with elementary knowledge and explanations regarding the various development stages, challenges, and possibilities the various provinces are experiencing.

A qualitative analysis involving a mix of interviews and document analysis will be carried for each province. Interviews will be carried with Indigenous communities, civil servants, energy developers, researchers, and NGO. The literature review will explore both documents produced by public institutions such as provincial governements energy transition strategies and civil engagement reports; and documents created by private energy developers such as sustainability reports.

In the province of Saskatchewan, while only 1 community is off grid, 51% of Indigenous people live on reserves (Government of Canada, 2017), and most renewable energy projects are planned to be carried on Indigenous lands. While other Canadian provinces have already developed some collaboration mechanisms when it comes to projects development on Indigenous lands, Saskatchewan appears to be quite late and conservative on the matter. As a result, Saskatchewan is facing issues related to the inclusion of Indigenous communities in renewable energy development. Specifically, my aim is to identify potential ways to enhance Indigenous position in renewable energy projects partnerships in Saskatchewan so that their perspectives can be better integrated.

To do so, I will structure this thesis based on the following research questions to guide my research:

- RQ1. What are the key elements structuring the perspectives on sustainable energy systems of Indigenous communities compared with other stakeholders?
  To what extent is there a shared vision on energy transition?
- RQ2. To what extent is collaboration practiced today in terms of indigenous engagement?
- RQ3. How could Indigenous communities be turned into leaders of their energy transition? What practices currently hinder such advancement?

1.3 Scope & delimitations

The main limitation of this paper is time, as it limited the number of exchanges, and overall comprehension of actor's working logic. Indeed, this work constitutes a master thesis and was conducted by a non-Canadian that do not possess on the ground experience in this field. Therefore, all findings should be considered with caution. This work is the result of 6 months of research which certainly does not equal the expertise of a professional even though it benefits from a plurality of perspectives. For instance, while certain findings have been validated by an important number of people and other studies, certain contradictions, and oppositions arised during interviews. When it was not possible to verify the veracity of statements, I chose not to mention them.

Another limitation is the representation of each group of stakeholders. This thesis aimed at integrating equally all stakeholders involved in the energy transition of Indigenous communities, however the response rate among groups is important. For instance, energy developers are under-represented compared to experts and researchers.

Moreover, while both Métis and First Nations people are present in Saskatchewan, this work mostly discusses issues faced by First Nations communities. In Canada, three Indigenous groups have been recognized: First Nations, Inuit, and Métis. They are respectively located South of the arctic, far North in the arctic and in the prairies. These groups experience different challenges related to legal status in the Canadian society. While all Indigenous groups are impacted by the energy transition, this thesis mostly focuses on First Nations, due to time constraints, contacts availability and budgetary reasons. Besides, Inuit are not located on the geographical scope of this comparative study. First Nations constitute the most involved group when it comes to the infrastructure development. First Nations are the most important Indigenous group in Canada. In Saskatchewan they represented 66% of the Aboriginal population in 2016. But most importantly, it is the only group which have been recognized exclusive rights on reserves. Therefore, public utilies and energy developers are required to obtain the consent of First Nations groups to develop renewable energy project while it is less of a concern when it comes to Metis communities for instance. Moreover, because the other Indigenous groups have not been recognized yet rights over the land, they have been less integrated to infrastructure development.

While a comparative study involving northern European States was initially envisioned, time limitation led to an abandon of this idea. Moreover, issues faced by Indigenous communities are highly contextual and it is already challenging to compare communities' situations across Canada. Therefore, researchers attempting to extrapolate or compare the results of this study to other countries should be very cautious. This study is most relevant in the Canadian context.

Finally, it is important to mention that nuclear solutions are excluded from this analysis. In this work, renewables are considered as solar, wind, hydro, geothermal and biomass solutions. Nuclear isn't examined as no communities has been provided with this solution so far, and questions related to the sustainability of this method divide Indigenous communities.

1.4 Ethical considerations

Canada constitutes a specific field of research when it comes to ethics and research involving Indigenous communities. I undertook the course "Ethical Conduct for Research Involving Humans" to gain necessary knowledge to conduct research in Canada. An interesting practice is to provide Indigenous respondent with a "right of review". Indigenous people are given the possibility to read the paper before it is submitted and ask the researcher to make corrections and precisions. I followed this practice and I receive valuable feedback from Indigenous respondents that I incorporated to this paper.

I also discussed my findings with several experts and researchers in the field. As a foreign researcher I do not have a strong legitimity as I didn't experience for an extended period on the ground reality. Therefore, I deamt very important to integrate the local critical perspective on my research to ensure the veracity and credibility of my work.

Before carrying interviews, I used a consent form to ensure interviewees awarness of their rights. I believe to have been very clear on the purpose of my research and the use of the interviews. I required interviewee consent regarding recording and storage of the information they provided. All along my research I considered how my research could positively and/or negatively affect communities and individual lives. This continuous assessment allowed me to foresee the benefits and impacts of each interview and consciously decide whether an interview should be carried or not. Similarly, considering the impacts my research could have, allowed me to understand how to deal with the findings provided by interviewees.

While carrying interviews and within the process of identifying potential interviewees, I adopted an open stance, providing me with higher chances to find interviewees through a snowball approach (Mertens, 2009). More importantly I aimed at avoiding short sighted vision. I tried to be as culturally sensitive as I could.

To ensure my findings are useful to all stakeholders, to recognize and thank people for their contribution, I have disseminated my thesis to every people I exchanged with either for interview purposes, contact findings or questions regarding previous papers.

Findings will be used for the purpose of my thesis, and potentially by other researchers. Indeed, the paper will be freely available on the Lund University Library Portal, Central European Library Portal and potentially the Saskatchewan University Portal.

This thesis research has not been funded by an external organization and no one has been considered in a position to potentially influence the findings and outcomes presented in this thesis.

2 Theoretical Framing

In this chapter, I introduce the reader to the energy justice framework, and its contribution to critical thinking on the energy transition of Indigenous people. Using the work of contemporary scholars, I point out the limits of the associated analytical model, and notably the normativity it carries. I show the benefits of the constructivist approach which demonstrates the difference of stakeholder's perspectives and highlight the importance of integrating Indigenous visions to achieve sustainable project design. Further on, I present the work of academics proposing ways to bridge perspectives and go beyond the already identified oppositions of perspectives. Finally, I point out the need for policy intervention to transform these bridging wishes into reality. Figure 1 summarizes the structure of this chapter.

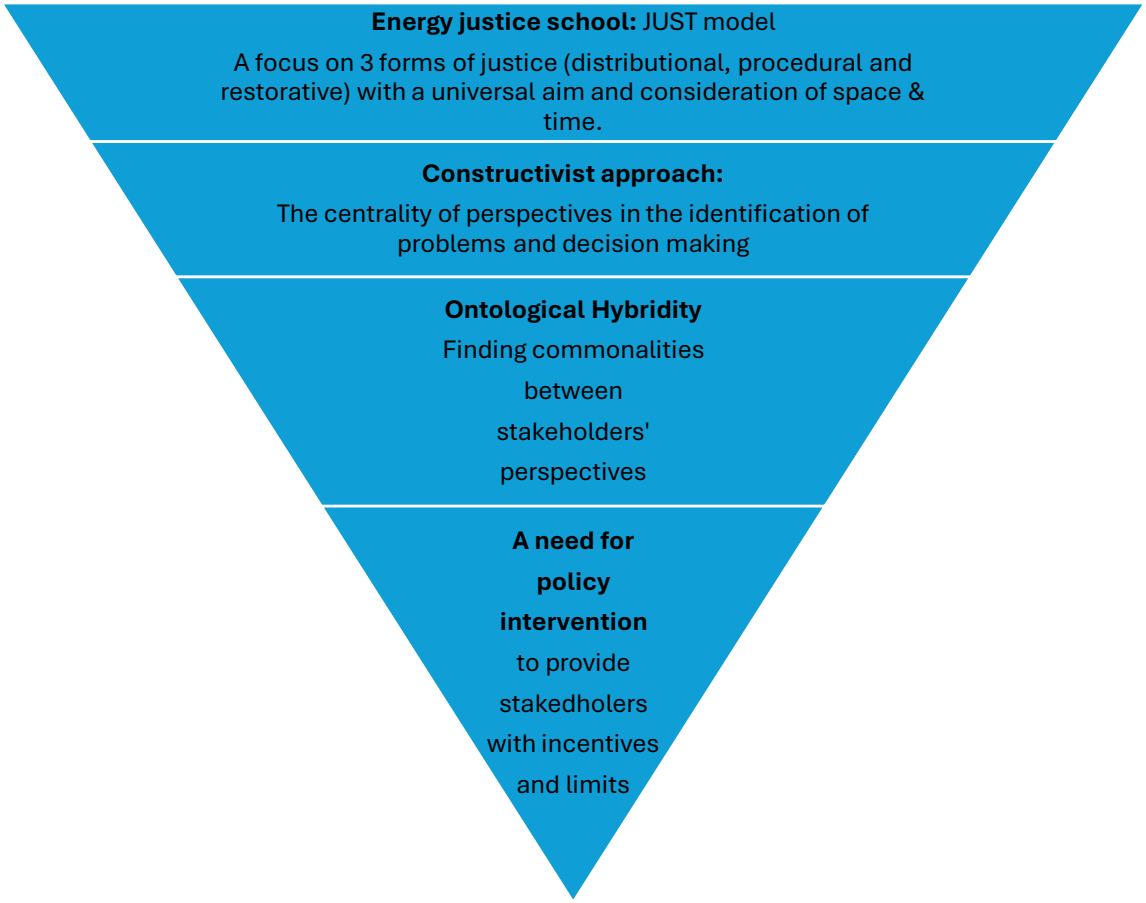

Figure 1. Illustration of the theoretical framing I undertook to think about Indigenous perspectives integration in renewable energy projects.

2.1 Energy justice as a general entry point:

The framework of Energy justice has been used by scholars to study the economic, social, and environmental problems related to the implementation of energy systems. It shows the importance of recognition, distribution, and procedures in achieving justice. Respectively, this non-linear model helps identifying people impacted and their claims; the allocation of benefits and impacts; and decision making influences (McCauley et al., 2013).

The Just Energy framework by including "climate" and "environmental justices" aimed at updating this framework to the "new challenges". It measures the allocation of benefits and burdens related

to climate change, environmental laws and policies (Heffron & McCauley, 2018). This updated model also considers the notions of time and space to be more accurate and reveals tradeoffs so far mostly ignored. It has been used by various researchers to address issues emerging from energy transition projects (Ramasar et al., 2022). I used this approach as a first step to recognize the several flaws associated to the spread of renewables solutions.

2.2 The constructive epistemic, an alternative way to assess projects sustainability, integrating actor's perspectives.

An important number of research have shown the limits of the energy justice model, notably the normativity that it carries (Laes et al., 2023). The energy justice model aims at challenging the inequality and injustice in the energy sector. It adds an analysis of the social and political participation, on top of the traditional technological and economic evaluation. It questions the production, delivery, use and impacts of the energy sector to make it more ethical. However, despite efforts to avoid biases, scholars' beliefs and surrounding context will always shape assumptions and ways of thinking (Hayes, 2015). This has a direct impact as researchers perceptions shape ethical evaluation.

These differences lead to complementary perspectives in sustainability assessment, notably in identifying problem sources and impacts, but also in porposing solutions to address them. Martinez (2020) proposes a classification of energy transition researches into four different epistemics: the positivist, pluralist, constructivist, and structuralist. In Canada,

- The positivist approach highlights institutional failures to create consultation mechanisms for Indigenous people.
- The pluralist approach focuses on firms influence on policy making resulting in an unequal distribution of impacts and benefits.
- The structuralist proponents criticize energy systems privatization and the removal of protection mechanisms for Indigenous communities.

Contrarily to the three other schools, constructivist narratives focus on elements motivating actors' behavior. According to Martinez (2020), systems of values and experiences, structure actor's ways of perceiving socioenvironmental effects. He argues that Indigenous and non-Indigenous perspectives differ, and advocates for an integration of these disparities to achieve higher sustainability. He explains that the dominant "cosmopolitan view of energy developers" uncovers "hidden social debates and technical alternatives". Questioning these conceptions would help "problematize the categories produced by colonial practices" (Burow et al., 2018). The aim is to convince, the various stakeholders, of the relevance of these perspectives' differences. These works become meaningful when actors start taking into consideration Indigenous concepts, understanding them, and ultimately modifying their behavior.

The constructivist epistemic has been very little used. It is highly contemporary but also quite challenging to work with. It uses concepts constantly evolving and inherently subjective as they are imbedded in culture. They are hard to grasp as researchers are entrenched in their own worldview, and it is even harder to transcribe this alternative thinking on paper. Despite these challenges, I intend to ground my work on the constructivist epistemic as an essential approach to contribute improving sustainability in energy transition projects.

2.3 The importance of considering Indigenous and energy developers' "worldview" differences

Proponents of the constructivist approach have already characterized the main differences between Indigenous and energy developers' "worldviews" (Velasco-Herrejón et al., 2022) ; (Awasis, 2020), see Table 1.

Table 1. A synthesis of scholar's findings on Indigenous and energy developers' ontological compounds based on (Velasco-Herrejón et al., 2022); (Awasis, 2020).

Components	**Indigenous "worldview"**	**Energy developers' "worldview"**
Relation between people	Philosophy characterized by mutual respect, solidarity, and equality.	Transactional relationships leading to power asymmetries.
Epistemology	Knowledge embedded in communal practices aiming at emancipation and valorizing what is local.	Scientific rationality is valued. Traditional knowledge is disregarded.
Relation to time	Cyclicity, consideration of the impacts on next generation.	Linearity, short term goals prevail as the calendar is set on fast returns on investments. Rapidity and efficiency are key.
Human-nature relationships	Eco-centric. Relationship based on survival and protection. No division between individual, community, and nature. Mutual obligations among humans and the other than humans.	Nature as a commodity that may be used sustainably. Hierarchical relation between individual, community, and nature. Little consideration for externalities.
Ownership structure	Communal, land as a source of life shared and cared for.	Private ownership ruled by a capitalist logic.
Political governance	Communal decisions, shared endeavor.	Elected leaders reaching agreements.
Social justice / Equity	System of meritocracy based on public service which doesn't translate in economic inequalities	Market leads social relations and lead to inequalities.
Economic framework	Solidarity economy where labor is exchanged to communally attain basic needs. Preserving identity and values take precedence	Global market trends prioritizing individual economic improvement and promoting materialist understanding.
Views on sustainability	Self-sufficiency, degrowth.	Ecological modernization theory: an idea of sustainability based on high tech solutions, international trade and eco-efficiency.

These differences of "worldviews", by structuring individuals' ways of behaving and thinking, have concrete consequences on project development. Scholars have shown a limited willingness of energy developers to consider and adapt designs to Indigenous communities' perspectives (Velasco-Herrejón et al., 2022). While Indigenous communities often show deep concerns for environmental impacts, they shouldn't be thought as a homogenous group in terms of thinking. Certain groups present a conception of sustainability which matches, or even go beyond western environmentalist views, while others favor socio-economic development with few regards for their surroundings. This thesis doesn't aim at determining and advocating for a "right" perspective on sustainability but a concerted conception that respects Indigenous right to self-determination.

Martinez (2020), Gedevanishvili (2023), Velasco-Herrejón et al., (2022) and Burow et al., (2018) provide examples of how these differences translate in opposing ways of decisions making, and energy developers' attempts to overcast them, see Table 2.

Table 2. Examples of problematic energy developers' traits from an Indigenous perspective (Velasco-Herrejón et al., 2022) (Martinez, 2020b).

Indigenous communities' traditional ways of doing things	**Behavior of energy developers**
Take decision collectively.	Trend to isolate one speaker per community to dialogue. This results in a partial understanding of problems and a reverse of the balance of power in favor of energy developers during negotiations.
Inform and consult the majority.	Consultation mechanisms with a limited sharing of information and an orientation of their understanding. Lack of adaptation of the projects to the opinion of the community.
Protect the land used for traditional purposes.	Low compensation packages proposed to single individuals occupying the land while the land pertain to the community.
Minimize the impacts on ecosystems.	Energy transition is given priority, the biodiversity and cultural impacts of projects are considered but downplayed.

It is fundamental to acknowledge that a long lasting hierarchization of people and things, formalized in colonial laws, has been governing people way of thinking and is still impacting mindsets (Bryant, 2015) ; (Fjellheim, 2023). Settler colonialism, through various mechanisms (education, forced displacements, containment, discriminating laws, etc.) is aiming at erasing Indigenous societies ontologies contravening western ideals (Wolfe, 2006b). Even though, heritage of settler colonialism doesn't constitute the core of my research, it is central to Indigenous and non-Indigenous people relations. Acknowledging its centrality provides a better understanding of the various actor's perspectives and actions.

2.4 Ontological hybridity: a pragmatic approach underlying commonalities between coexisting "visions" to overcome differences and bridge the gaps toward sustainable future.

In their work, Burow et al (2018) refer to numerous scholars denouncing settler ways of thinking in the management of land and resources. They advocate for the "revitalization of alternate ontologies" in a context where logics of conquest of the "conceptual landscape" have operated to "rule out any possible alternative model. These dominating mechanisms have displaced native perspectives to "rationalize international community demand for free, prior and inform consent" (ibid). Certainly, western approaches to nature require simplification to make things "immutable, accumulable and combinable" (Latour, 1987), and "when simplifications fail, they are understood as something in need of techno-scientific fix" (Mitchell, 2002).

Undoubtably, these patterns are incompatible with Indigenous understanding of their environment. Even though researchers increasingly understand nature as "a complex system under threat", they are still guided by the assumption that "land should be managed for the public good, even if some publics' interests must be sacrificed to do so" (Ingold, 2000) ; (Luke, 2009). Therefore, the definition of public good[5] by the different stakeholders is a key component of my research as it frames their range of possibilities and obligations.

Considering these complexities, Burow et al (2018) advocate for a movement toward an "hybrid assemblage of ontologies". Indeed, "settler modes of thinking about the land are being appropriated {by Indigenous people} to take the land back, at the same time as other modes of thinking are being practiced" (ibid). Therefore, stakeholders should not aim at rejecting "one modality of land for the other" but deal with these coexisting conceptions (ibid).

In her work, Burow (2018) uses the term "vision" to transcribe the notions of perspectives and "worldviews" in a more holistic and neutral way. This word "projects a range of meanings, knowings, doings, and modes of organising" (Longhurst & Chilvers, 2019), but also carries the ideals for future. "A vision consists of many different transition images" (Grin, 2010). I will use this term in my research.

2.5 A general need for policy intervention and improvement to regulate better energy transition projects:

The behaviors listed in Table 2 are not surprising in a context where national developers are subjected to a neoliberal style of governance, using indicators assessing the performances of institutions, like firms (Chambat, 1990) ; (Klages, 1973) ; (Rochet et al., 2005). In the case of private energy developers facing high competitivity and required to give important returns to their investors, these drifts are exacerbated. Therefore, policies are necessary to set standards, limits and obligations to the different stakeholders (UNDP, 2023) ; (ILO, 2023), including public institutions, avoid the excesses of market and inheritance of settler colonialism on actors' perspectives. Efforts

[5] « Public goods are commodities or services that benefit all members of society, and which are often provided for free through public taxation » (Jason Fernando, 2024). The absence of monetary value given to public good often leads to excesses (overconsumption, pollution, etc.). Incentives for private actors to address issues related to collective goods are limited as they implies free rider problems and prisoner's dilemmas (Geels, 2011).

to regulate the green transition have already been made in Canada, but policy mechanisms could be improved to integrate better Indigenous perspectives, which are conflicting with the current "Canadian constitutional framework" (Awasis, 2020). "Governing must be continuously reordered to structure conduct in response to shifting constructions of nature" (Braun, 2000).

Moreover, in his work Lowan-Trudeau (2017) explains that, "while many members of society might support" change toward more sustainability, "when conversations turns to the political and economic sovereignty aspects of such development, some fall silent". Referring to the theory of "repressive tolerance" developed by (Marcuse, 1965), he explains that "contemporary societies allow a certain amount of protest to maintain an appearance of democracy (…) but challenged to the status quo (…) they are only allowed to go so far and most often result in superficial changes" (ibid). In this context, the researcher presents public policies as tools to implement ideas "supported in principle by many, but in practice by few" (ibid).

2.6 Conclusion of the thesis framing

Scholars in Energy justice literature have demonstrated the necessity and value of integrating the perspectives of the various stakeholders. They have explained that Indigenous and non-Indigenous perspectives were currently competing. They advocated for a rethinking of approaches to the green transition focusing on bridging the gaps between perspectives toward more sustainability.

However, a theoretical framework is needed to determine concretely how to perform these transformations, moving toward shared visions on sustainable energy futures. I will present in the following section the work of scholars advocating for the use of disruptive ways of initiating in depth transformations of the societal regime. I will discuss how I intend to use their findings to conduct research.

3 Theoretical framework

This section presents a brief introduction to research in the field of sustainability transition, focusing on transition management, followed by an introduction to the two concepts of shared vision and collaboration, envisioned as key for a transformative change in the transition management literature. These two concepts form the theoretical framework of this thesis. Figure 2 summarizes the structure of this chapter.

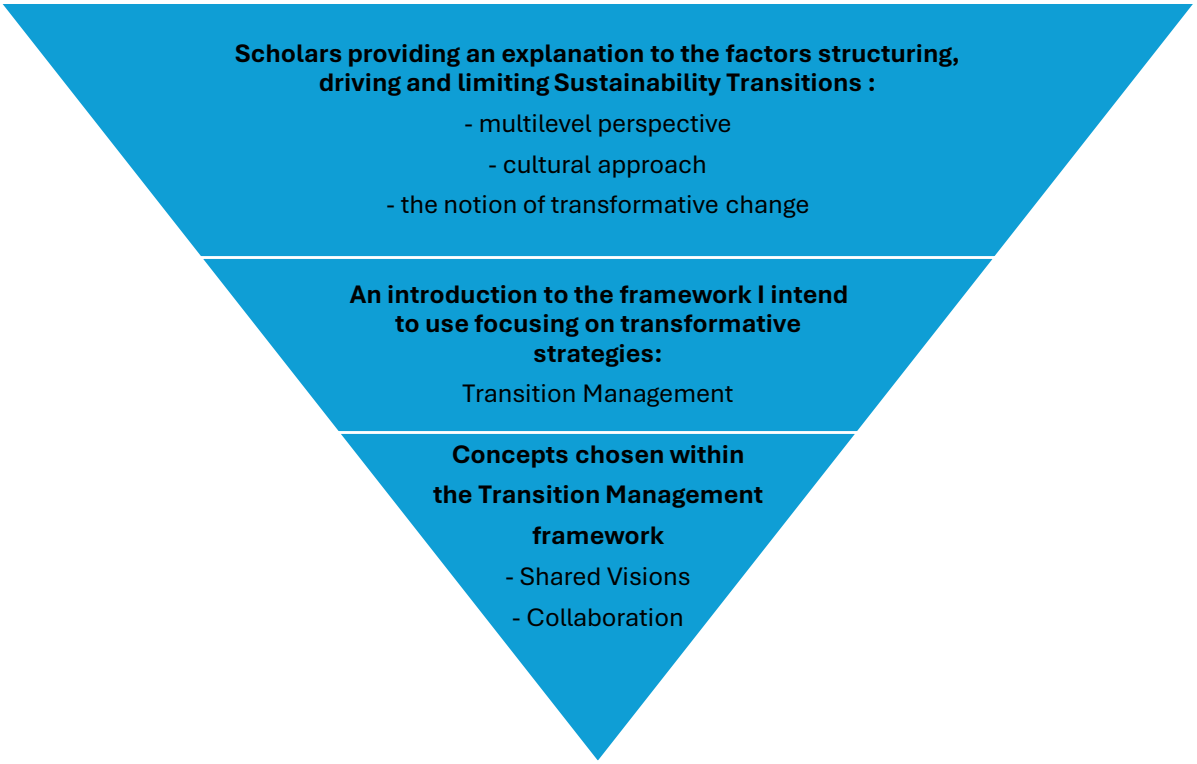

Figure 2: Summary of my reflection in terms of sustainability transition leading me to chose two concepts from the Transition Management Framework as my Theoretical Framework.

3.1 An introduction to the sustainability transition research field

Sustainability transitions are distinct from historical transitions for several reasons: they tackle "persistent environmental problems" while the others are "emergent"; environmental innovations require transforamtions in the economic frame conditions to be beneficial, and domains where sustainability transitions are needed (transport, energy, etc.) are dominated by incumbents with strong positions limiting the capacity of newcomers to develop alternatives. Working on the sustainability transition requires altering the configuration of technology, policy, markets, consumer practices, infrastructure, cultural meaning, scientific knowledge, etc. (Elzen et al., 2004). This implies considering complex interactions, interdependencies, and long-term non-linear processes. Concretely, Geels (2011) advocates for a multi-level approach examining the interplay between niches, socio-technical regime, and the exogenous socio-technical landscape, see Figure 3.

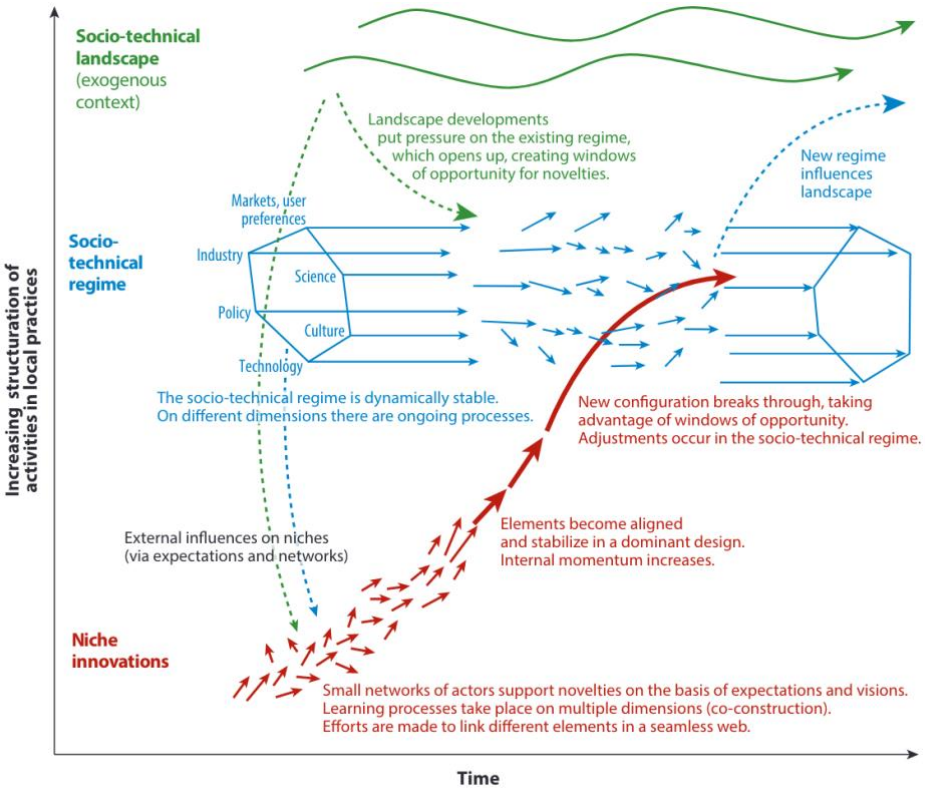

Figure 3. Graphic providing an understanding of the plurality of mechanisms involved in sustainability transitions (Geels, 2011).

Witoszek (2016) propose a complementary lecture by insisting on the cultural challenges faced by sustainability transition proponents. She explains that a "battle of modernities" is opposing the "carbon modernity", that has marked the "American dream and industrial revolutions", to "alternative visions", centered on planetary boundaries and human well-being. "Given the basic sex appeal of the narratives of excess, advocates of sustainability have remained seriously outgunned" to face the carbon modernity benefiting from the support of strong cultural storylines (ibid). To overcome the unfounded dichotomy between perspectives of austerity and development, Witoszek advocates for the use of "ecomodernity" as a bridge between the ideas of development and return to nature. A key to success would be to retain values central to Western modernity. This continuity would help people adhere to this new narrative. She takes for example the "insatiable human hunger for change" marking modernity which can easily be found in sustainability transformations.

Finally, another method thought by scholars to achieve sustainability transition is transformative change, which is the voluntary disruption of traditional management of issues (Kemp et al., 2007). According to these scholars, researchers have so far focus on the resilience of systems instead of on the possibility of reforming them. Loorbach (2022) explains that policies are currently framed to fit the current societal regime, while a deep cultural shift is necessary. Institutions are seeking for gradual change to maintain stability, while radical decisions, implying sacrifices on vested interested, are urgently needed. The notion of "lock in" used by Kemp (2005) is also helpful in explaining stakeholders tunnel vision leading them to focus on one solution, deemed the best

available option at start, and ignore the development of alternatives. This phenomenon is framed by important investments and regulations in support of this initial option which limits stakeholders' liberty. Thus, disequilibria mechanisms would be needed to steer the system into a more sustainable direction (Loorbach, 2010).

Therefore, different views exist on how to achieve sustainability transitions. I believe these currents complementary, and I consider all their contributions while carrying my research. These theoretical contributions were translated in applied tools by the same group under the name of transition management school.

3.2 Introduction to transition management

Scholars of the transition management school explore how actors' behaviors and interactions, can be fostered to initiate movements toward sustainability transitions. These scholars use 3 concepts "learning, adaptation and experimentation" to overcome barriers our societal regime is facing (Kemp et al., 2007).

- With the concept of "distributed control", Kemp et al (2007) explain that decisions in "pluricentric societies" are made by different actors sharing different beliefs. However, because decision makers operate in silos it "makes unitary action impossible". Against this, scholars advocate for cooperation and a renewed form of network management focusing on long term goals.
- The notion of "dissent" is used by Kemp et al (2007) to refer to the absence of consensus on the ranking of priorities and translation of definition in practice. Similarly, these problems are explained by a difference of perspectives between actors.
- The concept of "political myopia" is used to explain the behavior of policymakers and politicians denying the necessity for transformations. "They have to be convinced that a problem needs fundamental change and that time is needed for such a change to occur" (Kemp et al., 2007). Transition management scholars argue that, considering the urgency for action, transitions must be initiated outside of the traditional institutions with the aim of altering the current regime.

Proponents of transition management advocate for an articulation of short term actions and long-term sustainability efforts (Loorbach, 2010). Nowadays, these clashes result in the fulfilling of short terms needs at the expense of long terms objectives for various reasons including personal political benefits, which have been listed by political psychology scholars (Strom, 1990). Loorbach (2010) advocates for an institutionalization of "long term governance activities". Current style of governance is viewed as incapable to tackle sustainability challenges and alternative solutions needed. Transition management scholar's advocates for the development of a "transition arena" separated from regular institutions. This detachment would enable them to propose innovative and radical solutions, "that should then be institutionalized through development of transition agendas, new rules and laws" (ibid). Indeed, while an isolation is initially necessary "steering from outside a societal system is not effective" (ibid). Therefore, "operational policy models" must be developed to reorient public and private initiatives (Loorbach, 2010). Thus, a challenge of transition management is to find a balance to "translate abstract governance tenets" into practical solutions, without being too prescriptive. Indeed, there is a risk of repeating the errors of the traditional governance systems they denounced (ibid). Transition management scholars advocate

for an "incrementalist strategy", that is to say adopting successive small steps to approach common perspectives of sustainability (Kemp et al., 2007).

In this process, transition management scholars recommend the use of four concepts as tool to overcome the barriers to transition listed above: collaboration, shared vision, experimentation and learning.

3.3 Theoretical framework

Considering the contribution of the sustainability transition and transition management scholars, I chose to use the concepts of "shared vision" and "collaboration" as my theoretical framework. They are highly recurring in the academic literature and fit well with my work.

3.3.1. Shared visions

Through the concept of shared visions, scholars advocate for the uniting of actors around "common beliefs". They oppose this process to the regular networks where actors gathered around "mutual interests". (Loorbach, 2010).

This first tool aims at developing a "long term idea of sustainability" constituted by basic principles on the societal outcomes and sustainability criteria (ibid). It helps understanding problems by "identifying regime barriers and structural conditions for a transition". The principal objective of this concept is to determine concrete ways of carrying transformations. Indeed, (Nevens et al., 2013) explains that goals are insufficient by themselves, they should be coupled with "an understanding of the corresponding transition". Furthermore, scholars insist on the importance of non-quantifiable objectives within perspectives to ensure a preservation of complexity (Rotmans et al., 2001). According to Loorbach (2010), a simple set of questions can be asked to stakeholders to assess the degree of commonality between perspectives:

- Why a transition?
- What are the sustainability criteria of the societal system when fundamentally transformed?
- What are the areas that require change, and what are the alternatives?

This concept is thought by transition management scholars as an organizational instrument to push the transition in the society, a tactical tool to identify concrete pathways for transition (Grin, 2010). It also embeds a potential to influence and inspire actors actively participating to the collaboration, or simply witnessing it. A key characteristic of this concept is its flexibility "on short and midterm strategies". Certainly, stakeholders should agree upon an "agenda" (ibid) but it is open to change. A determining factor of success for the *shared vision* is the consideration norms and restraints characterizing the societal system. Failure to integrate these limits would give a utopian aspect to the *shared vision* and discredit it. Therefore, *shared visions* should be concrete and realistic. Moreover, the scholars explains that *shared visions* should be created within a group of agents "with the capacity to generate dissipative structures and operate within these deviant structures". Indeed, here *shared visions* are understood as disruptive tools "to overturn existing power structures" (ibid).

The concept is highly relevant for the assessment of stakeholders' value of the environment and energy access for people (Velasco-Herrejón et al., 2022). Moreover, actors face profound contradictions in the classification of priorities, as means are limited, and measures inevitably associated with tradeoffs (Morgunova, 2021). *Shared visions* highlighting long term common objectives could help achieving higher sustainability of energy transition projects.

3.3.2. Collaboration

Through *collaboration* Transition management scholars advocate for cooperation against "competitive relationships" (Köhler et al., 2019). Köhler et al (2019) argue that cooperation between actors from different spheres facilitate the achievement of objectives deemed common, or of mutual interest (Grin, 2010). In this process, a key element for success relies on the identification of each actor's values and interests (ibid). This effort leads to a better understanding of stakeholder's positions. Researchers underline that *collaboration* can take various degrees ranging from official partnerships to unformal conversations. In most cases several forms of cooperation are used "within and between formal settings" (ibid). Nevertheless, scholars advocate for a minimal setting designed to generate a "mental, social and physical space to develop new ideas, common language and ambitions" (Loorbach, 2010).

In this thesis, *collaboration* appears as an essential tool to go beyond primitive logics of oppositions. Stakeholders of the energy transition often experience various forms of confrontations, ranging from unsaid resentments to open physical clashes (Sovacool et al., 2022). Undeniably, humans, similarly to other species, naturally react to incomprehension by either fear or anger, depending on their position, which ultimately results in rejection (Gomolińska, 1998). These basic emotions, initially generated to guarantee survival, intervene on top of other logics of settler colonialism mentioned above. While stakeholders of the energy transition in Canada do not directly reject each other's, incomprehension remains and affects the sustainability of projects. "The issue in settler colonialism is neither how the forest thinks nor how natives think about the forest, but rather how settlers unthink both native and forest ontologies" (Burow et al., 2018). Certainly, a long path remains for actors to enter in logics of "true collaboration". Authors have repeatedly demonstrated the shallowness of consultation mechanisms (Fjellheim, 2023) and the fact that non-Indigenous people often do not perceive the benefits that could result from establishing authentic cooperation (Velasco-Herrejón et al., 2022) ; (Gudynas & Acosta, 2011).

Collaboration constitutes a first step, through dialogue, to understand how to overcome perspectives differences and finding commonalities. As explained before, proponents of green growth, have so far discarded the value of considering Indigenous understandings and depicted them as a danger to western neoliberal developmental ideals (Witoszek, 2016). Exiting from this stereotyped lecture, binary opposing Indigenous traditional systems to the Canadian contemporary society, opens new possibilities (Lowan-Trudeau, 2017) by escaping from the logic of "false choice" imposed to Indigenous people. *Collaboration* allows actors to grasp the complexity of the other's conception and increase the understanding of the other's position and behavior. Ultimately, it opens the possibility of creating *shared visions,* through discussions, toward an energy future fitting the different stakeholders needs and ideals, and therefore achieve more sustainability.

Other than that *collaboration* also helps exiting from the fragmentation characterizing most actors from institutions to businesses, but also NGO. Most focus on the day-to-day operations and are not considering the possibility of consulting and even less coordinating their actions with other

actors in their field because they haven't integrated yet the benefits of doing so. Logics of minimization of risks and competition dominate. This leads to important amounts of wastes which are material but also humans (time, energy). To achieve greater sustainability, these logics inherent to our neoliberal capitalist system that also drive our energetic systems, must be overcome.

(Loorbach et al, 2022) explain that stakeholders are often willing to contribute to transformations but that, on top of their unavailability to dedicate energy and time to do so, because they do not believe in the benefits of doing so, they are also unaware of ways to participate. According to researchers "an integrative strategic governance level is missing" (Loorbach, 2010). Therefore, I intend to assess the degree of collaboration between stakeholders, and the sincerity of actors in implementing it.

I also aim at identifying examples of "true collaboration" and keys of success to be able to foster such dynamics in writing policies recommendations later. Indeed, examples of in-depth collaboration do exist between Indigenous communities and institutions such as the "Alberta Ecotrust Foundation", the "Southern Alberta Institute of Technology", and "Environment and Climate Change Canada" for instance. Some academic actors also promote this trend such as "First Nations University of Canada", and "University Blue Quills".

4 Method

4.1 Research Design

This thesis aims at understanding the degree of integration of indigenous perspectives in renewable energy projects in the province of Saskatchewan, and identifying policy needs to favor indigenous engagement as partners with decision making power.

Indigenous communities experience various degree of inclusion in renewable energy projects across Canada, and Saskatchewan isn't the most advance province in this field. While several contextual reasons contribute to explain these differences of Indigenous integration, policy constitute a fundamental factor. As a result, the choice of a comparative study was made to identify how Saskatchewan could advance its policies to support Indigenous engagement.

Indeed, this work adopts a transformative worldview (Creswell & Creswell, s. d.) focusing on ways to bring transforamtions toward more sustainability in practionner's practices.

A qualitative approach was chosen based on a combination of document analysis and semi structured interviews. The use of these two types of data allows a comparison of official discourses with field perspectives along with a verification of interviewees statements regarding public action.

In terms of document analysis, both public agencies and energy developers' reports were condisered. Indeed, while public policies provide both public and private institutions a frame and orientation for action, private standards and strategies also largely impact energy systems development by structuring agents' practices, diffusing a culture of doing, configuring stakeholder's interactions, estimating value, etc. While incumbents, largely non-Indigenous, pave the way for smaller firms, this concerns also Indigenous companies. Therefore, beyond public policies, this thesis explores internal business sustainability guidelines.

In terms of interviews, scholars have demonstrated the joint responsibility of stakeholders in the faults of Indigenous communities energy transition (Velasco-Herrejón et al., 2022). Moreover, each actor presents a unique perspective on the topic, which must be acknowledged, understood, and compared with the views of other actors to conserve objectivity and address issues constructively. Therefore, this thesis adopts a holistic approach including all stakeholders in interviews, notably energy developers, nowadays mostly excluded from academic research.

Use of interviews and document analysis in relation to research questions are explained in table 3.

Table 3. Identification of the methods used to answer the various research questions.

Research Questions	**Method**
What are the key elements structuring the visions on sustainable energy systems for Indigenous communities', province/federal institutions, and private energy developers in the Province of Saskatchewan?	Semi structured interviews & analysis of official documents.
To what extent is there a shared vision on energy transition in the Province of Saskatchewan?	Semi structured interviews.
How is collaboration practiced for the alignment of actors in finding directionality?	Semi structured interviews & analysis of official documents.
How could Indigenous communities' involvement - in terms of visions and collaboration – be strengthen in the development of energy transition policies? What practices currently hinder such development?	Semi structured interviews & analysis of official documents.

4.2 Methods used to collect data:

4.2.1 Semi structured interviews

Semi structured interviewees were chosen to provide interviewees the possibility to express unexcepted views on the topic and reorient my way of perceiving realities. In the context of this thesis focusing on the notion of perspectives this open-minded stand was fundamental to succeed uncovering processes, and building the necessary trust for respondents to express themselves on what is perceived as a sensitive matter in Canada. An interview guide was created to provide an overall direction of the interview, see Appendix A.

Interviews were conducted preferably on site, as remote setting constitutes a barrier to the building of trust between the interviewees and the researcher, and therefore limits the sharing of information.

Interviewees were found with the help of Oscar Zapata, professor at the University of Saskatchewan and local facilitator. A snowball method was also used during most interviews. Linkedin was also intensively used to identify potential interviewees, notably energy developers with which the academic sphere possesses less contact.

4.2.2 Document analysis.

Publically available documents were analyzed to understand the official position of agencies, governments, and energy developers on the issue. These documents were either found on the website of these organizations or provided by interviewees when documents were not obvious to find, or in the case of recommended readings. These documents include energy transition strategy for each province included in this study, public consultation reports, energy initiatives reports, and energy developers' sustainability reports/indigenous engagement policies.

Considering the very important number of energy developers on the market, the most important ones, providing documentations, were selected for this analysis. Energy developers mentioned or recommended to contact by interviewees were also examined.

4.3 Materials collected

4.3.1 Semi Structured Interviews

In total, 29 interviewees were conducted with at least 3 interviews for each group of stakeholders (civil servants, experts, Indigenous communities, energy developers and public utilities) to ensure the validity and credibility of the findings. I conducted all the interviews in English. Most interviews were conducted remotely. A table summarizing all interviews conducted is available in appendix B.

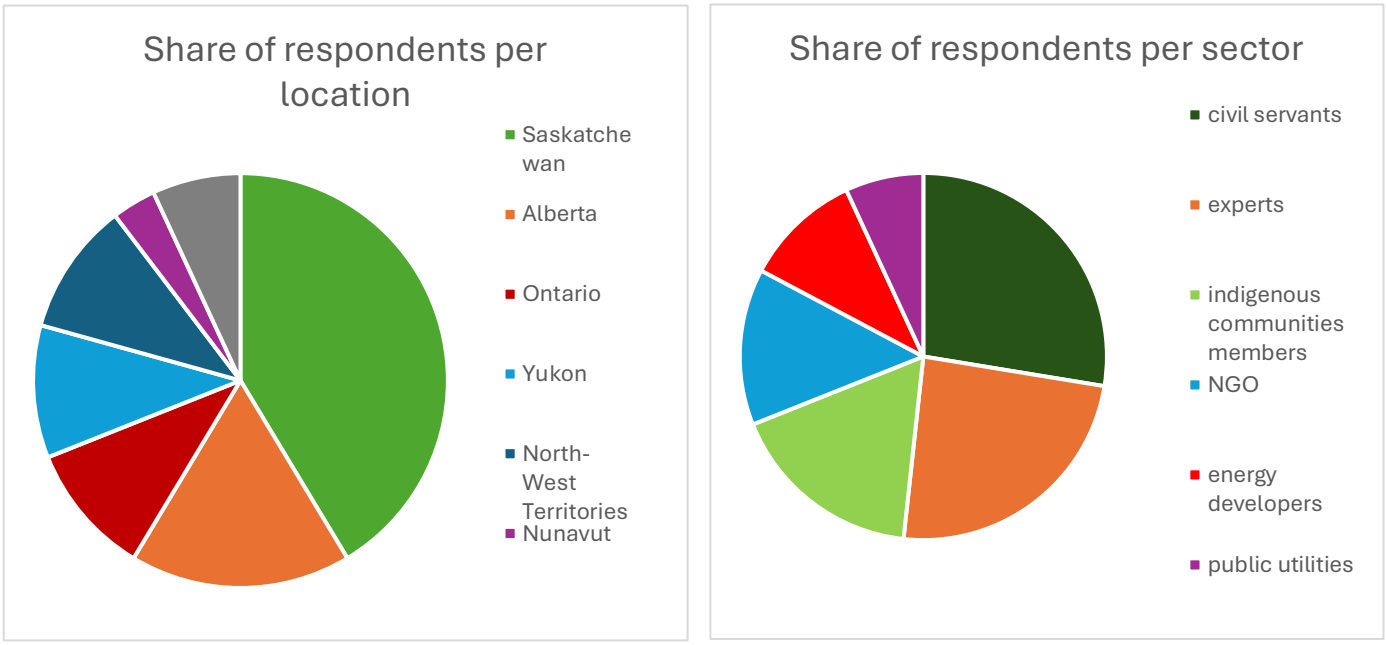

Figure 4: Presentation of the share of respondents per location and sector of activity.

4.3.2 Document analyzed

A list of the documents analyzed is provided in Appendix C. It includes documents from provincial governments such as consultation reports, action reports and strategies, but also documents written by NGO and energy developers in the frame of their sustainability policies and efforts to engage with Indigenous communities.

4.4 Methods for data analysis

4.4.1 Interview analysis

Informations provided by interviewees were crosschecked using other interviewees and online searches. Recurring statements among interviewees was given a higher reliability.

No coding systems was used, all interviews were read manually, and information were highlighted manually using different colors to distinguish informations conforting, disagreeing, or providing a

new perspective on the current hypotheses. Themes naturally emerged from the interview structure following the research question of this work.

This research was conducted in a complete anonymous manner to facilitate interviewees expression and avoid ethical issues. Therefore, I refer to stakeholders' groups when comparing perspectives, never to individuals. The structure of the analysis chapter follows the research questions and details each stakeholder's group position.

4.4.2 Document analysis

The first goal was to identify to what extent public agencies supporting the energy transition integrate the question of Indigenous engagement in their action plans and report. My second objective was to examine consultation report to assess public opinion familiarity and view on the topic. Finally, I aimed at comparing commitment on paper with on the ground reality collected through interviews. Words such as "collaboration", "perspective", "understanding", "partnerships", and "vision" were used as key terms to search for in each document.

5 Analysis: Perspectives on a just energy transition.

This chapter is introduced by a short background to provincial differences in Canada and the energy sector working logic, followed by the findings of the analysis based on the research questions. Indeed, it is necessary to understand the Canadian system's way of functioning to comprehend actor's positions and challenges. This introduction is based on knowledge gathered during interviews.

As explained in the introduction, the following research questions have guided my research:

- RQ1. What are the key elements structuring the perspectives on sustainable energy systems of Indigenous communities compared with other stakeholders? (section 5.2) To what extent is there a shared vision on energy transition? (section 5.3)
- RQ2. To what extent is collaboration practiced today in terms of indigenous engagement? (section 5.4)
- RQ3. How could Indigenous communities be turned into leaders of their energy transition? What practices currently hinder such advancement? (section 5.5)

5.1 Background

5.1.1 Demographic, geographic, and economic characteristics structuring Indigenous relations and possibilities

Interviews show that Indigenous engagement in renewable energy projects varies greatly among provinces. The impossibility for federal authorities to impose top-down decisions on such a large territory, led to an historically high delegation of power to provincial authorities which remains today. This choice results in great variations following the electoral weight of Indigenous people in each province. northern provinces, such as the Northwest Territories (50% of the population in 2021, (Satistics Canada, 2022)) and the Yukon (25%, ibid), characterized by an important share of Indigenous people among the population present more progressive policies in terms of Indigenous engagement. On the contrary, in regions such as Saskatchewan, characterized by a lower share of Indigenous people (17%, ibid), policies tend to follow the strict minimum required by federal authorities. A map showing the western provinces of Canada and the respective share of Indigenous population among each province is provided in appendix D.

Another factor of Indigenous engagement is the economic tissue of each province. While certain province possesses obvious interests in the energy transition to advance energy security and develop the economy such as northern regions, others such as Saskatchewan and Alberta present an important coal and gas industry. In these provinces, the energy transition fragilize incumbents' interests, therefore a lower number of projects is carried. This leads to a lower number of projects involving Indigenous communities.

But even in the North, differences exist among provinces due to geographic disparities leading to various degree of infrastructure development. In Yukon 5 communities are off grid (Canada Energy Regulator, 2024a) but 94% of the electricity is generated by hydropower and most of the population is connected to the grid. In the Northwest Territories, 2 microgrid based on hydropower supply more than 60% of the electricity while the rest of the population rely on diesel engines. In Nunavut most communities are isolated, and the electricity system should be comprehended as an archipelago more than an island. All communities are Indigenous and rely on

diesel engines. In all northern provinces, diesel engines are slowly combined with renewable solutions but no technical solution for complete replacement exist so far.

Definitions of essential terms related to the seclusion of certain Indigenous communities', mostly in northern regions, are provided below:

- *Remote*: "geographical area where a community is located over 350 km from the nearest service centre having year-round access by land and/or water routes normally used in all weather conditions" (The National Collaborating Centre for Indigenous, 2021)
- *Isolated*: "geographical area that has scheduled flights and good telephone service but that is without year-round access by land and/or water normally used in all weather conditions" (ibid).
- *Off-grid*: "Any community not currently connected to the North-American electrical grid nor to the piped natural" (Government of Canada, 2011). However, communities can benefit from micro-grid.
- *Rural community*: population of 5000 people or less (Saskatchewan Association of Rural Municipalities, 2024).

In Saskatchewan, there are 5 isolated communities (Governement of Canada, 2021), one off grid community, and 296 rural communities. 80% of the electricity is generated by coal and gas with an equal share of 40% each (Canada Energy Regulator, 2024b). 19% of electricity is produced using renewables, majoritarily hydro, and the rest is generated using a very small amount of petroleum (ibic) Most of the electricity is produced by the public utility Saskpower, independent energy producer accounts for 18% of the electricity generation (ibid). South Saskatchewan presents one of the highest wind and solar potential in Canada (ibid). Solar, and in particular wind solutions, are expected to grow in coming years, while hydro is supposed to remain stable unless droughts related to climate change reduce the provincial capacities.

5.1.2 A structure of provincial electricity systems impacting Indigenous engagement.

In most southern provinces, public utilities oversee the implementation of projects on behalf of each provincial government. Their authorization is needed for every electricity generation project including Indigenous communities' autonomous installation which are allowed under an "independent energy producer agreement". These public utilities delegate project management to private energy developers who might themselves delegate technical works to private contractors. While public utilities follow provincial government directive, they play a crucial role by framing the terms of the relations between energy developers and Indigenous communities. They set up project's requirements, select recipients and verify actors' compliance to their commitments. Often, in this configuration Indigenous communities must agree to the term of energy developers due to their lack of capacity to engage directly with public utilities and overall low negotiating ability.

On the contrary, in northern provinces, which do not benefit from a unique grid, but a plurality of microgrids, and have recognized more autonomy to Indigenous communities, an increased number of Indigenous led projects is observed. There, public utilities intervene as an advisor providing feasibilities studies to Indigenous communities. Autochthonous are the ones taking the final decision of conducting the project or not. Indeed, an important movement that it fundamental to consider when looking at responsibilities shares and relations dynamics, are

"reconciliation" policies. It provides communities, which have signed an agreement with provincial government to benefit from autonomy, are now receiving money directly from the federal level instead of going through the provincial government by applying to specific programs. This provides them with more autonomy in the management of public funds and they can set up priorities themselves. Communities are also at liberty of putting on the market bidding offer to benefit from a more competitive price than the one proposed by the public utility to implement the project.

Alberta constitutes a unique case structured around a free market approach. It provides increased liberty to stakeholders in creating and implementing their projects, but it also brings greater challenges in terms of control.

5.1.3 A degree of autonomy and rights recognition varying among communities and impacting Indigenous possibilities.

It is fundamental to understand that Indigenous communities are at differents steps in their engagement journey. A few First Nations benefit from modern agreement with the government granting them with the possibilities of making independent decisions in reserves, applying to private loans, and have been granted centennial leases on lands. On the contrary, Metis people are only untitled to occupy municipal lands and they are still subjected to follow Canadian authorities' decisions. Metis people were historically much more nomadic and therefore not granted titles on lands. This resulted in a lack of integration to the Canadian economy as banks didn't benefit from collateral to secure their loans. However, this situation is evolving as new agreements are currently being negotiated.

Certain communities are not yet authorized to apply for private loans; therefore, they are completely dependent on public funds for economic development.

Therefore, Indigenous communities' status highly determines their possibility to get involved as partner in renewable energy development projects. While First Nations communities start leading their own electricity generation projects and benefit from the support of some Canadian banks to get involved in bigger projects, Metis people mostly only start to be considered as potential partners. I didn't interview Inuit people as excluded from my initial research scope, so I do not refer to their situation, but it is also very different. A summary of the different existing degree of power delegation is provided in figure 5.

Indian Act	First Nation Land Management Act	Self Government
•Communities is administered by the ISC (Indigenous Services Canada) •This is the way most communities are still governed today	•An in between agreement where a specific land code has been agreed upon between the local government and the community. This code is used to rule the community.	•Community has been recognized full autonomy in terms of government. Land management policies are set by the community.

Figure 5: Summary of the different pieces of legislation structuring Indigenous status in Canada.

5.2 Key elements framing stakeholder's perspectives on sustainable energy systems

The definition given of sustainable energy systems by most interviewees focus on three pillars: affordability, reliance, and accessibility. Interviewees also mention low or zero emission, but it generally comes later in their way of thinking about the topic. They often refer to Canada commitment to achieve full clean energy by 2035 but often tone down this objective to around 50%. Renewable solutions are seen as a benefit but not as a prerequisite yet.

Interestingly, energy developers, public utilities and experts often refer to the dilemma of "heat or eat" faced by Indigenous communities to illustrate the poverty faced by several Indigenous groups. According to them, Indigenous communities lack of access to capita would prevent Indigenous communities from implementing renewable energy solutions as they face other more immediate and concerning problems. While this constitutes a positive recognition of a systemic issue faced by autochthonous groups, this also establishes a negative loop of thinking where actors justify their own inaction by refering to economic conditions that they are not responsible for.

Indigenous communities recognize this barrier to sustainable development, and it is important to recognize the impacts that it has on Indigenous communities' concerns about sustainability. For instance, in the Northwest Territories (Government of North West Territories, 2024) Indigenous participants to the consultation recognize the need to support a transition toward clean energy. They consider that not enough is being done to fight climate change, as they are at the forefront with regular fires, flooding, and permafrost melting. But they also express a fear to face higher energy cost, as stated by one of the interviewees:

> *"The government must address affordability issues before committing to aggressive GHG targets". (Indigenous respondent working for an Indigenous economic development corporation, Saskatchewan)*

As a result, Indigenous communities rank priorities differently depending on their possibilities and often, the inclusion in the Canadian economy prevails over environmental issues. Indigenous perspectives inclusion in renewable energy projects is deemed very important, but communities often prioritize the implementation of projects. This situation gives the upper hand to energy developers in project design since communities often do not want to take the risk of "missing an opportunity".

Indigenous conception of renewable energy projects is framed around the notion of kinship, according to which everything is perceived as related and to work cyclically. Following this perspective, environment and social impacts, should be considered in a way that prevents projects from leading to an unbalance. Consequences for future generations are also core to Indigenous way of thinking about development, along with preserving Indigenous identity and culture. Ancestral transmission of knowledge by community elders appears to be central in Indigenous perspective preservation.

"I think the definition that western world poses of sustainability is accurate, and it's great, but it's not representative of the reality, of what's truly happening." (indigenous respondent working for public organization, Ontario)

Indigenous engagement is not something that stakeholders naturally referred to while thinking about sustainability. This concern is so far reserved to experts and Indigenous communities. For public utilities, the priority is to achieve the 2035 Canadian federal target of a zero-emission energy system. Issues related to how this objective could be achieved in a socially fair way are often forgotten or avoided. Certainly, some interviewees underline the difference between sustainable and green, but they are not representative of most respondent's answers.

Most energy developers do not share the same beliefs on sustainability as Indigenous communities and scholars. They do not perceive yet the direct benefits of Indigenous engagement. They argue that energy developers must follow a pragmatic approach to remain competitive, which doesn't allow them to spend time building partnerships with communities. They also deem that involving communities as partners involves important risk due to their "diverse and numerous lack capacities". They consider Indigenous engagement a federal and provincial authorities' issue since they are the ones framing contracts terms through bidding offers and policies. According to them, energy developers must follow the minimum set of requirements as public utilities favor projects with the lower costs. This conception of stakeholder's roles bound to follow neoliberal market rules leads to a discard of Indigenous communities' inclusion beyond simple consultation and royalties. As stated by an expert,

"The same mistakes made by the petrol and gas industries are made by renewable energy actors today" (Expert working for Indigenous communities, Alberta.

Overall, Indigenous communities denounce a trend to commodify nature and people which doesn't align with Indigenous worldview according to which "everything is connected, and everything needs to be well together". A civil servant working for an institution supporting indigenous energy transition explains that:

"As long as we do not address the underlying systemic issues that continue oppressing marginalized groups, we won't be able to integrate Indigenous views". (public institution respondent, Yukon)

But some stakeholders argue that similarly to non-Indigenous people, Indigenous didn't agreed yet on what sustainability means. For instance, some believe that biomass and nuclear are beneficial while others consider that one or both solutions as unsustainable. Even hydropower is debated.

"Every community has a different definition of what is sustainable, what does align with their values." (public institution respondent, Northwest Territories)

It is also key to recognize the logistical challenges faced by most stakeholders operating with Indigenous groups. While they are limited in Saskatchewan, they can be highly problematic in northern provinces where distances, climatic conditions and lack of skilled workorce, make all sorts of development extremely costly. These conditions make projects much longer to be developed and limit investors interests.

Figure 6 summarizes how stakeholders' views on the sustainability of electricity generation from renewables on Indigenous lands influence Indigenous degree of engagement in projects.

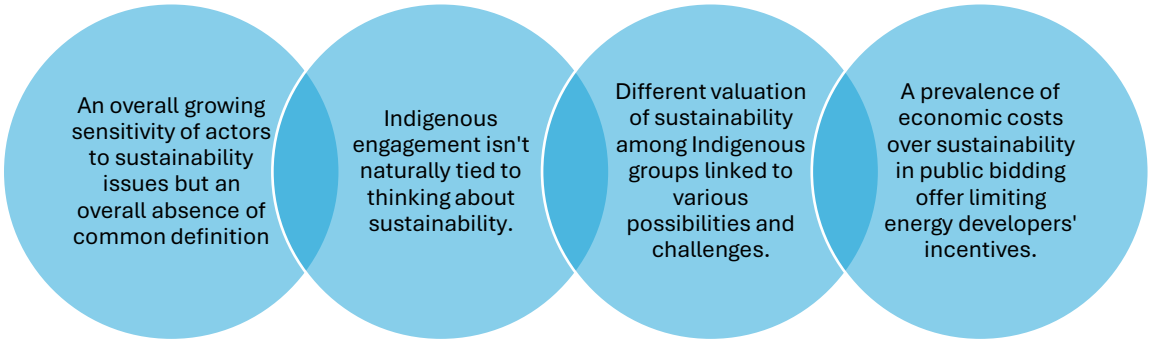

Figure 6. A summary of stakeholder's views on energy sustainability and its impacts on Indigenous engagement

Examinations of consultation reports created by provincial government reveals a wide range of degree of advancements on the topic. While Saskatchewan provides a very synthetic report built on responses from online survey and meetings, other provinces such as the Yukon and the Northwest Territories provide much more extensive reports based on onsite meetings. A correlation was observed between the degree of advancement of consultation reports and notions of sustainability. Indeed, the concept of Indigenous engagement doesn't specifically appear in Saskatchewan reports, and projects' sustainability is mostly appreciated in terms of cost and emissions (Saskpower, 2023). Indigenous perspectives on the topic are not mentioned either (ibid). In northern provinces, while key concerns remain affordability, reliability, and cleanliness, respondents also demand more collaboration between public utility and Indigenous community. Partnership is understood as a central tool to address current development related issues. Notion of "community business management" and "communities decision making" are also present but they remain a relatively new topic. For instance, in Yukon, the new province framework for collaboration was launched in spring 2024. Review of consultation reports also reveals a varying integration of Indigenous communities' responses. In Saskatchewan, Indigenous voices do not appear clearly, while in northern provinces, they are very clearly stated.

Similarly, analysis of initiative reports, and action plans, shows that while most provinces demonstrate efforts in emission reduction, Indigenous engagement still constitutes a relatively new topic institutionnally speaking. For instance, the Alberta government created a strategy for the energy transition where Indigenous perspectives appear important but are still not considered as decisionary actors. "Data and performances" still drive decision making.

Likewise, reviews of energy developers' action in terms of Indigenous engagement shows that the private sector mostly focus on achieving emissions reduction. Indigenous engagement constitutes a secondary concern that often doesn't appears on companies' communications. Nevertheless, it is important to acknowledge the leading role of certain companies engaging with Indigenous communities under joint ventures, dedicating some efforts to exercise dialogue and training their employees to Indigenous perspectives. Some energy developers use the terms "Indigenous leadership" and partnership in their communications. They also showcase the integration of

"training programs" in projects development, dedicated for Indigenous communities' members to acquire capacities. However, these energy developments are still very much considered front runners and do not represent the behavior of most companies in the sector.

5.3 Assessment of the shared sustainability vision in renewable energy projects

Most interviewees recognize that renewable energy projects are mostly framed and managed following western perspectives, centered on the notion of profit. Nowadays, communities are consulted, which is already an important improvement compared to the situation a few decades earlier, but they are not yet integrated to the design of projects as equal partners. Overall, the notion of shared vision is still "very far away" and people mostly engage in partnership due to vested interests. Legal obligations, fear of case laws and community blockage, but also community interests for profits constitute factors leading to collaboration over concerns on a shared vision of sustainability.

Participants to consultation reports in northern provinces refer to the notion of "shared vision" as opposed to "individual projects" and explain that a "theoretical foundation" should be built based on a common understanding of projects scopes. They argue that existing structures promoting this alternative way to development are lacking, along with an alignment of the local government and public utilities on the topic.

"There is no current coordinated strategic approach, amongst First Nations or stakeholders." (public institution respondent, Saskatchewan)

It is interesting to note that energy developers' willingness to include communities varies, depending on project types. Hydro and windmill projects are believed to have higher consequences and benefit from increased consultation than solar installations. A commonality of issues is faced by stakeholders, notably when it comes to understand and consider Indigenous perspectives. Settler colonialism appears to keep impacting actor's relations and influencing their possibilities today across Canada.

"First Nations have to fight really hard for it because of what their current position is and how colonization impacts have played out there". (expert, Saskatchewan)

Both Indigenous communities and experts denounce a colonial attitude characterizing the conceptions of numerous stakeholders today.

"Both energy developers and institutions believe that they know better what, where and how to implement energy solutions" (Indigenous respondent working for a public organization, Ontario)

Moreover, very few Indigenous people are involved in the design of public policies supporting Indigenous communities. Since most programs are supported by public grants, this has important impacts on Indigenous development possibilities. Some respondents working for public institutions supporting Indigenous development, advocate for "unlearning processes and open mindset" so that Indigenous perspectives could be heard.

"Public policies are made by people which do not really recognize Indigenous communities nor carry their vision of how things should be done". (public institution, Saskatchewan)

Energy developers appear to try to avoid Indigenous involvement as they think that it will help them save time and money. This demonstrates a clear lack of concern for Indigenous rights, and shortsightedness on the benefits that collaboration could bring. On the contrary, Indigenous communities demonstrate a willingness to be included in energy transition projects, while aiming to limit the environmental and cultural impacts of projects. Several interviewees take for example Indigenous communities development corporations, in charge of the economic development of Indigenous communities, which behave similarly to non-Indigenous companies, and are very efficient when engaged in a project.

5.3.1.1 An emerging shared vision of sustainability in small and medium size projects:

A great difference exists between utility scale and community size projects. While utility scales projects are still mostly led by energy developers, there are several examples of communities leading projects for smaller installations. In that case, energy developers, preferably from the community, are asked to conduct the technical work. Non-Indigenous energy developers are mostly interested in investing in utility scale projects as profit margins are higher. Therefore, respondents refer to a "natural repartition of tasks" where Indigenous communities take care of small size energy transition projects while energy developers manage bigger projects.

Consequently, Indigenous perspectives on sustainability have so far, mostly been integrated to lower scale projects, but no interviewees were able to refer to an example of implemented shared vision. Stakeholders keep conceiving decision making in a very binary way, where either Indigenous communities have the power to implement their ideas, or they do not.

Today, most renewable energy systems integrate Indigenous community (in terms of projects number, not total power generation…) It is important to note the federal efforts to promote Indigenous involvement in bigger projects by making larger funds available to them (up to 20 million dollars per project, 1,3 billion dollars in total). A very interesting report made by the Indigenous Clean Energy network (Indigenous Clean Energy, 2020) showing Indigenous communities involvement in 197 projects of medium to large scale projects, and 2100 in micro/small scale projects. This represents in total 2500 projects, most of them being for generation (90%) and the rest for transmission & efficiency. British Columbia, Ontario and Quebec appear to be leading provinces in terms of Indigenous engagement due to independent power producers' agreements valuing Indigenous engagement, and other progressive provincial policies. Finally, it is interesting to note the national trend of +45% Indigenous ownership. Figure 7 shows the evolution of Indigenous ownership in Canada.

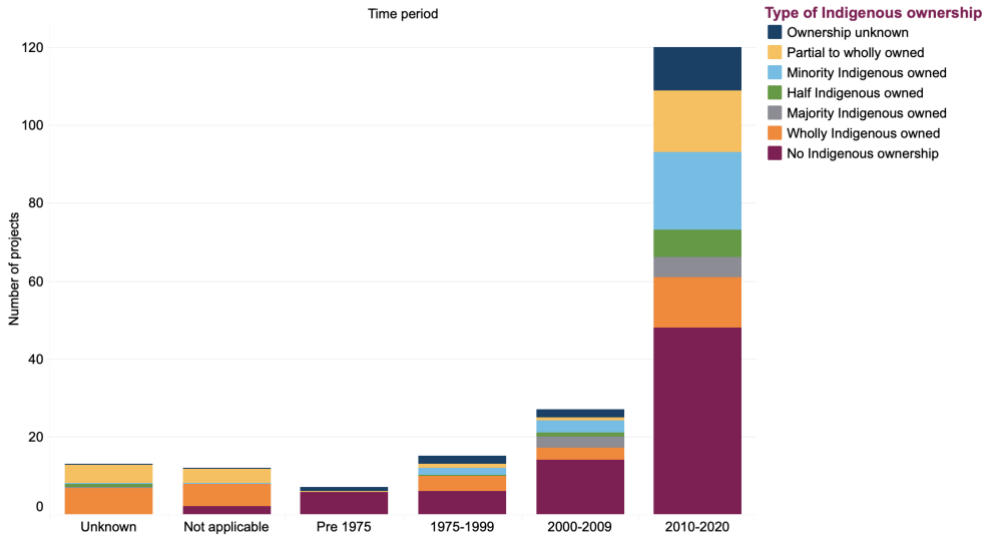

Figure 7. Evolution of the share of Indigenous ownership in energy projects, renewable and non renewable are mixed (Canada Energy Regulator, 2024c)

5.4 Conceptions of collaboration among stakeholders and its impact on Indigenous communities' engagement as partners.

Document analysis shows that comprehension of what Indigenous communities engagement in renewable energy projects means varies among provinces but at the federal level it is still mostly limited to employment and monetary compensation packages (National Energy Board, 2019). Several "calls for action" were made encouraging provinces to integrate Indigenous communities in the writing of the frameworks structuring the local energy transition. However, provinces are at liberty to follow these recommendations or not. This partly explains the important differences observed among provinces. So far collaboration is mostly conceived as meetings with Indigenous communities and reception of their feedback. It is therefore limited to the respect of their right to free, prior and informed consent.

When asked about concrete examples of collaboration, most interviewees refer to "consultation, royalties, scholarships, employment and IBA" (impacts and benefits agreements)[6]. Similarly, analysis of energy developers' communications reveals that Indigenous groups are comprehended as actors impacted by projects which should compensated under the forms of scholarships, funding programs and sometimes employment or training., but not partners. Figure 8 provides a summary of the different forms of indigenous engagement.

[6] It is important to note that contrarily to projects shares acquisition, IBA are often tied with non-disclosure agreements and negotiated directly between Indigenous communities and energy developers. It makes them quite controversial since the rightfulness of the compensation package propose is hard or impossible to assess. On the contrary, integrating Indigenous communities in equity provide them with an equal share of benefits and a long-lasting source of income to invest.

There is currently no public mechanism specifically encouraging stakeholders' cooperation. Indigenous communities are seen as beneficiaries that must be consulted and compensated. Collaboration is still at its early stage.

Stakeholders do not refer naturally to the acquisition of shares in projects. However, according to Indigenous communities, gaining majority in the capita of projects is the only way for them to have a say in the design and management of projects. Acquiring a veto power recognized by companies, through its economic nature is necessary in a society that doesn't value yet Indigenous people as "full right citizen" (REF). Beyond the socio-economic benefits resulting from acquiring shares in electricity generation projects, ownership appears to be one of the most rapid solutions for communities to be heard in a context of general discard of Indigenous communities' capacities and beliefs.

However, Indigenous communities limited knowledge on renewable energy systems and low financial capacity often led them to renunciate to ownership in favor of royalities deemed less risky. Indeed, under royalties' schemes, they only share projects benefits, instead of the cost of failures. Indigenous respondent themselves confess that energy developers are often more technically competent and have a vested interest in the success of the project. This perception limits Indigenous will to participate in projects as partners and defend their perspectives.

Experts explain that Indigenous ownership necessity depends very much on what "being heard" means for stakeholders. They argue that while controlling the proper management of a projecs and its technical aspects is relatively easy, integrating philosophical and conceptual beliefs shared among community members is much more complicated. The difference of "worldviews" requires community ownership for such advance design of projects to occur. They also explain that "conceptual ownership" can be understood a precondition to a shared vision of sustainability since community can then decide of the set of relationships that are engaged in the project. Ownership can also make a difference by recognizing Indigenous people specific ways of living and associated needs:

"So many workplaces will give you the standard two or three weeks off at a specified time of the year, but nations members must be on the land at certain times, therefore having a majority share in project can lead to a higher fit with Indigenous cultural and family requirements". (Civil servant in an agency working for the development of renewable energy systems for Indigenous communities, Alberta)

Several stakeholders argue that a wide variety of ownership structures exist and could be used by Indigenous people to match their possibilities and wishes. However, most actors are not knowledgable about legal differences between joint ventures and full ownership for instance.

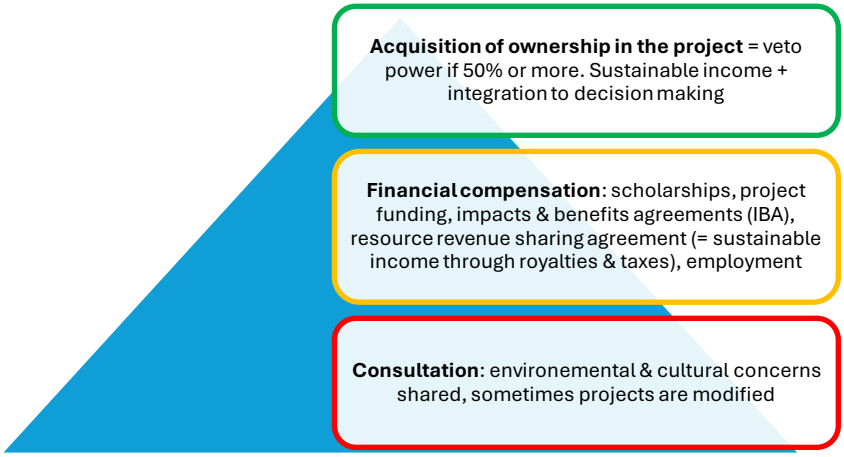

Figure 8: Indigenous engagement types and corresponding decision-making power.

Experts explain that sustainable projects are built on relationships that have last over several years. Integrating Indigenous communities to the energy transition as partner often require training formers coal and gas workers to become leaders, managers and designers of renewable energy projects. It is therefore a long process that requires an in-depth commitment of all actors.

"It's not just a decorative kind of community benefit agreement where the energy developers will say: 'hey, we will employ 10 of your workers to go drive a truck around for two years of this project. After that. Good luck. You're on your own.' That's not the type of thing that leads to long term success and sophistication of First Nations economies…" (public institution, Alberta)

Unfortunately, numerous projects are still created in a way that doesn't promote Indigenous communities' capacity building:

"One of the things that this First Nation wished had happened was that Solvest (an energy developer) also trained locals in the installation, but that didn't happen". (expert, Alberta)

5.4.1 "It depends": a recurring expression translating the variety of situations experimented by Indigenous communities.

"The old ways of thinking and doing are starting to be looked at, you know, as ways of doing that shouldn't be used anymore." (indigenous respondent, Saskatchewan)

Community engagement varies depending on the agreement that was signed with the Canadian government. While on certain territory, devolution of authority to Indigenous communities is clear and implemented, in others, the share of responsibilities is much blurrier. Moreover, the multiple level of governance involved (municipal, province, federal, Indigenous) make things more complex to understand as different institutions share missions and responsibilities.

Additionally, individual differences among community leaders and people involved in Development Corporations lead to differences of relationship between Indigenous communities and the other stakeholders. Renewable energy projects constitute business deals where personalities play an important role in the imposition of one's perspective into the design of the project. Therefore, each project presents a unique relationship, even though communities might benefit from the same agreements on paper.

Finally, both experts and Indigenous communities' members explain that, while certain stakeholders act in good faith, some practices of bribing persist. Nevertheless, all recognize that things are moving in the right direction. They explain that communities are increasingly listened and that the understanding among parties is growing:

"It's not just the the partnership, it's the relationship building with the Indigenous communities. It is needed to understand where we're coming from and what we think. And I think that, a lot of the time, people are in, developers are starting to do that." (indigenous respondent, Alberta)

5.4.2 A deceptive right to "free, prior and informed consent" making Indigenous engagement, as majority partner, fundamental to achieve autochthonous perspectives integration:

Indigenous communities recognize the efforts of regulators to integrate them more due to projects location on Indigenous lands. However, they do not see clear efforts to implement their right of veto. While Indigenous groups are consulted, it usually comes down to the regulator to approve whether this process was properly conducted or not. They explain that consultations are often not properly conducted and do not follow the requirements set by communities. A core element helping to explain Indigenous lack of integration to project building is that there were no clear consultation requirements before the 70's. Today, actors are progressively getting away from a long-lasting history of ignorance of Indigenous communities' opinion. But perspectives on how far on the way stakeholders have gone diverged. This study shows a clear disparity of perspectives between public utilities in charge of monitoring energy developer's fulfillment of Indigenous right to "free, prior and informed consent" and Indigenous communities:

"I would say that Indigenous are satisfied of the consultation processes". (public utility, Saskatchewan)

Moreover, some public utilities respondents still have a poor understanding of what consultation duty really means:

"I have limited information on duty to consult, you should look at the government website." (public utility, Saskatchewan)

There is still no document, recognized by all stakeholders, explaining how to conduct consultation, and achieved "informed consent". The federal and provincial government have issued guidelines adapted from the UNDRIP, and some Indigenous communities have issued documents explaining how and which information should be provided, but there is no legal obligation for any actor to follow them. Besides, energy developers haven't accepted yet consultation as a form of consent which can be retrieved. They consider it as a standard contract binding Indigenous communities. Nowadays, most stakeholders refer to a "duty to consult", which doesn't correspondent to the

constitutional Indigenous right to "free, prior and informed consent". Figure 9 shows Indigenous classification of the various forms of engagement.

"Nations see consultation as the floor, and consent as the ceiling, but right now, what's happening is that consultation is the ceiling". (indigenous respondent, Ontario)

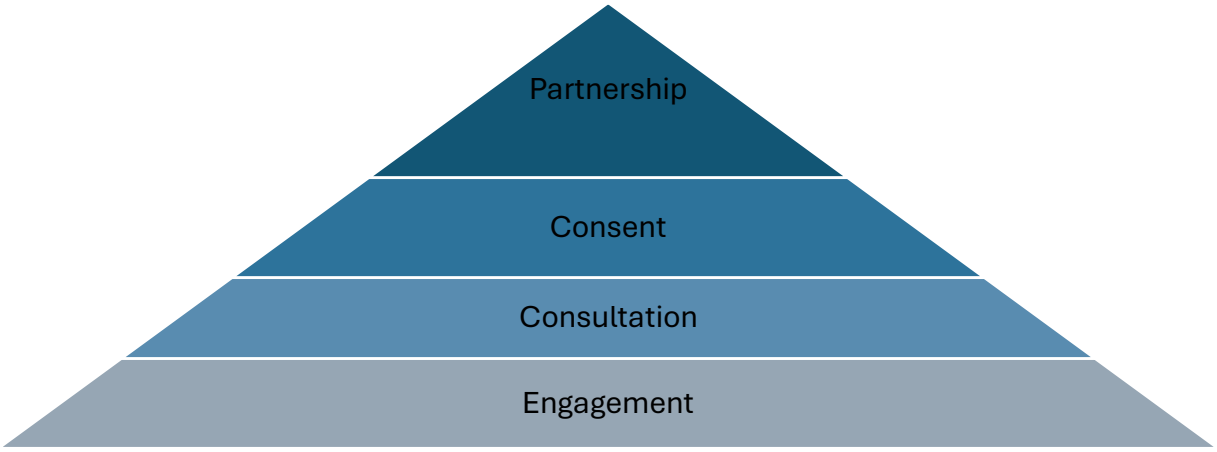

Figure 9: Classification of the different forms of engaging Indigenous communities by Indigenous respondents.

Overall, the evolution of stakeholder's conduct mostly follows Court decisions as investors fear more financial risk, than the legislator acting as a "validator" of on the ground practices. It is also important to note that environmental legislation is much more extensive and applied than the one related to Indigenous rights.

Moreover, Indigenous communities are not provided enough time to react, considering their lack of administrative capacities. Around thirty days are given at best, after which the public utility is given the right to decide whether the projects should be conducted or not. As a result,

"Indigenous communities mostly realize what's happening when they see machines coming in". (Indigenous respondent, Saskatchewan)

Both energy developers and communities agree upon the fact that "Indigenous communities are overwhelmed by demands and understaffed" making the duty to consult very difficult to achieve for an industry working in a much faster and competitive timeframe. Energy developers confess paying Indigenous communities so that they dedicate time to be consulted. Analysis of consultation reports confirm this problem and several Indigenous respondent advocate for a delegation of energy issue from indigenous leaders to community energy champions.

Additionally, all stakeholders recognized that consultation mechanisms have been wrongfully delegated to private actors, notably the financial sector fearing lawsuits, to avoid costs. Despite increase banks concerns to be sued, Indigenous communities keep denouncing about the behavior of certain energy developers. When asked about who oversees the respect of communities right to "free, prior and informed consent", most respondents reply that everyone is responsible, which also means that no one really is.

"Developers will go to communities and say like, "oh, well, we met this one guy who's a trapper and a hunter and a fisherman. So, he knows the bush, and we've talked to him, and he said that what we're doing here is not going to be invasive, that we can continue with this work". And then they often say that this is consent". (Indigenous community member, Saskatchewan)

They also explain that communities must have the capacity and courage to bring the case to Court, when they believe that their right to free, prior, and informed consent hasn't been respected. But while the community is waiting for a Court decision, the project will keep being implemented on their lands. The slowness of the juridical response, combined with the important investments at stake, make projects almost impossible to be removed once implemented. Therefore, energy developers often make the bet that they will be supported by the Court decision or that an agreement, which will often take the form of limited and non-representative compensation, will be found. Moreover, there is no doubt that the current institutional pressure to implement the green energy transition influences trials results.

"In theory Indigenous communities have veto power, but they weren't able to exercise it." (expert, Alberta)

Various institutions members', including public utilities, denounce the drifts resulting from a lack of monitoring. For instance, they explain that sometimes communities are given some shares of projects on paper, but that the benefits will never reach them. Some façades of community ownerships are created by private energy developers to satisfy public utilities requirement. Some stakeholders argue that Indigenous communities were granted control over their own territory without being given adequate monitoring capacities.

Finally, while consultations are mandatory on reserves, they are not required outside of them even though it might affect the livelihood of Indigenous people located in these areas. It is also important to note that reserves constitute territories that were agreed upon in the second half of the 1800's. The boundaries of these terrritories are increasingly less recognized by communities which denounce insufficient size and historical non-fulfilment of the terms of the exchange involving the sale of lands.

Figure 10 summarizes the need for Indigenous ownership in electricity generation using renewable sources to implement shared sustainability visions.

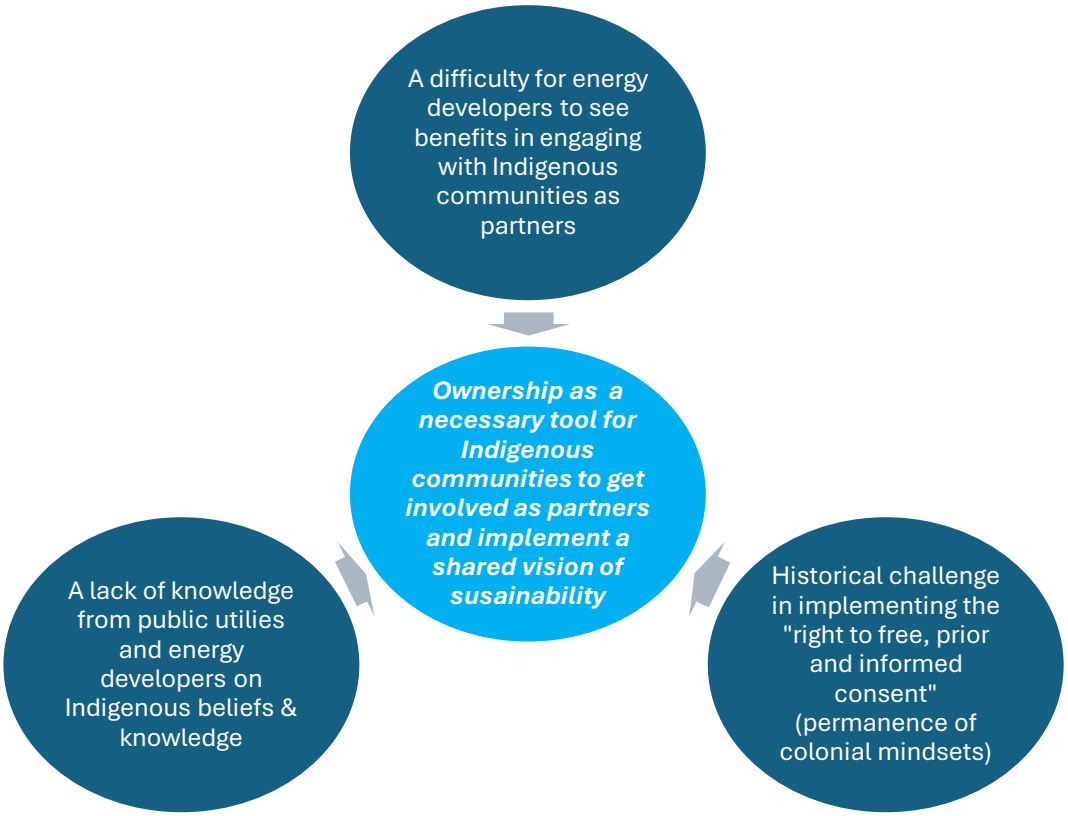

Figure 10: Explanations for ownership to be a prerequisite to implement a shared sustainability vision in renewable energy projects.

5.4.3 A lack of political commitment to incentivize Indigenous ownership:

In Saskatchewan, Indigenous communities' degree of integration in projects as partner mostly varies depending on the requirements set up by public utilities. Indeed, at the federal level, only 5% of Indigenous procurement is required for renewable energy projects (this mixes consultation, ownership, or compensation schemes). Therefore, it is up to the province to increase minimal rates by mandating the public utility. Yukon requires 50% community ownership and British Columbia requires 25%, most of the other provinces require only 10%. Currently, in Saskatchewan, grading systems used by the public utility, to determine which projects will be supported, value Indigenous engagement at a rate of 12,5%. According to Indigenous communities, providing them with 10% ownership is insufficient to make a difference in terms of decision making. They use the term of "bed feathering" to refer to this practice of "social green washing".

"I do not really see a lot of significant policy movement that's supporting Indigenous involvement" (private energy developer, Yukon)

"Energy developers are not at the table yet when it comes to Indigenous community engagement" (public utility, Saskatchewan)

Certain stakeholders in Yukon explain that the next energy reform will probably require full Indigenous ownership for projects occurring on reserves, as it is already highly encouraged.

Indigenous communities in Alberta also explain that a growing number of communities are achieving a 50% agreement and tend to become full owners over time. Therefore, Saskatchewan appears to be late compared to other provinces.

Another way for communities to benefit from ownership is to acquire shares within energy developers' company. The ATCO company operating in Yukon and the Northwest Territories, is one of the leaders of such approach, with a 50% Indigenous ownership. While it is criticized by civil servants denouncing a trend to attract federal funds without considering the actual benefits of projects, such model seems to promote Indigenous engagement as autochthonous are involved in company decision making.

The profound difference among provinces can be explained by several factors. Nevertheless, it seems that the share of Indigenous community among the total population, and the amount of land controlled by Indigenous communities constitutes two key factors favoring Indigenous integration in renewable energy projects as owners and/or partners. Concretely, the fact that 11 out of the 14 communities leaving in Yukon have been recognized a full right over land is a fundamental difference with the other two arctic provinces which are still negotiating on the matter. Moreover, higher share of Indigenous people among the population leads to a higher involvement in private companies and therefore facilitate relationships among actors. Some stakeholders explain that the low density, combined with difficult climatic conditions and important distances leads to an increased solidarity among inhabitants.

"{In Yukon}, if a private developer wanted to develop a solar project in community, I do not think that it would move forward without community approval, consent and at least part of ownership." (private energy developer, Yukon)

But even if legal requirements are set to favor Indigenous ownerships, acquiring 50% of shares in projects isn't easy for Indigenous communities. Public grants are often insufficient and Indigenous communities are often proposed by energy developers to progressively acquire their share using the benefits they project generates. But firstly, energy developers are often not able, or willing to provide all the upfront money, therefore support from public institutions is often seek. And secondly, it's unclear whether such proposition guarantees Indigenous communities' independence or if they must agree to the terms of energy developers as key capital investor. Moreover, some stakeholders explain that programs supporting Indigenous communities' energy systems development, along with capacity building, are running out of money, but others argue that more funds should be released soon to maintain these supportive mechanisms.

Besides, a 20% maximum of independent power producers was set a decade ago limiting project development of Indigenous communities led projects. While this tap has been identified by most stakeholders as a barrier, and governments are planning to increase it, one may wonder why this administrative limit isn't already increased as the issue has ben discussed for several years now.

Figure 11 compares the policy situation of Saskatchewan to other provinces.

British Columbia	Yukon	Saskatchewan
•No independent power producers ceiling •More favorable power purchase agreements to Indigenous communities than other provinces. •25% minimum Indigenous ownership participation to project, project with 50% or more are favored. •More than 90% of the electricity is generated by renewable with a majority from hydro.	•Organization of events promoting the dialogue and sharing of perspectives among stakeholders. •Important share of Indigenous people among the population leading to the implementation of more policies facilitating their engagement.	•A provincial government less progressive than the ones of others provinces. •Important coal & gas industry leading to a high reliance to fossil fuels. •Lower share of Indigenous people among the population diminishing the importance of the topic. •An energy system fully managed by the public utility and led by a market approach.

Figure 11: Saskatchewan compared to three other western provinces in Canada.

5.4.4 Several tradeoffs involved in the idea of ownership requiring compromises and delicate approach:

Achieving Indigenous ownership in renewable energy projects involves that communities be ready to fully assume the responsibility of the electricity generation system. Currently, public utilities possess ownership in most cases and personnel working for the utility perform maintenance tasks. In a context where Indigenous communities do not always benefit from skilled people to ensure this duty, Indigenous ownership would require that the personnel of the public utility start working for the community instead. Nowadays, because partnerships with public utilites weren't agreed upon yet, full community ownership is often deemed too risky. Public utility or energy developers are therefore keeping a share in projects to ensure the performance of maintenance tasks. This situation is particularly true in the North where several 100% Indigenous owned projects were either conducted half-way by Indigenous communities due to a lack of information on the full cost of projects or stopped working due to a lack of capacity to maintain them. In Southern provinces such as Alberta and Saskatchewan, communities benefit from much more capacities, so they tend to be more easily granted full ownership of projects. Overall, experts interviewed argued that public policies should favor Indigenous ownership, but also ensure that communities are ready to undertake this role. But many problems can also be explained by a lack of coordination between Canadian agencies at the federal and provincial level. Moreover, failure to consider on the ground reality, combined with personal disagreements between civil servants, have led to many complications in projects.

Issues of trust are also involved in difficulties to agreed on Indigenous communities to become partners. Indeed, providing Indigenous communities with decision making power would mean that non-Indigenous people rely on Indigenous willingness and knowhow to supply them with electricity. For instance, in Yukon, providing ownership to the Indigenous community on the main dam could be seen as fair because it is located on their land, and it has been built in the 50's without their consent. But this also introduces a risk for the entire province depending on this dam, if the community was to decide to close the dam for cultural and/or environmental reasons. This also demonstrates the permanence of tensions on what sustainability really means. While

some Indigenous people believe that closing the dam would be beneficial to the environment, this would also result in a temporary increase of petroleum consumption to compensate the lack of electricity. Already, Indigenous community has been recognized a right of veto on the question of the water level, and the public utility must negotiate regularly with the Indigenous community to maintain a sufficient water level to meet the provincial electricity demand.

Moreover, experts explain that achieving indigenous ownership would require spending additional money as it limits economy of scale, and discussions often stop when stakeholders realize that achieving a just energy transition would lead to increased consumer costs. Likewise, energy developers and public utilities often refer to a "tradeoff triangle" including affordability, security, and sustainability" to justify the low number of partnerships with Indigenous communities. Figure 12 summarizes the various tradeoffs associated with Indigenous ownership.

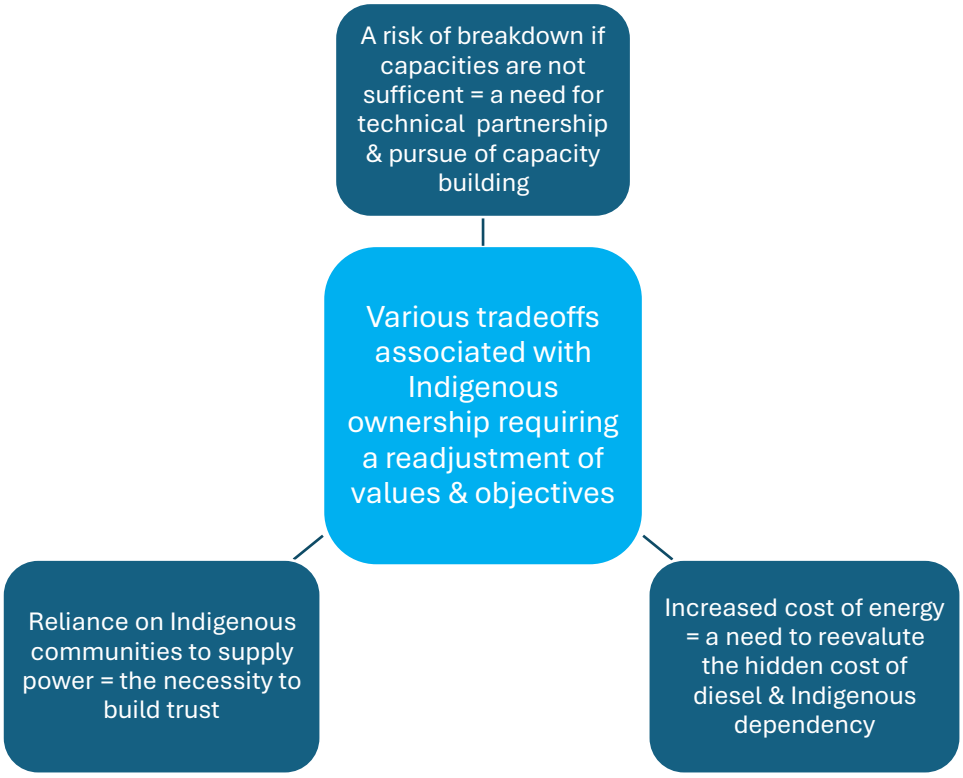

Figure 12: Summary of the various fears and tradeoffs associated to Indigenous ownership.

5.4.5 A lack of legislative protection to promote Indigenous engagement:

Overall, the blurriness of the legislation combined with low political commitment, leave the communities alone to deal with energy developers. Negotiations are unequal as Indigenous communities require energy developer's capita, technical skills, and ability to negotiate with public utilities, whereas energy developers only need one Indigenous communities' approval.

Stakeholders have all recognized the growing trend for communities to be able to valorize their legal rights and engage with non-Indigenous actors. However, the rhythm of this transformation is very slow compared to the commitment of Canada to Paris agreement for a net zero energy

system by 2035. Stakeholders disagree in determining whether this international pressure for energy transition constitutes a factor helping communities to engage in project development or not.

5.5 Pathways toward increased Indigenous involvement in decision making, increased collaboration and shared sustainability visions.

5.5.1 Vested interests constitute the current motivator to engage in partnership over concerns for a shared vision of sustainability:

Currently, most energy developers engage in partnership with Indigenous communities with the aim of savings costs. Indeed, status Indians working on community lands are not exposed to taxes, but not all Indigenous people enjoy this right. For instance it doesn't apply to Metis people and settlements. Moreover, institutions tend to allocate more funding to projects engaging Indigenous communities. However, some stakeholders explain that mechanisms supposed to encourage energy developers in engaging in partnership with Indigenous communities, sometimes "decincentivize private investments". My understanding is that investing in Indigenous project could generate a lower payback due to the absence of taxes and therefore limit the incentives of actors investing for tax cut purposes, but this remains to be clarified. Overall, it seems that higher cooperation among actors is needed:

> *"Sometimes they just really need to take a look at the impacts of some of the initiatives that they think are supposed to be supporting communities, but that do not work because they are actually working against the interests of the industrial partner." (Indigenous respondent, Ontario)*

The cost of exporting energy to remote Indigenous communities has been recognized as a burden for the entire Canadian society. Indeed, subsidies are granted to communities to balance the increased cost of energy, while funds are also allocated to cover maintenance and reparation costs. The electric system has been designed in a way where energy is generated in the South and exported to the North leading to important transmission costs. In the cases where transmission lines weren't built, costs are related to the shipping of fuel to power diesel generators. Therefore, one of the objectives of transitioning Indigenous communities is to lower public expenses by implementing local autonomous solutions more reliable and less expensive. However, this recognition hasn't led to an integration of Indigenous perspectives in projects.

5.5.1.1 Energy developers benefit from engaging with Indigenous communities:

Indigenous communities and some energy developers argue that going beyond simple consultation mechanisms and engaging in equal partnership is beneficial for several reasons. Firstly, it avoids energy developers having to fight against "unforeseen blockages" from Indigenous communities. Indeed, interviews show that several energy developers still believe that there is no necessity to consult for projects occuring on public lands since it is not required by law, even though the physical on impacts on Indigenous communities' seem obvious. Secondly, it motivates Indigenous community to engage in the projects making everything happen faster and smoother. Thirdly, it provides a good image to the energy developer which coul then refer to successful partnerships while looking for new partnerships in the future.

5.5.1.2 Indigenous communities' benefits in projects ownership:

A prerequisite to communities' sustainability is to "get rid of the dependencies imposed by by the federal crown, the provincial crown, corporate interests and other kinds of things that violate their right to self determination and integrity" (expert, Saskatchewan)

Practically, for Indigenous communities, partnerships provide a possibility to diversify the economy so that they do not rely only on federal support. Community ownership is perceived as a fundamental tool to exit from a logic of dependency. Both Indigenous respondents and experts argue that acquiring shares in projects would not only generate a sustainable income, but also increase communities technical and management capacities. Besides, Indigenous people explain that being responsible of projects generates pride within the community and a positive loop of dynamic of growth. Successful communities also transmit their knowledge to others and support the development of other Indigenous projects.

5.5.1.3 Society benefits of Indigenous communities' ownership:

Stakeholders in the Yukon, confess that several projects are being blockaded by Indigenous communities that would like to be considered as partner instead of beneficiaries. Increasing community engagement could facilitate agreements and the pace of the renewable energy transition.

Community ownership is also seen as a vector of reconciliation among the different stakeholders. It is perceived by communities as a proof of trust in their capacities, and it reinforce the bound between Indigenous and non-Indigenous people depending on each other's.

"Otherwise {if it's not community owned} it doesn't feed into the circular economy, it doesn't promote local Indigenous self-empowerment, it doesn't even contribute to reconciliation" (expert, Yukon)

Figure 13 summarizes the benefits of indigenous ownership in renewable electricity generation projects for the different groups of stakeholders.

Indigenous communities	Energy developpers	Society
•Integration of the communities perspectives •Capacity building within the communities and reduction of their dependency to external actors. •Reduce economic cost of energy and create benefits for the communities to invest in other projects. •Mental well-being, feeling of having achieved something and owning it.	•Acquire the trust of other communities and gain market shares. •Benefit from a better image by following the sustainability trend. •Accelerating the rythm of projects and avoid blockages.	•Achieve a more sustainable energy transition •Accelerate the energy transition by preventing blockages •Contribute to the reconciliation process among stakholders

Figure 13: Benefits of deeper Indigenous engagement for each group of stakeholders. What practices currently hinder the advancement of Indigenous communities to become leaders of their energy transition?

5.5.1.4 A lack of recognition of historical distrust and trauma:

It is paramount to understand that Indigenous communities are facing a multiplicity of issues which are limiting their engagement in renewable energy projects, notably psychological trauma. According to indigenous respondents needs for mental health support are not yet recognized enough.

"A lot of youth can't reach for those fundings because they're dealing with their traumas first, or they haven't dealt with it yet, because there isn't enough, you know, mental health supports within communities" (Indigenous respondent, Alberta)

Moreover, communities' respondents express an historical distrust against energy developers. Reparations for previous scandals have not yet been settled, and it is still limiting Indigenous engagement today.

"Indigenous communities put a lot of trust into energy developers. They used us, they took advantage of us. A lot of communities like ours suffer from this debt generated by these old projects. They are still affecting our people to this day". (Indigenous respondent, Alberta)

5.5.1.5 Limited funding and inadequate frameworks:

Interviews reveal that public agencies supporting Indigenous communities only engage with a limited number of communities due to insufficient funding to address every community's requests. Therefore, they choose to focus on communities they are familiar with as they will have higher chance of achieving positive results. This results in some Indigenous communities remaining excluded from public support. Moreover, communities that have benefited from capacity building programs are often more suited to reply to public grants, leading to a rapid growth of inequalities among Indigenous communities.

Review of consultation reports integrating Indigenous voices shows a call for a new fiscal relationship and physical collaboration spaces to move from "token partnerships" to "true partnerships". Indigenous participants advocate for a focus on procesess structuring project design instead of technicalities. Finally, legislation is deemed outdated by most stakeholders.

Overall review of consultation reports reveals respondents' desires for fast action toward the integration of principles discussed in consultation meetings in the legislation. Indeed, they fear that the next government won't be as progressive as the current one. Moreover, stakeholders are facing immediate issues concerning the sustainability of the energy transition, therefore the slowness of the public authorities is perceived as a key issue.

5.5.1.6 Low power purchase agreements rates limiting Indigenous communities' incentives in getting involved in renewable energy projects:

The Pembina institute created a very interesting report on power purchase agreements (Rábago & Valova, 2018) Experts explain that the avoided cost of maintaining diesel engines is not valorized at a fair rate. Low power purchase agreements rates limit Indigenous incentive to engage in renewable energy projects and do not represent "the true avoided cost of diesel". The report explains that current ways of setting electricity prices are brought down to:

"Whatever keeps customer rates lowest while maintaining reliable service, with little regard for the unequal burden of past energy developments, socioeconomic disparity, or climate objectives".

The report explains that power purchase agreements rates illustrate the type of mandates received by public utilities. Technical and economic factors are prioritized over reconciliation and climate objectives.

5.5.1.7 An overall need for more communication and collaboration from institutions:

Stakehodlers point out a lack of coherence and coordination among public institutions. For instance, in the Yukon, an agency oversees the electrification of the province, while another oversees the generation of the electricity. According to certain interviewee, while the electrification is under way, the production of electricity from renewable sources is not growing fast enough to meet the growing demand. As a result, the "green transition" leads to an increase used of petroleum to produce electricity. Similar problems occur when it comes to Indigenous engagement in renewable energy projects creating socio and environmental problems. Specifically, respondent denounce a lack of clarity toward independent power producers in decision making.

Mechanisms promoting the communication between Indigenous communities and energy developers are limited. Often, energy developers struggle finding coordinates of the person in charge of energy questions for the community. In the context of a competitive market where energy developers can't spend much time finding information about each community, this lack of a comprehensive and accessible database lead to misopportunities and failures to fulfill Indigenous right for free, prior and informed consent. The province of Alberta provided such tool, but it is still unknown by several actors. Brisith Columbia also introduced a similar plateform, but it is deemed less efficient because energy developers must contact public servants to access communities' information. Since communities are often located at the border between two provinces one may wonder why a nationwide database has still not been created.

Figure 14 summarizes the various barriers to Indigenous integration in renewable electricity generation projects as partners.

Figure 14: Summary of the barriers to Indigenous engagement.

5.5.2 Public policies and stakehodler's practices building toward a shared vision of sustainability and collaboration

5.5.2.1 Successful capacity building programs reinforcing Indigenous voices:

Several programs have been implemented for 6/7 years to support young Indigenous involvement in renewable energy projects notably the Indigenous Clean Energy network with the "Generation Power" program that provides training to young Indigenous working for their community and cover 75% of their wages to alleviate community burden for one year. Young Indigenous following this program explain that they were inspired by the examples of other youngs involved in such program. They evoke a "ripple effect" leading to a growing number of young people involved in energy development projects.

"Pretty soon it's gonna be seen throughout Canada that Indigenous people, especially young, are the ones leading these clean energy projects". (Indigenous respondent, Alberta)

Both indigenous and public institutions agree to say that efforts put into capacity building will soon be turned into a political ability to request for "justice" in all sectors:

"It's on a very good track to build the advocacy which then is the foundation to be able to recognize the value of community ownership in projects and to be able to demand more, like to not accept the second-class treatment that the communities have traditionally been forced into". (Indigenous respondent, Alberta)

In terms of dialogues, stakeholders point out at examples of conferences promoting exchanges between different stakeholders and promoting Indigenous speakers, notably in Alberta and in the Yukon.

5.5.2.2 Communities' partnerships increasing Indigenous credibility:

Another key driver of sustainable building of projects is the building of partnership and support among Indigenous communities. Not only does it reinforce Indigenous communities' capacities, but it also prevents competition and jealousy among indigenous groups.

"I felt happy and safe, and that's what you want to feel, and that's what I feel when all of us Indigenous people are working together, not just the Crees, but every First Nation in Canada." (Indigenous respondent, Alberta)

In Alberta, partnerships among communities are growing and Indigenous people are now able to initiate utility scale projects. Example of large biomass facility exist. Such projects are supported by Indigenous funds such as the "Alberta Indigenous Opportunities Corporation" and other partnership structures gathering up to 50 billion of capital. Projects are discussed through various inter nations meetings such as the "Assembly of Chiefs" gathering the elected chiefs of each province.

"There are all sorts of things and arrangements and interests out there, just as you would expect from a a group of many nations with both common and distinct interests." (Public organization, Northwest Territories)

5.5.2.3 Loan guarantees limiting financial actors' risk:

It is also important to mention the various loan guarantee funds which were created in British Columbia, Alberta, Saskatchewan, and Ontario. These funds were created as a warranty for banks granting loans to Indigenous communities. Recently, a federal fund was introduced to ensure the same purpose nation wide (Bennett Jones, 2024). However, it is important to note that these funds are not dedicated to energy transition projects only, but to all investments involving Indigenous ownership, including fossil fuel and mining. Therefore, it is questionable whether allocated funds are sufficient (5 billion total for the national fund) and why wasn't it restricted to sustainable projects only.

Figure 15 summarizes the various mechanisms favoring Indigenous engagement in renewable energy projects.

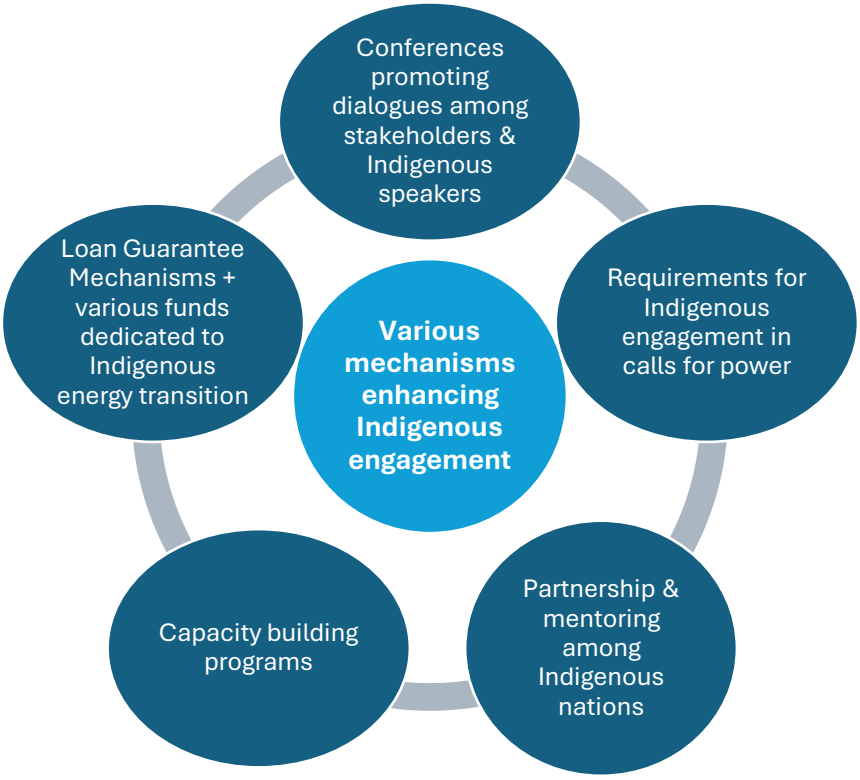

Figure 15: Summary of the mechanisms enhancing to Indigenous engagement today.

6 Discussion

6.1 Discussion on the findings

6.1.1 Across the entire western Canada and among all stakeholders, a growing sensivity to the need of integrating Indigenous perspectives

This study has demonstrated the important work that has been performed by all stakeholders involved in the energy transition of Indigenous communities in western Canada. In Saskatchewan, along with in the other provinces, Indigenous communities are increasingly involved in projects development through capacity building programs. Specifically, young graduates, aware of existing public policies and ways to defend Indigenous rights, are now working for their own community energy transition to integrate their perspectives on sustainability in renewable development. Moreover, a behavioral improvement has been observed among all types of actors around the notion of "consultation duty" now perceived as a mandatory step. This is the result of an important sensibilization work carried by institutions, NGO, and Indigenous communities themselves.

6.1.2 Various states in Indigenous engagement across western provinces placing Saskatchewan late in implementing mechanisms promoting collaboration and shared sustainability visions

Important differences exist among provinces in their journey toward increased Indigenous communities' engagement. While northern provinces, British Columbia and Alberta have organized conferences to promote the dialogue among Indigenous communities, the notion of a shared sustainability vision is still far along the road in Saskatchewan. There, contrarily to northern provinces, most stakeholders still comprehend indigenous engagement as a "consultation duty" which has not yet been replaced by the notion of "free, prior, and informed consent" developed by the United Nations and adopted by Canada in its constitution. Stakeholders are still aiming at identifying sufficient consultation framework for each Indigenous community instead of considering them as potential partners which knowledge and perspectives should be integrated. While in the Yukon, the Northwest territories and British Columbia, it appears difficult to develop projects without clear Indigenous communities' approval, many problems remain in Saskatchewan regarding the respect of Indigenous right to free, prior and informed consent. The absence of public utilities officers' familiarity with Indigenous rights, and agreement between provincial governments and Indigenous communities on a common consultation protocol, partly explains stakeholders' confusion. Indeed, the multiplicity of Indigenous communities' consultation requirements complexifies non-Indigenous actors as a case-by-case approach is required.

6.1.3 A limited integration of Indigenous communities in decision making, even in northern provinces, due to a mutual lack of trust among stakeholders, Indigenous communities' capacities and permanence of racism against Indigenous communities.

In terms of engagement of communities as partners, while autochthonous themselves, experts and public institutions constitute strong advocates, public utilities and most energy developers do not envision yet the benefits of going beyond current way of doing things. They do not deem communities ready to go further anyway. When considering the number of examples of successful renewable energy projects led by Indigenous communities in other provinces, one must recognize

the weight of misconceptions currently blinding certain stakeholders. Certainly, some communities are not ready to take a leading role in renewable energy projects, but most are currently capable to engage in fruitful discussions leading toward the idea of shared sustainability visions. Actors arguing otherwise are unsighted by long lasting traditions discarding Indigenous communities' abilities and values. In this process, historic inequalities faced by Indigenous groups are often used to justify their own inaction and claim an absence of personal responsibility. Energy developers explain that only public institutions have the power to deal with the problem, while it appears that these systemic issues are also continued by the behavior of individual actors at a micro level.

The study also reveals the permanence of a mutual distrust between Indigenous communities and the rest of the society preventing the sharing of perspectives and the building of collaboration. On the side of Indigenous communities, this is caused by negatives experiences of Indigenous communities with energy developers, and a lack of mental health support as Indigenous communities must deal first with their internal problems before being able to commit to new projects. The absence of mechanisms of dialogue doesn't allow going passed these conceptions.

6.1.4 Public policies, key tools to promote collaboration and shared sustainability vision among stakeholders

This thesis has identified as main barrier to further Indigenous engagement a lack of political commitment. Most issues are present in all western provinces and include the delegation by public utilities of their monitoring duty to energy developers; the slowness of the provincial government to update projects requirements or certain limits such as the independent power producer ceiling; and the permanence of a blurry and outdated legislation in terms of consultation duty.

But this comparative study has also pointed out the contrast among western provinces in terms of Indigenous perspectives integration, and it seems that most problems are exacerbated in Saskatchewan. It appears that demographic conditions, more favorable to Indigenous communities in northern provinces, have facilitated provincial governments to acquire the necessary political capita to launch more ambitious policies. These attempts have also succeeded better thanks to higher overall public support acquired through the important work of numerous advocacy groups and sensibilization campaigns. As a result, conversations between stakeholders on agreeing on what sustainability means, while not being common there yet either, are noticably taking place more often, and Indigenous communities are further included in project design as partners.

Undeniably, in Saskatchewan, increasingly, non-Indigenous actors understand the necessity to engage Indigenous communities beyond consultation mechanisms. Nevertheless, important work remains to be done to achieve communities' engagement beyond simple beneficiaries of projects. Shared vision on sustainable development appears to be a notion that institutions have just started to work with, and this translates into limited stakeholders' familiarity to the notion and collaboration practices. Concretely, when asked what sustainability means, energy developers, public utilities, and even public institutions, do not naturally make any reference to Indigenous perspectives, while it appears to be a bigger concern in other provinces. The notions of Indigenous perspectives and shared visions are present in the consultation reports of provinces that have promoted the physical encounter of stakeholders such as the Yukon and the Northwest Territories, but not in Saskatchewan.

6.1.5 A need to implement more ambitious public policies following the example of northern provinces and British Columbia.

Saskatchewan could make several public policies more ambitious. For instance, there is no mechanism in Saskatchewan yet promoting the collaboration among stakeholders, while a few conferences are organized on a yearly basis in other provinces such as Alberta and the Yukon. These events constitute essential first steps toward increased dialogue and have led to important improvments of stakeholder's relations and Saskatchewan should follow such initiatives providing Indigenous leaders with the possibility to express their perspetives on sustainability. However, these conferences do not constitute a safe place for regular small setting discussions among stakeholders. Such events allow the sharing of perspectives, and encountering of people but not the building of partnerships per se. Therefore, even most advanced western provinces in terms of public policies could go further in terms of public support by proposing

Another important tool to advance shared sustainability vision and collaboration among stakeholders are requirements for high share of Indigenous ownership. Indeed, across all western Canada, most stakeholders recognize that Indigenous perspectives on sustainability are still ignored unless Indigenous communities benefit from a majority share in projects. Provinces such as the Yukon, Northwest Territories and British Columbia have implemented 25% minimal Indigenous ownership or more, while Saskatchewan only requires 10% of Indigenous engagement which mixes consultation and compensation mechanisms. Saskatchewan could implement stricter requirement in terms of Indigenous communities' integration as partners if Indigenous communities were also better supported in acquiring the necessary financial capita to do so. Besides, providing ownership to communities in renewable energy system helps them develop an economic tissue and capacities reducing the dependency relationship that has been maintained for decades with Ottawa.

6.1.6 The necessity to promote a cultural transformation of stakeholder's assessment of value

Currently, public utilities and institutions are focusing their efforts on achieving emission reduction while maintaining affordability and reliability for consumers. This narrow vision limits attractivity for Indigenous ownership as all stakeholders point the tradeoffs that Indigenous ownerhsip introduces. Communities could lack capacities to maintain the system; they could badly assess what the project represent in terms of requirements and benefits; and it could result in a higher cost for the consumer. Personally, I believe that all systemic changes require risk and courage, but also that these tradeoffs are currently measured against indicators that were set following neoliberal and colonial conceptions. The true price of maintaining Indigenous communities in their current position is not integrated to the current cost of the electricity, nor is the pollution that it creates.

Perceptions of costs are tighly linked to the values promoted in the society. Transforming our ways of valuing the environment and people, would result in a different perception of the cost of an energy transition integrating Indigenous perspectives. Demonstrating the necessity and fairness of investing in such transformation probably constitutes a key to political acceptability and mindsets evolutions. Therefore, decision makers efforts should focus on the narrative of the energy transition. Besides, the risk related to a lack of communities understanding and capacities to handle projects could be managed if adequate resources were allocated to the matter notably in terms of mentorship from communities' energy champions, in terms of coordination among Canadian agencies; and if clearer communication was provided by public institutions in general.

Advocating for an Indigenously led energy transition requires a realignment of priorities by the political sphere, and especially an abandon of a market approach that doesn't allow the integration of an Indigenous perspectives. Decision makers set standards, objectives, budget and therefore provides a range of possibilities to the other actors. For instance, grading systems promoting a shared vision of sustainability integrating Indigenous as partner, instead of spectators, has already transformed the relations between actors in certain provinces such as the Yukon and British Columbia. Comparison of policies implemented in the various provinces shows that Saskatchewan could adopt a more ambitious strategy, but it is necessary to recognize the demographic, geographic, political, and economic differences among provinces providing different sets of possibilities.

It is also important to recognize the macrolevel pressure associated with Canadian commitment to the green transition. Undeniably international agreements, related to the fight against climate change, leads to a precipitation of projects. Most respondents believe that transformations always feel rushed, is urgently needed, and could be beneficial by integrating in a faster way Indigenous communities to the Canadian economy. But when considering the difficulties faced by energy developers to contact Indigenous communities, and the time require to build trust and exercise dialogue, it is questionable that the energy transition will be implemented in a socially fair way. Considering communities as partner and slowing down the pace of the energy transition for Indigenous communities to be able to acquire the ability to engage in projects, will be necessary to achieve a shared vision of sustainability.

6.2 Limitations of the research

While Indigenous engagement in renewable energy projects is a topic recognized of importance by most stakeholders, some groups were easier to reach than others. As a result, public agencies, NGO, and experts, are more represented in this study than energy developers, public utilities, and Indigenous groups. Relations of respondents to the academic sphere and time availability explain this different response rate but other explanations come into play. Most energy developers do not recognize yet direct value for increased Indigenous engagement. Moreover, stakeholders confessed a lack of trust from Indigenous communities toward the academic sphere. Autochthonous groups consider that western universities promote a colonial way of thinking and are marked by extractivist behavior where researchers take from communities without giving back anything in return. As a result, they have limited interest in exchanging with Canadian academia, and even less in foreign universities. Nevetheless, things are evolving, and good examples of collaboration exist with Universities of Alberta, Victoria, Regina, Saskatchewan, Ottawa and UBC for instance. Public utilities and private sector share a similar lack of trust. As a result, despite promising respondents' anonymity, several interviewees prefer "avoiding the risk" of exposing themselves to researchers' lenses.

Interviewees underlined the importance of context making a comparative analysis challenging. However, the risk of making irrelevant judgements was compensated by interviewees understanding of differences among provinces and the extensive time they spent explaining them.

Finally, refusal from public utilities to provide me with their grading systems to select projects limited my understanding of how Indigenous engagement was concretely valorized by the different provincial govenrments mandating public utilities. I was later on informed that these documents could be obtained through Freedom Information Requests mechanisms, but it can take months.

7 Conclusion

Energy transition projects are experiencing a steep growth across Canada following the federal administration commitment to meet international goals to fight climate change and implemented at the local level by provincial governments. Indigenous communities also increasingly perceive energy transition projects as a way of integrating the Canadian economy and the private sector is massively investing in this attractive field. This dynamic generates great hopes for Indigenous communities' development but also important concern regarding whether the energy transition will be carried in a socially and environmentally "just" way. The theoretical framework, based on Transition management and the concept of shared sustainability visions and collaboration, has been helpful in assessing the integration of Indigenous perspectives in renewable energy projects.

In the frame of this comparative study focusing on western Canada, British Columbia, Yukon and the Northwest territorities appear to be the most advanced provinces in terms of collaboration with Indigenous communities and *shared sustainability vision*. In Saskatchewan while concerns for the environmental impacts of projects are now much more scrutinized, Indigenous engagement constitutes an emerging topic which only frontrunners are familiar with and defend. As a result, the integration of Indigenous perspectives in projects is still marginal compared to other provinces but growing. Contrast with the situation in other provinces demonstrates public policies impacts in enhancing Indigenous integration as equal partners in projects and implement a *shared sustainability vision*. Nevertheless, context shouldn't be underestimated as demographic and economic differences play a major role in setting the political possibilities to promote *collaboration*.

While all stakeholders across Canada express a growing interest for *shared sustainability visions*, there is still no common definition on what sustainability means. Nowadays, platforms for dialogue and discussions among stakeholders are still not provided in Saskatchewan contrarily to other provinces. Goals, terms, and objectives of the energy transition weren't agreed upon contrarily to northern provinces where a growing consensus was observed. In Saskatchewan, the two main factors influencing renewable projects design are cost and emission reduction, while many other parameters including *collaboration* with Indigenous communities as partners are still ignored. Indigenous perspectives on sustainability are still disregarded and/or misunderstood by most stakeholders. Although certain actors appear to be familiar with these notions, and some constitute strong proponents of their integration, they only represent a minority of actors involved in this field. All accross Canada, the concept of *shared sustainability vision* is still very much emergent and will require much more time to be turned into common thinking. Saskatchewan constitutes one of the provinces where substantial efforts remain to be made to increase *collaboration* in western Canada.

In Saskatchewan, the notion of sustainability is not associated yet with Indigenous engagement even though most renewable energy projects occur on Indigenous lands due to climatic opportunities and space availability there. When asked about the integration of Indigenous communities to project, most Saskatchewan non-Indigenous stakehodlers refer to the "duty to consult" and express a certain pride in respecting this obligation. Nevertheless, important efforts must be made to turn Indigenous communities "right to free, prior and informed consent" into a common habit. For now, it is still misunderstood by most Saskatchewan actors due to the absence of proper definition and framework dedicated to the notion. Beyond consultation, Saskatchewan non-Indigenous stakeholders often refer to royalties and compensation schemes, far from the idea of partnerships express in other provinces, where Indigenous would benefit from an increased integration to decision making.

Across Canada, misconceptions and colonial mindset are still limiting Indigenous engagement but this cultural barrier appears less problematic in northern provinces where solidarity among inhabitants appear to be stronger for several reasons including difficult living conditions and low density of population. In Saskatchewan, Indigenous beliefs, knowledge and capacities are still disregarded. Their willigness to engage with the rest of the Canadian economy is also questioned by the permanence of a disorted imaginary on how Indigenous people think and want to become. The notion of *shared sustainability vision* appears to be more prevalent in northern provinces where communities benefit from a majority ownership in projects providing them with an economic right of veto recognized by the other stakeholders. In Saskatchewan, most Indigenous communities are only supported by a blurry and weakly applied legislation which doesn't provide them with the same *collaboration* opportunities. Benefits that would arise from partnership with Indigenous communities are also not yet obvious to energy developers. Across Canada, but particularly in Saskatchewan where incentives are lower, they perceive Indigenous engagement as a burden instead of a benefit. Enticements from public policies are not perceived yet which demonstrates the need to emit a stronger political signal in support of a *shared sustainability vision*.

7.1 Recommendations for non-academic audience in Saskatchewan

Both governance and corporate frameworks must be matured to achieve increased Indigenous engagement, but this research focus on public policies comprehended as tools to orientate stakeholder's behaviors. Recommendations provided below were conceived in a pragmatic manner. While they aim at transformative change by promoting the concepts of shared visions and collaboration, they were also thought to prevent the flee of actors. Indeed, a further marginalization of Indigenous actors wouldn't be suitable. Proposals were developed in cooperation with interviewees to provide grounded contribution. A table summarizing these recommendations is provided in appendix E.

1. Reinforce Indigenous position in renewable energy projects

It is needed to provide Indigenous communities with decisionary power in participating to the development of renewable energy systems occurring on their lands. To do so, capacity building programs must be pursued and increased so that Indigenous communities are able to dialogue with energy developers and challenge their ideas. Moreover, lack of administrative staff to respond to energy developers' solicitation and engage in public development programs must be addressed by creating a specific fund dedicated to this task. Legislation should also be updated to protect Indigenous communities with longer delays of response to energy developers and public utilities considering current limited time availability of Indigenous energy workers. Finally, interviews underlined the permanence of mental health issues blockading Indigenous communities' members to projects. Efforts to overcome these psychological problems should be reinforced.

Possibility for communities willing to engage in renewable energy projects as partners must be supported by introducing a federal 50% minimum community ownership in projects and favoring projects with 100% community ownership. Coupling this measure with a mapping of zones where projects should be implemented in priority could counterbalanced the risk of marginalization of communities that do not possess the capacity of accessing project capital.

2. Pursue the sensibilization of the private sector and public servants to Indigenous perspectives and capabilities to engage in renewable energy projects

Today, perspectives on sustainability are limited to the notions of affordability, reliability, and accessibility while they should integrate environmental and cultural considerations, along with Indigenous engagement. Moreover, numerous stakeholders do not perceive the benefits that coukd arise from entering in deeper collaboration with Indigenous communities. They understand Indigenous groups as an obstacle to avoid, rather than a skilled partner which knowledge should be valorized. Efforts should focus on demystifying what Indigenous engagement means. To do so, examples of successful projects involving Indigenous people as partner should be shared, along with Indigenous people willingness to engage with the industry.

Sensibilization efforts should be coupled to mandatory training for public servants operating in this field. Similarly, curiculum focusing on energy transition should integrate Indigenous engagement courses. The private sector should also be acquainted to these ideas through a licensing scheme associated with short training. Certifications could be offered on a voluntary basis at first and promoted by priorizing projects associating license holders. Once, the sector familiar with the scheme, certifications could be turned into mandatory licenses to operate.

3. Promote collaboration and coordination among stakeholders

Permanent locations should be dedicated to to the physical encounter of stakeholders, and mechanisms should promote the use of such places. Sessions focusing on key themes could be used to initiate discussions and stakeholders' encounter. A local agency should ensure the role of animating the network and facilitating communication among actors.

Lack of coordination among the various Canadian institutions constitute another important communication problem. An internal platform, specific to energy related projects, accessible by all federal, province, and municipal civil servants working on this field should be created.

4. Protect Indigenous rights through exemplary condemnations, and the promotion of a due diligence duty in the private sector

An agency tasked to monitor energy developers' behaviours and receive Indigenous claims should be created. Such institution should be granted investigating and pausing project development. It should act as a mediator encouraging stakeholders to find a fair agreement integrating Indigenous perspectives and interests.

Disuasive financial condemnations should be pronounced against actors found guilty of manipulation and inconsideration of Indigenous rights. Such actors should be permanently prohibited from operating on Indigenous lands. But such judiciary shift, shouldn't lead to a desertification of the sector that needs as much support as possible. It should only correct obvious abuses to put a definitive end to a persistent trend of leniency regarding Indigenous right to free, prior and informed consent. However today, nor federal or the provincial governements can veto First Nations to do business with a company. Thus, such decision should be made by an Indigenous organization.

Finally, a duty of due diligence, like the one implemented for environmental impacts should be developed. Companies are now expected to produce sustainability reports and demonstrate corrective actions. A similar reporting scheme should be developed for Indigenous engagement.

5. Integrate better Indigenous communities in policy making

Achieve Indigenous right to self-determination requires increasing the number of Indigenous people involved in policy making. A minimal rate should be set in departments devoted to Indigenous communities in accordance with the demographic situation of the region covered. Such shift should be progressive to allow prior Indigenous training and avoid unwanted firing of skilled civil servants.

A document which most Indigenous communities would agree upon when it comes to requirements for consultations should be adopted. Energy developers should then refer to it to conduct consultation in a way that respects Indigenous will.

6. Adapt existing frameworks promoting a one size fits all approach and a market-based approach incompatible with Indigenous communities' beliefs and reality.

Currently, public agencies confessed struggling with federal requirements when working to the transition of Indigenous communities. Certain obligations are unrealistic due to the remoteness of communities and their lack of capacities to reply to certain demands. Therefore, more flexibility and trust should be given to local agents.

A 20% independent power producers ceiling was set. Most regions haved reached this maximum that should be lifted to allow the development of new projects.

Moreover, future power purchase agreements should be rethink. They are currently barely covering the cost of phasing out diesel engines. They do not consider the spared negative externalities from which Indigenous communities suffered, nor the positive ones that renewable energy projects brings, notably in terms of reconciliation. Increasing power purchase agreements would also motivate Indigenous communities to engage into renewable energy projects.

Finally, the market approach currently promoted to minimize the cost of energy is incompatible with the integration of Indigenous communities as equal partner since this requires allocating more time and resources. It is needed to integrate criteria in the evaluation and prioritization of projects supported by public utilities promoting a shared vision of sustainability.

7. Encourage partnerships between energy developers & Indigenous communities.

A technical communication barrier remains to the building of partnerships between energy developers and Indigenous communities. The databases created by the provinces of Alberta and British Columbia, should be streamlined and expanded at the federal level. Indigenous communities should also be given access to energy developers contacts so that they can also initiate conversations with them.

Several stakeholders have mentioned a fear from financial institutions to lose their investments due to their impossibility to seize assets on Indigenous lands, and the absence of individual Indigenous property of land. Mechanisms such as the Loan Guarantee Program should be pursued and extended to reassure the financial sector of Indigenous communities' solvability. Such mechanisms also integrate a preferencial rate facilitating Indigenous communities loan subscription and preventing long lasting indebtment.

Besides, several stakeholders have point out the risks associated with community ownership in projects as communities sometimes do not have the capacity to maintain energy systems by themselves. Technical partnership should be established with the public utility to avoid responsibility issues in the design of projects.

Finally, a label could be created to promote energy developers operating with Indigenous communities as equal partner. The price of energy provided by these companies could be temporarily subsidised to encourage consumers choosing these energy providers. It would also help compensating potential increased costs of Indigenous engagement.

7.2 Recommendations for future research

It is recommended for future research to pursue research on Indigenous engagement enlarging the geographical scope to the East of Canada and increasing the number of responses from energy developers. It would be also beneficial to carry a comparative analysis with other arctic countries sharing the same issues in terms of Indigenous inclusion in their energy transition.

Research could also focus on following policies and renewable energy development in coming years to assess whether the energy transition of Indigenous communities is carried in a way that is increasingly integrating Indigenous perspectives or not.

It is highly recommended to conduct research in a pragmatic manner focusing on constructive solutions for improvement. Academic research should recognize the work made by the different stakeholders currently involved in energy transition efforts before emitting any critics if it wishes to be taken in consideration in a Canadian context. Moreover, research should be conducted in an ethical manner following standards developed in cooperation with Indigenous communities.

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9 Appendix

9.1 Appendix A: list of interview questions

I mostly used the questions in bolt, subquestions were used to orientate the respondent, and help him/her in his thinking. Therefore, only a few of these questions were asked to each interviewee depending following the discussion flow, interviewee knowledge, and confort in responding.

Introductory questions

- Do you define yourself as Indigenous? Are you part of an Indigenous community?
- What is your background specifically on energy systems and renewable solutions?

Could you define the key elements structuring your perspective of a sustainable energy future?

- Do you consider your perspective on energy future different from the "official visions" conveyed by businesses and institutions?
- How would you define the mainstream perspective on energy future?
- What are your objectives in terms of energy sustainability on short, medium, and long term?

To what extent is there a shared vision on transitioning to a sustainable energy system?

- Are you familiar with the concept of shared vision?
- Do you see today a common perspective on sustainability?
- Did actors agree on elements for a shared vision of sustainable energy future?
    - Have actors identify and recognize common beliefs?
    - Did they agree on sustainability criteria?
    - Did they agree on regime barriers to overcome?
    - Is there an agreement on the strategy to adopt (at long, medium, and short terms)?
- Is there any example of concerted perspectives in the implementation of projects?

Can we talk about collaboration today between Indigenous communities, companies, and public institutions? How is it practiced by these actors in finding directionality?

- What does Indigenous communities' engagement mean for the different actors today?
    - How are discussions structured?
    - How are decision taken?
- What degree of collaboration do you see today?
    - Which actors are involved in this collaboration?
    - Who are the leaders in this process?
- Are there any mechanisms, agencies promoting collaboration?
- Are there any physical places dedicated to collaboration and dialogue. Are there any regular gatherings/meetings scheduled? Is this mostly informal or formal?
- Did these efforts of communication turn into concrete examples of cooperation in the design and management of renewable energy projects?

How could policies be improved to steer actors' behaviour toward a shared vision for sustainable energy systems? How could actors be motivated in engaging into collaboration?

- Is there any policy promoting Indigenous engagement and partnerships today? How efficient are they?
- What barriers prevent Indigenous engagement as decision makers in projects?
- Are there any commonalities between actors' perspectives that could be used as bridges toward shared visions?
- What benefits could emerge from increased collaboration for Indigenous communities, companies, and public institutions in the Saskatchewan context?

9.2 Appendix B: list of interviews conducted

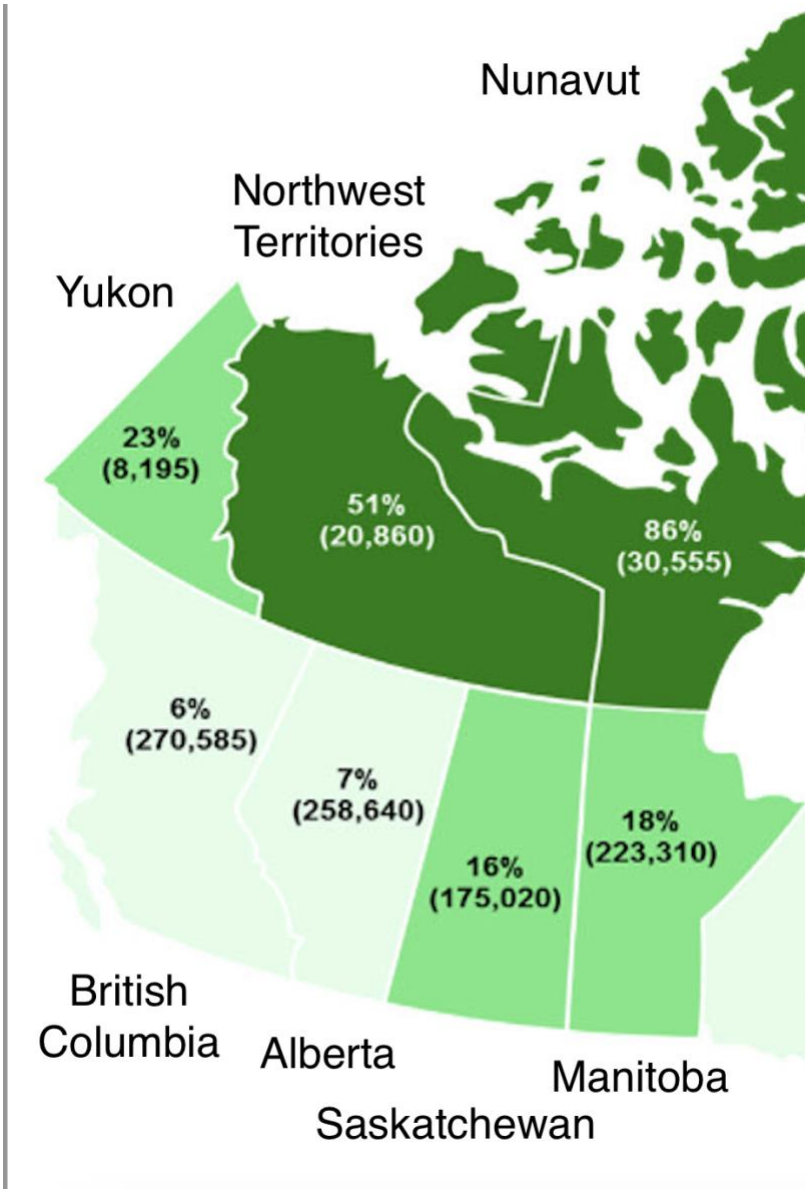
Organization	Date	Sector
University of Saskatchewan (4 interviewees)	28/02, 20/03, 19/04, 03/05	Academia
Yukon University	15/04	Academia
IHRB	22/02	Research center
WWF	26/02	NGO
Saskpower (2 interviewees)	01/03, 10/04	Public utility
Indigenous Clean Energy (2 interviewees)	08/03, 27/03	Public agency
Saskatchewan Environmental Society	08/03	NGO
First Nations Power Authority (4 interviewees)	08/03, 13/03, 16/04	Public agency
Pembina Institute	03/05	Research center
ATCO	18/04	Private energy developer
BluEarth Renewable	21/03	Private energy developer
Rising Edge Group	13/03	Private energy developer
Quest Canada	09/04	Consulting firm
Indigenous communities' energy workers (2 interviewees)	08/03, 13/03	Indigenous communities
Expert working at the service of several indigenous communities for renewable energy transition (2)	15/03, 27/03	Independent
Northwest territories government	19/04	Public institution
Cascade Institute	15/04	Research center
Arctic Energy Alliance	18/03	Public agency
Council of Yukon First Nations	16/04	Indigenous communities' representation

9.4 Appendix C: List of documents analyzed

Title	Author	Date of publication
Reports from provincial governments and public utilities (action reports, consultation reports, renewable energy strategy)		
Energy Initiatives Report – Reporting on Actions under the 2030 Energy Strategy	Northwest Territories Government	2023
What We Heard on the Public Engagement on the Review of the 2030 Energy Strategy and Climate Change Targets *(consultation report)*	Northwest Territories Government	2024
2030 Energy Strategy, Energy Action Plan 2022-2025	Northwest Territories Government	2022
Yukon's Independent Power Production Policy	Yukon Government	2018
Our Clean Future: A Yukon strategy for climate change, energy, and a green economy	Yukon Government	2020
Yukon First Nation Energy Summit, Technical Session, What We Heard *(consultation report)*	Yukon Government	2023
Annual Report for 2022-2023	Ministry of Energy & Resources (Saskatchewan)	2023
Business Plan 2024-2025	Ministry of Energy & Resources (Saskatchewan)	2024
Future Supply Plan 2030 and Beyond *(consultation report)*	Saskpower	2023
Emissions reduction & Energy Development Plan	Alberta Government	2024
2024 Call for Power, Planning, Phase 2 First Nations Workshops, Engagement Summary	BC Hydro	2023
Sustainability reports, strategy/policy on indigenous engament from energy developers		

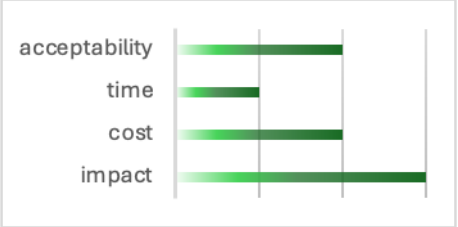
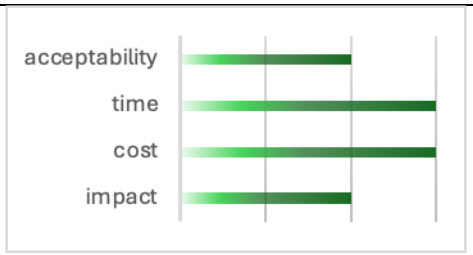
Indigenous People in Canada: our policy on relationships	BlueEarth Renewables	2024
Partnership webpage + sustainability webpage	Rising Edge Group	2024
Independent Producer webpage + Partnership with Indigenous People webpage + Responsible Energy Solutions webpage.	ATCO	2024
"Our approach to cultural awareness"	First Nation Power Development Inc	2024
Additional documents		
Waves of Change: Indigenous clean energy leadership for Canada's clean energy future	Indigenous Clean Energy	2022
Request for Suppliers Qualifications	Saskpower	Unknown
Voices of Understanding - Looking Through the Window	Alberta Energy Regulator	2017
BC Hydro 2023 Call for Power- A Framework for Advancing Indigenous Economic Opportunities First Nations Energy and Mining Council	BC Hydro	2023
BC Hydro 2024 Call for Power November Engagement Package B: First Nations Participation Model, EPA Term Sheet and RFP Summary	BC Hydro	2023
Best Practices for First Nations' Engagement and Consultation in the Planning and Development of a Clean Energy Future in Saskatchewan	First Nations Power Authority	2021
A guide to support Indigenous Renewable Energy Development in Alberta	Alberta Government	2018
Canada Energy Transition: An energy market assessment	National Energy Board	2019
Supporting Aboriginal Participation in Resource Development: the role of Impact and Benefit Agreements	Parliamentary Information & Research Service	2015
Summary of the final report of the Truth and Reconciliation Commission of Canada	Indigenous Corporate Training Inc	2016

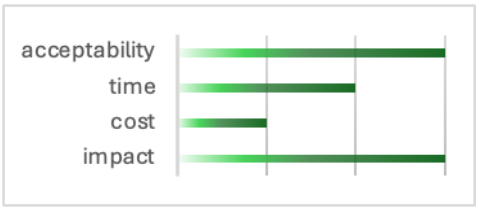
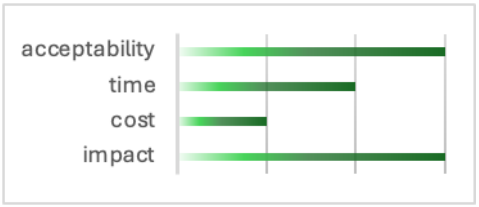
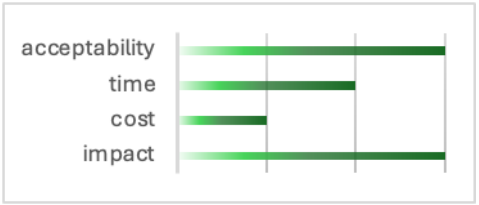
9.5 Appendix D: Map of western Canadian provinces and the respective population of Indigenous people (Government of Canada; Indigenous Services, 2020)



9.6 Appendix E: List of recommendations and indicators

Indicators were developed using my own comprehension on the topic, considering the costs and effectivity of previous programs, and my exchanges with interviewees. They were discussed with several experts.

1. Reinforce Indigenous position in renewable energy projects. • Increase capacity building efforts in terms of knowledge upon renewable energy systems, rights & policies so that Indigenous communities can engage with energy developers more informed. • Provide higher mental health support to Indigenous communities so that they can solve psychological issues and be able to engage in projects. • Provide Indigenous communities with a specific fund dedicated to administrative staff & extend delays of response of Indigenous communities to private energy developers. • Implement a nation-wide 100% community ownership incentive for projects, introduce a federal 50% minimum community ownership of projects for renewable energy projects. • Combine projects selection to a mapping of the zones where communities are facing the highest needs to avoid the marginalization of Indigenous communities that can't access project capita.	**Acceptability & feasibility indicators (low to high)** 
2. Pursue the sensibilization of the private sector and public servants to Indigenous perspectives and capabilities to engage in renewable energy projects. • Provide documentation on Indigenous perspectives & beliefs similarly to environmental guides. • Demystify what Indigenous engagement means, share testimonies demonstrating Indigenous willingness to engage with the industry while considering the social and environmental impacts. • Create voluntary certifications for private actors having followed training on Indigenous perspectives & engagement benefits. Transform such scheme into mandatory licenses to operate on the long term. • Integrate classes presenting Indigenous perspectives on sustainability & Indigenous engagement benefits in energy related curriculum. • Implement mandatory training on Indigenous integration for public servants.	

3. Promote collaboration and coordination among stakeholders. • Create physical spaces dedicated to collaboration among stakeholders. Gather actors under a network regularly meeting over different themes. • Build a platform dedicated to the sharing of information's on renewable energy project among civil servants at municipal, provincial, and federal levels to ensure coordination.	
4. Protect Indigenous rights through exemplary condemnations, and the promotion of a due diligence duty in the private sector. • Stop delegating monitoring duty to the private sector. Create an agency which tasks would be to monitor energy developers' behaviour, receive Indigenous claims, investigate cases, and block momentarily project development. Such agency should act as a mediator promoting agreements between stakeholders integrating Indigenous perspectives. • Implement a duty of due diligence for actors financing energy developers' projects, like environmental responsibility systems. • Set examples: heavily financially condemn energy developers showing a clear lack of concern for Indigenous rights to consultation & prohibit these companies from operating on Indigenous land.	
5. Integrate better Indigenous communities in policy making: • Agree with Indigenous communities upon a document listing mandatory steps to follow to carry proper consultation. • Adopt a minimum Indigenous people share for public servants working on policies related to Indigenous communities matching the demographic situation.	
6. Adapt existing governing frameworks. • Put aside the "one size fits all approach" and provide more flexibility to local agencies. • Remove the 20% independent producers cap and provide more clarity among the approval processes of projects. • Adjust new power purchase agreements rates to increase Indigenous communities' incentives to engage in projects. This would also constitute a recognition of the true cost bear by communities relying on diesel engines and show a sign of support to reconciliation initiatives.	

• Adjust the market approach to energy systems by integrating indicators promoting a shared vision of sustainability in projects.	
7. Encourage partnerships between energy developers & Indigenous communities. • Create a nation-wide database providing clear indication to both energy developers & Indigenous communities on who to contact. • Pursue financial safety mechanisms to reassure banks of the solvability of Indigenous communities. • Introduce mechanisms for de-risking: technical partnerships with public utilities could encourage communities' ownership in projects by limiting their liability meanwhile they acquire capacities to autonomize themselves maintenance wise. • Create a label certifying energy developers working as equal partners with Indigenous communities & subsidise customers buying energy from label certified energy provider.