A Decolonial Approach to Strategic Energy Management for Urban Indigenous Housing Providers in British Columbia

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Abstract

The transition to low-carbon energy systems is recognized as a critical response to climate change, while housing quality and equitable energy access are now understood as essential determinants of well-being and health. Across Turtle Island, growing attention is being directed toward the intersections of housing, justice, and Indigenous self-determination as critical pillars of a just energy transition.

For Indigenous peoples, climate vulnerability cannot be separated from the ongoing legacies of colonialism that continue to shape housing conditions, infrastructure quality, governance structures, and access to energy services. In British Columbia, where most Indigenous peoples live off-reserve, Urban Indigenous housing providers play a vital role in delivering affordable, safe, and culturally safe housing, yet often operate within conditions plagued by chronic underinvestment, aging infrastructure, capacity constraints, and fragmented policy and funding systems. Existing energy management and retrofit programs largely prioritize technical performance, cost-effectiveness, and greenhouse gas reductions, while giving limited attention to Indigenous sovereignty, cultural safety, well-being, and community-defined measures of success.

This study sought to explore the role of a decolonial, Indigenous-led Strategic Energy Management Plan (SEMP) for Urban Indigenous housing providers in breaking the insidious loop of coloniality at the urban frontier and building equitable, low-carbon energy solutions.

Drawing on lived experiences of Urban Indigenous housing providers, external partner expertise, and insight from the Aboriginal Housing Management Association (AHMA) staff, this research shows that conventional energy management approaches are insufficient to meaningfully address the interconnected challenges of housing quality, energy poverty, climate vulnerability, and Indigenous self-determination experienced within Urban Indigenous housing.

The findings reveal that energy-related struggles are not simply technical problems but manifestations of broader colonial structures that continue to shape housing and energy systems. Participants consistently identified capacity limitations, fragmented funding programs, culturally unsafe processes, and denial of Indigenous self-determination as significant barriers to improving housing quality and climate resilience. The research further demonstrates that Urban Indigenous housing providers prioritize tenant well-being, safety, belonging, and long-term organizational

sustainability above conventional energy metrics such as energy use intensity or greenhouse gas reductions.

These findings extend existing scholarship by demonstrating that strategic energy management can be reimagined as a pathway for restorative justice, Indigenous sovereignty, and community well-being rather than solely a tool for energy conservation and emissions reduction. The study proposes foundational principles for an Indigenous-led SEMP, including cultural safety, energy justice, energy as a service, climate resilience, Two-Eyed Seeing, technological and data sovereignty, and community-defined measures of success rooted in human flourishing and a "Good Life" (*Soh Kyo U'liih*).

This research contributes to emerging conversations on climate justice, energy justice, decolonization, and the invisible realities within urban sites by centering the experiences of Urban Indigenous communities, a population frequently overlooked in both academic research and climate initiatives. It argues that equitable energy transitions require more than technological innovation; they require structural transformation that restores Indigenous sovereignty, supports community well-being, and recognizes housing and energy as fundamental foundations for health, human flourishing, and collective resilience in a changing climate.

Research Keywords

Urban Indigenous housing; energy justice; decolonization; climate resilience; Indigenous sovereignty.

Foreword

This Major Research Paper was completed in partial fulfillment of the requirements for the degree of Master in Environmental Studies (MES) at York University. The research represents the culmination of my Plan of Study, which focused on the intersections of energy justice, Indigenous sovereignty, energy transitions, systems thinking, ecological economics, and energy policy. With a focus on just energy transitions, this work extends my exploration of how energy systems can be transformed to better serve communities through decolonial, justice-oriented, and community-centered approaches that challenge conventional understandings of energy planning and management.

Throughout my MES journey, I sought to critically examine the social, political, ecological, and economic dimensions of energy systems and how they shape the lived experiences of Indigenous and other equity-deserving communities. Guided by systems thinking and ecological economics, my Plan of Study emphasized the interconnected nature of environmental, social, and economic challenges and explored alternative approaches to the energy transition that prioritize well-being, reciprocity, sufficiency, and equity. Central to this inquiry was the concept of energy as a service, which shifts attention away from energy consumption itself and toward the human and community needs that energy fulfills, such as safety, comfort, health, mobility, and quality of life.

This Major Research Paper draws upon interdisciplinary perspectives from decolonial theory, energy studies, Indigenous sovereignty, cultural safety, justice and well-being, and Two-Eyed Seeing *(Etuaptmumk).* Weaving all these frameworks together, this approach provided the conceptual foundation for examining how housing, energy, climate resilience, and Indigenous self-determination intersect within the Urban Indigenous housing sector. Consistent with the MES program's commitment to interdisciplinary and justice-oriented scholarship, the research seeks to move beyond narrow technical approaches to energy management and instead situates energy within broader relationships of power, culture, human-nature interactions, and community well-being.

The research employs a mixed-methods approach incorporating semi-structured interviews, surveys, desktop studies, and reflexive thematic analysis. Through engagement with Urban Indigenous housing providers, sector partners, and the Aboriginal Housing Management Association (AHMA), the study investigates the barriers, opportunities, and priorities shaping

energy management and climate resilience efforts within Urban Indigenous housing in British Columbia. In doing so, it contributes both practical and scholarly knowledge by identifying foundational principles and design considerations for an Indigenous-led Strategic Energy Management Plan (SEMP).

This research supports the MES program's objectives by addressing a complex environmental and social challenge through interdisciplinary inquiry, critical analysis, applied research, and a commitment to all tenets of justice. It contributes to ongoing discussions on climate change, housing, decolonization, energy justice, and Indigenous self-determination while advancing a vision of energy planning that centers community well-being, cultural safety, and belonging. Ultimately, this Major Research reflects my commitment to supporting more equitable and reciprocal approaches to the energy transition and contributes to broader efforts to build healthy, resilient, and self-determined communities.

Table of Contents

Section 1. Introduction 1
Section 2. Theoretical Frameworks 5
2.1 Decolonial Theory and Indigenous Sovereignty 5
2.1.1 Decolonial Theory 6
2.1.2 Cultural Safety 12
2.2 Justice & Well-being 14
2.2.1 Foundation of the Justice & Well-Being Framework: Human Needs and Eudaimonic Well-being 15
2.2.2 Weaving Eudaimonic Well-being with "Grounded Normativity" 16
2.2.3 Energy Services at the Center 16
2.2.4 Tenets of Justice in the Urban Indigenous Context 17
2.2.5 Cultural Safety, Indigenous Sovereignty & Two-Eyed Seeing 18
2.2.6 Application to the Indigenous-led SEMP 19
Section 3. Brief History of Urban Indigenous Housing in BC 20
3.1 The Aboriginal Housing Management Association 20
3.2 Indigenous Peoples & Colonialism in British Columbia 21
3.3 Urbanization & Indigenous Identity 23
3.4 Urban Nullius & Relationship with the Natural World 23
Section 4. Energy Justice for Urban Indigenous Households 25
4.1 Energy Injustice as an Extension of Colonialism: A Tale of Forced Urbanization 25
4.2 Climate Change, Substandard Housing & Well-being: an Urban Indigenous Lived Experience 27
4.3 Energy Efficiency & Energy Management: Undoing the Harms of Energy Injustice 30
4.3.1 Energy Efficiency: The Unsung Hero of Climate Mitigation 31
4.3.2 The Role of Indigenous-led and Justice-Centric Energy Management 32
Section 5. Research Methodology & Data 36
5.1 Research Design & Methodology 36
5.1.1 Decolonial and Indigenous Research Frameworks 37
5.1.2 Two-Eyed Seeing *(Etuaptmumk)* 37
5.1.3 Integrating Mixed Methods with Indigenous Epistemologies 38
5.2 Semi-structured Interviews 38
5.3 Survey 40
5.4 Reflexivity and Positionality 41
5.5 Data Analysis Approach 42

Section 6. Results & Discussion 45
6.1 Urban Indigenous Households: What are their priorities? 45
6.1.1 Holistic Well-Being & Organizational Sustainability 45
6.1.2 The Priority Paradox: Survival Needs and Systemic Disinvestment 47
6.1.3 Shifting the Paradigm: Energy as a Service 48
6.1.4 Conditions for Valuing Environmental Sustainability within Urban Indigenous Housing 50
6.2 Restoring Indigenous Sovereignty: Trauma-Informed and Culturally Safe SEMP 51
6.2.1 Self-Agency and Decolonization of Being 51
6.2.2 Relationship and Relational Accountability 52
6.2.3 Trauma-Informed Practice and the Sanctuary of Home 53
6.2.4 Reciprocity and Indigenous Sovereignty 54
6.3 Energy Poverty & Urban Indigenous Lived Realities 55
6.3.1 Distributive Injustice and Survival Choices 55
6.3.2 The Invisibility of Urban Indigenous Households 56
6.3.3 Energy as a Service: Reclaiming Well-Being & Comfort 57
6.3.4 Procedural Barriers and the Operational Gap 57
6.4 Housing Infrastructure & the Climate: Building for Resilience 58
6.4.1 Climate Emergencies & Adaptation 59
6.4.2 Deep Energy Retrofits: The Missing Key 60
6.4.3 Human Dignity, Self-Agency & Technological Sovereignty 64
6.5 Structural & Systemic Barriers: The Misalignment of the Political and Funding Landscape 66
6.5.1 Incentives & Funding Sources: The Bureaucratic Trap 67
6.5.2 Institutionalized Metrics vs. Eudaimonic Well-Being 69
6.5.3 Capacity Constraints and the Maintenance Gap 71
6.5.4 Uncertain Futures and Data Sovereignty 72
Section 7. A Glimpse into a Decolonized & Indigenous-led Strategic Energy Management Plan 73
7.1 A Critique of BCNPHA's Strategic Energy Management Plan through a Decolonial Lens 73
7.1.1 Ontological Misalignment: Electrons versus Well-being 73
7.1.2 Capacity as Systemic Disinvestment: The "Coloniality of Being" 74
7.1.3 Technological Sovereignty versus Standardization 74
7.1.4 Climate Resilience versus Financial Sustainability 75

7.1.5 Planning Uncertainty & Infrastructural Colonization 75
7.2 Foundational Principles of a Decolonial & Indigenous-Led SEMP 76
7.2.1 Indigenous Sovereignty and Cultural Safety 76
7.2.2 Justice and Well-Being: Eudaimonic Flourishing 77
7.2.3 Energy as a Service: Centering Human Needs 78
7.2.4 Climate Resilience and Adaptation: The Next Seven Generations 78
7.2.5 Capacity Building, Advocacy, and System Transformation 79
7.2.6 Two-Eyed Seeing 79
7.2.7 Technological and Data Sovereignty 80
7.2.8 Definitions of Success: Eudaimonic Metrics 80
Section 8. Conclusion 82
8.1 Survival, Sustainability & Human Flourishing 82
8.2 Rethinking Strategic Energy Management 84
8.3 Reclaiming Power: Foundations of an Indigenous-Led Strategic Energy Management Plan 85
8.4 Implications for the Energy & Housing Ecosystem 85
8.5 Study Limitations and Future Research 86
8.6 Final Reflections 87
Bibliography 88
Appendix A: Codebook 98
Appendix B: Interview Questions 101
Appendix C: Survey Questions 104

List of Tables & Figures

Table 1 - Justice tenets linked to energy services and housing factors. 30
Table 2 - Common barriers faced by conventional energy retrofit and conservation programs. 34
Table 3 - What distinguishes deep energy retrofits from incremental or baseline retrofits? 64

Figure 1- The just energy transition's insidious loop effect. It shows the importance of acting on the consequences of colonization to influence all three JET dimensions simultaneously: distributional, procedural, and renewal. 6
Figure 2 - The four pillars of cultural safety. 13
Figure 3 - The interconnectedness of energy, energy services, and well-being. 15
Figure 4 - Housing units in AHMA's portfolio by type. 20
Figure 5 - Three forms of injustice and their outcomes on impacted individuals. 27
Figure 6 - Climate change impacts, outcomes, and potential health impacts on households. 28
Figure 7 - Impact of poor housing quality on households' health. 29
Figure 8 - Survey response: Housing providers top priorities. 46
Figure 9 - Survey response: Key barriers to energy efficiency project implementation. 48
Figure 10 - Survey response: Most likely non-energy benefits from retrofit projects observed by AHMA staff. 49
Figure 11 - Survey response: The most common climate emergencies faced by Urban Indigenous households in British Columbia. 50
Figure 12 - Survey response: Maintaining cultural safety for Urban Indigenous households. 52
Figure 13 - Survey response: Essential governance principles for the creation of an Indigenous-led SEMP. 53
Figure 14 - Survey response: Essential outcomes for the creation of an Indigenous-led SEMP. 55
Figure 15 - Survey response: Key barriers to energy efficiency project funding & implementation. 58
Figure 16 - Far-reaching outcomes of deep energy retrofits. 61
Figure 17 - Survey response: Severity of common challenges in energy project delivery. 66
Figure 18 - Survey response: Most impactful services for energy retrofit implementation within Urban Indigenous housing. 68
Figure 19 - Survey response: Most likely non-energy benefits from retrofit projects observed by AHMA staff. 70
Figure 20 - Survey response: Crucial data governance practices for energy & asset data within Indigenous communities. 72

Dedication

I want to dedicate this work to my parents, Rokhsareh and Saeid, who have been the biggest and loudest supporters of my dreams throughout my life. Thank you for teaching me that we are all connected and for showing me the importance of being the voice of the unheard.
I would also like to thank my supervisor, Doctor Lina Brand-Correa, for her kindness, passion, and invaluable insight throughout my research.

Acknowledgements

As an immigrant and uninvited guest on this land, I recognize that my perspective and language are limited to my position as a witness and observer of the lived experiences and stories of Indigenous community members involved in this study. I intentionally reflected upon my privilege and position throughout the interviews, analysis, and writing of this report. I relied on AHMA's cultural safety framework and lodge teachings to engage in an ongoing process of critical self-reflection to identify how colonial structures and practices influence my interactions throughout this study and, more importantly, decision-making processes impacting energy systems. Drawing on AHMA's lodge teachings, I sought to create a warm, welcoming, and safe space during the interviews to emphasize the importance of relationship-building, curiosity, and a sense of belonging. By creating a safe space, I ensured that all participants, especially Urban Indigenous housing providers, felt heard, respected, and honored.

I would like to respectfully acknowledge that the writing of this work took place on the traditional territory of the Mississaugas of the Credit, the Anishinaabe, the Chippewa, the Haudenosaunee, and the Wendat peoples, known today as Toronto. As part of the Dish with One Spoon Territory, I walk alongside subsequent Indigenous Nations and peoples, Europeans, and all guests in sharing and protecting this land.

Disclaimer

Grammarly embedded in Microsoft Word was used to check the grammar and punctuation of this Major Research Paper.

Section 1. Introduction

Climate change is increasingly recognized as one of the defining challenges of the twenty-first century. Across Canada and around the world, communities are experiencing more frequent and intense heat waves, wildfires, flooding events, and other climate-related emergencies (IPCC, 2022). These impacts are not distributed equally; rather, they interact with existing social, economic, and environmental inequities, resulting in disproportionate vulnerabilities for historically marginalized populations (Yumagulova et al., 2023; NCCIH, 2022). For Indigenous peoples, climate vulnerability is inseparable from the ongoing legacies of colonialism, including displacement from traditional territories, underinvestment in housing and infrastructure, and exclusion from decision-making processes that shape energy, housing, and environmental policy (Whyte, 2018; Rioux-Gobeil & Thomassin, 2024; Tornel, 2023).

Within British Columbia (BC), these challenges are particularly evident in Urban Indigenous housing. Approximately 82% of Indigenous peoples in the province now live off reserve and rely on a diverse network of Indigenous service providers for access to affordable, culturally safe, and supportive housing (Statistics Canada, 2021; AHMA, 2023). The Aboriginal Housing Management Association (AHMA) and its member organizations play a critical role in serving Indigenous households across urban, rural, and northern communities throughout BC (AHMA, 2023). However, Urban Indigenous housing providers frequently operate within complex governance and funding landscapes characterized by chronic underinvestment, aging housing stocks, limited organizational capacity, and fragmented responsibilities across different levels of government (AHMA, 2023; NAFC, 2021). As a result, many Urban Indigenous households continue to experience housing insecurity, overcrowding, poor indoor environmental quality, energy poverty, and heightened vulnerability to climate-related hazards (Statistics Canada, 2021; AHMA, 2023; Yumagulova et al., 2023). Yumagulova and co-authors reported that “according to the 2021 federal census, 1 in 6 Indigenous people lived in a home in need of major repairs (three times higher than for a non-Indigenous person), and more than 17% of Indigenous people lived in overcrowded homes (Yumagulova et al., 2023).

The relationship between housing quality and climate vulnerability is particularly important. Housing conditions are widely recognized as a key determinant of health, well-being, and resilience to climate-related impacts (Reading & Wien, 2009; Hahmann & Kumar, 2022). As

climate change intensifies, these existing housing challenges are expected to become more severe. Extreme heat events, wildfire smoke, and other climate emergencies are increasing pressure on both housing providers and tenants, particularly in communities already experiencing high energy burdens and limited access to resources (IPCC, 2022; AHMA, 2023). It becomes apparent that climate vulnerability in Urban Indigenous housing cannot be understood solely as an environmental issue. Rather, it reflects the cumulative impacts of historical and ongoing colonial processes of the settler-state that continue to shape housing conditions, access to energy services, and overall community well-being (Olsen, 2016; Whyte, 2018; Tornel, 2024).

Energy efficiency can be an effective tool for improving housing quality, reducing greenhouse gas emissions, lowering operating costs, and strengthening climate resilience (McClenaghan et al., 2023; García-Lamarca, 2026; EEP, 2022). Energy efficiency retrofits can improve thermal comfort, indoor air quality, affordability, and protection against climate-related hazards, while also contributing to broader climate mitigation objectives (Cui et al., 2024; Gillard et al., 2017; EEP, 2022). However, Urban Indigenous housing providers often face significant barriers to implementing energy efficiency initiatives (AHMA, 2023; EEP, 2022; Ecotrust, 2025). Existing energy programs and policies frequently emphasize technical performance, cost-effectiveness, and emissions-reduction targets while giving limited attention to Indigenous self-determination, cultural safety, well-being, and community-defined measures of success (Datta et al., 2025; Jenkins et al., 2021; García-Lamarca, 2026; AHMA, 2023).

Strategic Energy Management Plans (SEMPs) are a common tool within the housing, commercial, and public sectors for coordinating energy conservation initiatives, greenhouse gas reduction efforts, capital planning decisions, and long-term asset management (BCNPHA, 2026). Existing SEMPs provide valuable technical guidance and organizational structure; however, they have largely been developed through conventional managerial, engineering, and economic perspectives. Conventional SEMPs tend to prioritize energy conservation, cost savings, and emissions reductions while giving limited consideration to Indigenous sovereignty, well-being, cultural safety, and the lived realities of Urban Indigenous communities. While strategic energy management has become an established practice within the non-profit housing sector, an Indigenous-led, decolonial Strategic Energy Management Plan tailored to the realities of Urban Indigenous housing providers in British Columbia has not yet been developed. To my knowledge,

no existing SEMP in British Columbia has explicitly centered Indigenous sovereignty, cultural safety, justice, and well-being, and decolonial principles as foundational pillars.

This absence represents both a practical and an academic gap. From a practical perspective, Urban Indigenous housing providers lack energy planning frameworks tailored to Indigenous governance structures, community priorities, and culturally grounded definitions of success. From a scholarly perspective, the existing literature has extensively examined Indigenous housing, climate justice, energy justice, Indigenous sovereignty, and Indigenous-led climate action, but has mainly focused on on-reserve Indigenous communities, rendering Urban Indigenous households invisible. Additionally, little research has explored how strategic energy management itself can be reimagined through Indigenous, decolonial, and justice-oriented lenses. Existing strategic energy management literature remains largely focused on technical performance, financial feasibility, and climate mitigation targets, with limited attention to Indigenous self-determination, cultural safety, holistic well-being, and energy sovereignty (BCNPHA, 2026).

To address this gap, this study examines the development of an Indigenous-led Strategic Energy Management Plan for Urban Indigenous housing providers in British Columbia. The overarching research question guiding the study is:

> What would a Strategic Energy Management Plan for Urban Indigenous households in British Columbia, centered on energy justice, well-being, and decoloniality, look like?

Seeking to answer this question, the study investigates systemic barriers to housing quality, energy management, and climate resilience in Urban Indigenous housing; examines the opportunities and limitations of existing energy management approaches; and identifies foundational principles that could inform the development of an Indigenous-led Strategic Energy Management Plan.

The study is grounded in a woven theoretical framework. Decolonial Theory serves as the primary analytical lens, enabling examination of how colonial processes and legacies continue to shape contemporary housing and energy systems. This framework is supported by the following pillars: Justice and Well-Being, Indigenous Sovereignty, Cultural Safety, Two-Eyed Seeing *(Etuaptmumk),* and Energy as a Service. The woven framework used in this research facilitates an examination of housing and energy systems not only as technical infrastructures but also as social,

political, cultural, and relational phenomena that influence well-being, dignity, self-determination, and climate resilience.

This research employs a mixed-methods design that combines semi-structured interviews with Urban Indigenous housing providers and sector partners, a survey of AHMA staff, and a critical review of existing strategic energy management plans. By integrating qualitative and quantitative evidence, the study seeks to capture both the lived experiences and organizational realities of Urban Indigenous housing providers to identify broader patterns, tensions, and knowledge gaps related to energy management, housing conditions, climate resilience, and Indigenous self-determination.

By applying a decolonial and justice-oriented lens to the examination of strategic energy management, this study challenges conventional assumptions about the purpose, design, and evaluation of energy as a concept, as well as the systems that control and supply it. In doing so, it contributes to broader discussions surrounding climate and energy justice, housing equity, Indigenous self-determination, and the future of low-carbon transitions on Turtle Island and beyond. The research also offers a practical foundation for the development of an Indigenous-led energy management and planning framework that prioritizes community well-being, cultural safety, climate resilience, and justice alongside traditional energy and emissions objectives.

Section 2. Theoretical Frameworks

2.1 Decolonial Theory and Indigenous Sovereignty

Conventional energy management and housing policies in so-called Canada are often built upon technocratic and managerial socio-economic and socio-ecological "fixes" that prioritize decarbonization while failing to address the structural inequities that systemically marginalize Indigenous and other equity-serving populations (Post et al., 2025; Castleden et al., 2023). To develop a truly decolonial and Indigenous-led Strategic Energy Management Plan (SEMP) for Urban Indigenous households in British Columbia, a framework is necessary that unveils the persistent coloniality of power, knowledge, and being within urban infrastructures (Alvarez & Coolsaet, 2020; Tornel, 2023). This research adopts a woven approach: decolonial theory serves as the analytical lens to expose the violence and dispossession of energy and housing systems, while Two-Eyed Seeing *(Etuaptmumk)* provides the practical bridge to navigate colonial institutions, organizations, and processes while asserting Indigenous sovereignty (Wright et al., 2019; Tornel, 2023). These frameworks recognize that for Urban Indigenous communities, energy, housing, and climate impact experiences are embedded in an "insidious loop", where all dimensions of energy, housing, and environmental justice need to be evaluated through the lens of colonial legacies. Inspired by Potawatomi scholar Kyle Whyte's work, Rioux-Gobeil and Thomassin write that the insidious loop concept refers to the idea that "historic settlers' industries that violated Indigenous peoples when they began are also implicated many years later in further environmental violence, such as climate injustice". The insidious loop effect holds that the historical legacies of colonization continue to shape and define the lived experiences of Indigenous peoples, and, therefore, to meaningfully address the injustices faced by Indigenous communities, we must break the colonial insidious loop (Whyte, 2023; Rioux-Gobeil & Thomassin, 2024).

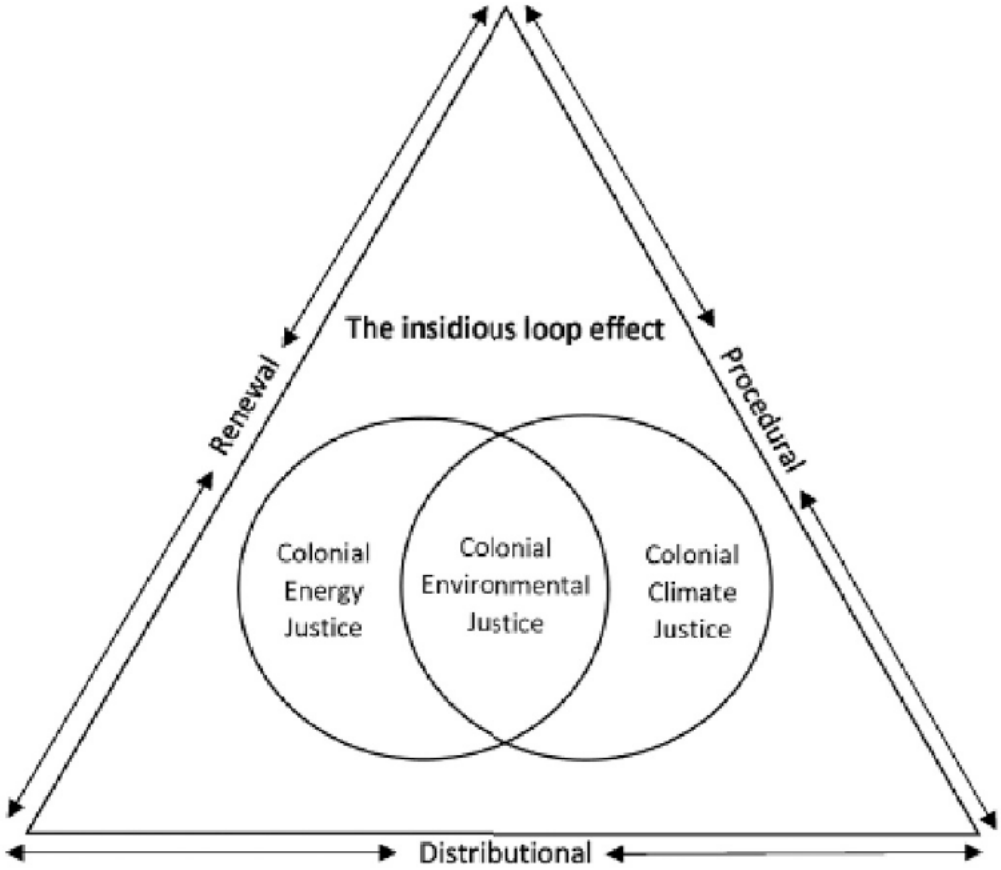


Figure 1- The just energy transition's insidious loop effect. It shows the importance of acting on the consequences of colonization to influence all three JET dimensions simultaneously: distributional, procedural, and renewal.

Sources used: Extracted from Rioux-Gobeil & Thomassin's 2024 article.

Recognizing that decolonial praxis is pluralistic and can have different definitions and manifestations across different communities, I will also introduce the cultural safety framework developed by Indigenous knowledge keepers across British Columbia and led by Chief Sum Simik Ganak, "woman of the upper headwaters", from the House of Malulak within the Gitxsan Nation as a tool used by members within the Aboriginal Housing Management Association (AHMA) to actively decolonize ways of being, knowing, and living within Urban Indigenous spaces.

2.1.1 Decolonial Theory

Decolonial theory, specifically the "modernity/coloniality - decoloniality project," diverges from Western postcolonial studies by grounding its analysis in the lived experiences, multiverses, and complex knowledge systems and traditions of Indigenous peoples across the globe and the periphery (Álvarez & Coolsaet, 2020). The fundamental distinction between colonialism, defined

as historical moments of political, economic, and social control over a specific population, and coloniality, which refers to the persistent and systemic matrix of dominance and power that continues to define socioecological relations, ownership, and control over resources that continues long after formal state-driven so-called reconciliation has occurred (Álvarez & Coolsaet, 2020). Coloniality is not an unintended or accidental side-effect of modernity and Western civilization, but rather the colonial structure's inherent dark side (Quijano & Ennis, 2000; Álvarez & Coolsaet, 2020). Therefore, decolonization must be defined not as a metaphor for social and economic improvement and mere political involvement but rather as the "Reparations of Indigenous land and Life" (Castleden et al., 2023).

2.1.1.1 The Colonial Matrix of Power

The framework used in this research is specifically organized around the Colonial Matrix of Power, which manifests itself in the housing and energy sectors:

- Coloniality of power: This theory involves the classification of populations, usually in the form of racialized classes, but at times in the form of income level and societal status, and the use of Western institutional systems, such as extractive industries, top-down governmental processes, and monopolies to control ownership, vital resources, and labor (Quijano & Ennis, 2000; Álvarez & Coolsaet, 2020; Tornel, 2023). In British Columbia, this is evident in utility monopolies treating Indigenous and equity-deserving communities as "consumers" rather than as sovereign, autonomous partners and citizens. Governments and utility monopolies perpetuate these dynamics by maintaining a strict and unsustainable funding landscape that enforces dependency on state and utility priorities (Castleden et al., 2023; Hoicka et al., 2025; López-González, 2025).
- Coloniality of knowledge: This lens describes the so-called "epistemology of point zero", "hegemonic conception of modern scientific knowledge", where Western scientific, philosophical, and cultural knowledge claims universal validity, neutrality, detached from geo-historical conditions, and therefore, superior to Indigenous knowledge systems that are described as "myth", "folklore", and limited to specific geological locations and inapplicable to universal and broad analysis (Quijano & Ennis, 2000; Álvarez & Coolsaet, 2020; Tornel, 2023). Western scientific concepts, such as thermodynamics and the

dominant economic model of capitalism, define and treat energy as a "prediscursive" phenomenon, void of any social, spiritual, or cultural dimensions. Energy is an asset that must be extracted, accumulated, and commodified, and the landscapes, ecosystems, and communities that stand in the way are therefore considered subhuman, barriers, and merely ecological waste to be dealt with (Tornel, 2023). This is in sharp contrast to Indigenous ways of knowing that may view energy as "chikawalis", which in Masewaltajtol, an Indigenous language primarily spoken by the Nahua people in the Sierra Norte de Puebla region of Mexico may roughly translate to "Force"(Post et al., 2025) As Erika Post writes in their work, "[chikawalis] denotes the living force manifest in all beings that inhabit the territory, including fire, water, wind, lightning, people, Mother Earth, the sun, and trees" (Post et al., 2025). Beyond the definitions and essence of energy, conventional and standardized metrics that define sustainability and efficiency within the energy sector often "obscure the politics of the present" by prioritizing technical performance, financial feasibility, and colonial agendas over cultural safety, lived experience, and well-being (AHMA, 2023; Garcia-Lamarca, 2026).

- Coloniality of being: Refers to the "lived experience of colonization and its ontological impact" (Álvarez & Coolsaet, 2020), where the self-image of the colonized is distorted into "less than human" by colonization through the creation of "zones of nonbeing" (Fanon, 1952, pp. 10). Colonization subjects nature and the more-than-human inhabitants of this Earth to the same violence, where animals, ecosystems, the lands and waters of this planet are placed on the "inferior" side of the duality line, while mainly communities with European descent are placed on the "superior" side of the duality line (Quijano & Ennis, 2000; Fanon, 1961, pp. 138-139). The hierarchies of racial difference, income level, and societal status that are codified into institutions manifest themselves when Urban Indigenous and equity-deserving tenants are expected to be grateful for having shelter and a low-quality living environment, an enforcement of docility that renders their well-being and other human needs disposable (Álvarez & Coolsaet, 2020; AHMA, 2023; Tornel, 2023).

Reckoning with coloniality requires the justice tenets to:

- Face the "epistemic and ontological forms of violence" perpetuated by the hegemonic Eurocentric systems of civilization and modernity (Tornel, 2023).

- Confront the violent values and structures that have shaped and continue to mold energy and housing.
- Recognize that justice is a deeply spatial, temporal, and cultural phenomenon and should be analyzed as such; rather than imposing a universal framework upon diverse communities across the globe (Tornel, 2023; Quijano & Ennis, 2000).

2.1.1.2 Decolonial Theory within the Realities of Urban Indigenous Communities

While the majority of the decolonial scholarship focuses on resistance against territorial threats and resource extraction, this research applies this framework to the urban frontier. The urban centers in British Columbia are sites of infrastructural colonization, where Indigenous communities were forcibly relocated to and violently assimilated (AHMA, 2023; Fladvad, 2023). Indigenous communities were forced to live in Western-style housing infrastructure that devalues their modes of life and their socio-ecological relationships (AHMA, 2023; Fladvad, 2023). Decolonization of urban centers requires the restoration of sovereignty for Indigenous housing providers and households living in urban sites that should inevitably lead to these communities managing their own spaces as "projects of life" (proyectos de vida) against a "system of death" characterized by structural neglect, high energy burden, and poor quality of life (López-González, 2025; García-Lamarca, 2026; Post et al., 2025).

2.1.1.3 Indigenous Sovereignty & Self-Determination

True Indigenous sovereignty challenges the mere "politics of recognition" offered by the settler state, which often serves as a "check the box" method, implying that Indigenous communities should accept recognition within the settler state as enough. But the politics of recognition, manifesting in the form of land acknowledgment and other symbolic practices, are nonreciprocal, do not challenge the coloniality of power and the system, and do not possess any relational ethos (Álvarez & Coolsaet, 2020; Castleden et al., 2023; Dunlap & Tornel, 2023). Tornel and Temper argue that true self-determination involves a "politics of refusal," rejecting state-authorized frameworks in favor of "grounded normativity," or place-based ontologies, ways of life, and traditional legal orders (Temper, 2019; Tornel, 2023). While AHMA operates within the Two-Eyed Seeing paradigm, the organization and Urban Indigenous housing providers within British Columbia advocate for sovereign self-management of Indigenous housing that is trauma-informed and follows the principles of For Indigenous By Indigenous (FIBI). AHMA and its affiliates

continue to advocate for alternatives to top-down approaches to funding, management, and the operation of Urban Indigenous housing in British Columbia, and for the restoration of Indigenous sovereignty to housing providers and their tenants (AHMA, 2023). This is a process and an outcome that manifests as re-existence, healing, the maintenance of cultural continuity, and the creation of resilient buildings for local climates that respect local Indigenous knowledge systems (Datta et al., 2025; Garcia-Lamarca, 2026; Tornel, 2023).

2.1.1.4 Two-Eyed Seeing: Weaving Indigenous Knowledge & Western Science

Two-Eyed Seeing *(Etuaptmumk)* refers to learning to see with one eye through the strengths of Indigenous knowledge systems and with the other through the strengths of Western science (Bartlett et al., 2012; Wright et al., 2019). It is not a "blending" that flattens differences, but a weaving that respects the integrity of both systems (Bartlett et al., 2012; Wright et al., 2019).
While decolonial theory identifies "epistemic extractivism", the practice of valuing Indigenous knowledge only when it serves pre-existing policy goals, Two-Eyed Seeing offers a bridge that allows those involved in a project, study, or activity to share the power of decision-making and provides a pathway to weaving of Indigenous wisdom and Western science (Datta et al., 2025; Bartlett et al., 2012; Rioux-Gobeil & Thomassin, 2024; Temper, 2019). Two-Eyed Seeing facilitates a “pluriverse”, a world where many worlds fit, or a “multi-epistemic literacy” allowing for appropriate and tactical use of Western science and technical tools (e.g., engineering, regulations, funding rebates, energy development, etc.) only when directed and led by Indigenous worldviews, knowledge keepers, and in a reciprocal partnership with these communities (Bartlett et al., 2012; Wright et al., 2019; Muller et al., 2019).

2.1.1.5 Coloniality in Housing, Energy Systems, and Climate Change

The challenges faced by Urban Indigenous households, including failing mechanical systems, thermal discomfort, poor indoor air quality, and vulnerability to climate change, are all manifestations of colonial climate justice (Rioux-Gobeil & Thomassin, 2024; Tornel, 2023). Higher energy bills, substandard housing, the absence of cooling, and unreliable energy infrastructure are part of the “insidious loop” in which colonization has diminished the current adaptive capacity of Urban Indigenous communities to face extreme weather events or socioeconomic disruptions to their lives (Rioux-Gobeil & Thomassin, 2024; AHMA, 2023).

Unlike conventional approaches to GHG reduction and energy conservation, housing decarbonization is reimagined not as a means of expanding consumption, extraction, and profits, but rather as a gateway to broader socio-ecological, political, and economic transformations (García-Lamarca, 2026). The decolonial framework advocates for a shift from energy efficiency to maximize work and reduce costs to energy as a service and sufficiency, focusing on the lived experience of communities with energy, how it impacts their lives, and enough energy for a Good Life (Tornel, 2023; García-Lamarca, 2026; Brand-Correa et al., 2018).

2.1.1.6 Strengths and Limitations

The decolonial theory presented here excels at unveiling performative policy gestures that fail to challenge power structures, systemic violence, and the sharing of decision-making. This framework is also a powerful tool for identifying infrastructural colonization and the permeation of the Colonial Matrix of Power in "green" transitions (Castleden et al., 2023).

A primary limitation of the decolonial theory framework is the "materiality gap", where scholarly language and approaches may detract from the immediate material needs of marginalized communities, such as high living costs, basic survival needs, etc. (Sylvester, 1999).

While Two-Eyed Seeing seeks to mitigate the challenges of weaving incompatible worldviews, it can at times fall into the trap of 'inclusion' and 'integration' of Indigenous knowledge and wisdom only when they fit dominant Western regulatory and decision-making systems (Tornel, 2023; Dunlap & Tornel, 2023).

2.1.1.7 Application to Indigenous-led SEMP

Grounded in decolonial theory and Two-Eyed Seeing, an Indigenous-led Strategic Energy Management Plan (SEMP) repositions energy planning as a collective "life project" rather than a purely technical exercise (Post et al., 2025). Drawing from community-centered and participatory approaches, the framework enables energy to be understood through Indigenous languages, worldviews, traditions, and relationships to place, allowing concepts such as a "Good Life" to guide discussions of why, how, and for whom energy systems are developed (Post et al., 2025; Chief Sum Simik Ganak, 2026). In doing so, the SEMP shifts away from conventional anthropocentric and efficiency-driven models toward a relational and place-based approach grounded in territory, reciprocity, and harmony among humans, non-human beings, and the natural environment (Post et al., 2025). Through a decolonial lens, longstanding challenges such as

capacity limitations, inadequate infrastructure, and resource constraints are understood not as individual or organizational shortcomings, but as manifestations of historical and ongoing colonial systems of disinvestment (Rioux-Gobeil & Thomassin, 2024; Segovia-Tzompa et al., 2024; Sovacool et al., 2023).

At the same time, Two-Eyed Seeing offers a practical pathway to integrate Indigenous knowledge systems with Western technical expertise, ensuring that engineering, asset management, and energy planning tools remain accountable to Indigenous priorities and values (Bartlett et al., 2012; Wright et al., 2019). By centering Indigenous governance, Free, Prior, and Informed Consent (FPIC), and community-defined visions of well-being, the SEMP becomes a vehicle for energy sovereignty, enabling Urban Indigenous housing providers to move beyond passive energy consumers and become sovereign decision-makers and leaders in shaping sustainable, culturally grounded, and self-determined energy futures (Post et al., 2025; AHMA, 2023).

2.1.2 Cultural Safety

"*Na sda hlimoot nuu'm ii dip 'wahl ama gandidils." (Gitxsan)*

"We helped one another and found a good life."

"Soh Kyo U'liih." (late Elder Russel Tiljo, Wet'suwet'en)

*"*Giving each other a good life."

This section was built upon discussions, workshops, and training sessions led by Chief Sum Simik Ganak, "woman of the upper headwaters", from the House of Malulak within the Gitxsan Nation, known as Judith Wesley among the members of the Aboriginal Housing Management Association (AHMA). Chief Sum Simik Ganak tells us that nothing is linear in her way of knowing and in her life; we need to decolonize our minds, bodies, ways of living and doing while learning to create culturally safe spaces for Indigenous community members. I acknowledge that cultural safety is a Western term that may not fully capture the essence of "Belonging", "A Good Life", and "Home" that flows through Indigenous languages and knowledge systems but respecting the decision of Indigenous Elders and knowledge keepers who have led the creation of this framework, I will continue to use this model throughout my research.

Cultural safety is understood not as a program, service, or checklist, but as an ongoing process of creating environments in which Indigenous individuals feel physically, mentally, emotionally, and spiritually safe. Importantly, cultural safety is defined by the Indigenous person receiving a service

rather than by the institution providing it. While often discussed alongside cultural awareness, competency, or culturally informed programming, cultural safety extends far beyond knowledge acquisition or the provision of cultural activities. It requires an active commitment to anti-racism, cultural humility, and the continuous examination of power relations, with the responsibility for creating culturally safe spaces resting primarily with those who hold institutional power and privilege. In the housing context, AHMA emphasizes that cultural safety is deeply connected to the experience of belonging, home, dignity, and the ability to live a "good life," while acknowledging the ongoing impacts of colonization, intergenerational trauma, systemic racism, and discrimination on Indigenous peoples' experiences and well-being.

Central to AHMA's framework are the Four Pillars of Cultural Safety:

- Self-Agency
- Relationships
- Trauma-Informed Practice
- Reciprocity



Figure 2 - The four pillars of cultural safety.

Sources used: AHMA's internal workshops.

Together, these pillars provide both a description of cultural safety and a reflective framework for evaluating policies, programs, and decisions. Self-agency recognizes the right of individuals to participate in decisions that affect their lives and well-being. Relationships emphasize trust,

respect, interconnectedness, and the responsibilities people have toward one another. Trauma-informed practice acknowledges the lasting effects of colonialism and other forms of trauma, seeking to understand people's experiences rather than judge their responses. Reciprocity reflects principles of mutual care, shared responsibility, and collective benefit. Rather than functioning as isolated concepts, these pillars work together to foster environments that strengthen dignity, belonging, healing, social inclusion, and community well-being. Experiences of cultural safety have been shown to improve outcomes across multiple domains, including housing, health, and social services, and to advance reconciliation by recognizing and affirming Indigenous identities, knowledge systems, and rights.

For this research, the Four Pillars of Cultural Safety provide a practical lens for evaluating the development of an Indigenous-led Strategic Energy Management Plan (SEMP). Beyond technical considerations such as energy efficiency, emissions reductions, or asset performance, the framework encourages critical reflection on whether energy-related policies, programs, and decisions support Indigenous self-agency, build and maintain trusting relationships, respond to the realities of historical and ongoing trauma, and create reciprocal benefits for communities. Accordingly, this study examines whether existing energy planning approaches align with culturally safe practices and contribute to housing environments that support well-being, self-determination, and a good life for Urban Indigenous housing providers and tenants.

2.2 Justice & Well-being

Contemporary energy transitions that rely on conventional tools and approaches are often reduced to techno-managerial challenges, yet they are fundamentally social and metabolic processes that co-produce political power and social outcomes (Jenkins, 2018; Tornel, 2023). To develop a decolonial Indigenous-led Strategic Energy Management Plan (SEMP) for Urban Indigenous housing providers in British Columbia, we must move beyond Western conceptualizations of energy that are built upon scientific discoveries and theories presented by thermodynamics and physics, such as energy efficiency and maximizing the flow of electrons while minimizing costs, and address the structural inequities embedded in the energy system (Cui et al., 2024; Tornel, 2023). The justice and well-being framework can provide this paradigm shift by reframing energy not as an abstract commodity (kilowatt-hours) but as a social relation essential for human flourishing (Brand-Correa et al., 2018; Tornel, 2023). As presented in Brand-Correa's work on

energy services, “the UN’s former Secretary-General Ban Ki-Moon described the crucial role of energy, when he stated that 'Energy is the ‘Golden Thread’ that connects economic growth, social equity and environmental sustainability” (Brand-Correa et al., 2018). The justice and well-being framework also identifies energy as the “Golden Thread” that must be untangled to ensure that the provision of energy services is not only focused on maximizing economic activity but also on expanding human capabilities and needs (Brand-Correa et al., 2018; Samarkoon, 2019).

2.2.1 Foundation of the Justice & Well-Being Framework: Human Needs and Eudaimonic Well-being

The Justice and Well-being framework is a normative and evaluative lens that assesses energy systems based on their contribution to eudaimonic well-being, rooted in the Aristotelian tradition of "the good life" or human flourishing (Samarkoon, 2019; Sovacool & Dworkin, 2015). This framework intentionally rejects the hedonic model of infinite consumption and instead focuses on the satisfaction of universal human needs, such as subsistence, protection, and belonging (participation) (Samarkoon, 2019). To connect this to the systemic challenges within the energy system, this framework would define energy poverty not as a lack of access to electricity or fuel, which is a technical failure, but rather as a deprivation of capabilities and human needs, the inability to achieve vital functioning and leading a Good Life, such as being in good health or maintaining social relationships, due to insufficient access to affordable and reliable energy services (Samarkoon, 2019; Willand & Horne, 2018; Bouzarovski & Simcock, 2017).

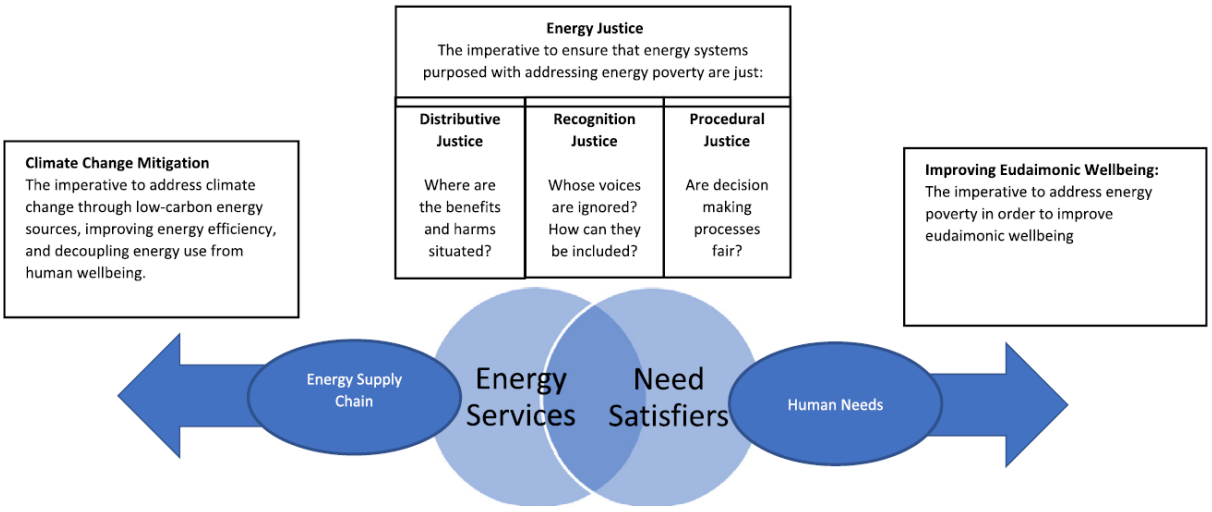


Figure 3 - The interconnectedness of energy, energy services, and well-being.

Sources used: This analytical framework, extracted from Samarkoon's 2019 article, was adapted from Brand-Correa's 2018 work.

2.2.2 Weaving Eudaimonic Well-being with “Grounded Normativity”

To address the trap of “coloniality of justice”, this framework anchors eudaimonic flourishing in "grounded normativity", which Tornel, citing the work of Coulthard and Simpson, defines as: “a system of place-based ethics at the core of struggles for dignity and self-preservation and against the abstraction embedded in capitalist modes of oppression and dispossession. Through grounded normativity, we can problematize what is just, for whom, and how universal ideals of justice operate through the core tenets of energy justice” (Tornel, 2023). In other words, “grounded normativity” is the place-based ethics rooted in the traditional Indigenous worldviews and kinship that, in the Urban Indigenous context, manifests as redefined concepts of well-being as an expression of Indigenous autonomy often articulated as *Soh Kyo U’liih* in Wet'suwet'en *or yeknemilis/xatlaan latamaat* in Sierra Nororiental de Puebla *(*giving each other a good life/ Buen Vivir) (Post et al., 2025; Chief Sum Simik Ganak, 2026). By grounding well-being in territory and relationality, the framework ensures that energy management serves the holistic health of the community and the land rather than just the individual consumer (Post et al., 2025; Tornel, 2023).

2.2.3 Energy Services at the Center

A central beam on which this framework has been built is that households do not directly demand energy in physical units (kWh or gigajoules) but rather the energy services that fuel sources provide, such as thermal comfort, mechanical work, illumination, mobility, and cooking (Brand-Correa et al., 2018; Samarkoon, 2019). Energy services are considered a tangible and relatable link between the complex energy supply chain and the satisfaction of human needs (Brand-Correa et al., 2018; Samarkoon, 2019). By focusing on energy services, planners can identify "synergetic satisfiers", such as an improved building envelope, that meet multiple human needs (e.g., health, protection, and dignity) simultaneously while potentially decoupling well-being from aggregate energy use (Brand-Correa et al., 2018; Samarkoon, 2019).

2.2.4 Tenets of Justice in the Urban Indigenous Context

Energy justice, as a framework, is a fluid field that continues to evolve. For the purposes of this study, I will focus on the common visions of the energy justice framework, which emphasize making energy services affordable, accessible, reliable, and clean, while centering Indigenous voices in energy planning and management. Thus, from the fluid and expanding dimensions of justice, the following four tenets have been selected to interpret the experiences of Urban Indigenous housing providers and tenants:

- Distributive Justice: Concerned with the fair allocation of energy benefits (affordable warmth, wealth generation) and burdens (high bills, pollution) (Jenkins et al., 2016; Kime et al., 2023). In urban sites of British Columbia, this manifests as failed distribution of the necessities of material life, where Indigenous providers manage violence within the energy infrastructure in the form of failing mechanical systems, rampant mold, and lack of access to solutions, while bearing the burden of climate change that they did not cause and simultaneously forced to adopt a technocratic “green” transition that they were not consulted on (Kime et al., 2023; Castleden et al., 2023; García-Lamarca, 2026).
- Procedural Justice: Demands self-governing authority rather than mere "participation" for Urban Indigenous households and other equity-deserving populations (Menton et al., 2020; Tornel, 2023). It critiques the "bureaucratic trap" of complex funding applications and slow regulatory processes as tools of the vicious cycle of dependency on the settler state (Castán Broto et al., 2018; Tornel, 2022).
- Recognition Justice: Requires the acknowledgment of, and respect for, different identities, ways of being, and specific vulnerabilities (Jenkins et al., 2016). This tenet would interpret qualitative findings of tenants living in social housing having to feel gratitude for poor quality housing as an enforcement of docility within a colonial “zone of nonbeing” (Fanon, 1952, p. 10; Tornel, 2023; Agyeman et al., 2016).
- Restorative (or Transitional) Justice: Arguably, these are the most critical tenets for an Indigenous-led SEMP as they aim to repair past harms caused by the energy system, recognize the healing processes required across generations, and create pathways for a

Good Life for the next seven generations (EEP, 2022; AHMA, 2023; Segovia-Tzompa et al., 2024).

In the Urban Indigenous context, Recognition and Restorative Justice are the most applicable foundational tenets because it precedes all other claims; without the recognition of Indigenous Peoples as sovereign rights-holders rather than "vulnerable customers," recognizing the past harms of the colonial system, and the necessity of trauma-informed approaches to energy justice, procedural and distributive fixes remain reformist rather than transformative (EEP, 2022; AHMA, 2023; Rioux-Gobeil & Thomassin, 2024; Velasco-Herrejon & Bauwens, 2020).

2.2.5 Cultural Safety, Indigenous Sovereignty & Two-Eyed Seeing

A "culturally safe" energy service is defined here as one that is trauma-informed, ensuring that the effort to meet the human needs within the home environment (e.g., thermal comfort, quiet and reliable mechanical systems) does not trigger intergenerational trauma or force a "heat or eat" dilemma for Urban Indigenous households (AHMA, 2023; Rioux-Gobeil & Thomassin, 2024; Gillard et al., 2017; Willand & Horne, 2018). This connects well-being to the physical condition of the home, where healthy indoor environments are a fundamental requirement for eudaimonic flourishing (EEP, 2022; AHMA, 2023; McClenaghan et al., 2023).

While the framework is directed by Indigenous worldviews, it utilizes Two-Eyed Seeing *(Etuaptmumk)* as a practical bridge. In this context, the "Western eye" (e.g., engineering, ROI, and efficiency metrics) is not an equal partner but a tactical necessity for navigating the dominant colonial energy system, such as "grid monopolies" and "strict funding landscapes," and investigating inequities (Willand & Horne, 2018; Jenkins et al., 2016; Tornel, 2023). The Western Eye provides the language, tools, and levers to address energy injustices while ensuring the material resources necessary for community survival are secured (Willand & Horne, 2018; AHMA, 2023; Velasco-Herrejon & Bauwens, 2020).

This framework contextualizes Energy Sovereignty, the inherent right of Indigenous Peoples to control the design, implementation, and management of their energy systems, as the foundational "capability" upon which all other well-being requirements and functioning depend (Baker et al., 2019; Castán Broto et al., 2018; Sovacool et al., 2023). As such, for Urban Indigenous

communities, energy sovereignty is the ultimate satisfier and should be at the center of the Indigenous-led SEMP.

2.2.6 Application to the Indigenous-led SEMP

Applying this framework transforms the SEMP from a technical manual into a pathway towards "giving each other a good life" or a "life project" (Post et al., 2025; Chief Sum Simik Ganak, 2026). It addresses capacity constraints as systemic disinvestments rather than individual failures and prioritizes relational accountability to tenants over aggregate carbon targets (Baker et al., 2019; AHMA, 2023; Rioux-Gobeil & Thomassin, 2024). Ultimately, the Justice and Well-being framework provides the normative justification for Urban Indigenous housing providers to reclaim authority over their environments, ensuring the transition to a low-carbon future is grounded in Indigenous dignity and holistic flourishing (Roysen et al., 2025; Jenkins et al., 2021; AHMA, 2023; Post et al., 2025).

Section 3. Brief History of Urban Indigenous Housing in BC

3.1 The Aboriginal Housing Management Association

Founded in 1996, the Aboriginal Housing Management Association (AHMA) is an umbrella organization of 55 Indigenous housing and service providers. AHMA's members oversee 95% of Indigenous housing units for those not living on-reserve across the province. AHMA's portfolio includes over 5,500 units that provide homes to an estimated 10,000 Indigenous individuals and families living in urban, rural, and northern regions of BC, with over 2,000 additional units currently under development. In addition to providing Indigenous peoples, their families, and communities with affordable housing, AHMA's members offer a range of support services. These include homelessness prevention, parenting skills, mental health programs, addiction recovery support, and more. AHMA members provide a culturally safe space for Indigenous peoples to make their home; wherever they settle, by facilitating connections to community and cultural resources (AHMA, 2023, 2024). AHMA members provide essential support for these people living away from their communities and traditional homelands. AHMA is a leading voice that supports, advocates, and responds to the needs of Indigenous housing providers in BC and the Indigenous Communities they serve.

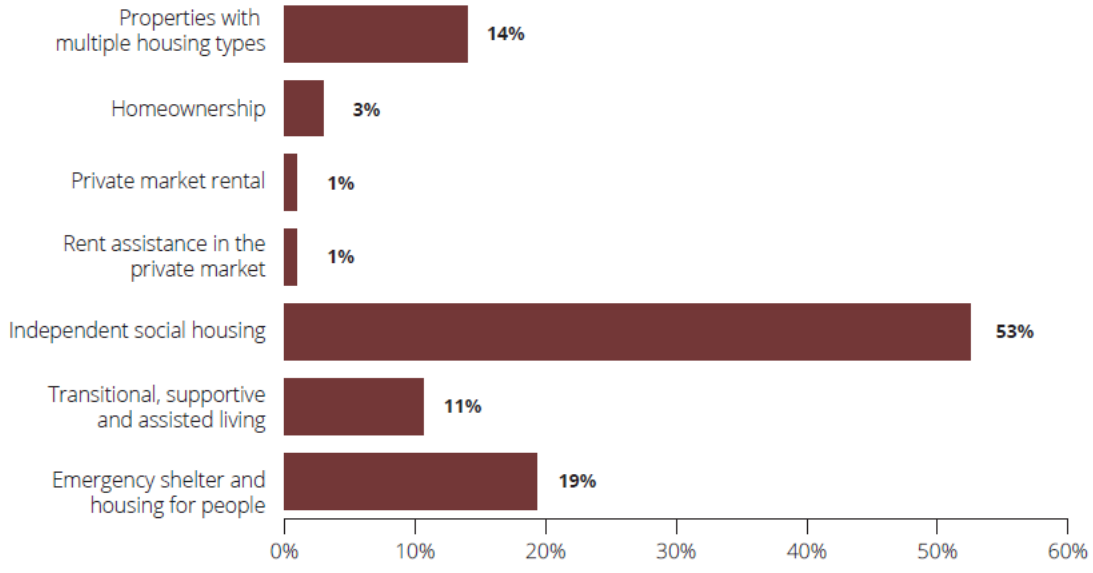


Figure 4 - Housing units in AHMA's portfolio by type.

Sources used: AHMA internal documents.

3.2 Indigenous Peoples & Colonialism in British Columbia

The land and waters now known as British Columbia (BC) are home to approximately 290,210 Indigenous people and 200 distinct First Nations (Statistics Canada, 2021). 82% of First Nations, Metis, and Inuit peoples now live, work, and play in urban and off-reserve areas (Statistics Canada, 2021). To gain a better understanding of the lived experiences of Indigenous peoples during extreme climate events, it is crucial to recognize and understand the historical colonial context and its legacies, which many of these communities have endured and continue to live through.

Building communities and houses that were in harmony with the natural environment, honoring the deeply complex relationships between the land, water, humans, and our non-human kin, was a pillar of traditional Indigenous practices. Homes and shelters were designed for the local climate, using local materials, and according to the regional functionality of the infrastructure by the community (e.g., whether women, hunters, trappers, traders, or fishermen were going to use the shelter) (Olsen, 2016).

The impacts of colonialism on housing run deep and wide within Indigenous communities. As Olsen (2016) demonstrates, colonial structures and federally imposed systems fundamentally distorted and damaged Indigenous housing across Canada, producing harm that extended far beyond the dismantling of traditional dwelling forms to encompass material, social, and psychological dimensions. Colonial housing programs were grounded in racist assumptions that positioned Indigenous peoples as inherently inferior, deserving only minimal housing standards, and incapable of managing finances, construction projects, or homeownership, a logic deeply rooted in the broader colonial project (Dyck, 1991; Carter, 1991; Milloy, 1999). These attitudes were embedded in the legal and administrative structures of the Indian Act, which withheld the financial and institutional tools required for autonomy, thereby producing long-term dependency by design (Olsen, 2016; Lea & Pholeros, 2010). Beyond material deprivation, Olsen (2016) writes powerfully about how living in government-issued, substandard homes shaped identity and inflicted lasting psychological harm: houses became visible symbols of inferiority imposed by the state; residents internalized shame, often believing “this is what we deserve”; communities absorbed narratives that equated Indigeneity with inadequate or unsafe homes; and children grew up associating “being Indian” with substandard living conditions. Olsen describes this as a profound identity wound created by the colonial housing regime, a wound that persists today, as

many Indigenous community members living on or off reserve remain reliant on government-issued housing systems that offer little meaningful autonomy over the design, financing, or maintenance of their homes (Olsen, 2016).

In addition to the material harms produced through colonial housing systems, Olsen (2016) situates these policies within a broader landscape of dispossession that profoundly reordered Indigenous relationships to land, governance, and cultural life. She argues that the confinement of Indigenous Nations to increasingly small reserve parcels, administered through the Indian Act rather than Indigenous law, severed communities from the territories that sustained their economies, knowledge systems, and seasonal ways of living, resulting in the erosion of practices that had long structured social, cultural, and political order (Olsen, 2016). Drawing on Alfred's assertion that the loss of land lies at the core of Indigenous impoverishment, she emphasizes that land displacement is inseparable from the disruption of languages, oral traditions, and community responsibilities rooted in place-based worldviews (Alfred, 2009; cited in Olsen, 2016). Missionary and colonial interventions further compounded these ruptures by attempting to reorganize Indigenous domestic and social life around Euro-Christian norms, reshaping family structures and community relations in ways that displaced existing governance and cultural frameworks (Perry, 2003; Neylan, 2003). Through this lens, Olsen (2016) shows that colonial housing policy was not an isolated administrative failure but part of a sweeping project that reconfigured Indigenous Nations' relationships to land, knowledge, and political authority. By removing Indigenous leadership over housing policies and design, colonial structures imposed by the Canadian state systemically stripped Indigenous communities of their autonomy and agency and created intergenerational incapacity for equity, homeownership, and self-sufficiency.

> *"On-reserve housing is not a failure of Indigenous people; it is a failure of colonial policy—one that manufactured poverty and continues to shape the lives of generations."* (Olsen, 2016)

3.3 Urbanization & Indigenous Identity

Simultaneously, as the Canadian state forcibly displaced Indigenous peoples from their traditional lands, urban centers and towns started getting erected on the Indigenous territories. Julia Tomiak reminds us that all so-called cities and urban centers in Canada are ultimately Indigenous places, but colonial state policies were intentionally designed to erase this reality through forced physical eviction of Indigenous populations and transforming the identity of the lands and waters where they were once called home (Tomiak, 2024).

Many Indigenous peoples, seeking better housing and social support systems, began migrating to new urban areas by the 1940s (Olsen, 2016). Among the reasons for migrating to cities were seeking improved employment, accessing healthcare and education, and escaping structural and family violence (NAFC, 2021). Many Indigenous community members had dreams of building a better life, only to face further systemic racism, forced assimilation, and colonial oppression. Multiple layers of colonial policies and laws were used to strip Indigenous peoples of their self-determination and human rights, including the 1854 Gradual Civilization Act, which became the Indian Act of 1911, and the "Pass System" (Dorries, 2023 & NAFC, 2021). Using different terminologies and reasonings, these colonial policies justified the removal and erasure of Indigenous peoples from urban centers as a requirement of urban vitality, civilization, and progress. The settler colonial agenda intentionally places Indigeneity and urbanization in opposition to accelerate and legitimize the removal of Indigenous peoples from urban centers, reconfigure the ecosystems that they have been stewarding for millennia, and impose the colonial structures, ways of life, and infrastructures (Dorries, 2023). The Indian Act and similar colonial laws gave the Canadian state the legal tools to not only regulate Indigenous identity but to accelerate the colonial project of assimilation of Indigenous peoples into the cultural, ideological, and physical structures of settler-colonialism (Dorries, 2023; Kipfer, 2018).

3.4 Urban Nullius & Relationship with the Natural World

Urbanization in Canada has had a much broader impact than just the expansion of cities and urban growth. Rural regions, ecosystems far from the urban centers, and Indigenous reserves have been subjected to exploitation, systemic abuse, and relentless extraction to fuel and accelerate the growth of the urban centers miles away (Kipfer, 2018). The colonial system established legal,

political, and economic structures, including property laws, urban planning rules, and complex regulatory bodies for the extractive industries, to pave the way for unchallenged systemic exploitation of Indigenous territories (Sandercock, 2004). Melissa Nursey-Bray uses the term 'urban nullius' to describe the ways in which urban space is understood as devoid of Indigenous presence (Nursey-Bray et al., 2022).

Extractive industries and their corresponding projects, including energy generation, mining, and sprawling construction projects, are often viewed by Indigenous communities as direct threats to their ways of life, cultural practices, and established reciprocal relationship with the lands, waterways, and ecosystems on which they have stewarded since time immemorial (Kipfer, 2018). Settler-colonialism has been described by many scholars, including Kyle Whyte, as "a form of domination that violently disrupts human relationships with the environment," that systematically undermines Indigenous collective continuance and resilience as sovereign and self-determining peoples (Whyte, 2018). By redefining lands, waterways, and ecosystems as commodities rather than living entities that were held sacred among many Indigenous cultures, settler-colonialism has reshaped the value of the natural world and the more-than-human kin through the colonial lens and has deployed many different mechanisms to erase Indigenous eco-social relations (Bacon, 2019). This violent disposition and systemic erasure of traditional and relational ties to the natural world have led to an immense amount of intergenerational trauma for Indigenous communities, which has inevitably led to deterioration of the physical and mental health of Indigenous Peoples (Reading & Wien, 2009).

Despite systemic dispossession, Indigenous-led environmental and social justice movements across Turtle Island have continued to "exist, resist, and persist" rejecting the settler-colonial expansion projects. Indigenous nations have built strong decolonial pathways to assert their sovereignty over their territories, restore their connection to the natural world, and reclaim the place of their knowledge systems within and beyond the settler-colonial state (Temper, 2018).

Section 4. Energy Justice for Urban Indigenous Households

4.1 Energy Injustice as an Extension of Colonialism: A Tale of Forced Urbanization

While the data may still be evolving, it is estimated that more than 82% of Indigenous people in Canada now live in urban settings (Statistics Canada, 2021). The ongoing process of colonization involves the violent transformation of Indigenous lands and territories into settler property and ground zero for resource extraction (Anderson & Collins, 2014). This violent dispossession and dislocation collapsed traditional ontologies of land, housing, and well-being for many Indigenous nations, forcing them into the margins of the capitalist labor and housing market (Tomiak, 2017). The loss of traditional home-building practices, healing, and living a healthy life has left Indigenous communities with no choice but to depend on colonial practices of construction, development, and reactive health management.

This legacy manifests itself as higher rates of low-income status, unemployment, housing precarity, and energy poverty for Urban Indigenous populations (AHMA, 2024; NAFC, 2021).

In this MRP, my focus will mainly be on energy poverty rather than the expensive concept of energy injustice that focuses on the national and international energy system. Scholars characterize energy poverty as a specific and severe expression of energy injustice that occurs at the "end-use" of the energy system (Walker & Day, 2012; Bouzarovsky & Simcock, 2017). Energy poverty may have different definitions depending on the geographical location and the demographics under discussion. However, energy poverty is most commonly defined as a high energy burden, in which a household spends a disproportionate share of their gross income on basic energy services, including heating, cooling, lighting, and cooking (McClenaghan et al., 2023; EEP, 2022).

Energy poverty for the Urban Indigenous community, based on the four most common tenets of energy justice, can be recognized as:

- Distributional failure: Since energy poverty involves the unequal spatial and temporal allocation of energy burden, it is considered a distributive injustice.

- Procedural failure: By systemically excluding Indigenous voices and leadership from urban energy system planning and energy conservation program design, decision-makers are perpetuating the procedural injustices of the current energy system.
- Recognition injustice: The unique needs, priorities, cultural identities, and vulnerabilities of Urban Indigenous households are devalued, ignored, and disrespected by the current energy programs and management practices.
- Restorative injustice: A rather newer tenet introduced by The Energy Equity Project in 2012, energy poverty can be categorized as restorative injustice due to the failure of the settler-colonial state to repair past harms, such as land theft and environmental degradation, inflicted upon Indigenous communities by the energy system, and perpetuating these harms by undermining Indigenous self-determination.

Energy poverty has mental and material impacts beyond mere expenditure. Scholars point to energy insecurity, the inability to meet basic life-sustaining energy needs due to high costs or poor housing quality, resulting in dangerous and traumatizing trade-offs, where families are forced to choose between heating their homes or paying for their food (Walker & Day, 2012; McClenaghan et al., 2023). Focusing on the first three forms of injustice, Walker and Day illustrate the interactions and implications of energy injustices in the following graphic.

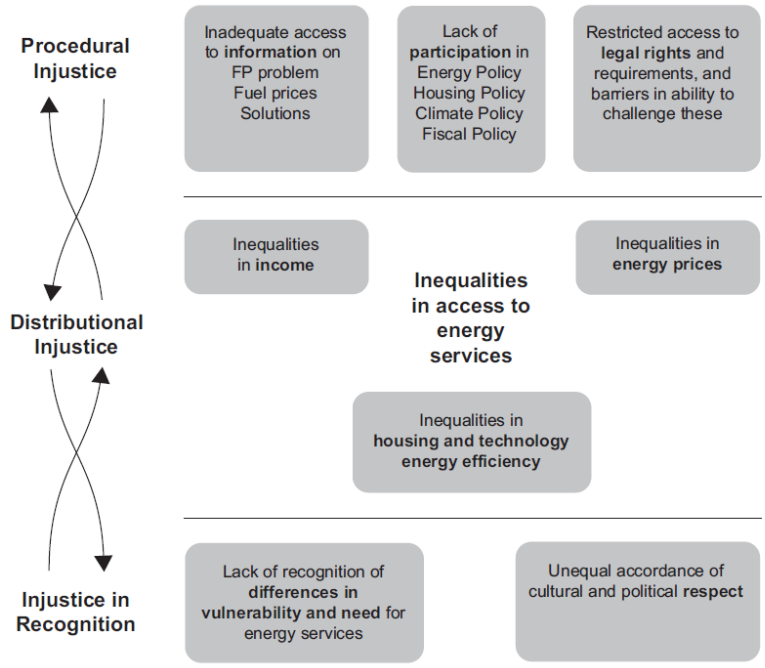


Figure 5 - Three forms of injustice and their outcomes on impacted individuals.

Sources used: Walker & Day's 2012 article.

4.2 Climate Change, Substandard Housing & Well-being: an Urban Indigenous Lived Experience

Decades of scientific research demonstrate that climate change is increasing the frequency, severity, and duration of extreme weather events, including prolonged heat waves (IPCC, 2022). These impacts are not experienced equally. Long-standing colonialism and systemic inequities have placed Indigenous peoples at heightened risk, resulting in disproportionate exposure to climate-related hazards and emergencies such as heat waves, disasters, and other climate-driven events (NCCIH, 2022).

Studies show that Indigenous populations are at a higher risk of suffering from chronic health conditions, including mental health issues, diabetes, high blood pressure, asthma, and chronic lung disease (Tam, 2013). Howard paints a dark picture when he writes of the impacts of residential schools on Indigenous children's health and well-being. Describing residential schools as "aggressive assimilation policy" that broke Indigenous food systems and land-based practices, he particularly points to diabetes as one of the most devastating chronic health issues faced by

Indigenous peoples in Canada, labeling it “disease of civilization” linked to colonization (Howard, 2014).

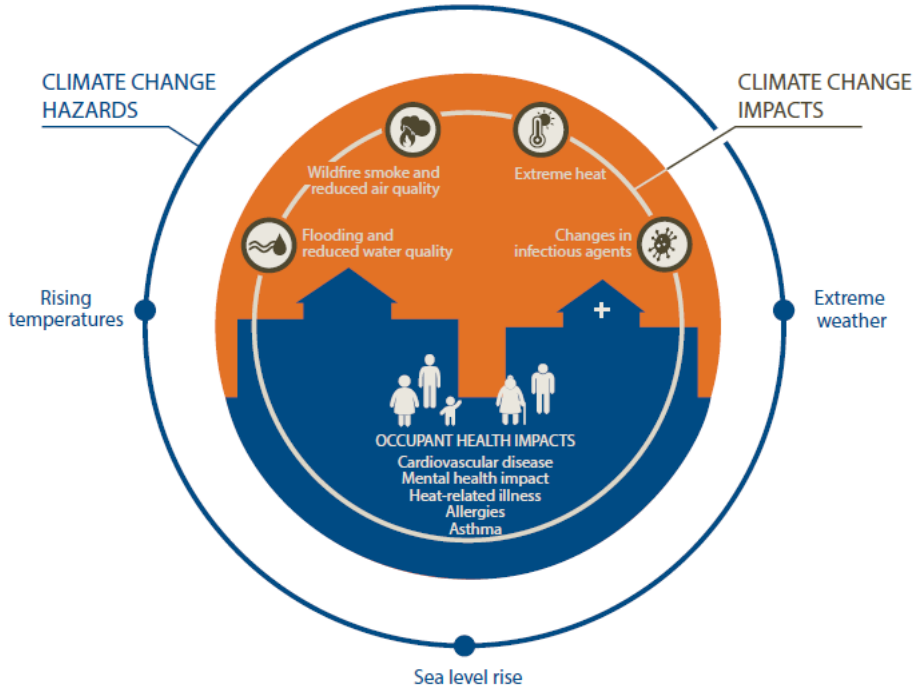


Figure 6 - Climate change impacts, outcomes, and potential health impacts on households.

Sources used: Blue & Agar’s 2024 Pembina Institute report.

Housing conditions are a critical determinant of health and a central factor shaping a community’s ability to withstand extreme heat and other climate emergencies. Yet structural inequities have produced significant disparities in housing quality for Indigenous peoples. According to the 2021 federal census, one in six Indigenous people lives in a home requiring major repairs, three times the rate of non-Indigenous populations, and more than 17% reside in overcrowded conditions (Statistics Canada, 2021; Yumagulova et al., 2023). These inadequate living conditions intersect with elevated rates of chronic health issues, which further exacerbate vulnerability during climate emergencies (Hahmann & Kumar, 2022).

These compounded vulnerabilities, substandard housing, limited resources, and disproportionate health burdens intensify the risks Indigenous, low-income, and equity-deserving populations face during climate emergencies (Kime et al., 2023; Sovacool et al., 2023). The capacity of a community to remain safe during climate emergencies, in other words, their climate resilience as a community, depends heavily on access to well-maintained housing, effective ventilation, reliable cooling systems, and a strong collective ability to safeguard those most at risk (Sovacool et al.,

2023; Haddad et al., 2022). The legacy of colonialism has contributed to widespread poor-quality housing, elevated chronic health conditions, and systemic resource constraints that place Indigenous communities at particularly high risk (Tam, 2013). Moreover, many Indigenous residents in urban areas already experience high energy burdens, and the cost of acquiring additional cooling equipment during extreme heat events is often financially prohibitive (Rezaei & Dowlatabadi, 2016).

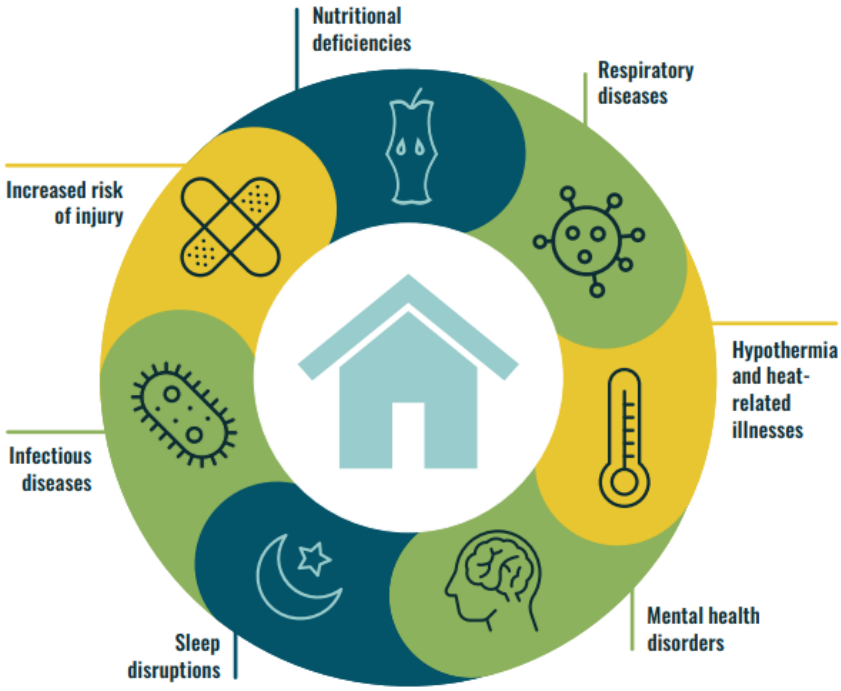


Figure 7 - Impact of poor housing quality on households' health.

Sources used: Shallard et al., 2025. Canadian Climate Institute report.

Taken together, the long-term impacts of colonialism, chronic underinvestment in housing, and higher rates of health conditions create a compounded and urgent vulnerability to extreme heat within Indigenous communities. Addressing these risks requires improved housing quality, climate-resilient infrastructure, and systemic interventions that confront the underlying inequities shaping differential exposure and resilience (AHMA, 2023). The table below directly links inequities in the housing sector to the energy justice framework, showcasing the intersection of energy services, justice tenets, and housing factors.

Housing Factor	Climate/ Energy Services Factor	Justice Tenets/Impact
Poor insulation, poorly built homes	Lack of thermal comfort, unsafe indoor temperatures,	Distributive injustice, absence of restorative justice
Inefficient and old heating and cooling systems	Overheating, absence of heating,	Distributive injustice, recognition injustice
Energy insecurity	Higher energy bills, disconnections	Distributive injustice, recognition injustice, procedural injustice
Structural marginalization	Exclusion from decision-making, cascading health inequities, undermining Indigenous self-determination	Recognition injustice, absence of restorative justice

Table 1 - Justice tenets linked to energy services and housing factors.

Sources used: EEP, 2022; Walker & Day, 2011; AHMA, 2023; Rodriguez et al., 2026; Baker et al., 2019; Blue et al., 2024.

4.3 Energy Efficiency & Energy Management: Undoing the Harms of Energy Injustice

The intentional and systemic erasure of Indigenous peoples from urban landscapes has led to the systemic exclusion of Indigenous voices and leadership from urban, climate, and energy planning (Dorries, 2023; Nursey-Bray, 2022). As a result, Urban Indigenous housing providers often:

- Face structural barriers to accessing energy management and climate adaptation funding (AHMA, 2023, 2024).
- Must fit their energy efficiency projects into narrowly defined performance metrics by energy efficiency and climate adaptation/mitigation funders rather than centering Indigenous-led outcome-based definitions of success, such as collective well-being, cultural safety, and reciprocity with nature (Castleden et al., 2023, AHMA, 2023).
- Fall into jurisdictional gaps of service delivery and operational funding. Urban Indigenous households and housing providers are often caught in disputes between the federal and provincial governments, with each level denying responsibility for services and funding, resulting in chronic underfunding for housing and energy needs (Tomiak, 2024).
- Technocratic solutions and policies: Regulatory and funding bodies often solely focus on technological and economic solutions and metrics that result in a “race to the bottom”

mentality for Urban Indigenous housing providers. Such policies and programs intentionally ignore societal benefits of health, energy justice, and environmental protection. This forces Urban Indigenous housing providers to deprioritize their tenants' well-being, cultural safety, and environmental sustainability just to keep the lights on (EEP, 2022; AHMA, 2023; McClenaghan et al., 2023).

These cascading crises, coupled with the impacts of climate change, often mean that Urban Indigenous housing providers lack the capacity or resources to engage in energy and climate resilience planning. In the face of inaction and lack of capacity, Urban Indigenous households are left with substandard housing and the inevitable physical and mental health impacts.

4.3.1 Energy Efficiency: The Unsung Hero of Climate Mitigation

Energy efficiency is commonly defined as using less energy to provide the same level of energy services, such as heating, cooling, and lighting, by improving building infrastructure, appliances, and occupant behavior. In the context of Urban Indigenous households and energy justice, energy efficiency goes beyond the mere technical goals of system improvement and expands to a pathway to address deep-rooted inequities in housing quality, access to energy services, affordability, and health outcomes. Improving energy efficiency can reduce the cascading burdens faced by Urban Indigenous households and outlined in this research by lowering utility costs, operational costs, enhancing the quality of life, and supporting restorative justice for Urban Indigenous households who have been historically marginalized (Lewis et al., 2020; Asher, 2025; Warren & Huntsman, 2023). However, historically, these interventions were not led by Indigenous communities and, as such, have failed to meaningfully benefit Urban and on-reserve Indigenous households (Asher, 2025; AHMA, 2023).

Many scholars consider energy efficiency the "unsung hero" of climate mitigation. By significantly reducing greenhouse gas (GHG) emissions and lowering the absolute energy demand in the built environment, energy efficiency measures can be effective tools in the fight against the impacts of climate change (McClenaghan et al., 2023; Agar & Kotha, 2024). Conventional approaches to implementing energy efficiency for buildings usually focus on the following goals:

- Emission reductions: More aggressive energy retrofits, which are defined as a holistic "house as a system" approach, such as deep energy retrofits, aim to achieve ambitious reductions in energy consumption and GHG emissions (Agar & Kotha, 2024; Mcllroy et al., 2024).
- Fuel switching: A critical mitigation strategy for many advocates has been the transition away from fossil fuels (such as natural gas or oil) to electricity and electrically powered systems in buildings (Blue et al., 2024; Winfield et al., 2023).
- Demand side management: Programs led by utilities encourage so-called consumers to adjust their usage patterns by providing generous incentives for shifting consumption away from peak hours and, at times, incentivizing energy conservation (Mcllroy & Agar, 2025).

4.3.2 The Role of Indigenous-led and Justice-Centric Energy Management

In this research, one of my objectives has been to investigate whether a Strategic Energy Management Plan (SEMP) can accelerate the adoption of energy-efficiency initiatives and other energy solutions, and to identify the pillars of a SEMP that effectively improve the quality of life for Urban Indigenous households while reducing greenhouse gas emissions. To do so, we will briefly evaluate definitions of energy efficiency, its connection to energy justice, and whether Urban Indigenous households can meaningfully engage with current energy-efficiency programs. Conventional approaches to energy conservation, support program design, implementation, and engagement strategies in Canada have faced critical challenges, primarily related to inequitable access, insufficient funding, structural design failures, and siloed performance metrics that fail to integrate social and health outcomes. A brief overview of the challenges faced by conventional energy retrofit and conservation programs is presented in Table 2.

Systemic & Design Barriers	**Metrics, Goals, & Data**	**Cultural & Social Barriers**	**`Funding & Resource Barriers**	**Accessibility Barriers**
Absence of Indigenous governance within energy efficiency programs	Narrow, siloed performance tests, such as the "total resource cost tests" or "least cost" economic analyses,	Absence of cultural safety and trauma-informed approaches to energy conservation	Unsustainable, fragmented, and short-term funding sources	Complex application processes that, in addition to being time-consuming, require extensive

	prioritize immediate system cost savings that ignore societal benefits, such as improved well-being, equity, and environmental protection.			eligibility documentation, including income verification
Complex, cumbersome, and difficult administrative processes to access energy efficiency programs	Energy efficiency programs often focus on measurable and simple outputs, such as "level of participation," "GHG reductions", "gigajoules of energy saved," rather than socio-ecological outcomes, such as improved well-being, climate resilience, and energy security.	The absence of holistic energy efficiency programs that adopt the "house-as-a-system" approach may result in dangerous health issues for equity-deserving communities, including heat trapping, elevated indoor pollution levels, and higher energy bills.	Incentive programs use a rebate model that requires housing providers to pay high upfront costs to initiate energy-efficiency projects.	The absence of multilingual support further hinders participation among newcomers, immigrants, and many Indigenous households.
Risk of fossil fuel/carbon lock-in due to the existence of generous rebates for fossil-fueled systems	There is a persistent lack of reliable, disaggregated data on housing conditions, energy use, and climate vulnerability within the Urban Indigenous housing landscape,		Funding amounts are determined by the Energy Conservation Measure (ECM), which limits the 'type' of upgrades a housing provider can implement, thereby stripping Urban Indigenous housing providers of the autonomy to	Lack of trust in institutions, especially utilities, due to colonial legacies, leads to very low participation in energy efficiency programs from Indigenous households.

	meaning many energy conservation efforts are "operating in the dark".		prioritize critical upgrades.	
Unrealistic incentive program timelines and eligibility criteria				Conventional retrofit programs and project management practices lack the cultural safety protocols needed to ensure Indigenous households feel safe and respected.
Energy efficiency programs are designed with a top-down approach where consultations with Indigenous and equity-deserving communities are retroactive and voluntary				

Table 2 - Common barriers faced by conventional energy retrofit and conservation programs.

Sources used: Pustova, 2023; McIlroy & Agar, 2025; McIlroy et al., 2024; AHMA, 2023; He, et al., 2025; Winfield et al., 2023; McClenaghan et al., 2023; Castleden et al., 2023; Energy Equity Project, 2022; Yumagulova et al., 2023; Blue et al., 2024.

The interconnected crises facing Urban Indigenous housing providers and their tenants demand urgent, coordinated action. Addressing the underlying causes of these overlapping challenges requires centering Indigenous leadership, grounding strategies in principles of justice and well-being, and embedding energy and climate equity into programs and policy frameworks. Urban Indigenous housing providers possess the relationships, lived experience, and knowledge needed to design and deliver community-driven, equitable energy solutions, provided they have the

appropriate tools and resources. As the collective representative of more than fifty Indigenous housing providers across British Columbia, AHMA is uniquely positioned to lead and collaborate to advance housing solutions that are healthy, sustainable, safe, climate-resilient, and culturally grounded. This includes ensuring that communities have access to affordable, reliable, and low-carbon heating and cooling systems.

A Strategic Energy Management Plan (SEMP) is a comprehensive, holistic, and evidence-based roadmap designed to guide communities, households, and organizations on their journey to manage their energy systems, potentially reduce energy use, decrease GHG emissions, and improve the housing conditions for their members. This research project focuses on determining the key pillars of a decolonial SEMP and whether an Indigenous-led SEMP can address the polycrisis of climate vulnerability, housing deterioration, and energy insecurity faced by Urban Indigenous housing providers in British Columbia.

In addition to positioning justice, well-being, climate resilience, and Indigenous sovereignty as necessary foundational principles of a SEMP that can empower Urban Indigenous housing providers to adopt crucial energy efficiency solutions, this research project relies heavily on the lived experience and stories of Indigenous housing providers who generously shared their insights through semi-structured interviews with the researcher.

Section 5. Research Methodology & Data

5.1 Research Design & Methodology

This study adopts a critical research framework rooted in Indigenous and decolonial methodologies, guided by the principle of Two-Eyed Seeing *(Etuaptmumk)* (Bartlett et al., 2012). This approach was selected to move beyond "extractive" research models that historically characterize the study of Indigenous peoples as passive "objects" or "problems" to be solved by external experts (Cochran et al., 2008). Instead, this methodology centers on relational accountability, conceptualizing research as a ceremony that maintains respectful, reciprocal connections among the researcher, participants, and the knowledge generated (Wilson, 2008).
This research sought to answer the following overarching question:

> What would a Strategic Energy Management Plan for Urban Indigenous households in British Columbia, centered on energy justice, well-being, and decoloniality, look like?

The interviews and survey also explore the following research objectives:

- RO1: Identify the systemic barriers faced by Urban Indigenous households, imposed by settler-colonialism, that contribute to substandard housing, energy injustice, and low quality of life among these communities.
- RO2: Assess the importance of developing a SEMP to advance energy efficiency retrofit projects in the Urban Indigenous housing sector.
- RO3: Highlight the manifestation of energy justice, well-being, and decoloniality through successful Indigenous-led energy retrofit projects.
- RO4: Investigate whether a decolonial SEMP centered on justice, well-being, and energy sufficiency can remove the systemic barriers faced by urban Indigenous households in BC and lead to more equitable energy efficiency retrofit projects.
- RO5: Investigate existing Strategic Energy Management Plans through the lens of decolonial theory, justice and well-being, and energy sufficiency.

Responding to the above question and objectives demands a framework capable of interrogating the coloniality of power embedded in current energy and housing systems. By integrating these frameworks, the study seeks to identify systemic barriers and investigate the potential for decolonial SEMPs to foster equity and justice.

5.1.1 Decolonial and Indigenous Research Frameworks

This study was intentionally built upon decolonial and Indigenous research frameworks and knowledge systems to undo the systemic marginalization of Urban and on-reserve Indigenous households and their lived experiences in Eurocentric research and data analysis (Tuck & Yang, 2012). I have been explicit in my intention that in all phases of this research and study, decolonization is not a metaphor but rather the material reparation of Indigenous life, sovereignty, and worldviews (Tuck & Yang, 2012). This study applies Aníbal Quijano's concept of the "coloniality of power" to examine who currently benefits from status quo energy management and why (Quijano & Ennis, 2000). By adhering to an Indigenous research paradigm, this work prioritizes relationality, viewing research as a site of community recovery and healing rather than mere data extraction (Chilisa & Tsheko, 2014; Wilson, 2008).

5.1.2 Two-Eyed Seeing *(Etuaptmumk)*

A central pillar of this research is Two-Eyed Seeing, a guiding principle introduced by Mi'kmaw Elders Albert and Murdena Marshall (Bartlett et al., 2012). This approach involves seeing, with one eye, the strengths of Indigenous knowledges and, with the other, the strengths of Western knowledges, using both together for the benefit of all (Roher et al., 2021). In this study, Two-Eyed Seeing is applied by centering Indigenous experiences, priorities, and ways of knowing regarding housing and energy, while utilizing Western qualitative and quantitative tools as bridging mechanisms for data collection and analysis. This framework is particularly important for the lived experiences of Urban Indigenous households, who may feel deeply connected to their Indigenous identity while navigating the complex Western political, economic, and social systems in urban settings. The Two-Eyed Seeing framework provides a culturally safe space to develop an Indigenous-led SEMP (RO4).

5.1.3 Integrating Mixed Methods with Indigenous Epistemologies

While standard mixed-methods frameworks are highly valued in mainstream research methodology, critical methodologists emphasize that simply mixing quantitative and qualitative techniques does not inherently constitute decolonial or Indigenous research (Chilisa & Tsheko, 2014). Bagele Chilisa and G. N. Tsheko argue that mixed methods must be consciously adapted to align with Indigenous paradigms (Chilisa & Tsheko, 2014). Following the recommendations made by Chilisa and Tsheko and centering relational accountability, I relied on teachings from Indigenous knowledge keepers and Elders and used qualitative components such as narrative storytelling alongside quantitative measures to ensure my mixed-methods research approach is culturally safe, co-designed with Urban Indigenous housing providers, Indigenous knowledge keepers, and directly beneficial to the interview participants (Chilisa & Tsheko, 2014).

This research relied on semi-structured interviews and a survey distributed only to AHMA staff members to address research objectives 1, 2, and 3. A desktop-based exercise was employed to investigate the experiences of Urban Indigenous housing providers with energy retrofit projects and the existing SEMP developed by British Columbia Non-Profit Housing Association (BCNPHA) to address research objectives 4 and 5.

5.2 Semi-structured Interviews

Semi-structured interviews were selected as the primary qualitative data collection method because they generate rich, detailed, context-specific insights while providing sufficient flexibility to explore issues that emerge throughout the conversation. This approach was particularly well-suited to the exploratory nature of the research and the study's expansive objectives.

Eight virtual interviews were conducted via Zoom between December 2025 and February 2026. Each interview lasted approximately 90 minutes. Participants included four representatives from Urban Indigenous housing providers and four external sector partners, including representatives from utilities, provincial government, and non-profit housing.

Participants were selected through past relationships built through AHMA’s work with various organizations. I used snowball sampling and aimed to interview 15 to 20 participants. Due to limited capacity within a few Urban Indigenous housing provider organizations and, ultimately, information saturation, I eliminated the interview process after conducting 8 interviews.

The employed criteria sought to diversify participant selection by organizational role, geographic location within BC, experience in the Urban Indigenous housing sector, professional expertise in energy efficiency, and experience with climate-related emergencies (e.g., extreme heat events). Keeping the province-wide participant outreach broad was intentional, as housing regulations, energy policies, climate-related emergencies, and energy-related challenges are regional phenomena. This research project aims to capture this regionality by including participants from diverse geographical locations within BC.

I have reflected deeply on the decision to involve Urban Indigenous housing providers in BC rather than tenants. From past research experiences in these communities, I have learned that requests from different organizations overburden tenants. In addition, due to past extractive engagements from governmental and academic institutions, Indigenous tenants find it difficult to trust researchers. Conversely, housing providers and their staff have long-lasting and deep relationships with their Indigenous tenants and have established trust with them. Additionally, since many are part of the local community, they can provide meaningful insight into the challenges they face.

Participants were recruited via direct email invitations from existing professional relationships. Given the collaborative nature of the Urban Indigenous housing sector and my ongoing work within the field, these pre-existing relationships helped establish a high degree of trust and openness during the interview process, allowing participants to speak candidly about their experiences, challenges, and perspectives.

A semi-structured interview format was used to balance consistency across interviews while allowing for greater depth in exploring issues. While a list of interview questions was used to ensure alignment with the research objectives, participants were encouraged to elaborate on topics they considered important and or introduce new topics. This flexibility allowed the study to capture both expected and emergent themes related to energy management, housing quality, climate resilience, cultural safety, capacity constraints, and Indigenous self-determination.

All interviews were audio-recorded with participant consent and subsequently transcribed for analysis. The resulting transcripts formed the primary qualitative dataset used to explore participant experiences and inform the development of the Indigenous-led Strategic Energy Management Plan (SEMP) framework proposed in this research.

I recognize that my approach to this interview process has many limitations, including but not limited to:

- The absence of direct engagement with tenants.
- The potential for housing providers to share incorrect information.
- The absence of a direct connection with the buildings and communities included in the research.

I attempted to address some of these limitations by relying on existing literature, but it should be noted that the research question presented in this study has multiple layers. While this research project explores the first layer of objectives with Urban Indigenous housing providers in BC, future research should engage directly with tenants to address the household-level objectives in this area.

5.3 Survey

To complement the interview findings and develop a more sophisticated analysis for this study, a survey was administered to staff members of the Aboriginal Housing Management Association (AHMA). The survey was designed to capture a broader range of organizational experiences, perspectives, and priorities related to housing, energy management, climate resilience, and Indigenous housing needs.

The survey was developed collaboratively with AHMA staff to ensure that the questions reflected organizational priorities and the realities facing Urban Indigenous housing providers. Following internal review and refinement, the survey was approved by academic supervisor, Dr. Lina Brand-Correa, and administered through SurveyMonkey. A total of 17 questions were included in the final survey.

The survey was distributed electronically to all AHMA staff via email and further promoted during team meetings and through internal organizational communication channels. Eighteen AHMA staff members, out of a total of fifty employees, completed the survey. While this is only a 36% response rate, I have full confidence that the survey results provide a comprehensive overview of AHMA's internal expertise, sector insights, and experiences.

The survey used a combination of closed- and open-ended questions to capture both quantitative and qualitative data. Ranking-style questions asked participants to identify their top priorities or preferences, helping to assess the relative importance of competing challenges and opportunities.

Multiple-response questions allowed participants to select all applicable responses and were used to capture the complexity and diversity of organizational experiences.

Several five-point Likert and Likert-type scales were used to assess participant perceptions, experiences, attitudes, and levels of agreement. Response options included scales ranging from *Strongly Disagree* to *Strongly Agree* and from *Not at all* to *Completely* or *Extremely*. These questions provided insight into participant assessments of organizational priorities, barriers, and experiences across key research themes.

Open-ended questions were also included throughout the survey to allow participants to elaborate on their responses, provide contextual information, and identify issues not fully captured in matrix and scale questions. These qualitative responses yielded additional insights that contextualized and enriched the quantitative findings.

Survey responses were analyzed using SurveyMonkey's built-in analytical tools, which provided descriptive summaries, rankings, frequencies, and response distributions. The open-ended responses were qualitatively reviewed and integrated with the interview findings during the analysis stage, providing an additional layer of evidence and strengthening the study's overall rigor through mixed-methods triangulation.

5.4 Reflexivity and Positionality

My positionality as a researcher has been shaped by both my engineering background and my subsequent academic and professional journey in environmental sustainability, justice, and Indigenous housing. My engineering education provided valuable technical skills, discipline, and problem-solving. However, we were often encouraged to remain within narrowly defined disciplinary boundaries, with limited attention given to the social, cultural, political, and human dimensions of the systems we sought to improve. Over time, I became increasingly uncomfortable with this separation between technical problem-solving and the lived realities of the people affected by those solutions. Through my studies in the Master of Environment and Sustainability (MES) program and my professional experiences, I came to recognize the interconnectedness of social, environmental, economic, and political systems, as well as the responsibility that we all share in caring for one another and the natural world.

My decision to pursue this research emerged from a desire to better understand these interconnections and to explore more holistic approaches to addressing complex societal

challenges. Throughout my academic and professional journey, I have had the privilege of working alongside incredible people and organizations committed to advancing environmental, social, and Indigenous justice. These experiences deepened my understanding of the historical and ongoing impacts of colonialism in Canada and strengthened my appreciation for the leadership, resilience, and resistance demonstrated by Indigenous and other equity-deserving communities. They have also fundamentally shaped my understanding of energy systems, not simply as technical infrastructures, but as social, political, and cultural systems that can either reinforce or challenge existing inequities.

These experiences, including my work at AHMA as an energy project advisor, inevitably influenced how I approached this research, interpreted the findings, and engaged with participants. Rather than viewing this influence as a source of bias to be eliminated, I adopted a reflexive approach that recognizes my positionality as an important part of the knowledge-generation process.

My interest in Urban Indigenous housing stems from a belief that these communities sit at the intersection of many of the defining challenges of our time, including climate change, housing insecurity, energy services, legacies of colonialism, the erosion of trust in public institutions, and our disrupted socio-ecological relationships. As a result, this research was motivated not only by an academic interest in energy management but also by a commitment to supporting more just, equitable, and community-centered approaches to housing, climate resilience, and energy planning. Through this work, I hope to contribute, in a small way, to ongoing efforts to build a more just and harmonious energy future grounded in dignity, well-being, and self-determination.

5.5 Data Analysis Approach

The interview data were analyzed using Reflexive Thematic Analysis (RTA) as developed by Braun and Clarke. RTA was selected for its theoretical flexibility and alignment with the decolonial and Indigenous orientation of this research. Rather than viewing the researcher as a neutral or detached observer, Reflexive Thematic Analysis recognizes that analysis is an active and interpretive process in which the researcher's experiences, values, and positionality contribute to the construction of meaning. Within this approach, researcher subjectivity is not treated as a source of bias to be eliminated, but as a valuable analytical resource that supports deeper engagement with the data. Themes are therefore understood as interpretive outputs generated

through reflection, analysis, and meaning-making rather than as objective categories that simply emerge from the data (Braun & Clarke, 2006; Braun & Clarke, 2019).

This understanding of knowledge production aligns closely with the study's decolonial foundations, which reject claims of complete objectivity and instead acknowledge the importance of context, relationships, lived experience, and researcher reflexivity in the co-creation of knowledge. Consistent with Braun and Clarke's approach, coding and theme development were treated as iterative and recursive analytical processes that required continuous engagement with the data rather than a linear sequence of technical steps (Braun & Clarke, 2006; Braun & Clarke, 2019).

All interviews were recorded, transcribed, and imported into Dedoose for analysis. Following Braun and Clarke's six-phase approach to thematic analysis, the analytical process involved: familiarization with the data through repeated reading of transcripts, generation of initial codes, identification of candidate themes, review and refinement of themes, definition and naming of themes, and production of the final analytical narrative (Braun & Clarke, 2006; Braun & Clarke, 2012). Throughout this process, coding and theme development were iterative and recursive rather than linear, requiring continuous movement between the data, codes, themes, and emerging interpretations (Braun & Clarke, 2006; Braun & Clarke, 2012).

A hybrid inductive-deductive coding strategy was employed. Deductive coding drew upon concepts identified in the literature review, theoretical framework, research question, research objectives, and the researcher's professional experience working within the Urban Indigenous housing sector. Simultaneously, inductive coding allowed new concepts, patterns, and relationships to emerge directly from participant accounts. Braun and Clarke note that thematic analysis can effectively integrate both inductive and deductive modes of analysis, allowing researchers to remain responsive to participant experiences while also engaging with relevant theoretical concepts and research questions (Braun & Clarke, 2006; Braun & Clarke, 2012). This approach ensured that the analysis remained grounded in the study's objectives while remaining open to unexpected insights and perspectives.

A codebook comprising root codes and subcodes was developed and refined throughout the analytical process. Coding was conducted through multiple rounds of transcript review, recoding, and refinement, with analytical memos and coding notes maintained to document emerging interpretations, relationships between concepts, and evolving thematic insights. This iterative

process reflects Saldaña's characterization of coding as a cyclical rather than linear activity involving the continual examination, revision, and synthesis of data to support deeper conceptual understanding (Saldaña, 2013).

Several first-cycle coding methods outlined by Saldaña (2013) were employed to examine different dimensions of participant experiences and perspectives:

- In Vivo Coding was used to preserve participant voice by adopting participants' own words and phrases as codes, thereby maintaining locally situated meanings and reducing the risk of imposing externally derived interpretations onto participant narratives (Saldaña, 2013).
- Values Coding was used to identify participant values, beliefs, attitudes, and priorities related to concepts such as energy justice, Indigenous sovereignty, climate resilience, housing quality, and well-being (Saldaña, 2013).
- Process Coding was employed to capture actions, sequences, developments, and changes described by participants, particularly in relation to the implementation of housing, energy, and climate initiatives (Saldaña, 2013).
- Descriptive Coding provided a foundational inventory of topics, experiences, conditions, and systemic barriers discussed by participants, supporting the identification of recurring issues across interviews (Saldaña, 2013).

Following first-cycle coding, related codes were grouped into broader conceptual categories and themes through a process of pattern identification, comparison, refinement, and synthesis. Consistent with Braun and Clarke's approach, themes were not treated as simple summaries of participant responses but as patterns of shared meaning that captured significant dimensions of participant experiences in relation to the research (Braun & Clarke, 2006; Braun & Clarke, 2012). Throughout this process, attention was given to both convergence and divergence within the data, allowing themes to capture complexity, contradiction, and nuance rather than forcing participant perspectives into uniform categories.

This mixed-methods integration, which included semi-structured interviews and a survey, enabled the identification of quantitative trends, AHMA staff experiences and expertise, and more nuanced insights into the research questions and objectives, to be examined alongside insights emerging from conversations with Urban Indigenous housing providers and partners. The resulting themes

formed the foundation of the Results and Discussion chapter and were interpreted through the theoretical lenses of Justice and Well-Being, Decolonial Theory, Indigenous Sovereignty, Cultural Safety, Two-Eyed Seeing, and Energy as a Service.

Section 6. Results & Discussion

6.1 Urban Indigenous Households: What are their priorities?

The research identifies a profound convergence between the organizational missions of Urban Indigenous housing providers and the eudaimonic dimensions of the Justice and Well-Being framework. For these providers, housing is conceptualized not merely as the management of physical assets or the provision of shelter as a commodity, but as a primary space for fostering human flourishing and enabling community members to lead a "Good Life" *(Soh Kyo U'liih).* Success for Urban Indigenous housing providers within their service delivery models is defined by the satisfaction of universal human needs; specifically, protection, subsistence, and belonging. Thereby shifting the evaluative focus away from technocratic metrics such as kilowatt-hour reductions toward the qualitative outcomes of the energy-service nexus.

6.1.1 Holistic Well-Being & Organizational Sustainability

The empirical evidence demonstrates that providers' overarching care centers on the dual priorities of tenant well-being and long-term organizational stability. The AHMA staff confirmed, throughout the Survey results, that the financial sustainability of the housing society (64.71%) and tenant well-being and safety (52.94%) are the preeminent priorities. This mission is rooted in a well-being model in which housing serves as the stable foundation for broader social determinants of health.

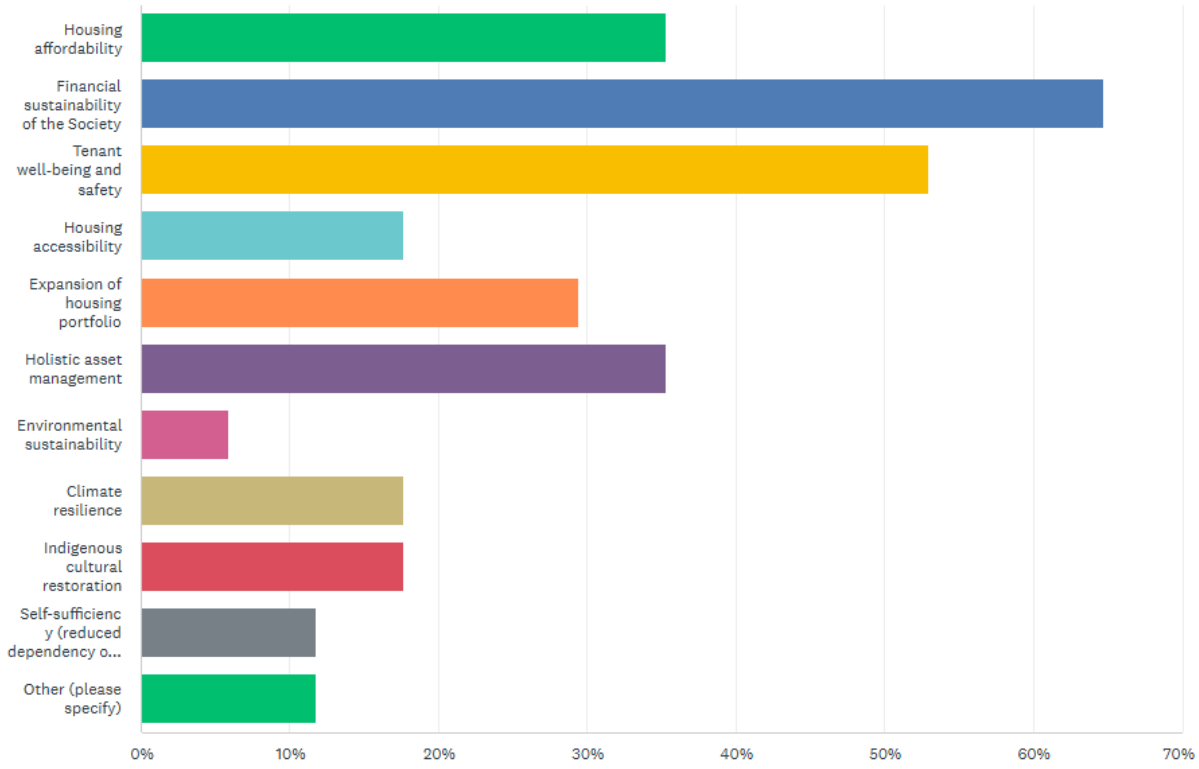


Figure 8 - Survey response: Housing providers top priorities.

Interviews with executive directors at multiple Urban Indigenous housing organizations reveal that success is measured by the organization's ability to move tenants from a state of crisis to one of stability and flourishing. One participant described their organizational objective as providing "safe, affordable, and culturally appropriate housing" while guiding tenants toward "financial sustainability, prosperity, and housing stability". In this context, housing is viewed as a social relation rather than a commodity, with the ultimate goal of fostering a strong sense of belonging.

> "[our mission] is and always will be to provide safe, affordable, and culturally appropriate housing for the urban indigenous community." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

6.1.2 The Priority Paradox: Survival Needs and Systemic Disinvestment

While providers conceptually value environmental sustainability, a critical analytical finding is the "priority paradox": energy efficiency is consistently deprioritized in favor of immediate material survival needs. Participants noted that environmental issues often "don't seem to have an everyday impact" compared to the urgent social and maintenance crises they face.

> "Environmental issues are not necessarily, how can I say, because they don't have, or they don't seem to have an everyday impact, then they're not a top priority for individuals." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

This paradox is a direct symptom of the British Columbia provincial government's systemic failure to provide sufficient financial support and staffing to Urban Indigenous housing providers. Chronic underfunding forces these organizations into a perpetual state of reactive crisis management, which participants termed the "emergency band-aid role."

> "We're in the emergency band-aid role with the goal of helping people build up their capacity, be it personal, financial, et cetera, et cetera, so that they can move out of emergency mode." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

When providers are forced to choose between long-term energy goals and immediate material needs, keeping the roof intact and helping tenants survive daily hardships necessarily takes precedence over energy efficiency. Consequently, executive directors described being "in the middle of a million other things," with energy management projects often falling to the "50th on their list" because they are preoccupied with addressing building emergencies and helping families survive. The survey quantifies this capacity-driven deprioritization: 50% of respondents cite a lack of internal capacity as a major hurdle to project implementation.

> "And they're not thinking energy is probably like 50th on their list." (External Partner, Interview Participant, December 2025)

"And so basically we're reactive instead of being proactive…" (Urban Indigenous Housing Provider, Interview Participant, January 2026)

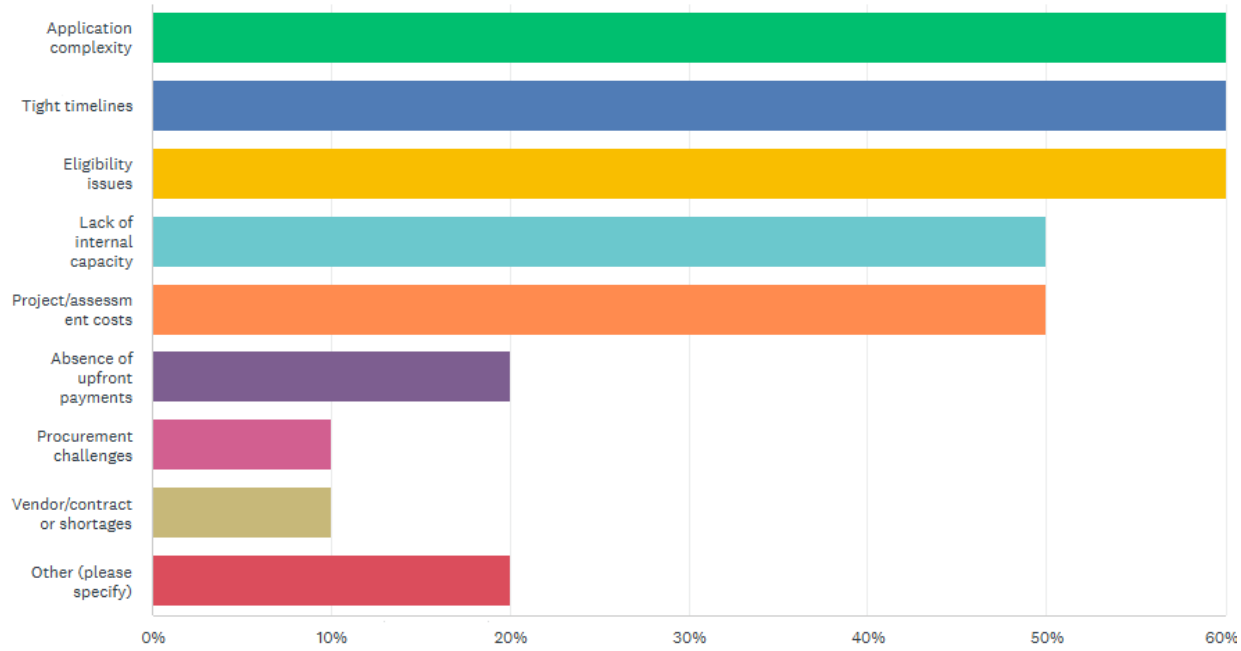


Figure 9 - Survey response: Key barriers to energy efficiency project implementation.

6.1.3 Shifting the Paradigm: Energy as a Service

Despite its lower operational rank, energy management is viewed as highly valuable when explicitly tied to meeting basic human needs. However, a deep disconnect exists between the conventional understanding of energy-efficiency targets and their actual meaning in a tenant's lived experience. While colonial energy systems are often designed to be invisible and disconnected from everyday living, the energy-as-a-service framework prompts a shift in perspective, reframing energy as a vital means of meeting basic needs such as heating, cooling, and lighting.

By intentionally linking energy systems to these services, providers can shift outcomes toward what research identifies as "synergetic satisfiers" for health and protection. The survey findings show a strong consensus that retrofits are valued most when they succeed in these areas:

- Indoor Air Quality (3.6/5 weighted average): Prized for remediating dampness and mold growth.
- Thermal Comfort (3.53/5): Essential for protecting vulnerable residents against extreme weather.

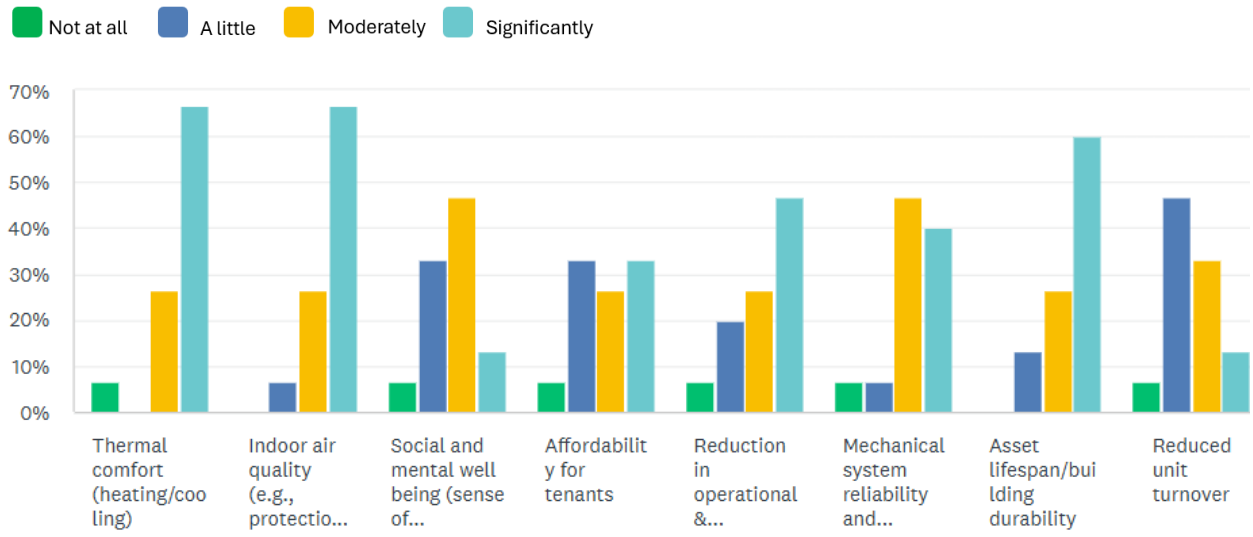


Figure 10 - Survey response: Most likely non-energy benefits from retrofit projects observed by AHMA staff.

Interview participants shared powerful narratives of how energy upgrades functioned as life-saving interventions when they were centered on these needs. During the 2021 heat dome, suite-level cooling via electric heat pumps became a necessary measure to save lives on Vancouver Island. One housing provider hired consultants to evaluate the risk of overheating for its tenants in the housing complex, and a report by professional engineers concluded that, at times, overheating in these suites reached "catastrophic levels," rendering the indoor environment unlivable.

> "We finally got the report back, I think the word in the report, if you remember, I think the word was catastrophic." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

6.1.4 Conditions for Valuing Environmental Sustainability within Urban Indigenous Housing

Environmental sustainability initiatives are valued by Urban Indigenous housing providers only when they are intentionally and meaningfully connected to basic human needs. While many housing providers with deep connections to the Land, including team members identifying as Indigenous, are personally passionate about protecting the planet and climate change mitigation, for an environmental sustainability initiative, such as an energy efficiency project, to align with housing providers' priorities, it must move beyond the abstraction of GHG emission reduction targets and achieve the following:

- Direct Reduction of Energy Burden: Ensuring long-term affordability for both the tenant and the provider to prevent financial instability.
- Climate Resilience as Protection: Specifically addressing extreme heat and wildfire smoke, which 86.67% of survey respondents identified as the top hazards facing their members.
- Well-being Integration: Adopting a "house-as-a-system" approach that treats the building envelope and mechanical systems as critical social determinants of health.

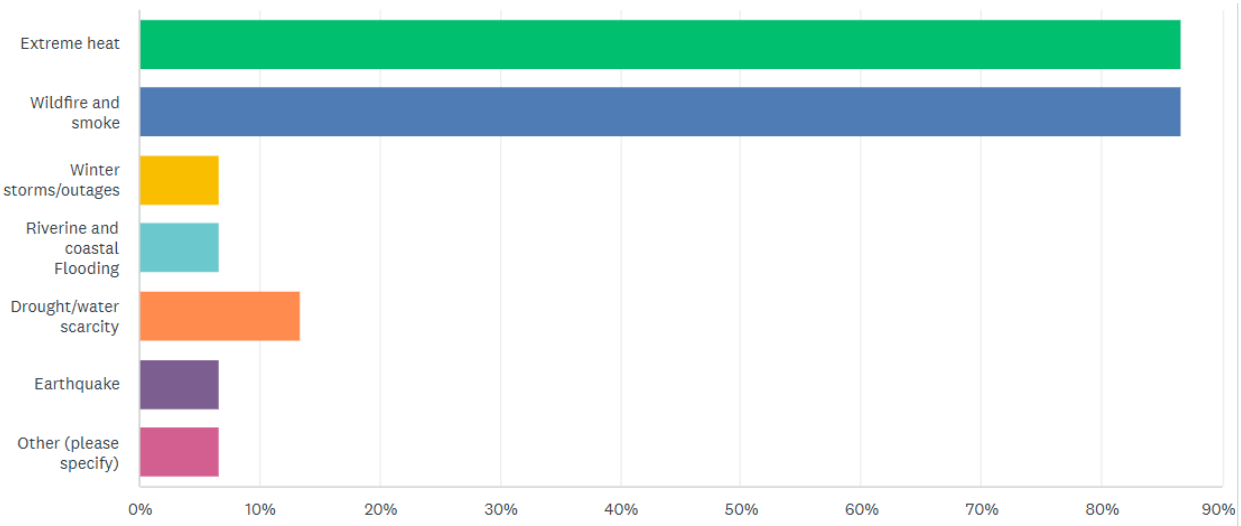


Figure 11 - Survey response: The most common climate emergencies faced by Urban Indigenous households in British Columbia.

6.2 Restoring Indigenous Sovereignty: Trauma-Informed and Culturally Safe SEMP

Urban Indigenous housing providers and their team members come from diverse cultural backgrounds and have connections to the Lands across British Columbia, so-called Canada, and beyond. However, regardless of their identity and roots, they are intimately aware of the cultural priorities, needs, and practices of their tenants. Many follow the teachings of local Indigenous Elders and knowledge keepers, ensuring that their tenants have the space and opportunity to practice cultural practices and welcome diverse cultures into their territories. This internal wisdom and continuous journey are validated by AHMA survey results, which show that 93.75% of staff either agree or strongly agree that they are striving to create spaces where those they serve feel safe to express cultural identity. As one housing provider put it beautifully:

> "It is all about listening and learning about each other. You and I now have a relationship and that is the basis of trust and living a Good Life." (Urban Indigenous Housing Provider, Interview Participant, February 2026)

6.2.1 Self-Agency and Decolonization of Being

The principle of Self-Agency asserts the right of individuals to participate in decisions that affect their lives without imposed assumptions about what is best for their well-being. While housing providers integrate traditional protocols, they face significant challenges from conventional building codes and architectural practices that impede Indigenous tenants from comfortably carrying out cultural practices.

A clear example of this tension is navigating policies around smudging. Providers described the difficulty of balancing rigid "non-smoking" rules with spiritual needs, a conflict that often requires prolonged board-level involvement to resolve. This highlights that a culturally safe SEMP must honor the home as a site of intimate experience. Survey results indicate that 56.25% of respondents identify "incorporating Indigenous design elements in buildings" as a key method for ensuring cultural safety. True self-agency in an energy plan means the power to define one's own living environment, ensuring that high-efficiency mechanical systems do not inadvertently suppress cultural expression.

"It was challenging, so I don't really talk about cultural safety until a tenant brings it up." (Urban Indigenous Housing Provider, Interview Participant, February 2026)

"I think that for me, cultural safety is just honoring the practices of the nations that you're in the territory of." (Urban Indigenous Housing Provider, Interview Participant, February 2026)

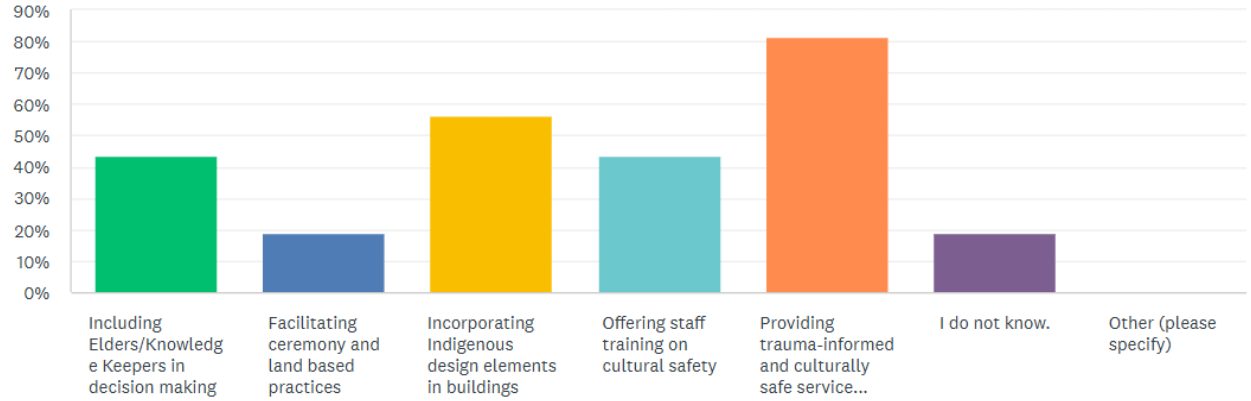


Figure 12 - Survey response: Maintaining cultural safety for Urban Indigenous households.

6.2.2 Relationship and Relational Accountability

The research identifies relationships, expressed through the teaching of "All My Relations," as the foundational beam of cultural safety in energy management. This principle reflects the interconnectedness of all people and the shared responsibilities of care and respect. Survey data reinforces this priority: "Meaningful engagement with Urban Indigenous housing providers" was rated as the highest governance principle, with a weighted average of 4.4/5.

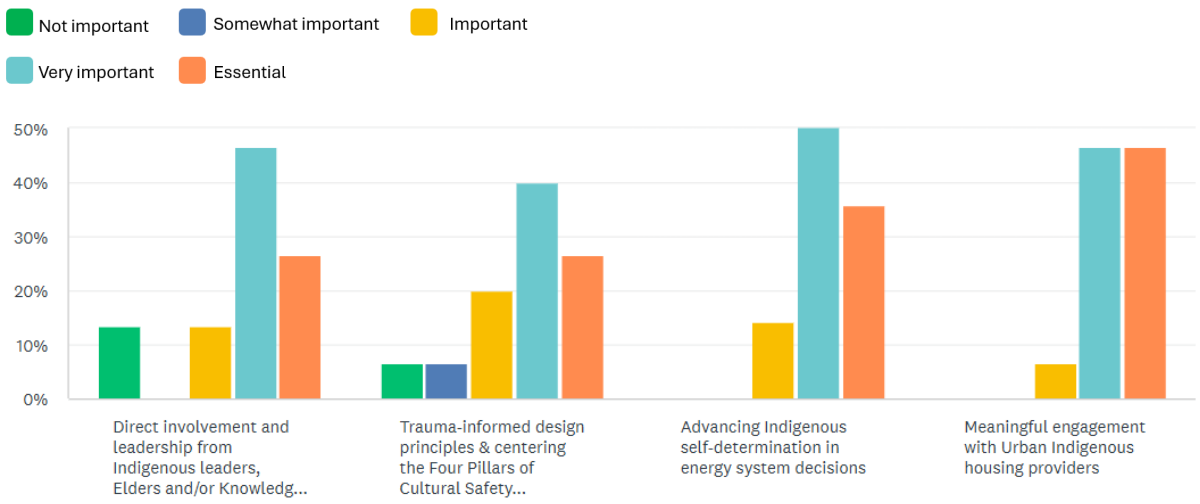


Figure 13 - Survey response: Essential governance principles for the creation of an Indigenous-led SEMP.

In practice, participants emphasized that relationship-building is not peripheral to project implementation but is an essential condition for upholding dignity. For Urban Indigenous housing providers, professionalism and competence are inseparable from respect and compassion. When trust is missing, for instance, when technocrats ignore lived experiences or community feedback on project design, it leads to the erosion of the relationship between the housing society and the tenants. Conversely, when tenants are involved from the beginning and understand that a retrofit directly benefits their well-being, they are far more likely to support the project.

> "Trust is something you cannot put a price on." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

6.2.3 Trauma-Informed Practice and the Sanctuary of Home

A Trauma-Informed approach recognizes how historical experiences of colonialism shape individual well-being. For Indigenous families who may carry generations of trauma, the entry of a likely non-Indigenous contractor into their private, intimate space is not a neutral event. Survey findings underscore the scale of this concern: 81.25% of respondents identified "providing trauma-informed and culturally safe service environments" as a primary means of ensuring tenant safety. Participants described a clear preference for working with professionals with whom they had established histories of respectful collaboration. Technical expertise alone was viewed as insufficient; project teams must approach their work with an understanding of historical realities,

respect, and compassion. One housing provider articulated this as a non-negotiable condition to uphold dignity, foster safety, and maintain the sanctity of a tenant's home:

> "I make sure that the folks I bring in, I have a previous relationship with, and I trust them implicitly. I have a mandate for contractors to walk gently while entering these units." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

This "walking gently" mandate reflects a trauma-informed commitment to ensuring that energy interventions do not trigger intergenerational trauma but instead foster Belonging and promote healing.

6.2.4 Reciprocity and Indigenous Sovereignty

The principle of Reciprocity is grounded in trust and shared responsibility, with giving and receiving essential to healthy community relations. This stands in contrast to the standard Western "transactional" model of housing maintenance. Survey data indicate a desire for reciprocal empowerment through "strengthening Indigenous procurement & workforce development" (rated 4.07/5) and "advancing Indigenous self-determination in energy system decisions" (4.21/5).

A powerful example of reciprocity in action was shared regarding mandatory cultural training for contractors working on the Seabird Island First Nation Reserve. The training ensured that external partners were familiar with traditional protocols and mindful of tenant priorities. This practical implementation shifts the power dynamic, restoring authority to the Indigenous Nation to set the terms of engagement. For an Indigenous-led SEMP, reciprocity means moving beyond pricing as the sole criterion for contractor selection and prioritizing relational accountability.

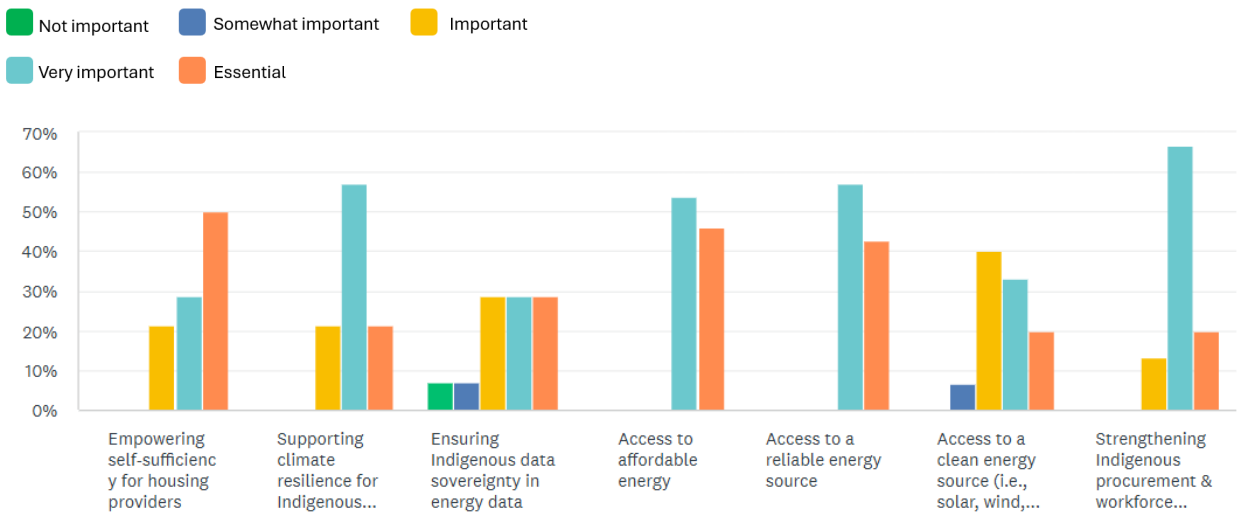


Figure 14 - Survey response: Essential outcomes for the creation of an Indigenous-led SEMP.

6.3 Energy Poverty & Urban Indigenous Lived Realities

Energy poverty within Urban Indigenous communities is not merely a byproduct of economic hardship; it is a profound expression of energy injustice that occurs at the "end-use" of the energy system, driven by low-quality housing, legacies of colonialism, and a regulatory and retrofit program framework that prioritizes "cost effectiveness" and "unit counts" over human well-being. Grounded in the Justice and Well-Being framework, this research reframes energy poverty not as a technical failure to access fuel, but as a deprivation of human needs—the inability to achieve vital functioning and lead a "Good Life" *(Soh Kyo U'liih)* due to insufficient access to affordable and reliable energy services. The empirical evidence reveals an "insidious loop," where historical colonial legacies of substandard housing and systemic disinvestment diminish the current adaptive capacity of Urban Indigenous households to manage high energy burdens.

6.3.1 Distributive Injustice and Survival Choices

The research identifies a profound Distributive Injustice in the allocation of energy burdens, where Urban Indigenous families and other equity-deserving tenants living in social housing are forced into impossible "survival choices." While I do not have access to reliable data on the struggles of Urban Indigenous households with high energy burdens, I heard from multiple housing providers that confirmed their Indigenous and other equity-deserving tenants spend a significant portion of

their income on household energy costs and generally struggle with ever-increasing living expenses. This financial strain forces a “heat or eat” trade-off, in which utility bills are weighed against necessities such as food, rent, and medicine. One housing provider noted that their prevention services must include paying for hydro, gas, or phone bills to support people.

> “Be it hydro, be it Fortis, be it phone, all of those things are also part of eligible expenses because they are there to support people who might otherwise have to choose between paying for those costs and paying for rent or for food.” (Urban Indigenous Housing Provider, Interview Participant, January 2026)

The scale of this burden is quantified by reports of “obnoxiously high bills” reaching “$900 a month heating bills for a 1,200 square foot house” in Indigenous communities with no access to natural gas that rely on electricity for heating, and struggle with crumbling homes that need major envelope repairs.

> “And we've seen some really obnoxiously high bills, both for gas and electricity, because we have five Indigenous communities in our electric service territory that have no gas. And that's where you see these $900 a month heating bills for a 1,200 square foot house.” (External Partner, Interview Participant, November 2025)

Survey results reinforce this urgency, with “Access to affordable energy” ranked as the highest priority outcome for an Indigenous-led Strategic Energy Management Plan (SEMP) (weighted average 4.46/5). This strain is acute for those on fixed incomes, who struggle to prepare for summer utility spikes when using cooling units.

6.3.2 The Invisibility of Urban Indigenous Households

The unique vulnerabilities of Urban Indigenous households are systematically devalued by decision-makers who focus primarily on “on-reserve” energy poverty, which can be identified as acute recognition injustice. This lack of recognition justice expands from governmental policies to municipal politics and utility mandates.

Furthermore, participants highlighted that energy poverty is not limited to the lowest income brackets; middle-income households also experience financial strain. This reveals a materiality gap where policy definitions fail to account for Indigenous families who do not qualify for low-income supports but cannot afford the rising costs of energy services.

> "We know that a lot of people who aren't on low income or, you know, that are in middle income are also struggling." (Urban Indigenous Housing Provider, Interview Participant, February 2026)

6.3.3 Energy as a Service: Reclaiming Well-Being & Comfort

The Energy as a Service framework shifts the focus from units of energy consumed, kilowatt-hours, or Gigajoules, to the fulfillment of basic human needs such as heating, cooling, and lighting. Interview participants emphasized that for Urban Indigenous tenants, energy is a vital social relation and a crucial means to achieve sustenance, comfort, and well-being. During the 2021 heat dome in British Columbia, the existing housing conditions, absence of mechanical cooling, and the inability to implement affordable cooling solutions resulted in "catastrophic" conditions. Families were forced to sleep on air mattresses on lower floors for long periods because their suites reached "unbearable" temperatures. 86.67% of AHMA staff survey respondents identified extreme heat as a top climate hazard affecting their sites and members.

> "We bring air mattresses and stuff or air mattresses down in the living room because it's too hot." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

6.3.4 Procedural Barriers and the Operational Gap

The findings reveal procedural injustice in program delivery. The "bureaucratic trap" of complex application forms discourages participation. One provider described utility forms as "horrendous," requiring model numbers and technical tiers that consume limited staff capacity. Survey data confirms this, with 60% of respondents identifying "application complexity" and "eligibility issues" as critical barriers.

A significant systemic insight from the survey is the maintenance funding gap: respondents noted that:

> "Societies do not get increased operational funding to operate or maintain the expensive new systems" (AHMA Staff, Survey Response, Written Comment)

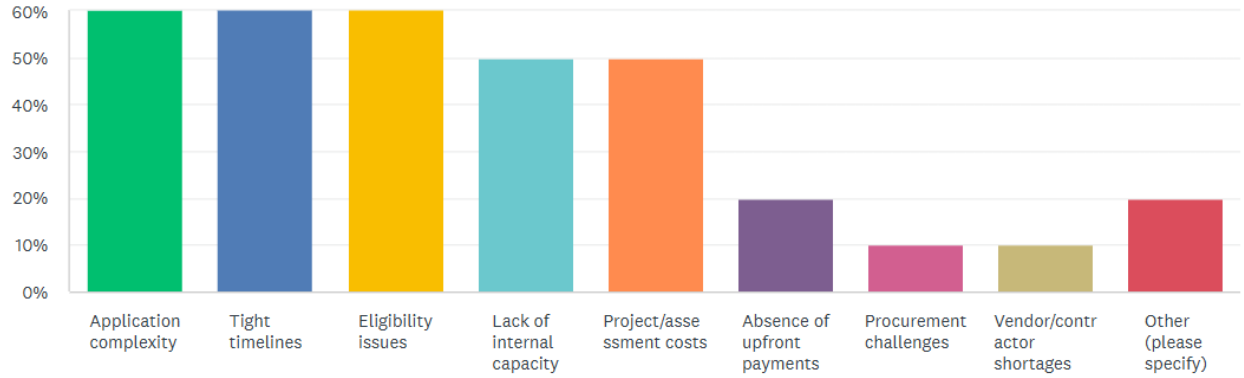


Figure 15 - Survey response: Key barriers to energy efficiency project funding & implementation.

This places an unfair distributive burden on providers who must redirect resources from social programming to cover the long-term costs of "efficient" technologies. This dynamic forces providers into a reactive "emergency band-aid role" that undermines their Indigenous Sovereignty and long-term strategic planning.

6.4 Housing Infrastructure & the Climate: Building for Resilience

The integrated research findings reveal that, for Urban Indigenous housing providers, climate resilience and infrastructure are not merely technical challenges in asset management but deeply rooted restorative justice issues. Substandard housing quality remains a foundational barrier to Indigenous well-being. Indigenous people are three times more likely than non-Indigenous people to live in homes requiring major repairs (AHMA, 2023). The current state of infrastructure is a physical manifestation of the "insidious loop" of coloniality, where historical patterns of disinvestment and substandard construction continue to define modern climate vulnerabilities. Applying the frameworks of Justice and Well-Being and Energy as a Service, the findings indicate

that infrastructure acts as a primary determinant of whether Indigenous community members can achieve eudaimonic flourishing and lead a “Good Life”.

Older, poorly insulated buildings, often characterized by poor indoor air quality and inadequate ventilation, trap heat in the summer and lose it in the winter. This physical deterioration directly compromises subsistence and protection, leaving tenants at the mercy of intensifying climate hazards. There is strong consensus among AHMA’s staff members (weighted average 3.6/5) that retrofits are essential for improving indoor air quality, particularly for remediating mold and protecting against wildfire smoke.

6.4.1 Climate Emergencies & Adaptation

Urban Indigenous housing providers are highly aware of local climate hazards, as many have experienced multiple climate emergencies in their personal and professional lives.

Almost all of the housing providers interviewed for this project indicated that their organizations have not developed a climate emergency plan and are unaware of their municipality’s existing emergency planning efforts.

Capacity constraints and resource shortages leave most Urban Indigenous housing providers stuck in the “emergency band-aid solution” phase. While they would all like to invest time and effort in developing comprehensive, customized climate emergency response plans, they are forced to respond retroactively to climate hazards when they arrive.

> “We do have [an emergency plan], but... it's too generic. I want to be able to work on it so that it applies to us.” (Urban Indigenous Housing Provider, Interview Participant, February 2026)

The 2021 extreme heat event was described as devastating by Urban Indigenous housing providers in previous AHMA research (AHMA, 2023). They described horrifying, chaotic, and extremely dangerous conditions imposed on their vulnerable tenants. The Urban Indigenous households located in Lower Mainland British Columbia and Vancouver Island experienced unbearable temperatures. Due to the absence of suite-level cooling in most aging buildings in the Lower Mainland of British Columbia and on Vancouver Island, some Urban Indigenous tenants were forced to sleep in overcrowded, cooled common areas. A few tenants who may have had portable

air conditioners invited their neighbors to share their living space during the extreme heat event. A few Urban Indigenous housing providers located in the Interior of British Columbia experienced wildfires and smoke in tandem with the extremely high temperatures. Many Indigenous households were cut off from other towns due to road closures, thousands had to evacuate their homes, and the interview participants confirmed that many of their tenants lost their homes.

These cascading crises not only underscore the urgency of mitigating the impacts of climate change but also the importance of focusing on climate adaptation, energy solutions that center on household well-being, and tailoring solutions to the regional lived realities of Urban Indigenous households.

Energy efficiency is vital for protecting Urban Indigenous households from the increasing frequency and likelihood of extreme weather events. However, energy retrofits should focus on climate resilience and safe indoor environments rather than merely on mechanical system upgrades or single-component replacements. Well-insulated, well-ventilated, and highly efficient homes with minimal heat loss can effectively protect households from extreme heat and cold events, as well as power outages (Mcllroy & Agar, 2025; Mcllroy et al., 2024).

6.4.2 Deep Energy Retrofits: The Missing Key

The deep energy retrofit strategy is currently missing from the established conventional approaches to retrofit projects within Urban Indigenous housing and non-profit housing as a whole. While it is a well-known fact that infrastructure failure within non-profit and Urban Indigenous housing leads to climate vulnerability, decision-makers, including funders, project managers, consultants, and contractors, target the “low-hanging fruit” and mechanical system upgrades, which can lead to indoor air quality issues, higher utility bills for the households, and maladaptation. Such single-component retrofits also usually fail to address the root causes of poor energy services and substandard housing conditions.

Similar to extreme heat, wildfire smoke is identified as an equal threat, with 86.67% of survey respondents ranking it as a top hazard. While advanced mechanical ventilation, such as Heat Recovery Ventilation (HRV), is essential for remediating mold and providing filtered air during smoke events, it can inadvertently exacerbate energy poverty. Housing providers may receive capital funding for single-component retrofits, such as installing an HRV, but they rarely receive the operational support needed to operate these units effectively. This represents a failure of

Reciprocity and Distributive Justice, as Urban Indigenous housing providers are forced to bear the additional costs of the settler-state's so-called climate mitigation solutions.

> "So now you've got better air, you've reduced the mold... but your utilities have gone up and you've spent $1,000,000 putting that in the building... but there is no increase to the operational budget." (External Partner, Interview Participant, December 2025)

Deep energy retrofits can have a much greater impact on building conditions and tenants' quality of life, as they employ a holistic, systems-thinking approach that addresses multiple building components simultaneously. A deep energy retrofit, therefore, can achieve radical improvements in building performance and climate resilience while supporting housing providers in providing healthy, safe, affordable, and accessible housing for their tenants (Bule & Agar, 2024; Mcllroy et al., 2024).

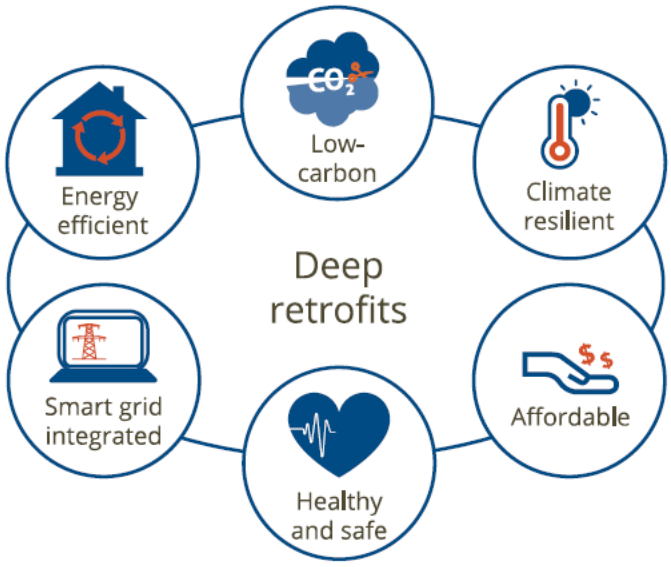


Figure 16 - Far-reaching outcomes of deep energy retrofits.

Sources used: Blue et al., 2024. Pembina Institute report.

While regular and phased retrofits often focus on "low-hanging fruit" or single-component replacements, deep retrofits reimagine a building as a complex system with interacting components.

Transformative improvements in performance	**House-as-a-system Approach**	**Multidimensional Benefits (non-energy benefits)**	**Climate Resilience**	**Long-term Asset Management**
Regular retrofits typically achieve marginal improvements in building performance, while deep retrofits aim for significant reductions in energy use and GHG emissions.	Regular incremental retrofits often miss complex interactions among building components, leading to economic and health challenges for tenants. However, deep energy retrofits view the house as a complex system with synergistic interactions.	Rather than focusing on near-term financial returns, deep energy retrofits prioritize non-monetary benefits that can improve households' quality of life.	Deep energy retrofit measures are designed to prepare a building for the intensifying effects of climate change.	While deep retrofits require more upfront capital, they address deep structural issues rather than providing "band-aid" solutions.
Deep energy retrofits typically involve multi-component upgrades rather than incremental or baseline upgrades.	Downsizing Equipment: By first improving the building envelope (insulation and air sealing), a deep retrofit can enable the installation of a smaller capacity heating and cooling system, reducing both capital and operating costs.	Improving indoor air quality: Advanced filtration technologies (e.g., HEPA or MERV 13) and ventilation systems (e.g., ERVs or HRVs) that can protect households from wildfire smoke and contaminants are common deep energy retrofit measures.	Improved insulation, ventilation, proper heating, and cooling mean that a deep energy retrofit strengthens a building’s resilience against heat domes, polar vortices, and other climate emergencies.	Equipment renewal cycles can be long, and retrofits are sometimes considered a once-in-a-lifetime opportunity to upgrade equipment, ensure aging buildings have sufficient electrical capacity, and ensure they are compatible with the modern electrical grid. Adopting a deep energy retrofit approach then

				becomes crucial to ensure retrofit outcomes are maximized when a capital project is economically feasible.
Alleviation of energy poverty: Deep energy retrofits are better suited to achieve the energy demand reductions needed to lower utility bills to affordable levels and reduce the energy burden on low-income and equity-deserving households.	A deep retrofit approach ensures that upgrades to air tightness are balanced with proper ventilation to prevent moisture buildup and mold growth.	Health outcomes: By eliminating heat loss, regulating humidity, and drafts, deep energy retrofits are designed to mitigate chronic health conditions.	Superior insulation minimizes heat loss in a building, ensuring it stays at a safe indoor temperature for much longer during a power outage.	Long-term building asset care: Deep retrofits are critical for maintaining and preserving the aging housing stock of many Urban Indigenous housing providers. In addition to reducing operational and maintenance costs, deep energy retrofits can reduce the chance of disruptive redevelopments.
		Thermal comfort: Regulating indoor temperatures effectively is central to deep energy retrofits, a goal that is critical for seniors and vulnerable households.	Avoiding maladaptation: Regular, single-measure retrofits can be maladaptive. For example, tightening a building's envelope without adding ventilation can trap heat or radon gas.	Despite requiring higher upfront capital, deep energy retrofits are still the more affordable, environmentally sustainable, and socially beneficial option compared to redevelopment

				and new construction.

Table 3 - What distinguishes deep energy retrofits from incremental or baseline retrofits?

Sources used: McIlroy et al., 2024; Blue & Agar, 2024; EEP, 2022; Ecotrust, 2023; Blue et al., 2025, Blue et al., 2024; AHMA, 2023; McIlroy & Agar, 2025.

Despite the far-reaching energy and non-energy benefits of deep retrofits, such projects remain inaccessible to most Urban Indigenous and other social housing providers due to higher costs, insufficient and unsustainable funding, the complexity of deep retrofits, and capacity constraints. In addition to funding and capacity challenges, the long-term vision for deep energy retrofits is paralyzed by uncertainty surrounding renewed subsidies for social housing imposed on Urban Indigenous housing providers by the provincial and federal governments. This planning uncertainty acts as a form of infrastructural colonization, stripping providers of the autonomy to build and maintain flourishing living spaces that nurture well-being and belonging.

6.4.3 Human Dignity, Self-Agency & Technological Sovereignty

A recurring theme across interviews was the tension between mandated settler-state green technologies and Indigenous Self-Agency. Some interview participants expressed deep skepticism toward technologies that ignore local climate wisdom, such as through-wall heat pumps, which have been pushed by funders despite documented failures in cold climates.

> "Our construction services team has created a document on the failures of through-all heat pumps... they're not adequate." (External Partner, Interview Participant, December 2025)

One interview participant described the organizational- and community-level toll of being used as a testing ground for innovative, unproven green technologies. Reclaiming the right to reject inadequate designs is an act of Technological Sovereignty. Successful implementation requires a Two-Eyed Seeing approach that empowers housing providers to adopt technical data and equipment (e.g., sensors, audits, and innovative technologies) only when they are accountable to community-defined needs, priorities, and local climate knowledge.

> “We were a bit of the guinea pig on what was... environmental and energy design... Is it reliable in my area... where we can experience 25 and 30 below for... a couple of weeks at a time?” (Urban Indigenous Housing Provider, Interview Participant, February 2026)

Interview participants frequently described how consultants, operating within constrained funding environments, recommend “low-cost” technical solutions in order to meet budget thresholds or satisfy minimum criteria set by housing providers or funders. While these approaches may achieve short-term compliance, participants emphasized that they often result in the installation of inadequate or poorly performing systems. Over time, this has contributed to mechanical failures, increased maintenance burdens, rising operational costs, and diminished indoor comfort for tenants.

> “We know there are higher utility bills, we know this won't work with this type of population, but they'll just come back and say, hey, we're signing off on the design…honestly, they ignore us.” (External Partner, Interview Participant, December 2025)

The research points to a troubling pattern in the nonprofit housing sector, where cost-effectiveness often takes precedence over long-term performance, building durability, and resident well-being. More critically, it reveals the implicit normalization of lower service standards in low-income and affordable housing. As participants observed, there appears to be an underlying assumption that residents in these settings should be satisfied with minimal levels of comfort and functionality, rather than receiving the same quality of systems, services, and living conditions expected in higher-income housing. This dynamic not only undermines housing quality but also reflects broader structural inequities embedded in the social housing sector. Such inequities manifest in the widespread adoption of low-cost mechanical systems prone to failure, the imposition of standardized, top-down energy solutions that disregard local realities and provider expertise, the prioritization of inexpensive technologies over higher-quality, more efficient alternatives, the deprioritization of climate resilience and resident well-being in response to budgetary pressures, and the promotion of unproven or inadequately tested energy technologies that can ultimately result in system failures and increased operational costs.

> "They have this weird perspective that oh, like it's social housing. So the level of quality…It's okay if it's lower than other." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

6.5 Structural & Systemic Barriers: The Misalignment of the Political and Funding Landscape

The evidence from the interviews and the survey identifies a profound misalignment between the operational realities of Urban Indigenous housing providers and the dominant political, regulatory, and funding landscapes in British Columbia and beyond. The interviews and survey results confirm that this convoluted landscape is characterized by an "insidious loop" in which historical colonial legacies, systemic disinvestment, and neglect continue to define contemporary, supposedly modern energy vulnerabilities. Rather than serving as neutral, isolated administrative hurdles, these systemic barriers manifest as infrastructural colonization, designed and maintained to manage Indigenous life as a technical and economic cost rather than a sovereign right. Survey results from AHMA staff confirm this at a significant scale, identifying insufficient funding as the most critical barrier to success with a weighted average of 4.5/5 and rating funding limitations as a major challenge in capital project delivery.

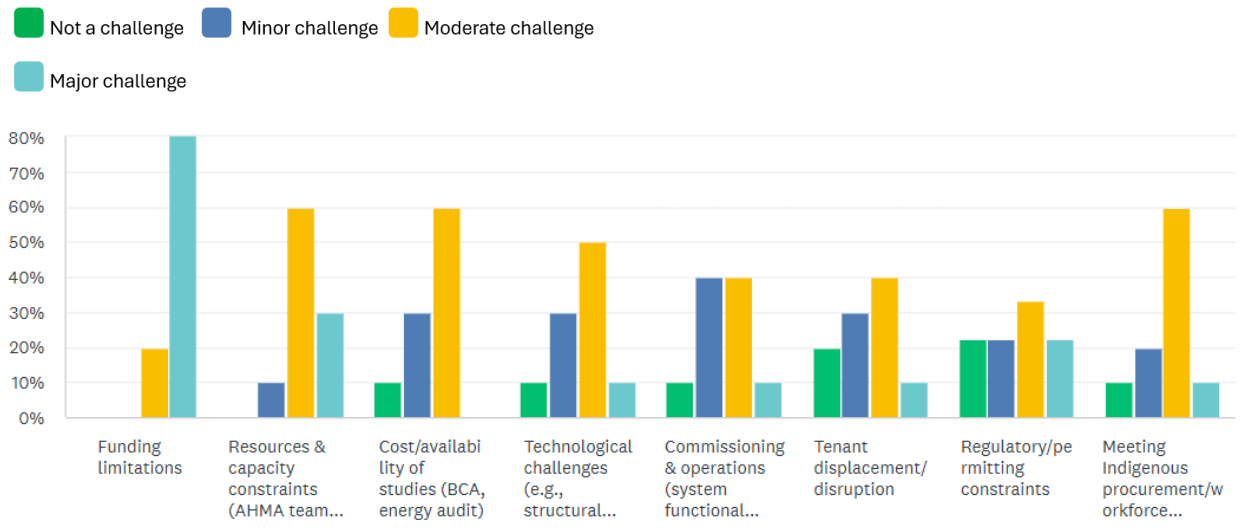


Figure 17 - Survey response: Severity of common challenges in energy project delivery.

> "…And so basically we're reactive instead of being proactive." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

6.5.1 Incentives & Funding Sources: The Bureaucratic Trap

The primary pattern revealed in the data is the "maddening" and "piecemeal" nature of funding, which forces providers to "cobble together different sources" that lack synchronized timelines for application, reporting, or grant duration.

> "The other thing is the difficulty, the timing of funding just drives me as always, I've always found it maddening." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

This fragmentation is a clear operationalization of the Coloniality of Power, where Western institutional systems maintain control over Indigenous life and strip Indigenous communities of their autonomy by enforcing dependency on the settler state. Survey data reinforces the prevalence of this barrier: 60% of respondents identified application complexity and eligibility issues as top-tier systemic hurdles.

Participants described utility incentive application forms as "horrendous," requiring hyper-specific model numbers and technical tiers that consume staff's limited administrative capacity. Interestingly, this sentiment resonated with the utility staff who participated in the interviews, who agreed that utility-led incentive applications are extremely complex and require immense effort and expertise to complete and submit. They were also quick to remind me that submitting an incentive application does not guarantee approval of any energy retrofit project, which means that, at times, capacity-strained Urban Indigenous housing providers may spend hours submitting these applications and still not receive any funding.

> "You're on your own and you need to put on your to-do list that you have to write five grant applications to potentially get one in five years." (Urban Indigenous Housing Provider, Interview Participant, January 2026)

From the lens of procedural justice, these processes function as a “bureaucratic trap”. The survey indicates a desperate need to escape this trap, with 80% of respondents identifying “funding application support” as the service that would provide the highest value to Urban Indigenous housing providers.

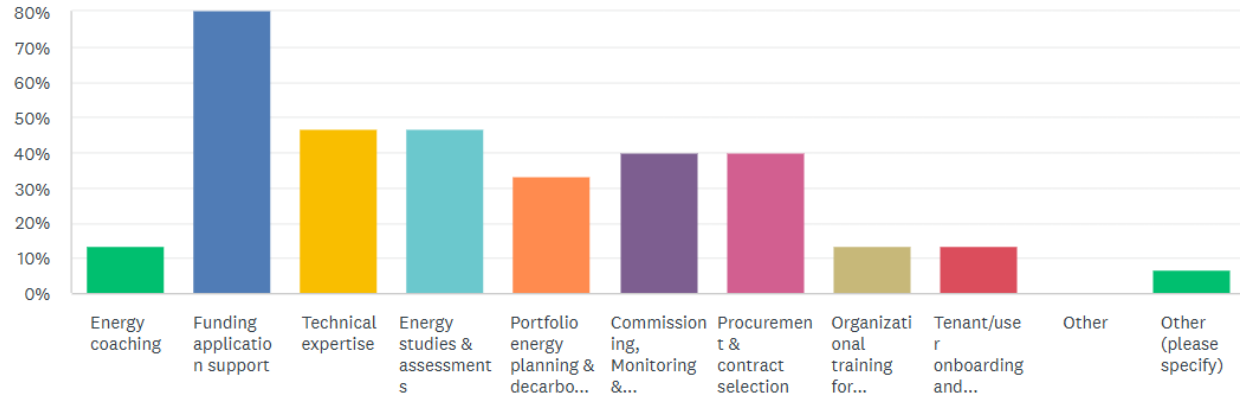


Figure 18 - Survey response: Most impactful services for energy retrofit implementation within Urban Indigenous housing.

By determining funding amounts based on specific Energy Conservation Measures (ECMs), the system strips providers of Self-Agency and forces them to deprioritize critical upgrades in line with their own “grounded normativity”. The survey confirms this technocratic rigidity, with 60% of staff identifying “one-size-fits-all offers” as a significant or critical barrier to the effectiveness of energy retrofit and conservation programs.

> “Utilities are very... fit in the box and our department, nothing ever fits neatly in a box.” (External Partner, Interview Participant, November 2025)

This "box" mentality enforces a politics of recognition that values Indigenous participation only when it adheres to state-authorized frameworks, effectively denying true Indigenous Sovereignty. This sentiment is confirmed by my own experience working with utility companies to navigate the convoluted utility-led incentive programs to support Urban Indigenous housing providers. Utilities are very proud of their training sessions, workshops, and ongoing training opportunities for their staff to raise awareness of the colonial past of so-called Canada and encourage them to engage with the diverse Indigenous cultures across British Columbia. However, valuing Indigenous

worldviews and knowledge systems does not stop at awareness or empty gestures of recognition. The systemic shifts required to meaningfully transform the harmful, and at times violent, practices, processes, regulations, and policies of utilities are ignored and labeled as too radical or incompatible with the complex regulatory system governing utilities.

6.5.2 Institutionalized Metrics vs. Eudaimonic Well-Being

The tension between utility structures and Indigenous priorities highlights the Coloniality of Knowledge, specifically the "epistemology of point zero". Utility programs prioritize siloed performance metrics, such as "least cost" economic analyses, cost-benefit analyses, energy-efficiency targets, and greenhouse gas (GHG) emissions-reduction goals, which treat energy as a prediscursive commodity rather than a social relation essential to human flourishing. This results in Recognition Injustice, as the unique cultural identities and vulnerabilities of Indigenous tenants are ignored in favor of aggregate greenhouse gas (GHG) and energy efficiency targets.

Participants with utility-sector experience shared that the Utilities Commission of British Columbia does not require them to design and lead any funding incentive programs specifically supporting Indigenous communities. However, both utility monopolies, FortisBC and BC Hydro, have developed funding incentive programs specifically designed for Indigenous communities. The Utilities Commission of British Columbia expects these utilities to report on these programs; however, the Key Performance Indicators (KPIs) are limited to participation rates and funding spent. The focus on managerial and purely economic reporting metrics for these incentive programs creates a significant gap between the definitions of success by these utilities and the Commission and the actual outcomes of these funding programs for Indigenous communities. While these incentives should be directly linked to alleviating energy poverty, enhancing household well-being, and improving energy services, the existing metrics offer no mechanism to hold utilities and decision-makers accountable for the true outcomes of these programs.

> "No, we did not tackle energy poverty... it's outside of our mandate." (External Partner, Interview Participant, November 2025)

A critical analytical finding is that energy efficiency does not always translate to energy affordability. This is a major concern for most Urban Indigenous housing providers, as financial

sustainability is their top priority. In addition, almost all Urban Indigenous housing providers struggle with limited funds and cannot afford to increase their operational budgets to implement energy-efficiency measures. Survey results show a high consensus that retrofits improve physical thermal comfort (3.53/5) and indoor air quality (3.6/5), yet respondents perceive a significantly lower impact on social and mental well-being (2.67/5). This suggests a materiality gap where technical fixes fail to reach the eudaimonic core of "the Good Life".

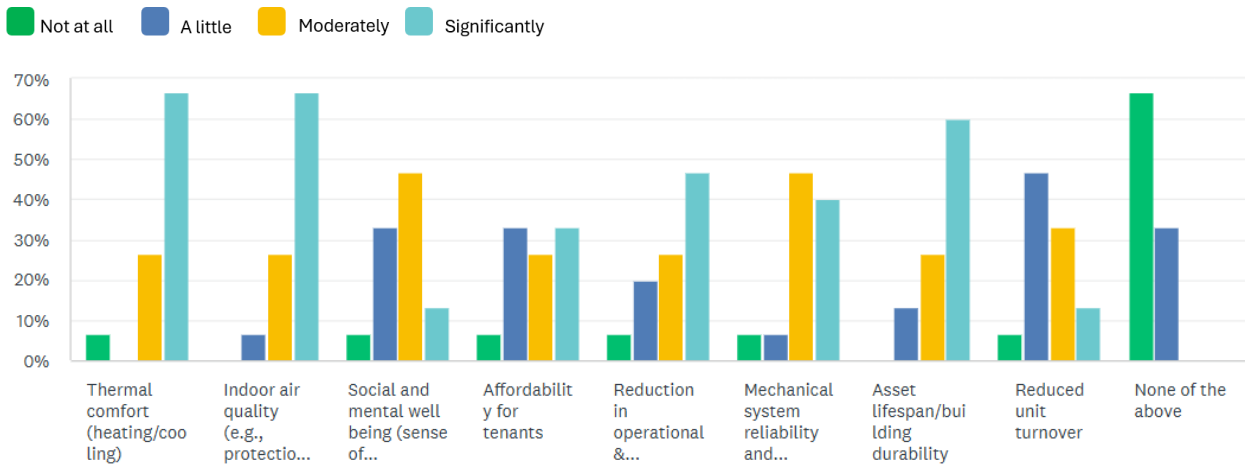


Figure 19 - Survey response: Most likely non-energy benefits from retrofit projects observed by AHMA staff.

> "Because you can get efficient, but not be affordable. You just assume you're going to save money because you say that it's efficient. And it's like, oh, no, it may not be the case." (Urban Indigenous Housing Provider, Interview Participant, February 2026)

The regulatory landscape of utility monopolies in British Columbia allows gas utilities, namely FortisBC, to act like a "drug dealer giving free drugs away," undercutting the initial costs of energy infrastructure in comparison to the electricity utility, namely BC Hydro, and locking Indigenous buildings into 60-year legacy costs for gas-fired mechanical systems that will soon become "stranded assets". This fossil fuel lock-in represents a systemic failure of Restorative Justice, as it perpetuates historical harms by undermining the long-term financial sustainability of Indigenous communities. This artificial affordability of gas-fired mechanical systems is a significant barrier to the crucial decarbonization efforts of Urban Indigenous housing providers committed to climate change mitigation but unable to bear the upfront costs of electrification.

> “If a housing provider says, no, that's a no, like, it doesn't matter.” (Urban Indigenous Housing Provider, Interview Participant, January 2026)

6.5.3 Capacity Constraints and the Maintenance Gap

Findings regarding capacity constraints reveal a deeper structural cause rooted in the Coloniality of Being, where Indigenous labor is rendered disposable. Staff working within Urban Indigenous housing are often paid “peanuts” to be social workers, trauma counselors, and maintenance technicians simultaneously. The survey quantifies this crisis: 50% of respondents cite a lack of internal capacity as a major hurdle to delivering projects.

> “Are we really supporting them when we're putting them in a situation where they're not making, reaching living wage?” (Urban Indigenous Housing Provider, Interview Participant, January 2026)

> “We don't have the capacity to have the professionals in our little communities to deal with this.” (Urban Indigenous Housing Provider, Interview Participant, February 2026)

A new systemic insight from the survey is the maintenance funding gap: respondents noted that societies receive capital for retrofits but “do not get increased operational funding to operate or maintain the expensive new systems”. This violates distributive justice by imposing long-term financial burdens on providers under the guise of "sustainability". Justice and Well-Being theory posits that eudaimonic flourishing requires protection and subsistence; however, when energy efficiency is “probably like 50th on their list” because managers are busy “unplugging toilets,” the system enforces a docility that renders community well-being disposable.

6.5.4 Uncertain Futures and Data Sovereignty

The “conundrum” of expiring leases and operating agreements for Urban Indigenous housing providers casts a “question mark” over long-term asset planning for their portfolios. This planning uncertainty is an expression of infrastructural colonization, as it prevents Indigenous providers from managing their urban spaces as sovereign “projects of life”. This paralysis also extends to the initiation and completion of energy retrofit projects, as uncertainty of the future strips housing providers of their autonomy to perform crucial energy upgrades at their properties.

> “And it's really hard to plan when you have a question mark... would I want to go and quote unquote blow a whole bunch of money for something that would be brand new and be used for six months? Probably not.” (Urban Indigenous Housing Provider, Interview Participant, January 2026)

The survey extends this argument by identifying Indigenous Data Sovereignty as a prioritized "capability" for combating colonization. 60% of respondents demanded clear Indigenous ownership of energy data, with 40% specifically advocating for protocols aligned with OCAP principles. This reflects the “politics of refusal,” as providers seek to reclaim the "knowledge" pillar of the colonial matrix of power.

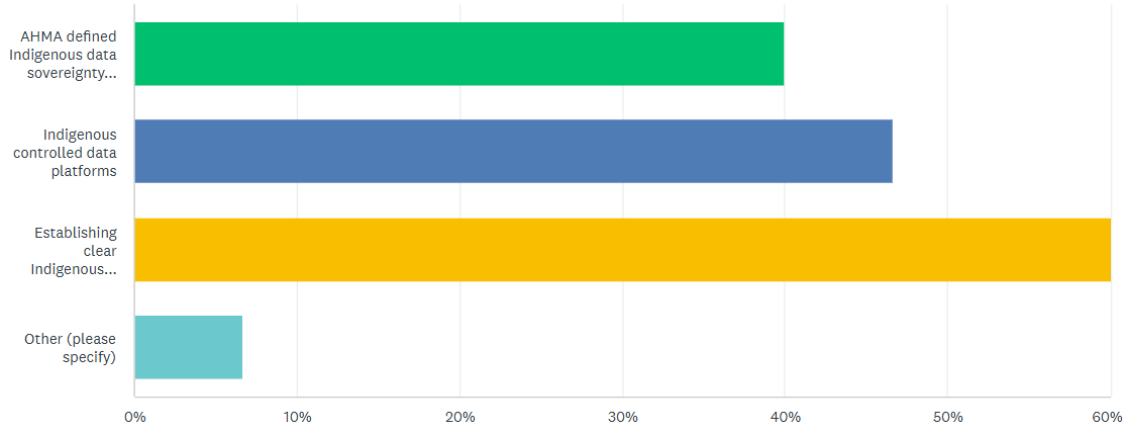


Figure 20 - Survey response: Crucial data governance practices for energy & asset data within Indigenous communities.

Section 7. A Glimpse into a Decolonized & Indigenous-led Strategic Energy Management Plan

7.1 A Critique of BCNPHA's Strategic Energy Management Plan through a Decolonial Lens

The Strategic Energy Management Plan (SEMP) for BC's Non-Profit Housing Sector 2025, developed by the BC Non-Profit Housing Association (BCNPHA), represents a sophisticated managerial framework designed to move the sector toward ambitious Energy Use Intensity (EUI) and Greenhouse Gas (GHG) reduction targets. While the SEMP provides a vital technical baseline for asset stewardship, a critical evaluation through the lenses of Justice and Well-Being, Decolonial Theory, and Energy as a Service (EaaS) reveals that the plan functions as a technocratic "fix" that remains embedded within the Colonial Matrix of Power.

7.1.1 Ontological Misalignment: Electrons versus Well-being

A primary tension exists between the technical metrics of existing SEMPs and the eudaimonic priorities of Urban Indigenous providers. The SEMP defines success in terms of quantitative Key Performance Indicators (KPIs): a 15% reduction in EUI and a 14% reduction in GHG emissions. This focus reduces energy to a prediscursive commodity, a flow of electrons or fossil fuel particles to be minimized. In contrast, research participants conceptualize energy through the lens of "Grounded Normativity", where energy is a social relation essential for Soh Kyo U'liih (The Good Life).

The SEMP's "Materiality Gap" becomes evident when technical efficiency success coexists with eudaimonic failure. For example, while a building may have been passive-house certified and met aggressive EUI targets, tenants described indoor temperatures as unbearable, rendering their living environments unlivable during the summer months. By prioritizing kilowatt-hour reductions over the satisfaction of human needs like protection, thermal comfort, and dignity, the BCNPHA SEMP inadvertently perpetuates a Recognition Injustice that devalues the safety and literal survival of Urban Indigenous households.

7.1.2 Capacity as Systemic Disinvestment: The "Coloniality of Being"

The BCNPHA SEMP assumes that capacity constraints are a "knowledge gap" that can be solved through “training and coaching”. This represents a fundamental misunderstanding of the Coloniality of Being prevalent within Urban Indigenous housing. Survey results confirm that 50% of AHMA staff identify a lack of internal capacity as a critical barrier, but interviews reveal this stems from systemic disinvestment rather than a lack of expertise.

Staff members working in Urban Indigenous housing are frequently paid low salaries to provide complex services that go beyond their job descriptions while managing aging infrastructure. As a result, energy efficiency is always deprioritized as Housing providers frequently operate within a reactive crisis-management framework, where resources are directed toward addressing immediate operational challenges rather than strategic priorities. The SEMP’s failure to advocate for Procedural Justice in the form of funded project management and "concierge" services, which 80% of respondents identified as a high-value need, can contribute to employee burnout, difficulty retaining experienced personnel, and ongoing capacity constraints within the sector.

7.1.3 Technological Sovereignty versus Standardization

The SEMP promotes "scalable" and "regionally appropriate" Western green technologies. However, it fails to provide housing providers the authority to exercise their self-agency and refuse standardized solutions for their communities that may not align with local climate and land-based wisdom.

Meaningful technological sovereignty requires a Two-Eyed Seeing approach, in which Western science (equipment, technologies, audits, etc.) serves only as a “supportive bridge” guided by community-defined goals. The SEMP’s focus on standardization threatens this sovereignty by imposing state-authorized definitions of "innovation" over place-based Indigenous wisdom.

7.1.4 Climate Resilience versus Financial Sustainability

A critical limitation of the BCNPHA SEMP is its assumption that "cost avoidance" automatically creates opportunities to reinvest or divest operational funds into other services. However, this research identifies a contradictory energy-retrofit penalty: some participants who installed high-efficiency equipment to improve indoor air quality experienced higher utility bills.

Because many Urban Indigenous housing providers may receive capital funding for energy retrofits but not additional operational funding to operate and maintain these new systems, such "green" energy transition initiatives can inadvertently exacerbate energy poverty. This represents a failure of the Reciprocity pillar within AHMA's cultural safety framework. Urban Indigenous housing providers shared that many of their tenants struggle to pay their bills; therefore, a SEMP that does not plan for the future maintenance and operation of new energy systems perpetuates maladaptation that can threaten the future survival and financial sustainability of Urban Indigenous housing providers.

7.1.5 Planning Uncertainty & Infrastructural Colonization

The SEMP developed by BCNPHA does not account for the expiration of subsidies for Urban Indigenous housing providers, creating uncertainty for long-term planning within these organizations. This planning uncertainty acts as a tool of infrastructural colonization, stripping providers of the autonomy to manage their urban spaces as sovereign "projects of life". As several interview participants noted, the loss of agency over energy retrofit decisions has left housing providers with limited ability to proactively manage their housing portfolios. Many described being forced to keep aging buildings operational despite mounting deficiencies, often uncertain whether the properties would ultimately be rehabilitated, demolished, or transferred to another organization. This ongoing uncertainty has left both tenants and staff in a prolonged state of limbo, making long-term planning and stability almost impossible.

Furthermore, the SEMP positions BCNPHA as the "data steward", which directly conflicts with the principles of Indigenous Data Sovereignty (OCAP) and the right of Indigenous communities, whether off-reserve or on-reserve, to own and control their energy and health data.

The BCNPHA SEMP is a sophisticated managerial tool that aligns the sector with the settler-state's climate agenda. However, by prioritizing standardization, supply-chain metrics, and knowledge-

based capacity fixes, it fails to address the "insidious loop" of historical harm. To be suitable for Urban Indigenous housing providers and their tenants, the design of an energy management tool and its contents must move beyond "participation" to the restoration of self-governing authority, reframing energy efficiency not as a technical requirement, but as a vehicle for the reparation of Indigenous Land and Life.

7.2 Foundational Principles of a Decolonial & Indigenous-Led SEMP

While some Urban Indigenous housing providers may not be able to provide a definition for a strategic energy management plan (SEMP), they were all clear about its essence: Urban Indigenous housing providers need holistic and wholesome roadmaps that in addition to energy conservation and GHG reduction goals, are built upon climate adaptation, energy resilience, well-being, equity, and above all empowering their tenants to lead a “Good Life”.

7.2.1 Indigenous Sovereignty and Cultural Safety

The findings consistently highlighted the need for Indigenous-led governance and decision-making within housing and energy planning. Participants expressed frustration with top-down solutions, externally imposed technologies, and planning processes that failed to reflect local realities and lived experience.

An Indigenous-led SEMP must therefore move beyond participation toward genuine self-governing authority. This includes restoring self-agency, supporting Indigenous decision-making, and recognizing the authority of housing providers to determine which technologies, policies, and approaches are appropriate within their communities.

Cultural safety must likewise be embedded throughout the SEMP. Rather than serving as a checklist or a supplementary consideration, cultural safety should shape project planning, procurement, tenant engagement, implementation, and evaluation. This includes advancing For Indigenous By Indigenous (FIBI) approaches and relational accountability, and providing Indigenous-led, culturally responsive, and trauma-informed training for contractors, consultants, and external partners involved in energy projects.

A potential manifestation of centering cultural safety in energy management practices and the design of a SEMP could be the development of community-defined procurement protocols for

energy retrofit projects and ensuring that Urban Indigenous housing providers have the autonomy to select trusted contractors to work in their communities.

7.2.2 Justice and Well-Being: Eudaimonic Flourishing

A decolonial SEMP must be grounded in justice and well-being. The findings demonstrate that existing energy systems can exacerbate vulnerabilities when energy initiatives are designed without consideration of affordability, equity, tenant well-being, or community priorities. Consequently, an Indigenous-led SEMP should be built upon the four pillars of energy justice.

- Recognitional Justice requires centering the priorities, lived experiences, and needs of Urban Indigenous housing providers and ensuring that energy interventions do not contribute to further harm or deepen existing vulnerabilities.
- Procedural Justice requires meaningful engagement and Indigenous leadership throughout planning, implementation, and evaluation processes.
- Distributional Justice requires transparent consideration of both the benefits and burdens associated with energy interventions, ensuring that costs, risks, and benefits are distributed equitably.
- Restorative Justice extends beyond participation by creating opportunities to restore Indigenous authority, self-determination, and sovereignty within housing and energy systems.

Within such a framework, success must be measured by outcomes such as thermal comfort, indoor air quality, climate resilience, affordability, and improved quality of life, rather than solely by energy savings or GHG reductions. A SEMP designed based on this framework will prioritize and approve projects with the highest impact on improved energy services, climate adaptation, and quality of life, even when such projects may fail cost-effectiveness tests.

7.2.3 Energy as a Service: Centering Human Needs

The findings reveal that Urban Indigenous housing providers generally do not conceptualize success in terms of kilowatt-hours saved or emissions reduced. Rather, energy is valued because of the services it enables.

An Indigenous-led SEMP must therefore adopt an Energy as a Service perspective that prioritizes the outcomes that energy systems provide, including thermal comfort, healthy indoor environments, accessibility, dignity, safety, and tenant well-being. This new mental model shifts strategic energy management away from siloed technical metrics and toward the lived experiences of community members.

7.2.4 Climate Resilience and Adaptation: The Next Seven Generations

The findings underscore the importance of moving beyond short-term project thinking toward long-term resilience planning. Participants consistently linked energy management with climate adaptation, building durability, and community resilience.

An Indigenous-led SEMP should therefore include guidance on developing climate emergency plans tailored to local contexts and priorities. The long-term objective should be to support Urban Indigenous housing providers in transitioning to deep energy retrofits that simultaneously improve building performance, enhance indoor environmental quality, improve affordability, and enhance resilience.

Rather than relying on incremental upgrades or isolated interventions, deep retrofits offer opportunities to address underlying housing deficiencies, prepare buildings for future climate conditions, and support intergenerational well-being.

A SEMP designed for deep energy retrofits will require sustainable funding from public institutions and entities that administer energy retrofit incentive programs. As such, an important component of a future SEMP should be the development of long-term capital and portfolio plans that integrate energy upgrades in the planning phase.

7.2.5 Capacity Building, Advocacy, and System Transformation

Participants consistently emphasized that many housing providers are already operating under significant capacity constraints. Consequently, an Indigenous-led SEMP cannot simply introduce additional responsibilities or reporting requirements. Instead, it must be designed as a support mechanism that strengthens organizational capacity.
Key priorities include:

- Reliable and sustainable capacity-building resources.
- Dedicated project management and implementation support.
- Concierge services to navigate complex retrofit and utility applications.
- Multi-year, predictable funding models.
- Upfront capital funding rather than reimbursement-based funding structures.
- Advocacy strategies that address systemic misalignment between provincial policies and Urban Indigenous housing realities.

The findings further suggest that energy planning must operate as a vehicle for broader systems change rather than isolated project delivery. A SEMP should therefore support AHMA and housing providers in advocating for policy and funding reforms, and for greater alignment between government priorities and Indigenous housing needs.
Recognizing that 80% of providers require application support, the SEMP must include funded concierge services to navigate the “horrendous” technical requirements of utility applications, thereby protecting the limited capacity of Urban Indigenous housing providers.

7.2.6 Two-Eyed Seeing

Participants welcomed technical expertise and tailored support for their communities. However, they emphasized the importance of ensuring that technical approaches remain accountable to community priorities and lived experience.
An Indigenous-led SEMP should operationalize Two-Eyed Seeing by centering Indigenous knowledge systems and community priorities and treating Western technical tools such as energy modeling, audits, sensors, benchmarking systems, and asset management platforms as a supportive

bridge. Within this approach, Indigenous wisdom and local knowledge lead the way, ensuring that technology and data remain responsive to Indigenous goals rather than driving them.

A great example of Two-Eyed Seeing in practice is ongoing energy upgrades led by an Urban Indigenous housing provider on Vancouver Island. The project was initiated by consultations with the community and tenants, and only then were contractors, engineers, and consultants invited to participate in the project planning.

7.2.7 Technological and Data Sovereignty

The findings highlight technological and data sovereignty as essential components of an Indigenous-led SEMP. Participants expressed skepticism toward externally prescribed energy technologies that failed to reflect local climatic realities or performed poorly in Indigenous housing contexts. An Indigenous-led SEMP should therefore recognize the right of housing providers to reject technologies that conflict with community priorities, operational experience, or place-based knowledge. In doing so, technological decision-making shifts from compliance with externally defined solutions toward the exercise of Indigenous authority over the built environment.

Similarly, the SEMP should codify Indigenous data sovereignty through OCAP principles, ensuring that energy, building, and tenant-related data remain under the ownership and control of Indigenous Nations and Indigenous housing providers. Together, technological and data sovereignty challenge top-down technological mandates and forms of epistemic extractivism by recognizing lived experience, operational knowledge, and Indigenous ways of knowing as legitimate sources of evidence alongside conventional technical expertise.

7.2.8 Definitions of Success: Eudaimonic Metrics

Perhaps the most significant implication of this research is the need to redefine how success is measured.

Conventional SEMPs typically evaluate success through metrics such as energy use intensity (EUI), GHG reductions, retrofit counts, and utility savings. While such indicators remain useful, participants consistently emphasized that they do not fully capture what matters most to Indigenous communities.

An Indigenous-led SEMP should therefore adopt eudaimonic and community-centered measures of success that prioritize qualities such as tenant well-being, thermal comfort, climate resilience, human dignity, sustenance, and a “Good Life”.

Ultimately, the findings suggest that strategic energy management should not be understood as merely managing energy. Rather, it should function as a holistic roadmap for restorative justice, community well-being, cultural safety, resilience, and Indigenous self-determination, supporting Urban Indigenous housing providers in creating the conditions necessary for present and future generations to live healthy, safe, dignified, and flourishing lives.

Funtowicz and Ravetz argue that complex challenges such as climate change, sustainability, and environmental governance cannot be adequately understood through reductionist approaches that seek to optimize a single variable or rely solely on quantifiable indicators. Instead, they propose a Post-Normal Science (PNS) approach that recognizes uncertainty, competing values, and the legitimacy of multiple ways of knowing. Rather than privileging expert knowledge alone, PNS calls for the inclusion of local, experiential, Indigenous, and community knowledge, while engaging all those affected by an issue as part of an extended peer community. In this way, the focus shifts from identifying a singular "correct" solution to fostering more transparent, inclusive, and legitimate decision-making processes. Consistent with this perspective, Funtowicz and Ravetz highlight Social Multi-Criteria Evaluation (SMCE) as a tool for navigating complex policy decisions without reducing social, environmental, cultural, ethical, and economic considerations to a single metric. By making trade-offs, values, and assumptions explicit, SMCE supports a more participatory and context-sensitive evaluation of alternatives. Within this framework, quantitative indicators and technical models remain valuable, but they are viewed as tools to support dialogue, deliberation, and collective learning rather than as mechanisms for determining an objectively optimal outcome (Funtowicz & Ravetz, 2003).

As Donella Meadows highlights in her essay, *“No one can precisely define or measure any value. But if no one speaks up for them, if systems aren’t designed to produce them, if we don’t speak about them and point toward their presence or absence, they will cease to exist.” (Meadows*, 2014).

Section 8. Conclusion

Urban Indigenous peoples are largely absent from climate, energy, and urban research and planning; when mentioned, they are framed as victims and an at-risk population rather than as sovereign members of Indigenous nations with deep knowledge of local climate and energy sources who should be leading climate adaptation, mitigation, and energy planning decisions. This invisibility is not accidental; it is a manifestation of the colonial legacies of the settler-state, in which urban sites starkly exemplify the forced relocation and violent assimilation of Indigenous people into Western-style housing that devalues their socio-ecological relationships and definitions of home.

This research seeks to address this critical gap by focusing on British Columbia's path to a low-carbon built environment and analyzing conventional energy management plans through the lens of decolonial theory, justice, and well-being, and Indigenous sovereignty. The research question asks:

> What would a Strategic Energy Management Plan for Urban Indigenous households in British Columbia, centered on energy justice, well-being, and decoloniality, look like?

The interviews and survey results showcase that this research problem, inevitably, must center the "insidious loop" of coloniality; the reality that historical disinvestment in Indigenous housing continues to define and exacerbate modern climate vulnerabilities, such as the catastrophic indoor temperatures during summer months in British Columbia.

8.1 Survival, Sustainability & Human Flourishing

The interview results revealed that Urban Indigenous housing providers are currently trapped in a reactive "crisis response" mode. While they are deeply committed to their mission of providing safe, healthy, and culturally appropriate housing for their tenants, they are continually forced to make difficult choices between long-term asset care and immediate emergencies across their housing portfolios.

The challenges faced by Urban Indigenous housing providers are interconnected and complex. A few of the key messages from that I heard during the interviews and the survey resonated across all types of Urban Indigenous housing and regions:

- Poorly constructed; Urban Indigenous tenants are more likely to live in homes that are old, poorly insulated, and use inefficient and at times dysfunctional heating and cooling systems.
- Poor indoor air quality: Urban Indigenous households report that their homes often lack adequate ventilation, resulting in vulnerability against climate emergencies such as wildfires, which also increases the risk of respiratory illnesses.
- Built with inefficient energy systems: Aging, poorly insulated buildings with outdated and inefficient heating systems that usually do not have cooling capacity mean that Urban Indigenous households must consume more power to stay warm in winter or cooled in summer, resulting in unaffordable high energy bills.
- Culturally unsafe: Due to the absence of meaningful consultation with Indigenous community members and leaders, many buildings built for Urban Indigenous households are not built for the intergenerational living needs of Indigenous families, leading to overcrowding that can have severe negative mental and physical health impacts and can also further strain the energy system.
- Unfit for the climate: colonial housing policies pushed for “one size fits all” construction practices that are often not designed for the local climates and leave Urban Indigenous households vulnerable to climate emergencies, including heat waves, flooding, and wildfires.

Infrastructure serves as the primary determinant of whether a community member can achieve eudaimonic flourishing and lead a "Good Life" (*Soh Kyo U’liih*). The stories shared by Urban Indigenous housing providers offer a glimpse into the lived experience of Urban Indigenous households and paint a grim picture of the profound "materiality gap" that exists within social housing in British Columbia, jeopardizing the dignity, basic human needs, and flourishing of these communities. Conventional approaches to energy retrofits, centered on technical and managerial fixes, often fail to translate into human flourishing. This material deprivation can reach a threshold

during climate emergencies when Urban Indigenous households and many other equity-deserving communities living in social housing are left with crumbling infrastructure that is a direct threat to their health and well-being.

8.2 Rethinking Strategic Energy Management

This research concludes that conventional Strategic Energy Management Plans (SEMPs), such as the BCNPHA model, are insufficient for Urban Indigenous communities because they function as technocratic "managerial fixes" and are constrained by entrenched structures of the Colonial Matrix of Power.

- Ontological misalignment: Conventional SEMPs rely on "hedonic" metrics, defining success by kilowatt-hour and GHG emission reductions rather than the satisfaction of human needs like dignity and thermal comfort.
- The retrofit penalty: These plans often assume that "cost avoidance" automatically creates revenue; however, findings reveal a contradictory penalty where high-efficiency energy systems improve health but may increase utility bills without providing additional operational funding.
- Technological imposition: Top-down technocratic mandates often force unproven Western designs onto Indigenous sites that fail in local climates, violating technological sovereignty for Urban Indigenous households and ignoring the "politics of refusal".
- Infrastructural colonization: Conventional energy management plans ignore the paralyzing planning uncertainty of subsidy and funding expiry for Urban Indigenous housing, which prevents providers from managing their urban spaces as sovereign "projects of life".
- Invisibility of cultural safety: Trauma-informed practices and the importance of cultural safety are practically absent in conventional SEMPs.

8.3 Reclaiming Power: Foundations of an Indigenous-Led Strategic Energy Management Plan

An Indigenous-led, decolonial SEMP is reimagined not as a technical manual but as a holistic roadmap for Indigenous energy sovereignty and the reparation of Indigenous land and life. The foundational pillars of an Indigenous-led SEMP may include:

- FIBI governance: Restoring self-determination through For Indigenous By Indigenous management of the built environment, energy retrofit decision-making, and design.
- Cultural safety: Ensuring that trauma-informed practices are meaningfully integrated in every phase of the SEMP design and energy retrofit projects.
- Energy as a Service: Prioritizing the services that the energy system provides and eudaimonic well-being, thermal comfort, safety, and health, over the "supply chain" of electrons in defining the success metrics of energy conservation and retrofitting.
- Two-Eyed Seeing: Utilizing Western technical tools and equipment only as a "supportive bridge" directed by Indigenous wisdom and community-defined goals.
- Technological and data sovereignty: Reclaiming the right to refuse inadequate technology and codifying OCAP principles to ensure Indigenous ownership of energy and health data.
- The "concierge" support model: Moving from "training and coaching" to a funded model that assumes the administrative burden of applications to protect the limited capacity of housing society staff.

8.4 Implications for the Energy & Housing Ecosystem

This research sought to expand the existing scholarly landscape of decolonial theory to the urban frontier and the lived experiences of Urban Indigenous households within the complex web of urban energy systems. I have also sought to contribute to existing justice and well-being theories by introducing the cultural safety framework, built on the wisdom of many Indigenous knowledge holders and Elders.

I have also attempted to provide the Aboriginal Housing Management Association (AHMA) with a preliminary vision for the foundational pillars of a Strategic Energy Management Plan (SEMP). The ultimate goal of such a plan is to provide a pathway to climate adaptation, equitable

decarbonization, and reparations for historical neglect, rather than a standard technical improvement. On this journey, AHMA is expected to lead the development of a decolonial SEMP while ensuring that Urban Indigenous housing providers are meaningfully engaged throughout the design process.

I heard from interview and survey participants that self-determination and autonomy must be restored to Urban Indigenous housing providers. This restoration must be initiated and implemented by all levels of government and by the utility monopolies that control the energy supply chain. Governments and utilities must transition from treating Indigenous communities as "consumers" to sovereign partners. This requires transferring decision-making power to Indigenous-led coalitions and organizations, such as AHMA; restructuring utility regulations to prioritize social and health outcomes; and moving from piecemeal grants to stable public investment so that capital repair projects and energy retrofits do not become a financial burden for Indigenous societies.

8.5 Study Limitations and Future Research

While this study captured the expert insights of housing providers, a primary limitation was the limited direct engagement with Urban Indigenous households and the limited capture of their lived experiences within Urban Indigenous housing. Additionally, time and budget constraints prevented the inclusion of all AHMA member organizations. While every effort was made to engage AHMA staff, not everyone was able to complete the survey, further limiting the study's sample size.

Future research opportunities should focus on the design of the Indigenous-led SEMP and explore the following:

- The "concierge" support model: Investigate how a central technical hub (e.g., AHMA) can provide "concierge" project management and funding stacking for smaller Urban Indigenous housing providers to bridge systemic staffing disinvestment.
- Visualization of justice & well-being: Explore the creation of an Indigenous-led tool to “measure” and capture the presence or absence of well-being indicators within a project, process, or infrastructure.

- Indigenous energy data ecosystems: Investigate the opportunities to create sovereign Indigenous data ecosystems within the settler-state legal and technical frameworks.
- Sustainable financing models: Investigate existing energy retrofit financing models and their applicability to Urban Indigenous housing.
- Rethinking the utility model: Investigate alternative energy utility models in different jurisdictions and identify opportunities to create community-centric energy utilities.

8.6 Final Reflections

The transition to a just energy future requires a fundamental shift in our mental models; we must stop treating energy as a mere commodity to be extracted, exploited, and managed. If we pay closer attention, we will notice that energy is a vital social relation that can help us restore our relationships with each other and with the natural world. The first step is to break the insidious loop of coloniality by treating the urban sites we have built not as lifeless concrete structures but as sacred sites of Belonging, dignity, and protection. An Indigenous-led SEMP is not just about making our systems more efficient and saving a few dollars; it is about restoring Indigenous sovereignty, healing our socioecological relationships, and the unwavering commitment to *Soh Kyo U'liih*, giving each other a Good Life for the next seven generations.

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Appendix A: Codebook

Root & sub codes

1. Values and priorities as a housing provider
    a. Affordability
    b. Environmental goals
    c. Housing accessibility
    d. Financial sustainability
    e. Self-sufficiency
2. Tenants' needs and priorities
    a. Health
    b. Economic prosperity
    c. Social well-being
3. Energy services/ energy efficiency benefits
    a. Cooling
    b. Heating
    c. Healthy indoor quality
    d. Mobility
    e. Asset lifespan/building durability
    f. Mechanical system reliability and performance
    g. Operational and maintenance cost reduction
4. Energy efficiency project implementation
    a. Energy support services: coaching, information resources, project management, technical expertise, training, tenant/user training for mechanical upgrades, energy assessments, energy planning
    b. Access to contractors
    c. Regulations, policies, and procedures
    d. Tenant engagement
    e. Project lifecycle support: initiation to commissioning
    f. Utility-related challenges
5. Energy justice or lack thereof (presence of energy poverty)

    a. Energy bills
    b. Energy access
    c. Energy reliability
    d. Clean energy
6. Indigenous self-determination & reconciliation
    a. 4 pillars of Cultural safety: self-agency, relationship, trauma-informed care, reciprocity
    b. trauma-informed approaches
    c. Strengthening Indigenous procurement & workforce development
7. Human or material Capacity
    a. Housing provider access to resources, materials or staffing
    b. AHMA's capacity to support
8. Funding
    a. Funding access: process
    b. Funding sustainability: amount and timelines
    c. Funding reporting requirements
    d. Funding alignment: alignment with the housing provider's goals, priorities, and needs
9. Climate change mitigation
    a. GHG reduction
    b. Energy use reduction
    c. Electrification
10. Climate change adaptation
    a. Organizational Preparedness against climate emergencies
    b. Infrastructure readiness against climate emergency
    c. Climate Resilience
    d. Type of climate emergency
11. AHMA's role in energy efficiency
12. Energy sufficiency
13. Energy, climate, and asset data
    a. Indigenous data sovereignty

b. Indigenous data ownership and control
c. Evidence-based and fact-based climate emergency response: collecting data on hazards to make energy efficiency projects successful
d. Access to utility data

14. Relationships and community building

Appendix B: Interview Questions

Urban Indigenous Housing Provider Interviews – Sample Questions

- What are your values and priorities as an Indigenous housing provider?
- What are your tenants' top priorities and needs regarding well-being and cultural safety?
- What are your tenants' top priorities and needs regarding energy services? (heating, cooling, lighting, healthy indoor air, mobility, etc.)
- Do you see an alignment between energy efficiency projects and your tenants' priorities?
- Do you see an alignment between energy efficiency projects and your priorities as a housing provider?
    - Examples: financial sustainability, environmental goals, housing accessibility and affordability goals, etc.
- How do you ensure your buildings are culturally safe?
- How do you keep energy bills affordable for your tenants?
- Is energy poverty an issue for your tenants?
- How do you conserve energy?
- What type of support do you need to reduce energy consumption?
- Have you ever tried to implement any energy efficiency measures?
    - If yes to the above: (more specific examples: how has it been in terms of accessing funding, contractors, regulatory aspects, etc.)?
    - If no, what were the barriers that stopped you?
- How can funders provide more sustainable support to Indigenous-led energy retrofit projects?
- How do you prepare for emergencies, especially climate emergencies?

Cultural safety, trauma-informed approach to energy management

- What does cultural safety mean to you and your work/organization?
- How, if at all, do you meaningfully center cultural safety in your work/organization?
- What does a trauma-informed approach look like in your work/organization?

If time permits/optional:

- What are the barriers to reducing energy consumption and GHG emissions?

- What supports do you need to pursue energy retrofit projects, energy conservation, or GHG reductions?
- What role should AHMA play in supporting Indigenous housing providers to reduce energy consumption and GHG emissions?

External Partner Interviews – Sample Questions

Energy efficiency programs, capacity, and funding

- What is the purpose of the funding program(s) supporting Urban Indigenous energy efficiency initiatives?
- Why are utilities funding energy conservation initiatives within Urban Indigenous and other housing sectors? (because of your mandate, environmental targets, demand side management, etc.)
- What role can the Urban Indigenous housing sector play to better align with your purpose/goals/mandate? And what would be the value of that alignment?
- Are environmental sustainability goals in tension with housing and energy affordability?
- How can funders provide more sustainable support to Indigenous-led energy projects?
- What are the barriers to meaningfully engaging with Indigenous communities during the design of energy efficiency programs?
- How do you envision integrating equity, well-being, thermal comfort, and cultural safety into energy efficiency programs and energy management?

Energy management plan, decolonization, Indigenous self-determination

- How can energy management support reconciliation with Indigenous Peoples?
- Do energy retrofit projects improve thermal comfort, well-being, and energy services for housing providers? If so, in what ways? If not, why?
- AHMA is working to develop a strategic energy management plan. How can your organization support its development and implementation?

Cultural safety, trauma-informed approach to energy management

- What does cultural safety mean to you and your work/organization?
- How, if at all, do you meaningfully center cultural safety in your work/organization?
- What does a trauma-informed approach look like in your work/organization?

- Do you have experience with energy management and/or energy efficiency projects that center cultural safety in their approach?

Optional/if time permits:

- Do you track how many Indigenous non-profit organizations access your funding programs?
    - What are the statistics of Indigenous uptake vs. non-Indigenous uptake?
- How can your programs reduce the administrative burden on non-profit Indigenous housing providers?

Appendix C: Survey Questions

Survey Introduction

The Engagement and Technical Services Team at AHMA is developing an Indigenous-led Strategic Energy Management Plan (SEMP) to support Urban Indigenous housing providers across BC on their energy retrofit journey. The SEMP will guide our members to more effectively adopt energy efficiency measures, reduce costs and GHG emissions, strengthen climate resilience, and maintain a healthy, safe, and culturally grounded housing portfolio.

We are in the early stages of engagement with members and employees. Your input is essential. AHMA employees have unique insight into members' priorities, cultural safety needs, regional realities, challenges and opportunities. Your responses will directly shape a plan that is practical, doable, culturally safe, and responsive to what members truly need.

All responses are confidential and will only be reported in an anonymous, aggregated form. No names, roles, or identifying details will appear in any report or publication.

Participation is voluntary. You may skip questions or exit at any time.

Thank you for contributing your time and knowledge. Your voice will help ensure the SEMP reflects AHMA's values, Indigenous knowledge systems, and the priorities of the Urban Indigenous housing sector.

Section A — AHMA team & service region

1. **Your AHMA role/team** *(Choice; Required)*
    a. Asset Strategies (Capital/Asset/Condition/Energy)
    b. Health & Revitalization / Complex Care
    c. Housing Operations
    d. Training & Evaluation
    e. Policy & Research
    f. Public Affairs / Government Relations / Partnerships
    g. Finance/Administration
    h. Other (please specify)
2. **Regions you primarily support** *(Multiple choice; Optional)*
    a. Northern BC

b. Thompson Okanagan

c. Vancouver Island

d. Vancouver Coastal

e. Fraser Valley

f. Province-wide

g. Other (specify)

h. Prefer not to answer

Section B — Member priorities & alignment

3. **Top three priorities among the housing providers you serve** *(select your top 3 choices)*

    a. Housing affordability

    b. Financial sustainability of the Society

    c. Tenant well-being and safety

    d. Housing accessibility

    e. Expansion of housing portfolio

    f. Holistic asset management

    g. Environmental sustainability

    h. Climate resilience

    i. Indigenous cultural restoration

    j. Self-sufficiency (reduced dependency on external systems)

    k. Other (please specify)

4. **For the priorities you selected above, how well do energy efficiency projects support each one?** (Only show the rows they selected in Q3. Matrix; scale = Not at all • A little • Moderately • Significantly • Completely)

a. Housing affordability

b. Financial sustainability of the Society

c. Tenant well-being and safety

d. Housing accessibility

e. Expansion of housing portfolio

f. Holistic asset management

g. Environmental sustainability

h. Climate resilience

i. Indigenous cultural restoration

j. Self-sufficiency

k. Other (please specify)

Section C — Cultural safety & trauma-informed practice

(Grounded in AHMA's cultural safety and trauma-informed frameworks and Four Pillars: self-agency, relationship, trauma-informed care, reciprocity.)

5. **How do housing providers ensure cultural safety for tenants? (Select all that apply)**

   a. Including Elders/Knowledge Keepers in decision-making
   b. Facilitating ceremony and land-based practices
   c. Incorporating Indigenous design elements in buildings
   d. Offering staff training on cultural safety
   e. Providing trauma-informed and culturally safe service environments
   f. I do not know.
   g. Other (please specify)

6. **What does cultural safety mean in your day-to-day work?**

   Please rate your level of agreement with the following statements:

   (Scale: Strongly disagree → Disagree → Neutral → Agree → Strongly agree)

   a. I incorporate Indigenous worldviews or teachings into my work.

b. I build relationships with housing providers in ways that respect cultural protocols.
c. I integrate trauma-informed approaches into my work.
d. I actively reflect on my own role, positionality, identity, and biases.
e. I strive to create spaces where my teammates and those whom I serve feel safe to express cultural identity.
f. I am unsure.
g. Please expand on your answers above. *(Open text)*

Section D — Energy services & capacity

7. **Which energy-related services would most benefit housing providers? (Select your top 3 choices)**
    - **a.** Energy coaching
    - **b.** Funding application support
    - **c.** Technical expertise
    - **d.** Energy studies & assessments
    - **e.** Portfolio energy planning & decarbonization roadmaps
    - **f.** Commissioning, Monitoring & Verification
    - **g.** Procurement & contract selection
    - **h.** Organizational training mechanical upgrades
    - **i.** Tenant/user onboarding and support for mechanical upgrades
    - **j.** Other (please specify).
8. **To what extent do energy management and energy retrofit measures improve the following outcomes for members and tenants?**

Response scale:

Not at all → A little → Moderately → Significantly → Extremely

Matrix items:

a. Thermal comfort (heating/cooling)
b. Indoor air quality (e.g., protection against wildfire smoke, mold, etc.)

c. Social and mental well-being (sense of Belonging, community, and pride in one's home)
d. Affordability for tenants
e. Reduction in operational & maintenance costs
f. Mechanical system reliability and performance
g. Asset lifespan/building durability
h. Reduced unit turnover
i. None of the above.
j. Other (please specify)

Section E — Reconciliation, decolonization & self-determination

9. How important are the following Indigenous self-determination principles for shaping AHMA's Strategic Energy Management Plan (SEMP)?

Response scale:

Not important • Somewhat important • Important • Very important • Essential

Governance Principles

a. Direct involvement and leadership from Indigenous leaders, Elders and/or Knowledge Keepers
b. Meaningful engagement with Urban Indigenous housing providers
c. Trauma-informed design principles & centering the Four Pillars of Cultural Safety (self-agency, relationship, trauma-informed care, reciprocity)
d. Other (please specify)

Outcome-based Pathways

a. Advancing Indigenous self-determination in energy decisions
b. Empowering self-sufficiency for housing providers
c. Supporting climate resilience for Indigenous communities
d. Ensuring Indigenous data sovereignty in energy data
e. Access to affordable energy
f. Access to a reliable energy source
g. Access to a clean energy source (i.e., solar, wind, hydroelectric, rather than fossil fuel)
h. Strengthening Indigenous procurement & workforce development

i. Other (please specify)

Section F — Climate resilience & emergency readiness

10. Climate risks & resilience needs

a. **Part A — Select the top 2 climate hazards affecting your sites/members.**

1. Extreme heat
2. Wildfire and smoke
3. Winter storms/outages
4. Riverine and coastal Flooding
5. Drought/water scarcity
6. Earthquake
7. Other (please specify)

b. **Part B — Which resilience capabilities should a SEMP prioritize?**

(Select top 3)

1. Organizational readiness in the face of emergencies (Emergency Management plans, Continuity of operations, Member staff training, etc.)
2. Tenant-centered preparedness (resilience hubs to shelter in place, displacement planning, etc.)
3. Hazard-informed capital planning (climate-informed siting and design)
4. Emergency readiness of infrastructure through capital renewal projects such as mechanical upgrades (installation of heat pumps, addition of cooling, energy generation, energy storage, etc.)
5. Other (please specify)

Section G — Data sovereignty & reporting

11. **Which data governance practices must apply to energy/asset data? (Select all that apply)**

"Please respond based on your current understanding; detailed knowledge is not required."

a. AHMA-defined Indigenous data sovereignty protocols (OCAP-aligned)
b. Indigenous-controlled data platforms
c. Establishing clear Indigenous ownership of energy data

d. Other (please specify)

Section H — Funding, program design & policy

12. To what extent do the following barriers limit the effectiveness of energy incentives and funding programs for Urban Indigenous housing providers?

Matrix scale:

Not a barrier • Minor barrier • Moderate barrier • Significant barrier • Critical barrier

Rows:

a. Eligibility rules
b. High administrative / reporting burden
c. Insufficient funding
d. Insufficient cultural-safety requirements
e. One-size-fits-all offers
f. Lack of Indigenous or community-based delivery partners
g. Unrealistic project delivery timelines
h. Federal, provincial, and/or Municipal regulations
i. Other (please specify)

13. How important are the following supports and funding mechanisms for enabling energy efficiency projects and Energy Management for AHMA's members?

Response scale (columns):

Not important • Somewhat • Important • Very important • Essential

Matrix rows

Funding Mechanisms

a. Multi-year predictable funding
b. Upfront capital funding (not reimbursement)
c. Rapid-access / small-grant streams
d. Indigenous-specific funding streams (i.e., clear inclusion of funding for trauma-informed practices)
e. Portfolio-wide or multi-site applications
f. Funding for tenant supports during construction
g. Other (please specify)

Implementation Supports

a. capacity-building for housing providers (e.g., energy coaching, climate change literacy, asset management training, etc.)
b. Technical studies (Building Condition Assessments, energy audits)
c. Data tools and dashboards
d. Commissioning support
e. Tenant engagement support
f. Other (please specify)

Other (specify)

"Please tell us about your experience accessing funding and delivering energy-efficiency or capital upgrade projects."

14. Have you had experience with capital or energy-efficiency projects in your work at AHMA?

a. Yes – go to next question (Q19)
b. No – skip to next section

15. Thinking about the projects you've been involved with, how important are the following improvements to strengthen data collection on energy systems, health indicators, and climate-change impacts across member portfolios?

Scale: Not important • Somewhat important • Important • Very important • Essential

a. Standardized data-collection tools/templates
b. Integration between energy, housing, and health datasets
c. Improved asset and energy-system inventories
d. Tracking tenant-level health outcomes related to housing/energy
e. Climate-risk monitoring (heat events, wildfire smoke, outages, floods)
f. Real-time or automated data systems (sensors, monitoring devices, dashboards)
g. Staff training on data collection & interpretation
h. Other (please specify)

16. Have you attempted to access energy-efficiency funding in the last 5 years?

a. Yes – successfully
    1. **How important were the following factors in your funding success?**
    Scale: Not important • Somewhat • Important • Very important • Essential
    Rows:

i. Funding flexibility
ii. Reasonable reporting requirements
iii. Internal staff capacity
iv. Partner support (BCNPHA, consultants, etc.)
v. Availability of technical data (BCA, energy audit)
vi. Vendor/contractor capacity
vii. Realistic timelines
viii. Other (specify)

b. Yes – but not successfully

1. What were the key barriers you faced? (select up to 5)

i. Application complexity
ii. Tight timelines
iii. Eligibility issues
iv. Lack of internal capacity
v. Project/assessment costs
vi. Absence of upfront payments
vii. Procurement challenges
viii. Vendor/contractor shortages
ix. Other (specify)

c. No – have not attempted

If "Yes (successful or not)" OR "No — have not attempted"

d. How severe are the following challenges in delivering energy efficiency or capital upgrade projects?

Scale: Not a challenge • Minor • Moderate • Major • Critical

Rows:

i. Funding limitations
ii. Resources & capacity constraints (AHMA team, contractors, society staffing)
iii. Cost/availability of studies (BCA, energy audit)

iv. Technological challenges (e.g., structural/electrical/hazmat constraints, design challenges, installation issues, etc.)
v. Commissioning & operations (system functionality, maintenance, warranties, servicing concerns, etc.)
vi. Tenant displacement/disruption
vii. Regulatory/permitting constraints
viii. Meeting Indigenous procurement/workforce goals
ix. Other (or open text to describe your top challenge)

Section I — Next steps

17. Is there anything else you would like to share, or do you think AHMA should consider when developing the Strategic Energy Management Plan? *(open text)*

Section J - Thank you page

"Thank you for your time—your insights will directly shape AHMA's Indigenous-led Strategic Energy Management Plan."