

Archetypes of Experiences with Energy Poverty in Canada

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Efficiency
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Carleton
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About Efficiency Canada

Efficiency Canada is the national voice for an energy-efficient economy. Our mission is to create a sustainable environment and better life for all Canadians by making our country a global leader in energy efficiency policy, technology, and jobs. Efficiency Canada is housed at Carleton University's Sustainable Energy Research Centre, which is located on the traditional unceded territories of the Algonquin nation. The views expressed, as well as any errors or omissions, are the sole responsibility of the authors.

About Create Climate Equity

Create Climate Equity is a not-for-profit that advocates for energy and climate policies and programs that are equitable, just, and effective for all. It achieves this through the delivery of energy efficiency programs and the incubation of innovative energy research and projects.



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Introduction

Energy poverty and housing vulnerability are critical issues affecting many Canadians. The lack of access to affordable, reliable, and modern energy services, coupled with inadequate housing conditions, can have severe consequences for individuals, families, and communities across the country. Improving energy efficiency can benefit these Canadians.

The goal of this project is to map out evidence on how energy poverty compounds existing vulnerabilities for Canadians, including housing and health, while building capacity among key stakeholders to act on eliminating energy poverty. We expect the outcomes of this mapping project to lead toward more sophisticated and targeted energy efficiency policies and programs to alleviate energy poverty and associated vulnerabilities to health and housing.

Energy poverty, while a major concern, is not officially or uniformly defined in Canada. While there is significant international literature and emerging Canadian literature on energy poverty and its impacts, the links between energy poverty and housing vulnerability are not well understood in the Canadian context. Understanding how energy poverty and housing vulnerability interact can help diagnose the drivers, risks, and outcomes of the co-occurring problems, coordinate policy responses, and direct resources toward alleviating their negative impacts for all Canadians.

Viewing energy poverty and housing vulnerability as interconnected suggests the necessity of broadening programs to involve new actors, public funding sources, and frameworks, including those focused on affordability, equity, and the adequacy of the built environment. Energy efficiency programs aimed at reducing energy poverty can also address underlying vulnerabilities for Canadians most in need.

Energy poverty as a vulnerability

Energy poverty is a complex multifaceted phenomenon commonly understood to describe the situation where a household is unable to access adequate energy to maintain wellbeing at home. Energy poverty is typically considered to be caused by an interplay between unaffordability (low incomes and/or high energy costs) and poor housing conditions (such as inefficient, leaky homes). Energy poverty is largely experienced behind closed doors and conditioned by social practices, which makes it uniquely challenging to define, measure, and track the patterning of its intensity and prevalence.

Additionally, recent literature is calling attention to energy poverty as an expression of injustice, and a consequence of sociopolitical marginalization. Therefore, an emerging consensus in literature is calling for conceptualizing energy poverty as an uneven distribution of vulnerabilities, i.e. the potential of future harm due to a person or household's exposure and sensitivity to energy poverty, combined with their (in)capacity to adapt or to respond meaningfully to energy poverty.

As noted in our literature review of links between energy poverty, housing, and health,¹ there is also an increasing call for a more nuanced understanding of underlying factors that determine energy poverty and how they interact and overlap to have different impacts on different groups of people. The literature review shows that there is a growing need for targeted and decisive action to mitigate impacts on vulnerable communities by integrating energy poverty into wider social, economic, energy, climate, housing and social justice policy agendas so that interventions are fair, effective and aligned with people's daily lives. The review also notes the need for establishing clear policy goals and pathways for incorporating energy poverty and energy justice considerations while deploying housing-related interventions such as energy retrofits and refurbishments.

We respond to these calls by proposing a framework that conceptualizes energy poverty as the vulnerability to future housing-related harms, amplified by energy-related risk factors, and conditioned by a household's (in)ability to adequately respond.

¹ Kantamneni, A. 2024. Energy Poverty, Housing and Vulnerability in Canada. Efficiency Canada, Carleton University, Ottawa, ON.

Conceptual model

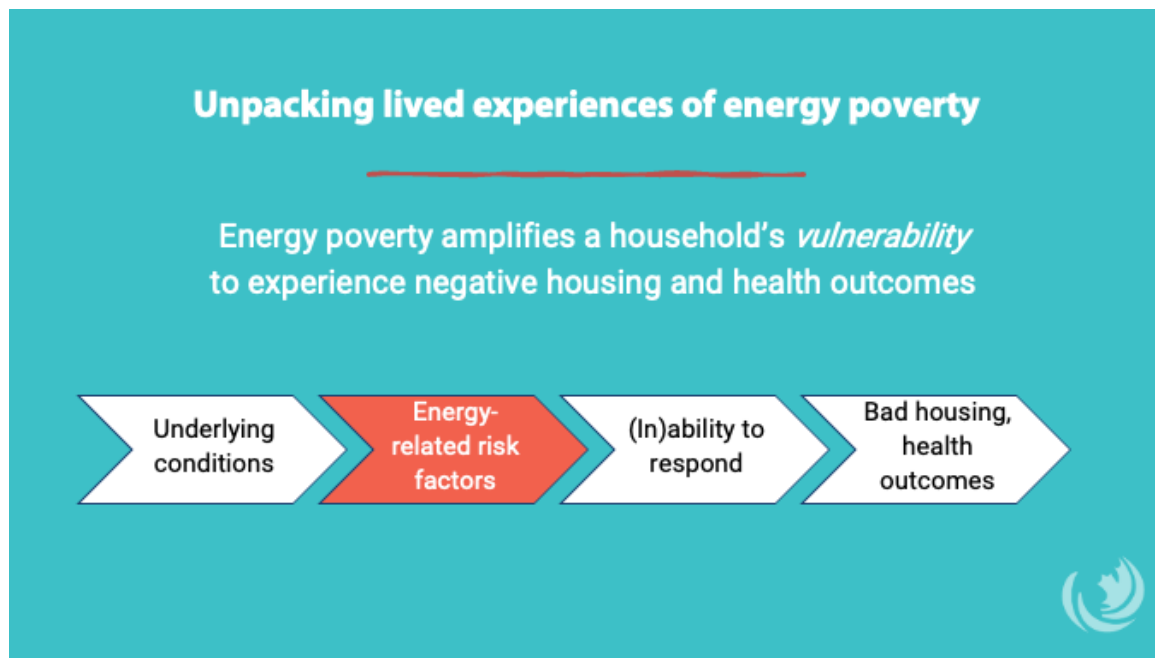


Figure 1: Conceptual framework of energy poverty as risk factors that amplify vulnerability to future housing-related harms

Underlying conditions

The underlying conditions are grouped into themes commonly regarded as determinants of energy poverty, and households may be experiencing any combination of these underlying factors in overlapping and intersectional ways.

Examples of underlying conditions include:

- **Affordability:** low incomes, single-earner households, precarious employment, fixed incomes, unstable incomes, cash-flow problems, high household debt, low disposable incomes, and high shelter costs. etc.
- **Poor housing conditions:** old leaky homes, inefficient heating, poor building envelope, housing needing repairs, lack of access to passive or active cooling, precarious housing, high shelter costs, inadequate housing, unsuitable housing,

overcrowding, poor ventilation, dampness and mould issues, structural damages, etc.

- **Systemic marginalization:** exclusion from policies (e.g. renters or those who live in multi-unit buildings are not included in most Canadian energy-efficiency initiatives), challenges navigating complex systems of support (e.g. newcomers who may face barriers learning about no-cost energy efficiency upgrades that are marketed in English or French), exclusion errors (e.g. households that self-ration energy use may not show up in common measures of energy poverty such as high energy cost burdens), etc.

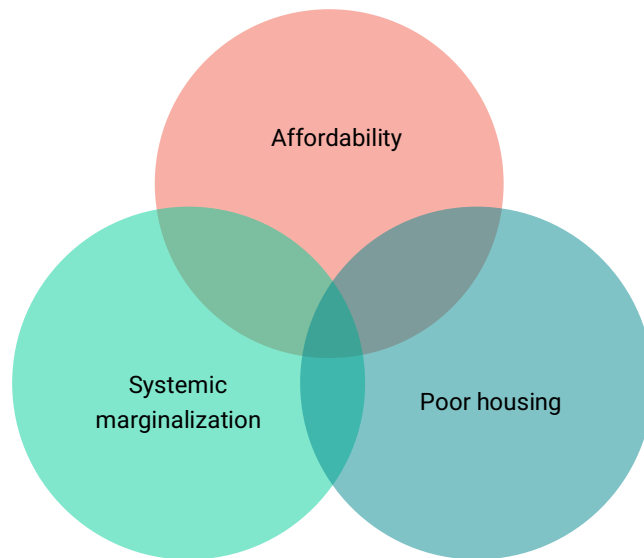


Figure 2: An intersectional look at underlying factors of energy poverty

This report will blend in underlying factors to develop archetypes of ‘user profiles’ to unpack their lived experiences with energy poverty.

Energy-related risk factors

Examples of energy-related risk factors could include but are not limited to high energy bills (chronic or acute, e.g. a single large unmanageable energy bill), disproportionate energy cost relative to income, high energy cost burdens, utility arrears, utility disconnections, disqualification from participation in energy efficiency programs for administrative reasons, using unregulated fuels for heating that require up-front

payment, such as propane or heating oil, heating/cooling system malfunction requiring emergency replacement, and so on.

Examples of the inability of a household to respond adequately could include but are not limited to a lack of access to cooling during extreme heat events, unable to prioritize energy efficiency upgrades due to other competing priorities, living in housing situations that preclude the ability to undertake comprehensive energy upgrades, such as renting or living in multi-unit buildings, unable to make time for housing upgrades due to caregiving responsibilities, unable to access qualified installers to upgrade to more efficient heating systems or improve building envelope due to rural and remote locations, and so on.

Examples of housing and health-related harms could include but are not limited to housing insecurity, housing vulnerability, unaffordable housing, unsuitable housing, eviction, foreclosure, poor cardiovascular health, respiratory illness, poor mental health, social isolation, risk of mortality due to extreme weather events, loss of dignity, emotional distress, unhealthy means of coping, and so on.

Inability to respond adequately

Some households with better access to resources may be able to respond to such risk factors with adequate measures such as improving the energy efficiency of their homes.

For some households, this may prove challenging. This could be due to cost barriers, some households may be unable to afford upfront costs. They could also have limited access to financing due to poor credit history or may be unwilling to go further into debt to access energy-efficient upgrades. Some households such as renters have limited control over their heating or cooling systems or may lack permission from their landlords to make cost-saving home energy upgrades. Some marginalized households may face uphill challenges navigating complex systems of support, for instance, seniors may have limited capacity to apply for programs delivered predominantly online. Traditional methods of program marketing and outreach strategies may exclude newcomers or minorities who may not follow legacy media like radio or television advertisements.

For some households, the measures they take to respond to these risks may prove counterproductive to their housing and health-related vulnerabilities in the long run. For example, some households may self-ration energy use by turning down thermostats or limiting heating to just one room. This may worsen underlying health conditions or cause problems to housing like condensation and mould indoors due to lack of adequate ventilation. For some households, self-rationing could mean cutting down on other essentials including making difficult choices between heating or eating. This could lead to negative health consequences due to a lack of nutritious food.

Vulnerable households may also experience depleted resilience, where resources such as time, money, mental energy, social capital, and information capacity may be depleted or exhausted in trying to cope with everyday life challenges, making it challenging to respond adequately to other external risks.

Impacts on health and housing

Households unable to adequately respond to risks can experience negative impacts on their health and housing. The prevalence and consequences of these impacts vary between individuals, households and communities. Negative housing impacts could include eviction or foreclosure due to missing energy bills or housing payments, going further in debt to pay for accumulating utility bills, living in housing that is inadequate to meet their health and well-being needs, service disconnections making their homes uninhabitable, deferring making necessary repairs to home and deferring maintenance, which could lead to poor housing quality in the long term.

Poor housing quality due to energy poverty can have downstream impacts on health and well-being. This can include worsening health conditions such as respiratory problems or cardiovascular illnesses, mental health issues due to stress and anxiety, worsening of chronic conditions such as arthritis, increased risks at home due to falls, or unsafe operation of heating equipment such as portable space heaters, increased risk of hypothermia or heat-related illness and death, social isolation from inability to leave homes due to discomfort or social stigma associated with inviting friends over in a house that is too hot or too cold, compromised immune systems due to nutritional deficiencies.

Summary

Energy poverty is a complex multifaceted phenomenon largely experienced behind closed doors, and each household's experiences with energy poverty may be unique. No single metric best summarizes how energy poverty shows up in the lives of Canadians. By clarifying specific examples under each category of underlying conditions, risk factors, and inability to respond adequately and impact future harms, we can construct archetypes or 'user profiles' that better reflect the heterogeneity of lived experiences with energy poverty.

This report uses qualitative user-profiles and associated evidence from academic and grey literature and Canadian Census data to unpack lived experiences of energy poverty. In doing so, this report explores how energy poverty may exert diverse and disproportionate impacts on different vulnerable Canadian communities.

The rest of the report is organized as follows. Each section features a 'user profile' sociodemographic community; seniors, individuals experiencing chronic illness or disabilities, newcomers and racialized households, rural households, and lone parent households. Each user profile begins with a qualitative narrative encapsulating the archetypal experience of the community with energy poverty, housing and health-related vulnerabilities. This is followed by evidence from Canadian and international research on underlying vulnerabilities, energy-related risks, factors affecting their inability to respond adequately to external risks, and negative impacts on health and housing.

The experiences of low-income Canadians and renters are not treated as a separate demographic group. Instead, low-disposable incomes and rentals are discussed as additional risk factors that exacerbate a household's inability to respond adequately to emergent risks.

This report is not meant to be an exhaustive documentation of all risks and vulnerabilities. Vulnerable communities are not a monolith and the diversity of their experiences with energy poverty may vary from individual to individual and from household to household.

It should be noted these qualitative user profiles are merely archetypes or profiles of experiences and are not based on any real individuals.

Seniors

Qualitative profile

In a quiet Canadian neighbourhood, J.S. and M.S., a retired couple, confront a dilemma that encapsulates a national issue: the housing challenges facing our aging population. Their family home, now showing signs of age and wear, is at the center of this quandary.

On one hand, the couple could choose to retire in place in their family home, the cornerstone of their social existence, and a place with thick ties with their community. Yet, the practicalities of maintaining an aging, poorly insulated property on a fixed income are becoming increasingly untenable.

The implications of their energy insecurity are profound:

Health risks: Living in poorly heated homes means an increased risk of hypothermia and worsening chronic illnesses. Cold indoor temperatures can also lead to reduced mobility, and increase the risk of falls and injury for the couple. The inability to maintain a comfortable living environment and the fear of rising energy bills can lead to stress, anxiety, and depression for seniors on fixed incomes. Without adequate access to cooling, extreme heat events can cause hospitalization, complications of pre-existing health conditions, and increased mortality rates.

Financial risks: The harsh winters drive up heating costs, threatening to outstrip their budget constrained by retirement savings and limited government transfers. Investing in major home upgrades could offer long-term relief, but the upfront costs are prohibitive. Their home equity represents a significant portion of their net worth, yet it is largely inaccessible due to the lending climate in Canada, which often leaves retirees like them, those with modest pensions and less favourable credit ratios, out in the cold.

An alternative to retiring in place is downsizing and tapping into the equity of their home by moving into a smaller, more manageable rental property. However, this route is fraught with its own set of uncertainties associated with housing market challenges: loss of community and belonging, dealing with the volatility of the rental market and

potential loss of control over living conditions and future energy expenses. The couple also worry that rental housing without adequate cooling can put them at increased risk of heat-related illness or death during extreme weather events.

J.S. and M.S.'s predicament is a microcosm of a larger issue facing Canadian seniors: the twin problems of energy poverty and housing insecurity. It calls for the need for innovative housing and energy solutions that can ensure the well-being of an aging population, offering senior households ample choices between aging-in-place or relocation to housing that better suits their needs. It is a reminder that adequate indoor temperatures across seasons are not a luxury, but a basic necessity that should be accessible to all, regardless of age or income.

Evidence

Underlying conditions:

- Many older Canadians are living with core housing needs. In other words, they live in inadequate, unsuitable, or unaffordable housing. An estimated one in five of all senior homeowners and more than half of senior renters are in this situation. Nearly two in three renters who are 85 years or older experience core housing needs.²
- One-third of Canadian seniors who rent or pay mortgages are having trouble making ends meet.³
- Older Canadians regard energy efficiency as one of the most important factors that determine satisfaction with their homes.⁴ However, older adults also

² CMHC. 2020. "Housing for Older Canadians: The Definitive Guide to the Over-55 Market - Understanding the Market." https://publications.gc.ca/collections/collection_2020/schl-cmhc/NH15-295-1-2020-eng.pdf.

³ Bierman and Lee. 2022. "One-Third of Canadian Seniors Who Rent or Pay a Mortgage Are Struggling to Pay Their Bills." February 21, 2022. <https://theconversation.com/one-third-of-canadian-seniors-who-rent-or-pay-a-mortgage-are-struggling-to-pay-their-bills-176122>.

⁴ Cheng, S. 2023. "Dwelling satisfaction among older adults: Dwelling characteristics and their influence on satisfaction". *Insights on Canadian Society*. September. Statistics Canada Catalogue no. 75-006-X. <https://www150.statcan.gc.ca/n1/pub/75-006-x/2023001/article/00010-eng.html>.

reported energy efficiency was among the least satisfying aspects of their current dwelling. This gap suggests more assistance with targeted support for energy efficiency may be necessary to improve dwelling satisfaction among older Canadians.

- Seniors are less likely to move out of their homes,⁵ which may reflect a desire to age in place and/or a lack of viable alternative housing that best suits their needs.

Energy poverty risk factors:

- **Low disposable incomes:** While the poverty rate of seniors in Canada is among the lowest in the world, a vast majority of seniors who are in poverty are women who live alone.⁶ Recent immigrants, single individuals, and renters are disproportionately represented among older Canadian adults with low incomes in retirement.⁷ Seniors from marginalized communities are also more likely to have lower retirement savings.⁸
- **Older homes:** Canadian seniors are more likely to live in older homes. Nearly three in four Canadians over the age of 65 live in a home built before the 1990s.⁹

⁵ CMHC. 2020. "Housing for Older Canadians: The Definitive Guide to the Over-55 Market - Understanding the Market." https://publications.gc.ca/collections/collection_2020/schl-cmhc/NH15-295-1-2020-eng.pdf.

⁶ McKinsey & Company. 2022. "What percentage of Canadian seniors have enough income to live adequately?" https://www.mckinsey.com/~media/mckinsey/dotcom/client_service/financial%20services/latest%20thinking/wealth%20management/what_percentage_of_canadian_seniors_have_enough_income_to_live_adequately.ashx.

⁷ Kei et. al. 2019. "Results from the 2016 Census: Examining the Effect of Public Pension Benefits on the Low Income of Senior Immigrants." <https://www150.statcan.gc.ca/n1/en/pub/75-006-x/2019001/article/00017-eng.pdf?st=4BCwLHo7>.

⁸ Block et. al. 2021. "An Intersectional Analysis of Retirement Income and Savings in Canada." [https://policyalternatives.ca/sites/default/files/uploads/publications/National Office/2021/06/Colour coded retirement.pdf](https://policyalternatives.ca/sites/default/files/uploads/publications/National%20Office/2021/06/Colour%20coded%20retirement.pdf).

⁹ 2016 Census of Population [Canada] Public Use Microdata File (PUMF).

- **High energy use:** Seniors find it harder than younger people to regulate their temperature, requiring more energy to stay comfortable indoors.^{10,11}

Inability to respond adequately:

- **Cost barriers:** Seniors may be unable to pay up-front costs to access energy efficiency upgrades due to fixed incomes and lack of liquidity. The number of Canadian seniors in debt and the net amount of debt owed, including mortgage debt, is increasing.¹²
- **Depleted resilience:** An increasing number of Canadian seniors are living alone¹³ and facing mounting challenges navigating daily life. Loneliness and isolation compound barriers to participation, rendering the search for information about available resources and the effort needed to access them more challenging.¹⁴
- **Self-rationing:** Seniors are likely to self-ration energy use at home to reduce energy costs, and attempt to cope by using additional clothing, adjusting daily routines, and using smaller localized portable heating units. Research from the UK¹⁵ shows that such active coping mechanisms may be a conscious attempt to balance the need to keep comfortable with the affordability of energy

¹⁰ Frederiks, Elisha R., Karen Stenner, and Elizabeth V. Hobman. "The socio-demographic and psychological predictors of residential energy consumption: A comprehensive review." *Energies* 8.1 (2015): 573-609. <https://doi.org/10.3390/en8010573>.

¹¹ Großmann, Katrin, and Antje Kahlheber. "Energy poverty in an intersectional perspective: on multiple deprivation, discriminatory systems, and the effects of policies." *Energy poverty and vulnerability*. Routledge, 2017. 12-32.

¹² Uppal, Sharanjit. 2019. "Debt and assets among senior Canadian families". *Insights on Canadian Society*. April. Statistics Canada Catalogue no. 75-006-X. <https://www150.statcan.gc.ca/n1/pub/75-006-x/2019001/article/00005-eng.htm>.

¹³ CTVNews, dir. 2023. "Unprecedented Growth among Canada's Senior Population Will Mean Shift in Housing Needs: Experts." *CTVNews*. <https://www.ctvnews.ca/canada/unprecedented-growth-among-canada-s-senior-population-will-mean-shift-in-housing-needs-experts-1.6669611>.

¹⁴ Report on the Social Isolation of Seniors, National Seniors Council, <https://www.canada.ca/en/national-seniors-council/programs/publications-reports/2014/social-isolation-seniors/page05.html>.

¹⁵ Chard, Rose, and Gordon Walker. "Living with fuel poverty in older age: Coping strategies and their problematic implications." *Energy Research & Social Science* 18 (2016): 62-70. <https://doi.org/10.1016/j.erss.2016.03.004>.

consumption, however, it calls to question whether such adaptive behaviours are a choice or almost a survival necessity. Coping mechanisms may both be a legitimate yet problematic response to energy poverty, particularly in light of the well-documented risks of inadequate indoor temperatures for seniors.¹⁶

- **Challenges navigating complexity:** Seniors have challenges navigating the programs' complex systems of support. In the US, nearly \$30B of money-saving public benefits are left unclaimed by seniors due to barriers such as lack of awareness of programs, assumption of complicated application process and being unsure of how and where to apply.¹⁷ Seniors in Canada are less likely to use the internet to access critical services, supports, and resources. This digital divide is more pronounced for disadvantaged seniors in Canada; those with less education, living alone, or reporting poor health.¹⁸
- **Unable to assume additional debt:** The number of Canadian seniors in debt and the net amount of debt owed, is increasing. Debt for seniors can be challenging as repayments can be more difficult on reduced incomes. While debt-to-income ratios have increased, debt-to-asset ratios have remained relatively stable for seniors. This means that some groups of seniors, such as those with lower levels of education, are unable to use housing as collateral to finance necessary home upgrades. For these seniors, borrowing more debt with limited means to repay it means financial vulnerability, delayed retirements, and reduced well-being.¹⁹
- **Limited control:** One in four Canadian seniors are renters and have limited ability to make energy efficiency upgrades to their dwellings.²⁰ Renters may not be

¹⁶ van Hoof, Joost, et al. "Ten questions concerning thermal comfort and ageing." *Building and Environment* 120 (2017): 123-133. <https://doi.org/10.1016/j.buildenv.2017.05.008>.

¹⁷ Alwin, Ramsey, and Brandy Bauer. 2024. "Why Do Older Adults Miss Out on Financial Benefits?" April 4, 2024. <https://www.ncoa.org/article/30-billion-left-on-the-table-connecting-more-older-adults-with-money-saving-public-benefits>.

¹⁸ Government of Canada, Statistics Canada. 2019. "Evolving Internet Use Among Canadian Seniors." July 10, 2019. <https://www150.statcan.gc.ca/n1/pub/11f0019m/11f0019m2019015-eng.htm#a10>.

¹⁹ Uppal, Sharanjit. 2019. "Debt and assets among senior Canadian families". *Insights on Canadian Society*. April. Statistics Canada Catalogue no. 75-006-X. <https://www150.statcan.gc.ca/n1/pub/75-006-x/2019001/article/00005-eng.htm>.

²⁰ Canada, Employment and Social Development. 2021. "Report on Housing Needs of Seniors". <https://www.canada.ca/en/employment-social-development/corporate/seniors/forum/report-seniors-housing-needs.html>.

permitted by their landlords to install mechanical cooling (air conditioning), which leaves them vulnerable to extreme heat events.

Negative impacts on housing:

- **Eviction or foreclosure:** Seniors may allocate a larger portion of their income to energy bills, leaving less money available for rent, mortgage payments, property taxes, and maintenance. Affordability challenges are the primary driver of eviction for senior tenants.²¹
- **Debt accumulation:** To cope with energy poverty, some seniors may resort to credit cards or loans, leading to debt accumulation.²² Over time, this can erode their credit scores, making it difficult to secure housing in the future or negotiate better terms on mortgages or rent.²³
- **Inadequate housing:** Energy poverty may force seniors to move to less expensive, and potentially less safe or less comfortable housing. However, concerns about ending up in areas with fewer amenities and social services, increasing their isolation and reducing their quality of life, are among the reasons why Canadian seniors are less likely to move out of their homes.²⁴ Many seniors want to age in place, even if their current place is not adequate to meet their changing needs as they age.²⁵

²¹ CMHC (2022) Evictions: Focus on Seniors and Older Adults: <https://www.cmhc-schl.gc.ca/professionals/housing-markets-data-and-research/housing-research/research-reports/housing-needs/research-insight-evictions-focus-seniors-older-adults>.

²² Age UK. 2023. "Millions of Older People Borrowing Money, Using Credit and Not Able to Pay Bills Due to the Cost of Living Crisis." Age UK. July 4, 2023. <https://www.ageuk.org.uk/latest-press/articles/2023/millions-of-older-people-borrowing-money-using-credit-and-not-able-to-pay-bills-due-to-the-cost-of-living-crisis/>.

²³ Renting with bad credit, CMHC <https://www.cmhc-schl.gc.ca/consumers/renting-a-home/i-want-to-rent/credit-checks-and-bad-credit>.

²⁴ CMHC. 2020. "Housing for Older Canadians: The Definitive Guide to the Over-55 Market - Understanding the Market." https://publications.gc.ca/collections/collection_2020/schl-cmhc/NH15-295-1-2020-eng.pdf.

²⁵ Charlene Sadler, dir. 2020. "Seniors Find New Ways to Stay Put in Their Homes." <https://www.cbc.ca/cbcdocspov/features/seniors-find-new-ways-to-stay-put-in-their-homes>.

- **Energy arrears leading to service disconnection:** Seniors struggling to pay their energy bills may face disconnection of services, which can make a home uninhabitable. This could lead to temporary homelessness or the need to move into assisted living facilities prematurely. In recognition of the unique needs of seniors for continuous energy services, many states in the US have specific protections against utility disconnections specifically for seniors.²⁶
- **Reduced home maintenance:** To deal with energy poverty, seniors might defer home maintenance, which can lead to a decline in home value and conditions that are unsafe or that exacerbate health issues (like mould from unrepaired leaks or poor heating systems). While several provinces²⁷ offer home renovation grants for seniors, energy efficiency upgrades like insulation and air-sealing are typically not considered an eligible age-related upgrade. Low-income energy efficiency programs in Canada also do not provide non-energy but essential health and safety upgrades like mould removal or structural repairs.²⁸

Negative impacts on health and well-being:

- **Increased risk of respiratory problems:** Cold and damp homes can lead to the development or exacerbation of respiratory problems, including pneumonia and chronic obstructive pulmonary disease (COPD), which are particularly dangerous for seniors.²⁹
- **Cardiovascular stress:** Cold temperatures can increase blood pressure and the risk of cardiovascular events. Cold environments can lead to an increased

²⁶ Carley et al. 2023. "Electric Utility Disconnections: Legal Protections & Policy Recommendations." Energy Justice Lab. <https://utilitydisconnections.org/doc/electric-utility-disconnections-legal-protections-and-policy-recommendations.pdf>.

²⁷ HomeEquity Bank. 2019. "Government Grants for Seniors Canada | HomeEquity Bank." *CHIP* (blog). March 15, 2019. <https://www.chip.ca/reverse-mortgage-resources/retirement-planning/government-of-canada-benefits-and-grants-for-seniors/>.

²⁸ Kantamneni, A., & Haley, B. (2022). Efficiency for All: A review of provincial-territorial low-income energy efficiency programs with lessons for federal policy. Efficiency Canada, Carleton University, Ottawa, ON.

²⁹ Ballesteros-Arjona, Virginia, et al. "What are the effects of energy poverty and interventions to ameliorate it on people's health and well-being?: A scoping review with an equity lens." *Energy Research & Social Science* 87 (2022): 102456.

incidence of hypertension, heart attacks, and strokes, particularly among the elderly who are more vulnerable to temperature variations.³⁰

- **Mental health issues:** Energy poverty can lead to stress, anxiety, and depression due to the financial strain and the discomfort of living in a poorly heated or cooled environment.³¹
- **Worsening of chronic conditions:** Seniors often have chronic health conditions like arthritis that can be worsened by living in homes that are too cold or too hot.³²
- **Increased risk of falls and injuries:** Cold homes can lead to decreased mobility in seniors, increasing the risk of falls, which can lead to serious injuries or even fatalities.³³ Excess indoor temperatures due to lack of adequate access to cooling, particularly during extreme heat events, can reduce mobility and increase the risk of falls and injury.³⁴
- **Hypothermia and heat-related illnesses:** Seniors are particularly susceptible to hypothermia, as their bodies may have a diminished ability to regulate temperature.³⁵ Similarly, during heat waves, seniors are at a higher risk for heat

³⁰ Churchill, Sefa Awaworyi, and Russell Smyth. "Energy poverty and health: Panel data evidence from Australia." *Energy economics* 97 (2021): 105219.

³¹ Bentley, Rebecca, et al. "The effect of energy poverty on mental health, cardiovascular disease and respiratory health: a longitudinal analysis." *The Lancet Regional Health–Western Pacific* (2023).

³² Marmot, Michael. 2020. "Health Equity in England: The Marmot Review 10 Years On." <https://www.bmj.com/lookup/doi/10.1136/bmj.m693>.

³³ García-Esquinas, Esther, et al. "Housing conditions and limitations in physical function among older adults." *J Epidemiol Community Health* 70.10 (2016): 954-960.

³⁴ Lindemann, Ulrich, et al. "Effect of indoor temperature on physical performance in older adults during days with normal temperature and heat waves." *International journal of environmental research and public health* 14.2 (2017): 186.

³⁵ CDC. 2021. "Prevent Hypothermia & Frostbite." 2021. <https://www.cdc.gov/disasters/winter/staysafe/hypothermia.html>.

stroke and other heat-related illnesses³⁶ – see the full discussion on the disproportionate impact of extreme heat on Canadian seniors.³⁷

- **Compromised immune system:** Studies from the European Union countries show that poor housing conditions resulting in cold temperatures indoors suppress the immune system, making seniors more susceptible to infections and illnesses such as cold and flu.³⁸
- **Nutritional deficiencies:** Some seniors in energy poverty may cut back on food spending to pay their energy bills, leading to nutritional deficiencies, which can have severe health implications for seniors who need a balanced diet to manage health conditions.³⁹
- **Social isolation:** High energy costs can lead to social isolation if seniors are unable or unwilling to leave their homes due to discomfort or the inability to invite guests into a home that is too cold or too hot. Social isolation is widely regarded as the number one emerging issue facing seniors in Canada.⁴⁰
- **Vulnerability to scams:** Financially stressed seniors may be more susceptible to scams promising energy savings or financial relief, which can further jeopardize

³⁶ National Institute on Aging. n.d. "Hot Weather Safety for Older Adults." National Institute on Aging. Accessed April 16, 2024. <https://www.nia.nih.gov/health/safety/hot-weather-safety-older-adults>.

³⁷ Eady, Allison, Bianca Dreyer, Brandon Hey, Manuel Riemer, and Anne Wilson. 2020. "Reducing the Risks of Extreme Heat for Seniors: Communicating Risks and Building Resilience." *Health Promotion and Chronic Disease Prevention in Canada* 40 (7/8): 215–24. <https://doi.org/10.24095/hpcdp.40.7/8.01>.

³⁸ Oliveras, et al.. "Energy poverty and health: Trends in the European Union before and during the economic crisis, 2007–2016." *Health & Place* 67 (2021): 102294. <https://doi.org/10.1016/j.healthplace.2020.102294>.

³⁹ Porto Valente, Caroline, Alan Morris, and Sara J. Wilkinson. "Energy poverty, housing and health: the lived experience of older low-income Australians." *Building Research & Information* 50.1-2 (2022): 6-18.

⁴⁰ Canada, Employment and Social Development. 2017. "Social Isolation of Seniors - Volume 1: Understanding the Issue and Finding Solutions." Departmental performance report. February 22, 2017. <https://www.canada.ca/en/employment-social-development/corporate/partners/seniors-forum/social-isolation-toolkit-vol1.html>.

their financial and housing security. Scammers often target seniors living alone with promises of energy rebates and services.⁴¹

Individuals with chronic illness and disabilities

Qualitative profile

A.T. is a middle-aged individual living with multiple disabilities and chronic illnesses. Previously employed as an IT specialist, A.T.'s life shifted dramatically following a car accident that led to quadriplegia. The shift from a steady income to reliance on disability benefits has been fraught with difficulty, further complicated by chronic health conditions, including diabetes, which necessitates careful indoor temperature control for insulin storage.

A.T.'s residence is a modest and outdated rental apartment with poor insulation. The financial burden of utility bills takes up a disproportionate amount of A.T.'s limited resources, forcing difficult decisions regarding energy consumption. The home is equipped with necessary medical devices, such as an electric wheelchair, a pressure mattress, and a dialysis machine, all of which significantly increase electricity usage.

A.T.'s daily life is dominated by a perpetual struggle to balance disability management, well-being and energy costs. They are often compelled to make difficult choices between adequate nutrition and maintaining a comfortable indoor temperature. The need to keep medical devices operational means that heating and cooling are often neglected.

- **Health risks:** Inconsistent temperature regulation directly affects A.T.'s health. Cold weather has led to hospital admissions due to hypothermia, and extreme heat has resulted in heat exhaustion. These incidents disrupt their diabetes and

⁴¹ Government of Canada, Royal Canadian Mounted Police. 2012. "Seniors Guidebook to Safety and Security | Royal Canadian Mounted Police." March 28, 2012. <https://www.rcmp-grc.gc.ca/en/seniors-guidebook-safety-and-security>.

kidney disease management, leading to a repetitive pattern of health emergencies and convalescence.

- **Social and emotional risks:** Isolation is a significant issue for A.T., stemming from the inability to host visitors in an uncomfortably cold or hot home and the shame associated with visible signs of poverty. The constant worry over managing finances, health, and daily needs within the confines of energy poverty contributes to A.T.'s anxiety and depression.

To manage energy bills, A.T. employs rigorous budgeting, seeks community assistance, and participates in energy aid programs. To cope with cold winters, A.T. layers clothing and, during sweltering summers, resorts to using cold packs to offset the lack of air conditioning. However, these measures are often not enough or lack consistency, leaving A.T. in a precarious living situation.

A.T.'s circumstances highlight the intersectional relationship between disability, chronic illness, energy poverty and housing insecurity. It emphasizes the need for support systems that can address the built environment, health, well-being and energy costs affecting the quality of life for Canadians with disabilities and chronic illness.

Evidence

Underlying housing vulnerabilities:

- Over 20 per cent of Canadians live with a disability, and this figure is likely to increase due to an aging population,⁴² This highlights the necessity for more and better-quality accessible housing that meets their needs. However, individuals with disabilities often face challenges in finding suitable residences that cater to

⁴² Scotiabank. 2022. "Numbers That Cannot Be Ignored: Exploring Disability and Labour Force Participation In Canada." Insights & Views. November 30, 2022. <https://www.scotiabank.com:443/content/scotiabank/ca/en/about/economics/economics-publications/post.other-publications.insights-views.disabilities-and-labour-markets--november-30--2022-.html>.

their specific accessibility requirements. Canadians experiencing disabilities, particularly renters, are getting left behind in Canada's housing markets.⁴³

- More than half of people with disabilities live in shared living arrangements, in boarding houses or with roommates who are not family members.
- Sixteen per cent of persons with disabilities live in households with core housing needs, compared to 10 per cent of the total population that experiences core housing needs. Canadians with disabilities are also more likely to live in housing needing major repairs and more likely to live in unaffordable housing.⁴⁴
- Persons with disability in Canada experience deplorable housing conditions, including long-term challenges with pests, rodents and units needing major repairs. Tight private rental markets and weak landlord recognition of tenant rights lead to disabled households being unable to secure a better standard of housing.⁴⁵

Energy poverty risk factors:

- **Low disposable incomes:** Poverty and disability are related. Canadians with disabilities are disproportionately unemployed or underemployed. Canadians with more severe disabilities live with incomes half of that of their peers without disabilities.⁴⁶ Canadians with disabilities are more likely to experience poverty -

⁴³ "CBC Explains | People with Disabilities Are Getting Left behind in Canada's Housing Crisis." 2023. *CBC*. <https://www.cbc.ca/player/play/1.6943284>.

⁴⁴ Council of Canadians with Disabilities. n.d. "As a Matter of Fact: Poverty and Disability in Canada | Council of Canadians with Disabilities." Accessed April 16, 2024. <http://www.ccdonline.ca/en/socialpolicy/poverty-citizenship/demographic-profile/poverty-disability-canada>.

⁴⁵ Government of Canada, Department of Justice. 2021. "Serious Problems Experienced by People with Disabilities Living in Atlantic Canada." December 2, 2021. <https://www.justice.gc.ca/eng/rp-pr/jr/pwdac-phca/index.html>.

⁴⁶ Scotiabank. 2022. "Numbers That Cannot Be Ignored: Exploring Disability and Labour Force Participation In Canada." Insights & Views. November 30, 2022. <https://www.scotiabank.com:443/content/scotiabank/ca/en/about/economics/economics-publications/post.other-publications.insights-views.disabilities-and-labour-markets--november-30--2022-.html>.

nearly one in three Canadians with disabilities live in poverty, compared to one in five for their counterparts without disabilities.⁴⁷

- **Older homes:** Canadians experiencing disabilities reported experiencing drafty and mouldy units with inadequate heating and ventilation.⁴⁸
- **High energy use:** People experiencing disabilities and chronic illness are unable to generate as much of their own heat compared to healthier peers. Underheating can significantly exacerbate health issues for disabled individuals or those with underlying conditions, often necessitating increased energy consumption for adequately managing the health effects.⁴⁹

Inability to respond adequately:

- **Cost barriers:** Energy efficiency improvements, such as upgrading insulation, windows, or heating systems, often require significant upfront investment. People experiencing disabilities may have limited savings or may have additional medical expenses, making it difficult to allocate funds for home improvements.⁵⁰
- **Depleted resilience:** Dealing with a disability can be physically and emotionally taxing, reducing an individual's capacity to handle additional challenges. Adults with disabilities report experiencing frequent mental distress almost five times as often as adults without disabilities.⁵¹ This depletion of resilience can make the prospect of undertaking home improvements seem overwhelming.

⁴⁷ Council of Canadians with Disabilities. n.d. "As a Matter of Fact: Poverty and Disability in Canada | Council of Canadians with Disabilities." Accessed April 16, 2024.

<http://www.ccdonline.ca/en/socialpolicy/poverty-citizenship/demographic-profile/poverty-disability-canada>.

⁴⁸ Government of Canada, Department of Justice. 2021. "Serious Problems Experienced by People with Disabilities Living in Atlantic Canada." December 2, 2021. <https://www.justice.gc.ca/eng/rp-pr/jr/pwdac-phca/index.html>.

⁴⁹ Snell, Carolyn, Mark Bevan, and Harriet Thomson. "Justice, fuel poverty and disabled people in England." *Energy Research & Social Science* 10 (2015): 123-132.

⁵⁰ McMaster, Geoff. 2020. "Canadians with Disabilities Face Barriers to Financial Security, Researchers Find." August 4, 2020. <https://www.ualberta.ca/folio/2020/08/canadians-with-disabilities-face-barriers-to-financial-security-researchers-find.html>.

⁵¹ CDC. 2023. "Mental Health for All." Centers for Disease Control and Prevention. November 20, 2023. <https://www.cdc.gov/ncbddd/disabilityandhealth/features/mental-health-for-all.html>.

- **Self-rationing:** Research from Scotland shows that disabled people are more likely to reduce their energy use under acceptable levels due to concerns about energy costs, and using the ‘energy budget’ instead to ensure their ability to use essential-for-life medical equipment.⁵²
- **Challenges navigating complexity:** Canadians experiencing disabilities report facing challenges accessing income and disability supports and other public programs due to rigid eligibility requirements and the complex landscape of funding programs.⁵³
- **Lack of trust:** Canadians experiencing disabilities or long-term conditions are also more likely to report low confidence in institutions and legacy media,⁵⁴ therefore, are less likely to access energy efficiency supports and programs that do not make targeted outreach efforts through networks they trust.
- **Unable to assume additional debt:** Inflation places additional pressure on people with disabilities, as costs for health care (prescriptions, supplies and equipment) – a considerable portion of expenses for Canadians – increased by approximately four per cent from 2022. A recent survey revealed that over half of Canadians with long-term conditions reported having difficulty meeting an existing financial obligation or were cutting back on essential needs.⁵⁵ Tighter household budgets amid record inflation may make it challenging for persons with disabilities to assume more debt to finance home energy improvements.
- **Limited control:** Two million Canadians with disabilities – or nearly one in three persons with disabilities – live in rental housing and have limited ability to make

⁵² Consumer Scotland. 2023. “Health, Disability and the Energy Crisis.” <https://consumer.scot/publications/health-disability-and-the-energy-crisis-html/>.

⁵³ Government of Canada, Department of Justice. 2021. “Serious Problems Experienced by People with Disabilities Living in Atlantic Canada.” December 2, 2021. <https://www.justice.gc.ca/eng/rp-pr/jr/pwdac-phca/index.html>.

⁵⁴ Government of Canada, Statistics Canada. 2024. “Confidence in Institutions and the Media, 2023.” February 13, 2024. <https://www150.statcan.gc.ca/n1/daily-quotidien/240213/dq240213a-eng.htm>.

⁵⁵ Government of Canada, Statistics Canada. 2022. “For Canadians with Disabilities, Another Housing Affordability Crunch.” August 9, 2022. <https://www.statcan.gc.ca/o1/en/plus/1548-canadians-disabilities-another-housing-affordability-crunch>.

energy efficiency upgrades to their dwellings.⁵⁶ A significant portion of disabled Canadians live with roommates, making it challenging for them to exercise control over energy use and by others they share the dwelling with.

Negative impacts on housing:

- **Eviction or foreclosure:** People with disabilities may allocate a larger portion of their income to energy bills due to energy use by essential medical equipment, leaving less money available for rent, mortgage payments, property taxes, and maintenance. Losing their home due to missed rent or mortgage payments can be particularly devastating for this group as it can mean losing a space that has been adapted to their needs, leading to further health and mobility challenges.⁵⁷
- **Debt accumulation:** To cope with energy poverty, persons with disability may resort to credit cards or loans, leading to debt accumulation.⁵⁸ Over time, this can erode their credit scores, making it difficult to secure housing in the future or negotiate better terms on mortgages or rent.
- **Inadequate housing:** Energy poverty for Canadians experiencing disabilities means tighter household budgets and limited options for securing housing conditions that better meet their health and well-being needs.
- **Energy arrears leading to service disconnections:** People experiencing disabilities struggling to pay their energy bills may face disconnection of services, which can mean cutting off access to life-saving medical equipment. In recognition of the unique energy needs and vulnerabilities of disabled people,

⁵⁶ Government of Canada, Statistics Canada. 2022. "Housing Experiences in Canada: Persons with Disabilities." June 10, 2022. <https://www150.statcan.gc.ca/n1/pub/46-28-0001/2021001/article/00011-eng.htm>.

⁵⁷ Reid, Luke. 2022. "Issues for Persons with Disabilities: Security of Tenure in Canada." https://homelesshub.ca/sites/default/files/attachments/Reid-issues_for_persons_with_disabilities-security_of_tenure.pdf.

⁵⁸ Terrio, Scott. n.d. "Drowning in Debt Is the New Normal in Canada." Macleans.Ca. Accessed April 16, 2024. <https://macleans.ca/news/canada/drowning-in-debt-is-the-new-normal-in-canada/>.

many states in the US have specific protections against utility disconnections specifically for people experiencing disabilities.⁵⁹

- **Reduced home maintenance:** Canadians experiencing disabilities and in energy poverty might defer home maintenance, which can lead to a decline in home value and conditions that are unsafe or that exacerbate health issues (like mould from unrepaired leaks or poor heating systems). Provinces like Ontario offer a modest monthly credit on electricity bills for people with disabilities, but limited support for long-term relief through improving energy efficiency. Low-income energy efficiency programs in Canada also do not provide non-energy but essential health and safety upgrades like mould removal or structural repairs.⁶⁰

Negative impacts on health and well-being:

- **Increased risk of respiratory problems:** Cold and damp homes can lead to the development or exacerbation of respiratory problems, which are particularly dangerous for people with certain disabilities.⁶¹
- **Cardiovascular stress:** Cold temperatures can increase blood pressure and the risk of cardiovascular events. Cold environments can lead to an increased incidence of hypertension, heart attacks, and strokes, particularly among people with disabilities who are more vulnerable to temperature variations.⁶²

⁵⁹ Carley et al. 2023. "Electric Utility Disconnections: Legal Protections & Policy Recommendations." Energy Justice Lab. <https://utilitydisconnections.org/doc/electric-utility-disconnections-legal-protections-and-policy-recommendations.pdf>.

⁶⁰ Kantamneni, A., & Haley, B. (2022). Efficiency for All: A review of provincial-territorial low-income energy efficiency programs with lessons for federal policy. Efficiency Canada, Carleton University, Ottawa, ON.

⁶¹ CDC. 2019. "Disability and Health Related Conditions | CDC." Centers for Disease Control and Prevention. September 9, 2019. <https://www.cdc.gov/ncbddd/disabilityandhealth/relatedconditions.html>.

⁶² Churchill, Sefa Awaworyi, and Russell Smyth. "Energy poverty and health: Panel data evidence from Australia." *Energy economics* 97 (2021): 105219.

- **Mental health issues:** Energy poverty can lead to stress, anxiety, and depression due to the financial strain and the discomfort of living in a poorly heated or cooled environment.⁶³
- **Worsening of chronic conditions:** Individuals experiencing disabilities may have chronic health conditions that can be exacerbated by cold or hot conditions. For example, cold environments can increase the pain and stiffness associated with rheumatoid arthritis, while excessive heat can worsen symptoms of multiple sclerosis.^{64, 65}
- **Hypothermia and heat-related illnesses:** Individuals experiencing disabilities are particularly susceptible to hypothermia, due to slower metabolisms and limited mobility.⁶⁶ Similarly, during heat waves, people with disabilities experience greater pain, fatigue and disorientation.⁶⁷
- **Compromised immune system:** Some disabilities can severely compromise an individual's immune system. Energy poverty can exacerbate these effects due to cold homes which increase the risk of experiencing illnesses such as flu and cold, as studies in the European Union demonstrate.⁶⁸
- **Nutritional deficiencies:** Energy poverty may compel Canadians experiencing disabilities to cut back on food spending, leading to nutritional deficiencies.

⁶³ Bentley, Rebecca, et al. "The effect of energy poverty on mental health, cardiovascular disease and respiratory health: a longitudinal analysis." *The Lancet Regional Health–Western Pacific* (2023).

⁶⁴ Baraniuk, Chris. 2022. "Energy Crisis: How Living in a Cold Home Affects Your Health." BBC.Com. November 7, 2022. <https://www.bbc.com/future/article/20221107-energy-crisis-how-living-in-a-cold-home-affects-your-health>.

⁶⁵ National MS Society. n.d. "Heat & Temperature Sensitivity." National Multiple Sclerosis Society. Accessed April 16, 2024. <https://www.nationalmssociety.org/Living-Well-With-MS/Diet-Exercise-Healthy-Behaviors/Heat-Temperature-Sensitivity>.

⁶⁶ United Disabilities Services. 2020. "Important Winter Safety Tips For People With Disabilities." December 22, 2020. <https://udservices.org/blog/winter-safety-tips-people-with-disabilities/>.

⁶⁷ Human Rights Watch. 2021. "Canada: Disastrous Impact of Extreme Heat." October 5, 2021. <https://www.hrw.org/news/2021/10/05/canada-disastrous-impact-extreme-heat>.

⁶⁸ Oliveras, et al.. "Energy poverty and health: Trends in the European Union before and during the economic crisis, 2007–2016." *Health & Place* 67 (2021): 102294. <https://doi.org/10.1016/j.healthplace.2020.102294>.

Malnutrition can exacerbate disabilities and chronic health conditions, particularly among children.⁶⁹

- **Social isolation:** High energy costs can lead to social isolation if seniors are unable or unwilling to leave their homes due to discomfort or the inability to invite guests into a home that is too cold or too hot, every two in five Canadians with disabilities struggle with social isolation and loneliness.⁷⁰

Newcomer and racialized households

Qualitative profile

The N. family, comprising of parents and two young children are recent immigrants to Canada that have settled in the suburban area of a mid-sized Canadian city. They are navigating the complexities of a new cultural and economic landscape while contending with energy poverty and integration into the Canadian labour market and civic society.

The N. family resides in a low-quality rental unit that is poorly insulated, leading to high energy costs and uncomfortable indoor temperatures during cold Canadian winters and warm summers. The family struggles with the high cost of housing, heating and electricity, which consumes a significant portion of their limited income and savings.

Due to their recent arrival, the family has a limited rental history, making it difficult to secure better-quality housing closer to employment opportunities. With no established credit history, the family cannot access financing services to purchase a transportation vehicle. With no driving history in Canada, auto insurance may also be cost-prohibitive. The family's remote location necessitates long commutes via unreliable public transit to school and work centers, contributing to higher transportation costs and less time at home.

⁶⁹ Groce, N., et al. "Malnutrition and disability: unexplored opportunities for collaboration." *Paediatrics and international child health* 34.4 (2014): 308-314.

⁷⁰ Cardus. 2019. "Extreme Social Isolation and Loneliness Affect Almost One Quarter of Canadians." *Cardus* (blog). Accessed April 16, 2024. <https://www.cardus.ca/news/news-releases/extreme-social-isolation-and-loneliness-affect-almost-one-quarter-of-canadians/>.

The professional educational credentials of the adults in the family are not immediately recognized in Canada and require a lengthy re-certification and re-training process. Securing a good education for their young children is a top priority, but navigating the Canadian educational system with language barriers is challenging. These complications, when combined with extended commuting times, reduce the family's mental bandwidth and ability to engage in community programs and supports that could assist with their housing situation.

Furthermore, the N. family is cautious about engaging with government programs due to fears of legal implications for their immigration status. They have limited access to or familiarity with traditional media like CBC or local radio, which restricts their ability to receive outreach materials from energy efficiency programs they may qualify for. The N. family is also not familiar with equipment like furnaces and thermostats that control heating in their home and has trouble understanding the itemized costs on their utility bills.

Given the family's current circumstances, their focus is divided between numerous high-priority commitments, such as securing good schooling for the children, obtaining stable and gainful employment that recognizes and appropriately values their foreign credentials and work experience, and survival and adaptation to the new country's social and cultural life. These immediate priorities overshadow concerns about securing better quality and more energy-efficient housing.

The N. family's profile illustrates the intersection of energy poverty with the broader challenges faced by new immigrant families. Their situation highlights the need for improving access to energy efficiency supports through networks that communities trust and interact with in their day-to-day life.

Evidence

Underlying housing vulnerabilities:

- Newcomers to Canada are more than twice as likely to experience core housing needs compared to their counterparts who were born in Canada.⁷¹
- Newcomers to Canada are often regarded as living in 'hidden homelessness' due to shared, overcrowded living conditions, especially in large urban areas where affordable rental units are in short supply.⁷²

Energy poverty risk factors:

- **Low disposable incomes:** Newcomers to Canada are more likely to experience low incomes. Nearly one in three newcomers to Canada is a member of a low-income family (using MBM measure), compared to one in eight Canadians who were born in Canada and experience low incomes.⁷³
- **Older homes and high energy use:** Some indirect evidence from front-line organizations that work with newcomers suggests newcomers to Canada are living in damp, drafty homes with disproportionately high energy bills.⁷⁴

Inability to respond adequately:

- **Cost barriers:** Energy efficiency improvements, such as upgrading insulation, windows, or heating systems, often require significant upfront investment. On average, immigrants to Canada arrive with \$47,000 in savings but over half of it is used up just to get settled. Almost one in five newcomers come to Canada

⁷¹ Custom calculation using 2016 Census of Population [Canada] Public Use Microdata File (PUMF).

⁷² Keung, Nicholas. 2012. "New Immigrants Are the 'Hidden Homeless.'" *Toronto Star*, April 2, 2012. https://www.thestar.com/news/canada/new-immigrants-are-the-hidden-homeless/article_5e5c0f20-5666-5862-a52c-0206978c602c.html.

⁷³ Custom calculation using 2016 Census of Population [Canada] Public Use Microdata File (PUMF).

⁷⁴ EmpowerMe. n.d. "Real-World Stories from the Empower Me Community." Accessed April 16, 2024. <https://www.empowerme.ca/community-stories>.

with no savings.⁷⁵ Households with limited savings may not prioritize investment in energy efficiency upgrades that require upfront costs.

- **Depleted resilience:** Newcomers spend more time commuting to work compared to their peers born in Canada. Twenty-five per cent of newcomers spend more than an hour commuting to and from work every day, compared to only 17 per cent of their peers who spend as much time on commutes. Newcomers are also more than three times as likely to commute to work using public transit, which can sometimes be unreliable.⁷⁶ Such constraints on time, alongside pressing priorities such as finding jobs, ensuring education, and managing transportation, stretch the family's resources thin. This leaves little room for focusing on energy efficiency and housing improvements.
- **Self-rationing and counterproductive behaviours:** Experiences from frontline organizations suggest many newcomers are unfamiliar with energy technologies in their homes, and how their behaviours impact energy consumption and costs. This knowledge gap can result in scenarios where renters will persist with underheated homes because they fear messing with thermostats or using portable electric heating assuming it is the cheaper alternative.⁷⁷
- **Challenges navigating complexity:** A small percentage of newcomers (1 in 12) have no knowledge of either English or French, which poses challenges for accessing conventional support programs.⁷⁸ Newcomers may also not understand how to read their energy bills, how to manage costs and how to access programs that can help reduce energy use.⁷⁹

⁷⁵ "BMO New Canadians Study: Immigrants Come to Canada With an Average of \$47,000 in Savings." 2015. 2015. <https://newsroom.bmo.com/2015-04-15-BMO-New-Canadians-Study-Immigrants-Come-to-Canada-With-an-Average-of-47-000-in-Savings>.

⁷⁶ Custom calculation using 2016 Census of Population [Canada] Public Use Microdata File (PUMF).

⁷⁷ EmpowerMe. n.d. "Real-World Stories from the Empower Me Community." Accessed April 16, 2024. <https://www.empowerme.ca/community-stories>.

⁷⁸ Custom calculation using 2016 Census of Population [Canada] Public Use Microdata File (PUMF).

⁷⁹ McGarvey, Dan. 2019. "Multicultural Energy Efficiency Program Helps Newcomers Manage Bills." *CBC News*, November 18, 2019. <https://www.cbc.ca/news/canada/calgary/energy-efficiency-immigrants-newcomers-refugees-alberta-1.5362033>.

- **Unable to assume additional debt:** Many newcomers have difficulty accessing credit and loans because their credit history may not be recognized in Canada. Some cultural beliefs, such as certain religions prohibiting receiving or paying interest in money, can also pose challenges for newcomers to accessing financing to meet their needs.⁸⁰
- **Issues of trust:** Newcomers to Canada may have negative attitudes towards government programs and be less trusting of authority if they've had harmful experiences with such groups in their home country. Immigrants may not seek the necessary support, for fear that such information will be used against them.⁸¹
- **Limited control:** Due to financial constraints and limitations with accessing credit to invest in home equity, most newcomers can't own a home in the first few years after their move to Canada.⁸² Consequently, a vast majority of newcomers to Canada are renters or move in with friends or family, which limits their ability to make energy upgrades in the place they call home. Newcomers are also more likely to live in apartments, which limits their ability to make major upgrades to their property even if they own it as such consequential upgrades would require coordination across multiple owners in multiple units.

Negative impacts on housing:

- **Eviction or foreclosure:** Newcomers with lower incomes may pay a significant amount of their incomes on energy use issues such as lack of control over home heating and cooling or unfamiliarity with energy use patterns in Canadian homes. This can leave less money available for rent, mortgage payments, property taxes, and maintenance. This can lead to losing their home due to missed rent payments. Some evidence suggests newcomers, particularly non-economic

⁸⁰ Prosper Canada. 2015. "Financial Literacy and Newcomers to Canada."

<https://prospercanada.org/getattachment/3ff26769-c2d4-4d9e-82e9-f56467e4eb31/Financial-Literacy-and-Newcomers-to-Canada.aspx>.

⁸¹ Canadian Paediatric Society. n.d. "Caring for Kids New to Canada - Barriers and Facilitators to Health Care for Newcomers." Accessed April 16, 2024. <https://kidsnewtocanada.ca/care/barriers>.

⁸² Hogue, Robert, and Rachel Battaglia. 2022. "Proof Point: Is Canada Becoming a Nation of Renters?" RBC Thought Leadership. December 7, 2022. <https://thoughtleadership.rbc.com/proof-point-is-canada-becoming-a-nation-of-renters/>.

immigrants, and refugees, are at higher risk of eviction in Canada due to a lack of familiarity with Canadian law and are seen by landlords as easier to evict.⁸³

- **Debt accumulation and inadequate housing:** To cope with energy poverty, newcomers without access to credit may borrow from unconventional (and often predatory) financial services with high-interest rates.⁸⁴ Over time, these large monthly payments can trap households into recurring cycles of debt, making it difficult to secure adequate housing in the future.
- **Energy arrears leading to service disconnections:** We were unable to find direct evidence linking newcomers to elevated risk of energy arrears or service disconnections. However, while most provinces offer some emergency assistance to low-income households that are struggling to pay their energy bills, the income qualification is established through CRA tax filings of the previous year. Newcomers who have just moved to Canada and are yet to file a tax return may not be eligible for this emergency assistance, which may lead to utility service disconnection.
- **Reduced home maintenance:** We did not find direct evidence linking newcomers to energy poverty and impacts on deferred home maintenance. However, we can infer from the experiences of other families that newcomers experiencing energy poverty might defer home maintenance, which can lead to a decline in home value and conditions that are unsafe or that exacerbate health issues.

Negative impacts on health and well-being:

- **Increased risk of respiratory problems:** We did not find direct evidence linking newcomers to Canada with increased risk of respiratory problems. However, cold and damp homes can lead to the development or exacerbation of respiratory problems even among immigrant communities.

⁸³ Scott et al. 2023. "Fighting to Keep Your Home in a Community": Understanding Evictions through Service Provider and Community Leader Perspectives in North York Communities." February 7, 2023. <https://www.wellesleyinstitute.com/publications/fighting-to-keep-your-home-in-a-community/>.

⁸⁴ ACORN Canada. 2022. "ACORN's Submission to the Federal Consultation on Fighting Back Predatory Lending - ACORN Canada." <https://acorncanada.org/resources/acorns-submission-to-the-federal-consultation-on-fight-back-predatory-lending/>.

- **Cardiovascular stress:** Among immigrants to Canada, some groups such as South Asians, are reported to have the greatest risk of cardiovascular stress.⁸⁵ Prolonged exposure to cold temperatures indoors can increase blood pressure and the risk of cardiovascular events.
- **Mental health issues:** Newcomers to Canada are more likely to experience mental health issues due to factors such as homesickness, culture shock and language barriers. The financial strain and the discomfort of living in a poorly heated or cooled environment can exacerbate these impacts.⁸⁶
- **Worsening of chronic conditions:** Newcomer children experience an elevated risk of chronic conditions due to lack of access to green spaces and limited opportunities to pursue healthy outdoor activities.⁸⁷ Energy poverty can lead to feelings of general discomfort and lethargy, which can exacerbate these chronic conditions.⁸⁸
- **Hypothermia and heat-related illnesses:** Newcomers to Canada are at greater risk of hypothermia because they may be unaware of the dangers of prolonged exposure to cold temperatures.⁸⁹ Energy poverty can exacerbate exposure to unsafe indoor temperatures. Immigrants are also more likely to live in Canada's

⁸⁵ Sebastian, Sneha A., et al. "The Risk of Cardiovascular Disease Among Immigrants in Canada." *Cureus* 14.2 (2022).

⁸⁶ Bentley, Rebecca, et al. "The effect of energy poverty on mental health, cardiovascular disease and respiratory health: a longitudinal analysis." *The Lancet Regional Health–Western Pacific* (2023).

⁸⁷ Radio-Canada.ca, News Labs |. 2022. "Here's Who Lives in Your City's Worst Heat Islands." Radio-Canada.ca. Radio-Canada.ca. July 13, 2022. <https://ici.radio-canada.ca/info/2022/07/ilots-chaieur-villes-inegalites-injustice-changements-climatiques/en?tz=EST..>

⁸⁸ Pellicer-Sifres, Victoria, Neil Simcock, and Alejandra Boni. "Understanding the multiple harms of energy poverty through Nussbaum's theory of central capabilities." *Local Environment* 26.8 (2021): 1026-1042.

⁸⁹ Canadian Red Cross. 2021. "Welcome to Canadian Winter: Preparing Newcomers for Their First Winter - Canadian Red Cross Blog." Red Cross Canada. December 1, 2021. <https://www.redcross.ca/blog/2021/12/welcome-to-canadian-winter-preparing-newcomers-for-their-first-winter>.

hottest urban areas,⁹⁰ and energy poverty can lead to unsafely indoor temperatures during extreme heat events.

- **Nutritional deficiencies:** Newcomers to Canada, particularly ethnic minorities, are at increased risk of malnutrition and food insecurity due to changes and disruptions in traditional dietary practices.⁹¹ Energy poverty may exacerbate these risks when newcomers are compelled to cut back on food spending and substitute nutritious meals with high-calorie foods.
- **Social isolation:** High energy costs can lead to social isolation when newcomers are unable or unwilling to leave their homes due to discomfort or the inability to invite guests into a home that is too cold or too hot. Immigrants generally report higher levels of loneliness and isolation than the Canadian-born, across various socioeconomic and demographic groups.⁹²
- **Compromised immune system:** Newcomers to Canada are at higher risk of social isolation, which is linked to weakened immune systems.⁹³ Being unprepared for the weather conditions in Canada, particularly in the winters⁹⁴ and cold homes may exacerbate these risks.

⁹⁰ Radio-Canada.ca, News Labs |. 2022. "Here's Who Lives in Your City's Worst Heat Islands." Radio-Canada.ca. Radio-Canada.ca. July 13, 2022. <https://ici.radio-canada.ca/info/2022/07/ilots-chaleur-villes-inegalites-injustice-changements-climatiques/en?tz=EST>.

⁹¹ Lane, Ginny, Christine Nisbet, and Hassan Vatanparast. "Food insecurity and nutritional risk among Canadian newcomer children in Saskatchewan." *Nutrients* 11.8 (2019): 1744.

⁹² Statistics Canada. 2021. "Self-Reported Loneliness among Recent Immigrants, Long-Term Immigrants, and Canadian-Born Individuals." <https://www150.statcan.gc.ca/n1/pub/36-28-0001/2021007/article/00001-eng.htm>.

⁹³ Silberman, Alexandre. 2020. "For Newcomers to Canada, Social Isolation Amplified during COVID-19 Pandemic." *CBC News*, July 6, 2020. <https://www.cbc.ca/news/canada/new-brunswick/newcomers-canada-social-isolation-covid19-1.5637275>.

⁹⁴ CLCC. n.d. "A Newcomers Guide to Canadian Winters." CCLC. Accessed April 16, 2024. <https://www.lcllc.org/blog/gbahkuetc8f1au3b7soiegw89dg135>.

Rural households

Qualitative profile

The Y. family, two parents with three young children, reside in a modest, weathered farmhouse that has been in their family for three generations. Located several kilometres from the nearest town, their home is surrounded by dense woodland and expansive fields. Their farmhouse, characteristic of rural Canadian homes, is spacious but poorly insulated, with single-pane windows and an old roof that is prone to leaking. These features contribute to heat loss during the long, cold winters and make the home expensive to heat and uncomfortable to live in.

Their home is not connected to the natural gas grid and the electrical infrastructure in their area is prone to outages, especially during harsh winter storms. They rely on a combination of oil heating, wood-burning stoves and outdated electric heaters to keep warm.

Both the parents are employed seasonally. One parent works in the forestry sector while the other is employed in the hospitality sector caters to tourists in the warmer summer months. While their annual incomes are sufficient to provide for the needs of the family, the seasonal nature of their employment produces a fluctuating cash flow that is not always sufficient to meet unanticipated expenses. Despite budgeting, some months their everyday expenses exceed their incomes. This risk is even more pronounced in the lean winter months when work is less available.

The Y. family is also unable to make use of government programs that help reduce energy use at home. Existing programs offer loans to help households install energy-efficient measures such as insulation and heat pumps. However, the family's old farmhouse would need major structural upgrades such as fixing the roof and upgrading electrical wiring to become eligible for those upgrades as existing energy efficiency programs do not offer support for such non-energy upgrades. The family's tight budgets mean cannot afford to pay for the upfront costs for both the structural upgrades and energy efficiency measures in the same year.

Households that heat primarily with electricity and gas in most provinces in Canada are protected from energy service disconnections in the winter months. However, no such protections exist for households that heat with unregulated fuels, who are required to pay up-front for the delivery of heating oil, propane, or wood. Last winter, when the price of heating oil shot up unexpectedly due to global price shocks, the Y. family had to borrow money at short notice from family and friends to refill their oil tank to stay warm for the season.

Missing a fuel delivery due to a winter storm or inability to pay for fuel up-front can be particularly perilous for a family living in an extremely leaky house. The Y. family, for instance, would face the immediate risk of their home rapidly losing heat, leading to dangerously low indoor temperatures. This could result in hypothermia or frostbite, especially in areas of the home that are poorly insulated. Additionally, the lack of fuel could mean essential tasks, such as cooking and heating water for hygiene, would become challenging, further disrupting daily life. The cold could also cause pipes to freeze and burst, leading to costly water damage, and exacerbating their already precarious financial situation and housing issues. In rural areas where emergency services may be hours away, the vulnerability to such a scenario underscores the critical nature of reliable access to energy services and the need for housing that is 'thermally resilient' and able to retain heat for longer.

Taken together, this scenario highlights how rural households in Canada experience energy poverty along two dimensions; *chronic* energy poverty due to a combination of leaky homes, high energy costs and modest incomes, as well as *acute* energy insecurity due to the risks of missing a fuel delivery. This scenario also calls to attention how program design choices like narrowly focused on energy measures may make such supports out of reach for households that need it the most.

Evidence

Underlying housing vulnerabilities:

- Because rural homes are typically less densely packed and more exposed to the elements, they may be more susceptible to wear and tear from fluctuating weather conditions. Rural houses in Canada tend to be older,⁹⁵ which may lead to costly and difficult-to-manage maintenance or repairs, especially if the homeowner is financially constrained.
- Rural properties in Canada often rely on wells for water and septic systems for sewage. These can be expensive to repair or replace and are vulnerable to contamination or failure.⁹⁶
- Rental housing in rural Canada is often limited, leading to challenges with housing access and affordability particularly for seasonal workers and newcomers.⁹⁷
- Rural households in Canada are also at significantly greater risk for residential house-fire casualties, due to compounding risk factors such as less likelihood of owning smoke alarms, older populations, lower incomes, less likelihood of owning phones, and slower response times due to large service territory of emergency responders.⁹⁸

⁹⁵ Statistics Canada. Table 46-10-0078-01 Rural Canada Housing Profiles, occupied private dwelling characteristics <https://doi.org/10.25318/4610007801-eng>.

⁹⁶ Canada, Environment and Climate Change. 2007. "Groundwater Contamination." Research. January 9, 2007. <https://www.canada.ca/en/environment-climate-change/services/water-overview/pollution-causes-effects/groundwater-contamination.html>.

⁹⁷ ISEDC. 2023. "Rural Housing." Innovation, Science and Economic Development Canada. June 26, 2023. <https://ised-isde.canada.ca/site/rural/en/housing>.

⁹⁸ Clare and Kelly. 2017. "Fire and at Risk Populations in Canada." <https://cjr.ufv.ca/wp-content/uploads/2018/04/Murdoch-University-Fire-and-at-Risk-Populations.pdf>.

Energy poverty risk factors:

- **Low disposable incomes:** Rural Canadians face higher unemployment and are more likely to work in declining industries.⁹⁹ Transportation is often necessary for basic needs, and fuel costs can often consume a substantial portion of modest incomes.¹⁰⁰ Income and employment can also be precarious due to the seasonal nature of jobs in rural regions.¹⁰¹
- **Older homes and high energy use:** Rural homes are more likely to be of poorer quality and more drafty.¹⁰² Rural housing is also older and has a higher incidence of needing major repairs.¹⁰³ In rural areas and the Atlantic provinces (which are significantly rural), over 30 per cent of households pay a disproportionate amount of their incomes to meet their home energy needs.¹⁰⁴ Rural households are also more likely to spend more on energy costs, especially in provinces like Ontario where fixed charges on electricity bills are higher in regions with low population density.¹⁰⁵

⁹⁹ Infrastructure Canada. 2019. "Overview of Rural Economic Development." Minister of Rural Economic Development Transition Book. <https://www.infrastructure.gc.ca/pd-dp/transition/2019/red-der/3/book-cahier-3-eng.html>.

¹⁰⁰ IRPP. n.d. "Rural Recognition: Affordable and Safe Transportation Options for Remote Communities." IRPP. Accessed April 16, 2024. <https://irpp.org/research-studies/affordable-safe-transportation-options-remote-communities/>.

¹⁰¹ Ali, Waad K., K. Bruce Newbold, and Suzanne E. Mills. "The Geographies of Precarious Labour in Canada." *Canadian Journal of Regional Science* 43.1 (2020): 58-70.

¹⁰² Gill, Jordan. 2018. "Despite Anti-Poverty Efforts, Little Has Changed for Rural Poor, Sociologist Says." *CBC News*, March 2, 2018. <https://www.cbc.ca/news/canada/new-brunswick/rural-new-brunswick-poverty-1.4559659>.

¹⁰³ Eaton, Don. 2019. "Energy Use and the Rural Homeowner." Rural Ontario Foresight Papers. Rural Ontario Institute. https://www.ruralontarioinstitute.ca/uploads/userfiles/files/Energy Use and the Rural Homeowner and Northern Perspective_Rural Ontario Foresight Papers.pdf.

¹⁰⁴ Energy poverty in Canada: Prevalence, social and spatial distribution, and implications for research and policy. *Energy Research and Social Sciences*, 81, 102237.

¹⁰⁵ Bhanji et al. 2023. "An Assessment in Northern Ontario and Recommendations on Next Steps." CELA. <https://cela.ca/wp-content/uploads/2023/03/1519-Pathway-out-of-energy-poverty-in-Northern-Ontario-22-March-2023-1.pdf>.

Inability to respond adequately:

- **Cost barriers:** Energy efficiency improvements, such as upgrading insulation, windows, or heating systems, often require significant upfront investment. Rural households with precarious employment and modest incomes often cannot afford such up-front costs even with long-term savings.
- **Depleted resilience:** Rural households must contend with transport poverty – lack of access to reliable and inexpensive modes of travel. Rural households in Canada spend a disproportionate amount of time driving just to access basics such as groceries, healthcare services and participation in civic life.¹⁰⁶ This may have exhausted their mental, material and time resources and leaves little room for additional investments, even for cost-saving improvements.
- **Self-rationing and counterproductive behaviours:** Rural households in energy poverty struggling to adequately warm their home may resort to using localized heating sources such as wood stoves or portable heaters, which are more expensive in the long run and may contribute to exacerbating indoor air pollution.¹⁰⁷ Rural households in Canada are also at significantly greater risk for residential house-fire casualties, in part due to greater use of portable space heating,¹⁰⁸ which is a common and detrimental coping mechanism for energy-poor households.
- **Challenges navigating complexity:** Rural households are geographically isolated from experienced contractors, experts and service providers, and may lack exposure and access to the best technologies, resources and services that can help them navigate the complexity of undertaking appropriate energy efficiency

¹⁰⁶ Guerrero, Maria. 2023. "Evaluating Transport Poverty and the Risk of Social Exclusion in Canada." *Mobilizing Justice* (blog). August 17, 2023. <https://mobilizingjustice.ca/evaluating-transport-poverty-and-the-risk-of-social-exclusion-in-canada/>.

¹⁰⁷ Baker, Rochelle. 2021. "The Burning Question: What Pollution and Health Threats Are Lurking in Wood Stoves?" *Toronto Star*. January 7, 2021. https://www.thestar.com/news/canada/the-burning-question-what-pollution-and-health-threats-are-lurking-in-wood-stoves/article_2a04cba2-a1ac-50a3-aa26-99891018017c.html.

¹⁰⁸ Clare and Kelly. 2017. "Fire and at-Risk Populations in Canada." <https://cjr.ufv.ca/wp-content/uploads/2018/04/Murdoch-University-Fire-and-at-Risk-Populations.pdf>.

upgrades, as evidenced by the US shows.¹⁰⁹ Rural households can be logistically difficult to upgrade due to poor housing distributed in small clusters in remote locations (see discussion in the UK).¹¹⁰

- **Unable to access credit or assume additional debt:** The debt of some rural communities, farmers, for example, has nearly doubled since 2010 and farmers have been forced deeply into debt to make ends meet.¹¹¹ Housing in rural Canada also tends to be cheaper,¹¹² which constrains how much a household can borrow using their home equity as collateral.

Negative impacts on housing:

- **Eviction or foreclosure:** Evidence of evictions and foreclosures in rural areas is limited. However, like other families experiencing energy poverty, rural households allocate a larger portion of their income to energy bills, leaving less money available for rent, mortgage payments, property taxes, and maintenance. Missing utility or rent payments are a driving force for evictions in Canada.
- **Debt accumulation:** We were unable to find evidence for patterns of debt accumulation due to energy distinctive to rural households. As evidence from the UK shows, some rural households may continue to borrow and sink further into debt to cope with high energy costs.¹¹³ Over time, this can erode their credit

¹⁰⁹ Winner et al. 2020. "Bridging the Rural Efficiency Gap." Island Institute. <https://www.energy.gov/scep/slsc/articles/bridging-rural-efficiency-gap-expanding-access-energy-efficiency-updates-remote>.

¹¹⁰ Committee on Fuel Poverty. 2023. "Meeting or Missing the Milestones:" Annual Reports. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1164849/cfp-annual-report-2023.pdf.

¹¹¹ National Farmers Union. 2020. "Tackling the Farm Income Crisis." <https://www.nfu.ca/wp-content/uploads/2020/02/Farm-Income-Crisis.25.02.pdf>.

¹¹² Financial Consumer Agency of Canada. 2021. "Canadians and Their Money: Key Findings from the 2019 Canadian Financial Capability Survey." Research. December 20, 2021. <https://www.canada.ca/en/financial-consumer-agency/programs/research/canadian-financial-capability-survey-2019.html>.

¹¹³ Age UK. 2023. "Millions of Older People Borrowing Money, Using Credit and Not Able to Pay Bills Due to the Cost of Living Crisis." Age UK. July 4, 2023. <https://www.ageuk.org.uk/latest-press/articles/2023/millions-of-older-people-borrowing-money-using-credit-and-not-able-to-pay-bills-due-to-the-cost-of-living-crisis/>.

scores, making it difficult to secure housing in the future and negotiate better terms on mortgages or rent or make other necessary upgrades on the property.

- **Inadequate housing:** Compared to urban markets, rural housing markets offer few incentives for developers and home builders.¹¹⁴ In the absence of new housing builds, existing housing will continue to remain inadequate without energy efficiency upgrades to improve housing quality.
- **Energy supply disruptions:** Rural households experiencing energy poverty and heating with unregulated fuels uniquely experience energy precocity caused by supply disruptions, either due to extreme weather events that prevent delivery of fuel for home heating or due to energy poverty constraining budgets and making it difficult for households to afford upfront costs of fuel supplies. Canadians heating with electricity or natural gas are protected from utility service disconnections in the winters, but households that heat with unregulated fuels – a vast majority of whom are rural households – receive no such protections.
- **Reduced home maintenance:** Rural households are likely to have higher than average maintenance costs due to isolation from contractors and services, generally old housing stock and greater exposure to the elements. Energy poverty may compel rural households to defer home maintenance, which can lead to a decline in home value and conditions that are unsafe or that exacerbate health issues (like mould from unrepaired leaks or poor heating systems).

Negative impacts on health and well-being:

Rural households may face health impacts similar to the impacts on other demographics discussed elsewhere in this report. In addition, rural households may face some unique impacts on their health due to energy poverty.

- **Risks from limited access to healthcare:** Rural residents often live far from medical facilities, making it difficult to seek timely treatment for health issues exacerbated by energy poverty, such as respiratory conditions.

¹¹⁴ Innovation, Science and Economic Development Canada. 2023. "Rural Housing." Innovation, Science and Economic Development Canada. June 26, 2023. <https://ised-isde.canada.ca/site/rural/en/housing>.

- **Risks due to delayed response by emergency services:** In the event of health emergencies caused by inadequate heating or cooling (such as hypothermia, heatstroke, or carbon monoxide poisoning from alternative heating sources), the distance from emergency services can be life-threatening in severe cases.
- **Exposure to extreme weather events:** Rural homes may be more isolated from access to community warming or cooling centers during extreme weather events. This can lead to adverse health impacts from exposure to extreme cold or heat during extreme weather events.
- **Water quality issues:** Rural households are also more likely to be disconnected from municipal water and sewage infrastructure. In the event of energy precarity events like power outages, the ability to pump and treat water from the well may be compromised.
- **Air quality issues:** Rural Canadian households are also more likely to use wood fuels and other biomass sources for indoor heat.¹¹⁵ In energy-poor homes with inadequate ventilation, these energy sources can lead to indoor air quality issues due to the amount of particulate matter and carbon monoxide emitted during combustion.
- **Occupational health risks:** Rural households are also more likely to be employed in physically demanding industries like farming, mining, or forestry.¹¹⁶ Living in homes that are too cold or too warm can exacerbate chronic muscle and back pain. Energy poverty also contributes to feelings of lethargy and distraction, which may increase the risk of experiencing occupational mishaps and/or debilitating injuries at the workplace.

¹¹⁵ Statistics Canada. 2023. "The Heat Is on: How Canadians Heat Their Home during the Winter." January 13, 2023. <https://www.statcan.gc.ca/o1/en/plus/2717-heat-how-canadians-heat-their-home-during-winter>

¹¹⁶ Innovation, Science and Economic Development Canada. 2023. "Rural Housing." Innovation, Science and Economic Development Canada. June 26, 2023. <https://ised-isde.canada.ca/site/rural/en/housing>.

Lone parent households

Qualitative profile

M. is a single mom who balances part-time work with the responsibility of raising two young children. She attended college for a few years before dropping out due to the financial burdens and the need to care for her children after a family breakdown.

M. earns a modest hourly wage that places her below Canada's poverty line. She lives in a rented home with assistance from housing support programs. Prior debt obligations from student loans, medical bills, childcare costs, and credit card debt consume a significant portion of her monthly budget. Like many lone parents in Canada, M. has a net worth that is negative owing to her debts outweighing the total of her assets, investments, and savings.

The older home M. rents is drafty and poorly insulated with an aging heating system, costing a lot to heat in the winter. To save on costs, she keeps her thermostat low and her family huddles into one room with a small portable electric heater.

Stress from financial pressures and the responsibility of being a single parent with little family support have profound adverse effects on M's physical and mental health. These effects are further exacerbated by the discomfort of living in a home that is too cold in the winter and too warm in the summer. And since her children spend a disproportionate amount of time indoors in an uncomfortable home, they are struggling to get a good night's rest or focus on homework.

M. aims to achieve financial security and better housing conditions to improve life for her family. One of her neighbours suggests applying for free energy efficiency upgrade programs offered by her utility that she may be eligible for.

However, M. is already stretched too thin. Her daily schedule is packed with work, childcare, and essential household management, leaving little room for additional appointments or meetings. The constant juggling act to keep her family afloat means that even beneficial programs seem out of reach amidst her current priorities. The thought of coordinating a home assessment, followed by an installation visit and then

followed by a post-install audit, seems daunting. Even if these upgrades are free and promise long-term savings, it feels like yet another burden in her already overextended life.

This profile highlights the intersection between energy poverty and the complexities of the day-to-day life of single parents. Even when programs offer energy efficiency measures that are no-cost, turnkey and installed by professionals, they may still be out of reach for some vulnerable communities experiencing energy poverty.

Evidence

Underlying vulnerabilities:

- Lone parents are more likely to live in older housing built before energy efficiency was a standard part of building codes in the 1990s.¹¹⁷
- Lone parents are three times as likely to be in the low-income group, as measured by Market Based Measure.¹¹⁸
- Lone parents are also two times as likely to live in housing that is not suitable for their needs.¹¹⁹
- Lone parents in Canada are overwhelmingly likely to be female.¹²⁰
- Lone-parent families are more likely to have a higher debt service-to-income ratio than couples with children. Lone parents also have a much lower net worth (\$47,300) compared to the net worth of couples with children under 18 (\$303,000).¹²¹

¹¹⁷ Custom calculation using 2016 Census of Population [Canada] Public Use Microdata File (PUMF).

¹¹⁸ Custom calculation using 2016 Census of Population [Canada] Public Use Microdata File (PUMF).

¹¹⁹ Custom calculation using 2016 Census of Population [Canada] Public Use Microdata File (PUMF).

¹²⁰ Custom calculation using 2016 Census of Population [Canada] Public Use Microdata File (PUMF).

¹²¹ Department of Justice Government of Canada. 2016. "Economic Consequences of Divorce and Separation." June 2016. <https://www.justice.gc.ca/eng/rp-pr/fl-lf/divorce/jf-pf/ecds-cfds.html>.

Energy poverty risk factors:

- **Low disposable incomes:** Lone parents are three times as likely to be in the low-income group, as measured by Market Based Measure.
- **Older homes and high energy use:** Lone-parent families, much like individuals with disabilities and seniors, are more likely to have higher energy needs. This is more pronounced for families living in leaky and poorly insulated homes. Some studies suggest this is because a lone-parent household is likely to be at the intersection of gender, class, age, and ethnicity, and have far less access to adequate and quality housing than other groups. This manifests as lone parents being prime candidates for not keeping homes adequately warm.¹²²

Inability to respond adequately:

- **Cost barriers:** Energy efficiency improvements, such as upgrading insulation, windows, or heating systems, often require significant upfront investment. Lone-parent households are more likely to have modest incomes and high household expenditure, therefore often cannot afford such up-front costs even with long-term savings.
- **Depleted resilience and navigating complexity:** Lone parents with young children spend up to 3.5 hours each day on housework as a primary activity. 72 per cent of lone mothers have primary caregiving responsibilities.¹²³ The mental and emotional bandwidth of a lone parent is consumed by the immediate needs of their family, making it challenging to engage with programs that require them to plan ahead, coordinate schedules, or follow through with multiple steps.
- **Self-rationing and counterproductive behaviours:** Studies show lone-parent households are more likely to self-ration and reduce energy use to uncomfortable

¹²² Sunikka-Blank, Minna, and Ray Galvin. "Single parents in cold homes in Europe: How intersecting personal and national characteristics drive up the numbers of these vulnerable households." *Energy Policy* 150 (2021): 112134.

¹²³ Statistics Canada. 2018. "Time Use: Total Work Burden, Unpaid Work, and Leisure." July 30, 2018. <https://www150.statcan.gc.ca/n1/pub/89-503-x/2015001/article/54931-eng.htm>.

levels due to fears of energy costs.¹²⁴ These efforts can be counterproductive, leading to poor physical and mental health for all members of the family.

- **Unable to access credit or assume additional debt:** Canadians in lone-parent families are likely to have a higher debt service ratio (40 per cent or more of their incomes) compared to couples with children who only spend four per cent of their income servicing debt. Lone parents also have lower total net worth, which constrains their ability to borrow and service more debt¹²⁵ without collateral. Constrained from borrowing from traditional lending sources, lone parents in Canada are also twice as likely to have used high-interest payday loans to meet their pressing day-to-day financing needs.¹²⁶

Negative impacts on housing:

- **Eviction or foreclosure:** Evidence from the US suggests that lone parents, particularly single mothers, are evicted far more frequently than any other demographic.¹²⁷ Single-parent households facing energy poverty may struggle to pay their rent or mortgage because a disproportionate amount of their income may go towards energy bills. In extreme cases, this can lead to eviction if they must choose between paying for energy or paying for housing. Additionally, some landlords may seek to evict tenants who are unable to pay utility bills if the bills are included in the rental agreement. Missing utility or rent payments are a driving force for evictions in Canada.
- **Debt accumulation:** Evidence from the UK suggests lone parents inherit financial problems following relationship transitions.¹²⁸ And unlike other households, lone-

¹²⁴ Middlemiss, Lucie. "Who is vulnerable to energy poverty in the Global North, and what is their experience?." *Wiley Interdisciplinary Reviews: Energy and Environment* 11.6 (2022): e455.

¹²⁵ Department of Justice Government of Canada. 2016. "Economic Consequences of Divorce and Separation." June 2016. <https://www.justice.gc.ca/eng/rp-pr/fl-lf/divorce/jf-pf/ecds-cfds.html>.

¹²⁶ Marshall, George. 2019. "Debt and financial distress among Canadian families". *Insights on Canadian Society*. June. Statistics Canada Catalogue no. 75-006-X. <https://www150.statcan.gc.ca/n1/pub/75-006-x/2019001/article/00010-eng.htm>.

¹²⁷ Covert, Bryce. 2021. "Why Landlords Target Mothers for Eviction." *The New Republic*, March 16, 2021. <https://newrepublic.com/article/161578/landlords-target-mothers-eviction-crisis-covid>.

¹²⁸ StepChange. 2021. "The Single Parent Debt Trap." Gingerbread Charity.

https://www.gingerbread.org.uk/wp-content/uploads/2021/02/The-single-parent-debt-trap_web.pdf.

parent households are unable to work more hours or supplement their income to get out of debt. So to cope with high energy costs and irregular monthly bills some lone-parent households may continue to borrow and sink further into debt, getting caught in debt traps.¹²⁹ Over time, this can erode their credit scores, making it difficult to secure housing in the future and to negotiate better terms on mortgages or rent or make other necessary upgrades to their home.

- **Inadequate housing:** Lone-parent households in energy poverty and sinking further into debt may not be able to secure alternative housing that is adequate to meet their needs.
- **Energy service disruptions:** When lone parents cannot pay their energy bills, they face the risk of having their services disconnected. This can have serious implications, especially in extreme weather conditions, leading to health and safety concerns. Families with young children or individuals with chronic illnesses are particularly at risk. Many US states have special protections against disconnecting service to families with young children.
- **Reduced home maintenance:** Energy poverty may compel single-family households to defer home maintenance, which can lead to a decline in home value and conditions that are unsafe or that exacerbate health issues (like mould from unrepaired leaks or poor heating systems).

Negative impacts on health and well-being:

Adults in lone-parent households may face health impacts similar to the impacts such as mental stress and chronic illness faced by other demographics discussed elsewhere in this report. In addition, children in single-parent households may face some unique impacts on their health due to energy poverty.

- **Child health and well-being:** Children in single-parent households may be more directly affected by energy poverty due to limited resources. Evidence from the

¹²⁹ StepChange. 2021. "The Single Parent Debt Trap." Gingerbread Charity. https://www.gingerbread.org.uk/wp-content/uploads/2021/02/The-single-parent-debt-trap_web.pdf.

UK suggests¹³⁰ that inadequate heating or cooling can lead to children missing more days off school than their peers, due to respiratory illnesses from cold and damp conditions; the prevalence of allergies in children after homes are made more energy efficient; children from energy-poor households tend to do less well in school and suffer from bullying, stigma and isolation.¹³¹

- **Child nutrition:** In a “heat or eat” situation, single-parent households may need to make trade-offs between heating and eating due to limited financial resources. This can lead to undernutrition or reliance on cheaper, less nutritious food options, which can have long-term health consequences, particularly for children and can hamper their growth.¹³²

Summary

Using user profiles archetypes of five different vulnerable communities, this report illustrates how energy poverty is not merely a problem of high energy bills. Rather, energy poverty increases the risk and vulnerability of experiencing future housing and health-related harms in different ways for different people based on their lived experiences.

This report offers an entry point into conceptualizing the policy domain of energy poverty, widening the policy arena for multiple targeted policy interventions. We can illustrate the significance of our conceptual framework for effective policy design with the following impact diagram:

¹³⁰ Liddell, Christine. “The Impact of Fuel Poverty on Children.” (2008).

https://www.savethechildren.org.uk/content/dam/global/reports/hunger-and-livelihoods/The_Impact_of_Fuel_Poverty_on_Children_Dec_08.pdf.

¹³¹ Baraniuk, Chris. 2022. “Energy Crisis: How Living in a Cold Home Affects Your Health.” BBC.Com. November 7, 2022. <https://www.bbc.com/future/article/20221107-energy-crisis-how-living-in-a-cold-home-affects-your-health>.

¹³² Fernández et al. 2018. “Dual Food and Energy Hardship and Associated Child Behavior Problems.” *Academic Pediatrics* 18 (8): 889–96. <https://doi.org/10.1016/j.acap.2018.07.002>

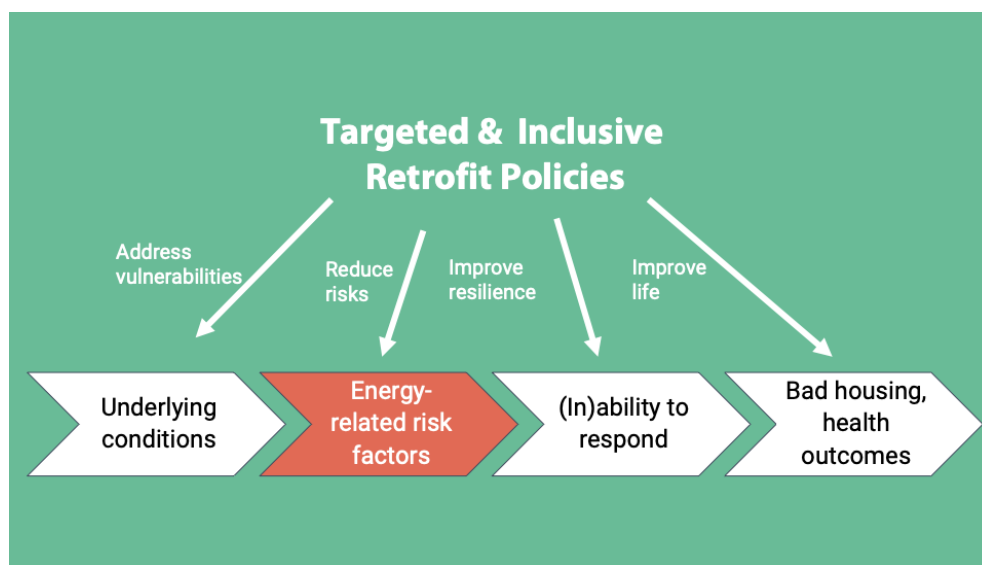


Figure 3: An impact diagram illustrating how our conceptual framework of energy poverty as vulnerability opens up opportunity for addressing energy poverty through a diversity of policy interventions

Policies for addressing energy poverty can be *preventative*, seeking to directly address underlying root causes and conditions. For instance, policies with a focus on improving material and economic conditions might target job creation, raising standards of income, and improving employment in areas that have been identified as hotspots for unaffordability. Policies with a focus on improving housing conditions might zoom in on building performance standards, retrofit and new-building codes, increasing the supply of new housing, constructing new purpose-built affordable rentals, renovating existing affordable housing stock, urban planning and renewal, and so on. Policies with a focus on eliminating systemic marginalization may also take a social justice approach - ensuring everyone has equal opportunity to participate in and benefit from policy interventions regardless of their specific circumstances. Preventative policies have a strong conceptual link to the principles of *distributive justice*, which calls for fairness in the distribution of benefits and burdens of impacts and outcomes.

Energy poverty policies can also be *curative*, focusing on reducing the incidence and likelihood of risks before they flare up underlying vulnerabilities. Such policies could include targeted interventions such as better utility rate design, emergency energy assistance programs, bill credits, no-cost energy upgrades, low-cost financing programs, rebate programs and so on. Energy poverty policies can also be *adaptive*, seeking to improve household resilience and ability to respond to risk factors. Such

policies could include informational and awareness campaigns on energy use at home, provision of emergency shelters during extreme weather events, community aid programs to assist people with navigating complex systems of support, financial literacy programs to help households manage budgets, investments such as childcare support to free up household bandwidth and resources that can be dedicated to investing in the durability of their homes, and so on. Curative and adaptative policies have a strong conceptual link to principles of *procedural* and *recognition justice*, which emphasize the need for designing interventions that acknowledge and account for the various needs, rights and experiences of those most impacted by them. Rather than take a one-size-fits-all approach, policy interventions must tailor their support to be fair, effective, and aligned with people's daily lives. To be successful, energy poverty policies must encourage participation from stakeholders outside the energy sector, such as social policy, health, business, planning, community development, and so on.

Finally, energy poverty policies can also be *restorative*, focusing on remedying and undoing past and ongoing harms to health and housing as a result of energy poverty. This links up with the concept of *restorative justice*, which is often advanced as a way of ensuring distributive, recognition and procedural justice are applied in practice so that those most impacted by energy poverty are prioritized every step of the way. However, as health and housing outcomes are typically not considered to be within the remit of energy poverty policies, there is a need for integrating the energy poverty agenda into cross-cutting interdisciplinary and intersectional issues such as climate change, just energy transitions, gender, justice, human rights, minority rights and social inclusion/exclusion. Transformative national policy pathways such as Canada's National Adaptation Strategy, Green Buildings Strategy, National Housing Strategy, and Net-Zero Emissions by 2050 must prioritize energy-poor households by dedicating resources towards improving underlying conditions, reducing risk factors, improving resilience, and undoing harms caused by energy poverty.

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