

September 16, 2022

DELIVERED BY EMAIL

To: greenbuildingsstrategy-strategiepourlesbatimentsverts@nrcan-rncan.gc.ca

Re: The Canada Green Buildings Strategy

Thank you for the opportunity to comment on *The Canada Green Buildings Strategy*, Discussion Paper, July 2022. We support the identification of equity, diversity and inclusion as a key principle underlying the Canada Green Buildings Strategy and make recommendations below to ensure that program design and program funding appropriately incorporate low-income people.

Background on Canadian Environmental Law Association

The Canadian Environmental Law Association (CELA) is a specialty legal aid clinic. We conduct litigation, law reform and public legal education with a focus on environmental justice and the protection of low-income people from environmental health hazards. CELA also co-founded the Low-Income Energy Network and advocates for robust programs to eliminate energy poverty.

Discussion Questions

Discussion Question 1. Does this discussion paper target the right strategic themes and areas requiring change, and communicate the level of action required?

We are supportive of identifying equity, diversity and inclusion as a key principle underlying the Canada Green Buildings Strategy.

The climate crisis is also a public health and equity crisis. Low-income people are disproportionately burdened by the impacts of the climate crisis, but least responsible for it.

Energy poverty is a serious concern for low-income people in Canada. Energy poverty is the disproportionate burden of electricity, natural gas and other utility costs on low-income households which reduce the funds available for food, clothing, medicine and other basic necessities. Inability to pay utilities is second only to inability to pay rent as a reason for homelessness. The alleviation of energy poverty is central to the concepts of energy justice, climate justice and democracy.¹ The accessibility and affordability of energy services is seen as essential to energy sustainability.²

¹ J.C. Stephens *Diversifying Power: Why we need antiracist, feminist leadership on climate and energy* (Washington D.C. Island Press, 2020)

² B.K Sovacool and M.Dworkin, *Energy Justice: Conceptual Insights and Practical Applications Applied Energy* 142 (2015) 435–444

Access to affordable energy should be understood as a human right.³ Services like electricity are integral to several rights including the right to an adequate standard of living, which incorporates the right to adequate housing, the right to health and even the right to life. In rural areas, access to safe water and sanitation can be dependent upon electricity access.

(a) Flooding, Health Impacts and Low-Income Communities

Resilience to flooding is an equity concern. Programs designed to upgrade residential buildings to protect them from flooding should be mindful of the disproportionate burden of flooding on low-income communities.

Households with lower income may experience higher concentrations of indoor contaminants because lack of capital causes them to reside in deteriorating structures that have water damage.⁴ *Exploring Spatial Heterogeneity and Environmental Injustices in Exposure to Flood Hazards Using Geographically Weighted Regression* found that vulnerable groups including visible minorities, the elderly, lone-parent households, Indigenous peoples, and low-income residents are at a higher risk for flooding in Canada.⁵

Mould proliferates in damp conditions and presents a risk to human health, especially to children. Mould presents a human health problem by inducing asthma, hypersensitivity pneumonitis, disease, or other issues.⁶ As their immune systems are less developed than adults, children are more susceptible to mould-related illnesses. 30 studies from different countries have demonstrated a close relationship between living in damp homes or homes with mould proliferation and the extent of detrimental respiratory symptoms in children.⁷ Further, the Centers for Disease Control and Prevention (CDC) noted the potential link between early mould exposure and the development of asthma in children.⁸ In fact, with excessive exposure, infants face an increased risk for hemorrhagic pneumonia and death.⁹

Flood protection retrofits present a co-benefit to human health by reducing mould growth. The CDC found that after a flood in New Orleans, 46% of flooded structures had some mould

³ Scott, Adrienne J. In the Dark, *An Exploration of the Human Rights Implications of Energy Poverty in Rural Ontario*, Research Paper submitted to the Faculty of Graduate and Postdoctoral Studies in partial fulfillment of the requirements For the LL.M. degree in Law, available at <https://cela.ca/in-the-dark-an-exploration-of-the-humanrights-implications-of-energy-poverty-in-rural-ontario/> (2016)

⁴ Reponen, T., Levin, L., Zheng, S., Vesper, S., Ryan, P., Grinshpun, S. A., & LeMasters, G. (2013). Family and home characteristics correlate with mold in homes. *Environmental research*, 124, 67-70.

⁵ Chakraborty, L., Rus, H., Henstra, D., Thistlethwaite, J., Minano, A., & Scott, D. (2022). Exploring spatial heterogeneity and environmental injustices in exposure to flood hazards using geographically weighted regression. *Environmental Research*, 210, 112982.

⁶ Centres for Disease Control and Prevention, “Mold Prevention Strategies and Possible Health Effects in the Aftermath of Hurricanes and Major Floods” at page 3.

⁷ Etzel, R., & Rylander, R. (1999). Indoor mold and children's health. *Environmental health perspectives*, 107(suppl 3), 463-463.

⁸ Centers for Disease Control and Prevention, “Basic Facts about Mold and Dampness”, online at: <https://www.cdc.gov/mold/faqs.htm>.

⁹ Etzel, R., & Rylander, R. (1999). Indoor mold and children's health. *Environmental health perspectives*, 107(suppl 3), 463-463.

contamination and 17% had heavy mould contamination.¹⁰ The CDC noted that the key to mould prevention is to “eliminate or limit the conditions that foster microbial growth by limiting water intrusion and the nutrients that allow mould to grow.”¹¹

By retrofitting buildings to keep water out, mould proliferation will be decreased.

(b) Extreme Heat, Health Impacts and Low-Income Communities

Extreme heat events have major health implications and also disproportionately impact low-income and vulnerable communities. Various life-threatening conditions can occur when the body cannot maintain its core temperature of approximately 36.6°C due to excessive external heat.¹² These include dehydration, cramps, heat exhaustion, and heat stroke.¹³ During the summer of 2018 in Quebec, the hottest summer on record in 146 years, 86 heat-related deaths were recorded.¹⁴ In British Columbia, between June 25 and July 1, 2021, 619 heat-related deaths were recorded.¹⁵ Extreme heat is a public health emergency and action must be taken to reduce heat-related deaths.

Vulnerable populations face higher risks from extreme heat. Equity concerns must be built into any policy measure to address extreme heat as certain populations are more at risk for heat-related illnesses and death. These populations include seniors, infants and young children, individuals with chronic illnesses and mobility challenges, and individuals that are socially disadvantaged.

British Columbia

A report published by the Government of British Columbia, entitled “Extreme Heat and Human Mortality” found that it was vulnerable people who died during the extreme heat event in 2021.

- 90% of the 619 people who died in British Columbia during last year’s heat wave were over 60 years old.¹⁶
- 91% were registered with at least one chronic disease registry.¹⁷

¹⁰ Centres for Disease Control and Prevention, “Mold Prevention Strategies and Possible Health Effects in the Aftermath of Hurricanes and Major Floods” at page 1.

¹¹ Centres for Disease Control and Prevention, “Mold Prevention Strategies and Possible Health Effects in the Aftermath of Hurricanes and Major Floods” at page 8.

¹² Government of British Columbia, “Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021” (June 7, 2022), online: https://www2.gov.bc.ca/extreme_heat_death_review_panel_report.pdf at page 11.

¹³ Government of British Columbia, “Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021” at page 11.

¹⁴ Annick Poitras, “Extreme Heat Waves in Quebec”, online: <https://climatedata.ca/case-study/extreme-heat-waves-in->

[in.](https://climatedata.ca/case-study/extreme-heat-waves-in-)
¹⁵ Government of British Columbia, “Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021” at page 4.

¹⁶ Government of British Columbia, “Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021” at page 13.

¹⁷ Government of British Columbia, “Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021” at page 14.

- Deaths were higher among those living in socially or materially deprived neighbourhoods. Poor quality housing, homelessness and overall deprivation were identified as risk factors for increased mortality rate.¹⁸
- 98% of heat-related deaths occurred indoors. Most of the 619 people who died were in homes without adequate cooling systems.¹⁹

Quebec

An analysis of the deaths in the 2018 Quebec heat wave made similar findings that vulnerable people were most impacted by the extreme heat event:

- Elderly people, those that are socially isolated, and those with chronic diseases or psychotic disorders were most vulnerable to heat.²⁰
- The majority of decedents lived in an urban heat island.²¹
- 8/53 decedents in Montreal lived in a senior's home.²²
- Most decedents did not have access to air conditioning.²³

Access to adequate cooling is a key climate adaption measure and should be a priority for the Canada Green Buildings Strategy.

Discussion Question 3. Are there other actions that you believe need to be taken, best practices we should consider, or potential risks to pursuing the Strategy?

Programs must be targeted and designed for low-income people.

We provide the following recommendations to ensure that the principle of equity, diversity and inclusion is appropriately incorporated into funding and program design. Currently, there are no particular programs or funding measures identified to reflect this core principle. In CELA's experience, programs must be designed to specifically target low-income communities and specific budgets must be set aside for these programs. Otherwise, there is a risk of perpetuating injustice and excluding low-income people from the transition to a net-zero economy.

We are encouraged by Bill C-226's focus on environmental racism and identifying overburdened communities, and urge the government to ensure the bill becomes law as soon as possible. However, in order to address environmental injustice, there must be a whole of government commitment to ensure adequate funds are reaching low-income communities.

¹⁸ Government of British Columbia, "Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021" at page 17.

¹⁹ Government of British Columbia, "Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021" at page 5.

²⁰ Santé Montreal, "Heat Wave Summer 2018 in Montreal", online: https://santemontreal.qc.ca/fileadmin/fichiers/professionnels/DRSP/Directeur/Rapports/Resume_EnqueteChaleurMtl_2018_Anglais.pdf at page 1.

²¹ Santé Montreal, "Heat Wave Summer 2018 in Montreal" at page 1.

²² Center-Sud-de-l'Île-de-Montréal Integrated University Health and Social Services Center, "Heat Wave: July 2018 – Montreal Preliminary Assessment", online: https://santemontreal.qc.ca/fileadmin/fichiers/actualites/2018/07_juillet/BilanCanicule2018VF.pdf at page 2.

²³ Santé Montreal, "Heat Wave Summer 2018 in Montreal" at page 1.

CELA has very long experience advocating for a robust energy poverty framework in Ontario. We founded the Low-Income Energy Network with our sister legal aid clinics dedicated to housing rights and income security in the early 2000s. We have gained experience over decades of advocacy on energy poverty programs in Ontario. One of the key lessons we have learned is that energy efficiency programs do not reach low-income populations unless there is dedicated funding, targeted programs, and they are designed differently.

In Ontario, initially, the Ontario Energy Board relied on a "Total Resource Cost" test, which is similar to a cost/ benefit analysis, to fund energy efficiency programs. That calculus in practice meant that low-income programs were not funded because key criteria like improvements to a person's health and equity were not considered. There is a structural bias against appropriately accounting for why targeted low-income energy efficiency programs are beneficial, especially as it benefits the health of the people involved.

There are many barriers to participation in government programs for low-income and disadvantaged communities. In CELA's experience, there is a deeply rooted skepticism about energy poverty programs which hampers participation. It has been much more successful at the provincial level to partner with local, trusted service providers, and we urge the federal government to take the same approach.

Low-income people do not have extra capital. There is simply no room in the budget for low-income people to spend upfront capital on energy efficiency or renewable energy. Non-turnkey programs which would require extra effort or installation by low-income people do not work.

The Justice40 Initiative in the United States

The United States has long recognized the disproportionate environmental burden borne by low-income and vulnerable communities. The United States Office of Environmental Justice was created in 1992. Recently, Executive Order 14008 made a commitment that 40% of the overall benefits of Federal investments in seven areas will flow to disadvantaged communities. The program areas are: climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, remediation and reduction of legacy pollution, and the development of critical clean water and wastewater infrastructure. There is a list of programs covered by the Justice40 initiative.²⁴

The investments are understood to confront decades of underinvestment in disadvantaged communities. The investments also start to assist the populations most overburdened by existing pollution.

Interim Guidance on the Justice40 initiative was published in July 2021.²⁵

²⁴ Justice40 Initiative Covered Programs List, Version 1.3, August 18, 2022 <[Justice40-Covered-Programs-List_v1.1_07-15-2022.pdf \(whitehouse.gov\)](#)>

²⁵ Executive Office of the President, Office of Management and Budget, M-21-28, Interim Implementation Guidance for the Justice40 Initiative, July 20, 2021 <[M-21-28 \(whitehouse.gov\)](#)>

Since that time, a map of disadvantaged communities for the purposes of the Justice40 initiative has been created which relies on census data: [Explore the map - Climate & Economic Justice Screening Tool \(geoplatform.gov\)](#).²⁶ The map includes information on methodology and highlights that communities are identified based on factors like income levels, expected agriculture loss rate, energy burden, levels of PM_{2.5} in the air, communities with over the 90th percentile for lead paint in housing, proximity to hazardous waste facilities, etc.

The interim guidance provided information on how to calculate benefits flowing to disadvantaged communities. For each covered program, the lead Department had 150 days to create methodology for calculating the covered program benefits accruing to disadvantaged communities. It was then required to create a reporting structure to track where benefits were going and pilot programs were identified to look at maximizing benefits to disadvantaged communities.

CELA's Recommendations

In order to ensure that low-income people benefit from the Canada Green Buildings Strategy, CELA recommends:

- 1- \$2 billion per year to fund no-cost deep retrofits for low-income households of all types, including privately owned houses and rental units, publicly owned low-income housing, and a top-up for the renovation of social housing through the National Housing Strategy, including climate adaptation measures. We recommend growing the targeted programs to low-income and vulnerable households to 40% of program spending over time.
- 2- Low-income and vulnerable people - including remote and Indigenous communities - must have affordable and equitable energy access as Canada transitions to a clean electricity grid. Siting of renewable installations on traditional Indigenous territories, and reducing reliance on diesel in Indigenous and remote communities, requires special care and attention. By targeting renewable energy funds, there is significant opportunity to advance environmental equity while reducing building emissions.
- 3- There has been past success from federal programs designed to reduce diesel use in remote communities across Canada.²⁷ We recommend allocating up to an additional \$800 million to programs specifically aimed at building Indigenous leadership and partnerships for clean energy deployment in remote Indigenous communities. Funding programs should be flexible and support Indigenous-led projects that reduce diesel consumption in homes and buildings through deep energy retrofits, and through renewable heat and power generation.

²⁶ Climate and Economic Justice Screening Tool < [Explore the map - Climate & Economic Justice Screening Tool \(geoplatform.gov\)](#)>

²⁷ Natural Resources Canada, "Clean Energy for Rural and Remote Communities Program." <https://www.nrcan.gc.ca/reducingdiesel>

- 4- Health Canada should be involved in designing energy efficiency programs to ensure integration of relevant health standards and considerations, such as climate adaptation, radon remediation, asbestos removal, air filtration, fire safety, cooling upgrades, and seismic upgrades. These issues should not only be addressed within the programs, but the retrofits must not create new problems from air-tightness without planning to alleviate potential impacts such as radon levels and other indoor contaminants.

We would be pleased to discuss these recommendations further.

Sincerely,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION



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