

Analyzing Energy Efficiency Initiatives in Quebec from an Energy Justice Perspective

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Rationale

Energy poverty occurs when households cannot afford enough energy services, such as heating, cooling, lighting and powering appliances to meet their needs and maintain healthy indoor temperature (Bouzarovski et al., 2021). Based on the measure used, between 9% to 16% of households in Quebec experience energy poverty (Riva et al., 2021).

Energy poverty is influenced by several factors: lower household incomes, the energy efficiency of housing, and the price of energy, with low-income households living in inadequately insulated buildings most at risk of experiencing energy poverty (Bouzarovski et al., 2021; Riva et al., 2021).

Initiatives targeting energy efficiency in the residential sector can help tackle energy poverty.

Research objective and questions

The goal of this study is to assess the scope of residential energy efficiency initiatives implemented in Quebec to mitigate energy poverty, and whether there are inequalities in the distribution of these initiatives. The research questions guiding this study are:

1. Which types of energy efficiency initiatives exist in Quebec?
2. How are these initiatives distributed amongst population groups?
3. Do these initiatives accurately respond to the needs of different groups?

Methodological approach

This study inventories and characterizes residential energy efficiency initiatives in Quebec and analyzes them from the lens of energy justice.

1. Online search of initiatives in Quebec, mainly on websites of energy providers, provincial and federal governments, provincial ministries and state-owned companies. Keyword searches and snowballing were used.
 - An initiative refers to any policy, program or strategy implemented towards the increase of residential energy efficiency.
2. Initiatives inventoried were characterized following the method developed by Das et al. (2022), along (among other criteria): actor and level of government responsible for implementation, description and intended effect, eligibility for admission, target audience, and start/end year.
3. Initiatives were analyzed from the lens of energy justice, which pays attention the ethical dimensions of energy use and distribution (Sovacool & Dworkin, 2015).
 - Two principles of energy justice guided the analysis: distribution justice (research question 2) and recognition justice (research question 3) (Jenkins et al., 2021).

Results

A total of 56 residential energy efficiency initiatives were inventoried from 1999 to 2023.

Homeowners, landlords and new construction companies

- 70% of inventoried initiatives
- most common type of initiatives: financial aid for retrofit renovations and new energy efficient installations
- have more agency in lowering their energy bills

Tenants and low-income groups

- 30% of inventoried initiatives
- most common type of initiatives: efficiency advice, equipment and energy bill support
- have less control over their home's energy efficiency

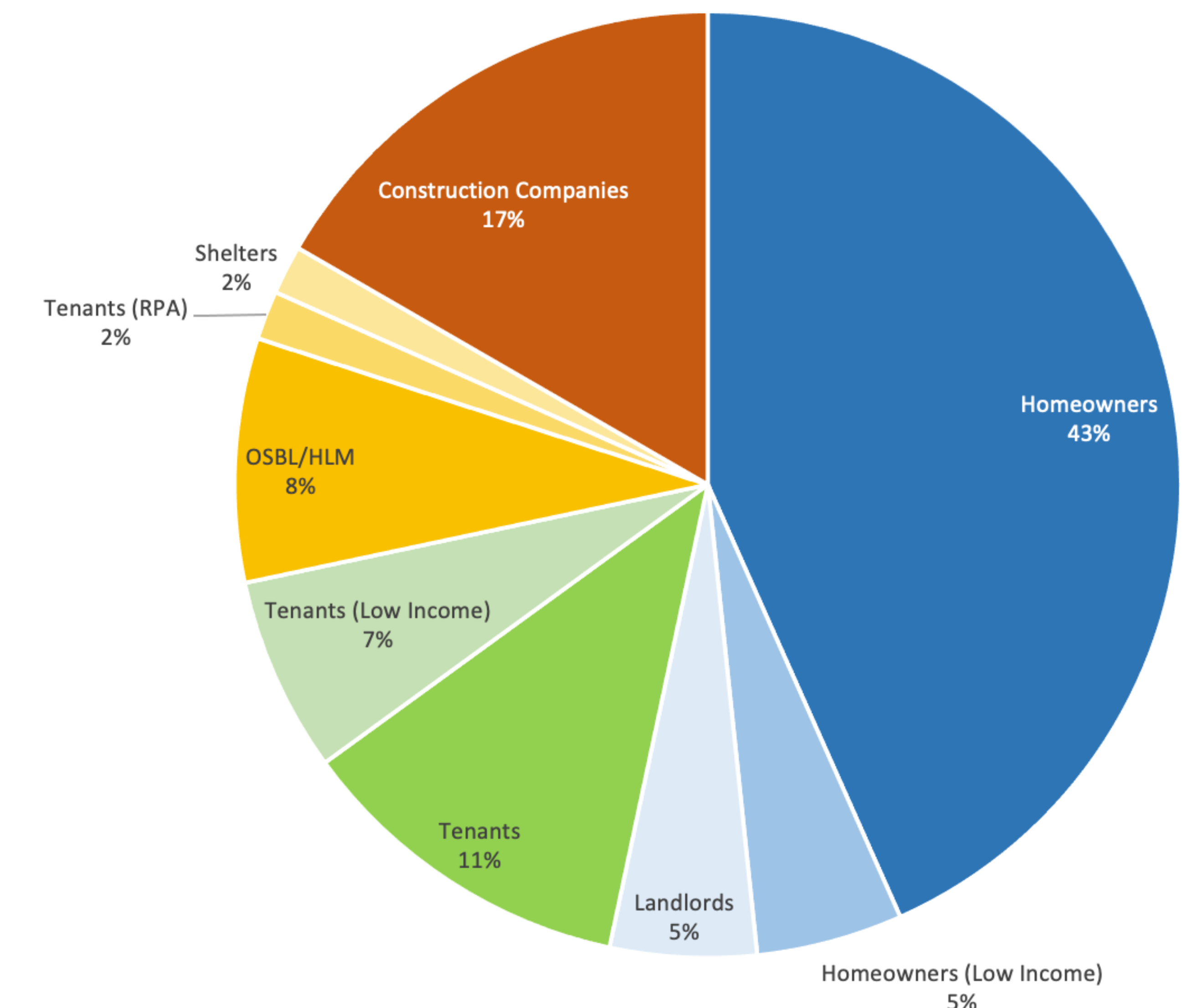


Figure 1: Distribution of energy efficiency initiatives in Quebec based on target audience

	Certification	Advice	Equipment	Payment Plan	Reduced Rates	Efficiency Policy	Financial Aid or Subvention	Total (target audience)
Construction Companies	1	0	0	0	0	1	9	11
Tenants	0	2	3	0	1	0	2	8
Tenants (Low Income)	0	0	0	1	0	0	1	2
Tenants (RPA)	0	0	0	0	0	0	1	1
Landlords	0	1	1	0	0	0	5	7
Shelters	0	0	0	0	0	0	1	1
OSBL/HLM	0	0	1	0	0	2	4	7
Homeowners	0	2	2	0	1	0	22	27
Homeowners (Low Income)	0	0	0	1	0	0	2	3
Total (type of initiative)	1	5	7	2	2	3	47	

Table 1: Number of initiatives of each category per type of target audience. A heat map was created for each row in order to highlight the types of initiative most available to each target audience group.

Discussion and conclusion

- Homeowners not only receive more support from energy efficiency initiatives, but the kind of support they receive is more beneficial to improve the energy efficiency of the dwelling, reduce energy consumption and lower energy bills.
- Few initiatives target those who might benefit the most from improvements in the energy efficiency of their dwelling (tenants and lower-income households).
- Overall, residential energy efficiency initiatives in Quebec do not meet some of the principles of energy justice, namely distribution and recognition justice.
 - The initiatives in place do not equally benefit tenants and homeowners
 - They do not accurately meet the needs of tenants and lower-income households – those who are most at risk to face energy poverty.
- Residential energy efficiency initiatives need to exist for those in needs and to tackle energy poverty in Quebec.

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