

Agenda



- Introduction to Energy Poverty (**20 mins**)
 - Background, Mapping Tool and Methodology
- Dive deeper (**30 mins**)
 - Hands-on activity + key takeaways for your own community!
- Discussion: (**30 mins**)
 - Case studies, examples, use cases, best practices....

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Prior knowledge of Energy Poverty?



9

Not much



22

Heard about it from others



12

Shows up in my work
experience



7

I have applied energy poverty
and equity lenses in my work



2

I am a recognized expert

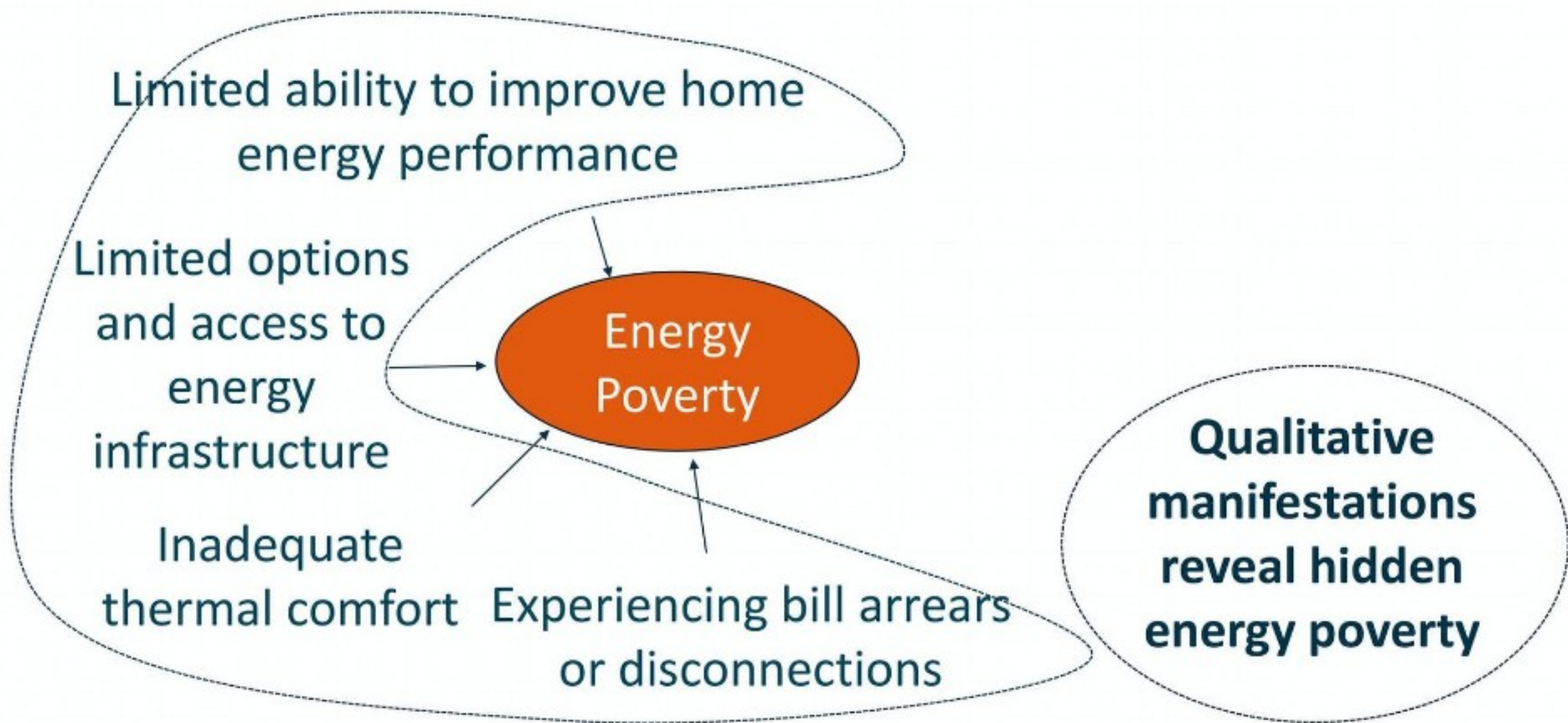
Introduction:

What is energy poverty?

Energy poverty refers to the experience of households or communities that struggle to heat and cool their homes and power their lights and appliances.

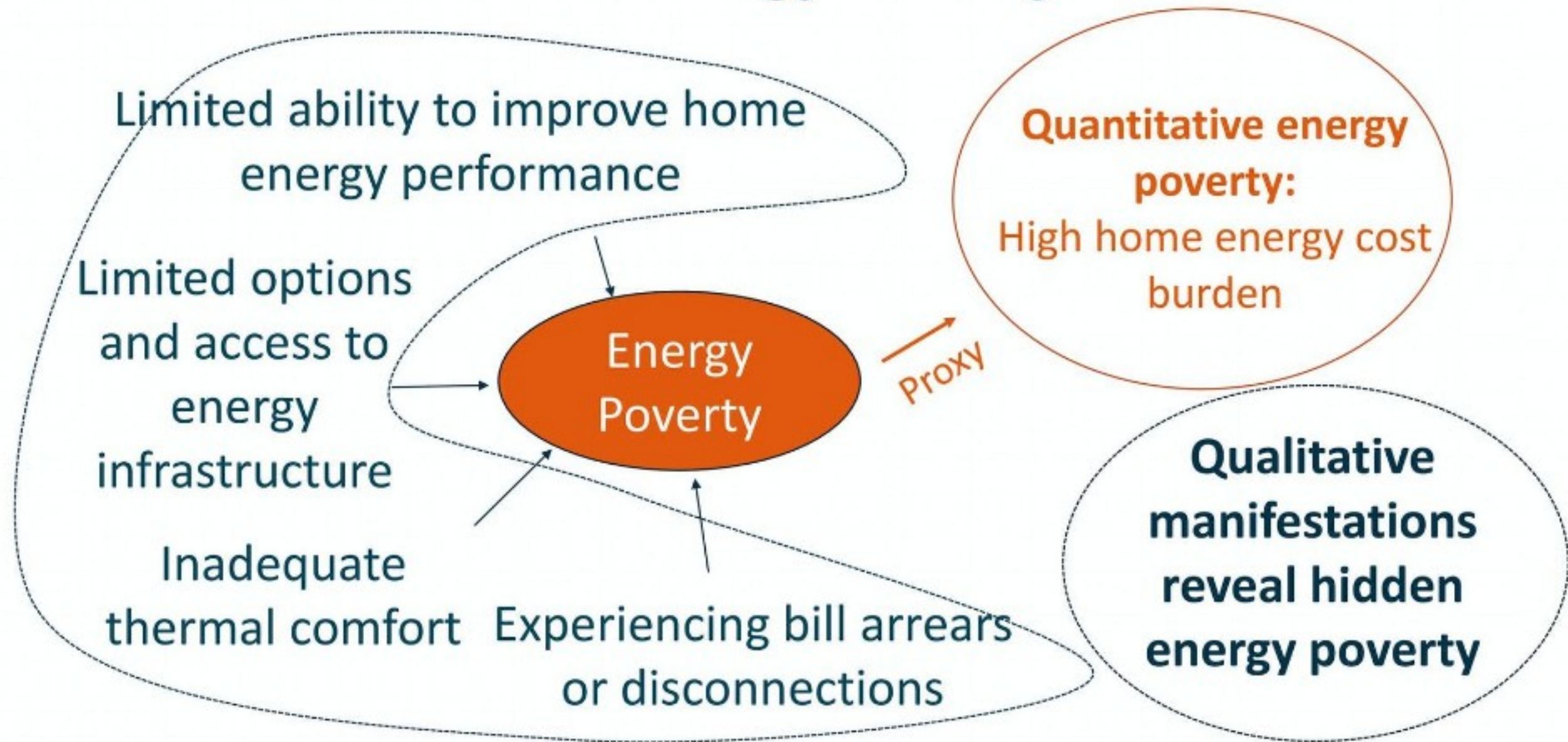
Introduction:

How do we measure Energy Poverty?



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Defining High Energy Cost Burden

$$\text{Energy Cost Burden [\%]} = \frac{\text{Energy Expenditures [\$]}}{\text{After-Tax Income [\$]}}$$

= 3%, for households with **median** national home energy cost burdens

>=6%, or 2x median, are defined as households with **high** home energy cost burdens*

*quantitative proxy for 'energy poverty'

Resources Available

(click in resource to open link in your browser)



- Strategic/Systems change initiatives
- Projects and programs
- Resource library – staff reports, best practices, case studies



- Interactive mapping tool; custom dataset from 2016 Census
- Energy cost burdens and other variables; select cross-tabs available
- Nationwide at various Census scales



- Definition of Energy Poverty
- General nationwide trends in energy poverty
- Methodology on energy poverty proxy indicators



- Energy poverty trends in racialized, recent immigrant and Indigenous households
- Next steps recommendations for policymakers and partners



- Process and principles for design of equitable clean energy programs
- Detailed case studies accompany guide.

Data-Informed Equitable Clean Energy Program Design

**Why
measure
Energy
Poverty?**



Energy Poverty and Equity Mapping Tool

Demo

Key Takeaway #1:

Many households experience high energy cost burdens

In your community, **how many and what percentage of** households experience high energy cost burdens?



3 minutes



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Key Takeaway #1:

Many households experience high energy cost burdens

In your community, how many and what percentage of households experience high energy cost burdens?

Example using Guelph, (ON)

- Number of households experiencing high energy cost burdens: **8,485**
- % of all households experiencing high energy cost burdens: **20%**



3 minutes



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Key Takeaway #2

Households with a range of incomes experience high energy cost burdens

In your community, how many households experiencing high energy cost burdens are also in low income (incomes below after-tax Low-Income Measure)?

Example using Guelph, (ON)

	Households with high energy cost burdens	Households without high energy cost burdens
Households in Low Income	3,175	???
Households <u>not</u> in Low Income	???	???

Most Impacted

Impacted

Not Impacted



3 minutes



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Example using
Guelph, (ON)

	Households with high energy cost burdens	Households without high energy cost burdens
Households in Low Income	3,175	975
Households <u>not</u> in Low Income	5,310	32,860

Most Impacted

Impacted

Not Impacted



3 minutes



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Key Takeaway #3

Households with high energy cost burdens have higher median home energy expenditure

In your community, what is the median household after-tax income of all households?

In your community, what is the median household after-tax income of energy poor households?

Example using Guelph, (ON)

	Households with high energy cost burdens	All Households
Median AT Income	\$35,047	\$76,735
Median energy expenses		



3 minutes



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Key Takeaway #3

Households with high energy cost burdens have higher median home energy expenditure

In your community, what is the median home energy expenditure of all households?

In your community, what is the median home energy expenditure of energy poor households?

Example using Guelph, (ON)

	Households with high energy cost burdens	All Households
Median AT Income	\$35,047	\$76,735
Median energy expenses	\$3,045	\$2,406



3 minutes

Key Takeaway #4

Households across housing tenure type experience high energy cost burdens

In your community, what **number of homeowner households** experience high-energy cost burdens?

Note: The universe of this dataset excludes households reporting no after-tax income and households with no home energy costs (renters with utilities included)

Example using Guelph, (ON)

	All households	Households with high energy cost burdens	Households <u>without</u> high energy cost burdens
Homeowner	34,060	6,280	27,780
Rental	8,270	2,205	6,065
Subsidized housing	1,045	585	460



3 minutes



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Key Takeaway #4

Households across housing tenure type experience high energy cost burdens

In your community, what **number and percentage of renters** experience high-energy cost burdens?

Note: The universe of this dataset excludes households reporting no after-tax income and households with no home energy costs (renters with utilities included)

Example using Guelph, (ON)

	All households	Households with high energy cost burdens	Households <u>without</u> high energy cost burdens
Homeowner	34,060	6,280	27,780
Rental	8,270	2,205	6,065
Subsidized housing	1,045	585	460



3 minutes

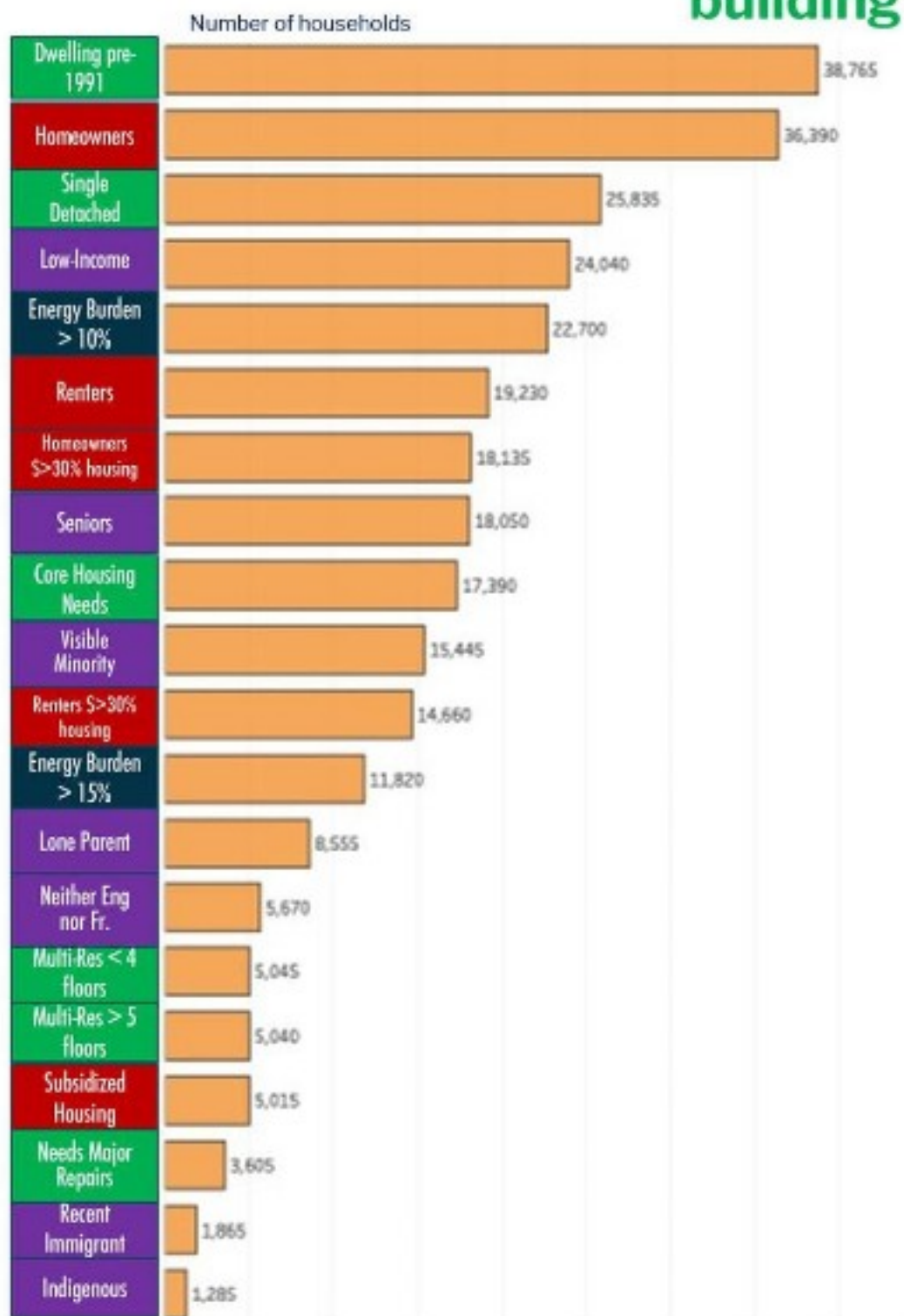


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Key Takeaway #5

High energy cost burden is also an issue of equity, with high *incidence* among certain groups based on household income, **demographics**, **housing tenure** and **building stock** characteristics



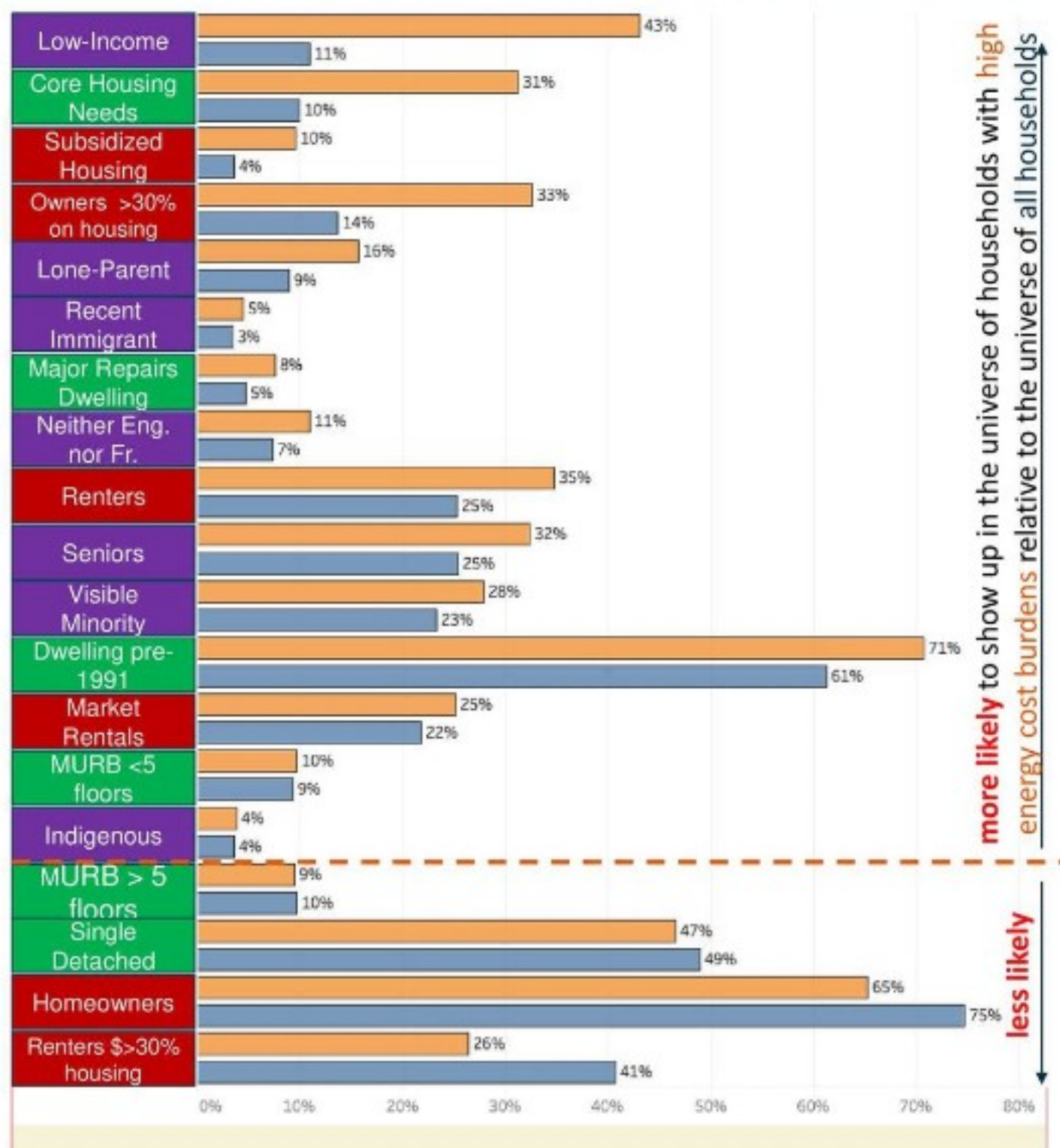
Example using Ottawa, (ON)

Total number of households with high energy cost burdens: (~56k)

Note: These categories are not mutually exclusive. A household with high energy cost burdens can, and more than likely does, belong to one or more groups

Key Takeaway #6

High energy cost burden compounds other known inequities - with higher *prevalence* among certain households based on household income, demographics, housing tenure, building stock characteristics



Example using Ottawa, (ON)

Total number of households with high energy cost burdens: (~56k)

Note: These categories are not mutually exclusive. A household with high energy cost burdens can, and more than likely does, belong to one or more groups

Key Takeaway #7 (Homework)

Incidence and prevalence of high energy cost burdens also varies by geography and neighbourhood

In your community, what neighborhoods (census tracts) have **the most households** with high energy cost burdens?

In your community, what neighborhoods (census tracts) have a **highest percentage of households** with high energy cost burdens?



8 minutes



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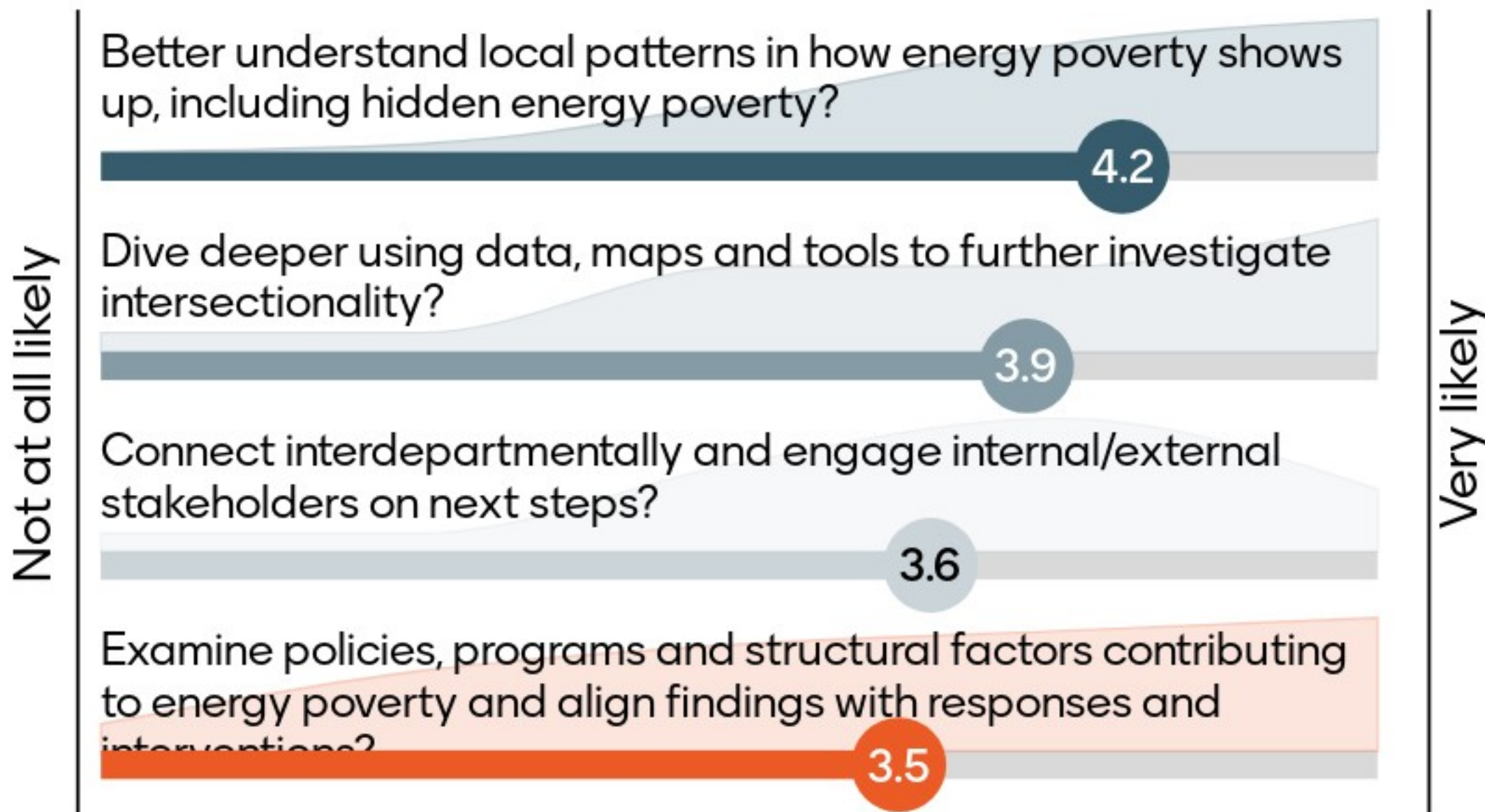
Also available

- Transportation - household commute mode and distance for all households vs households with high home energy cost burdens
- Energy spend by energy source – electric and non-electric

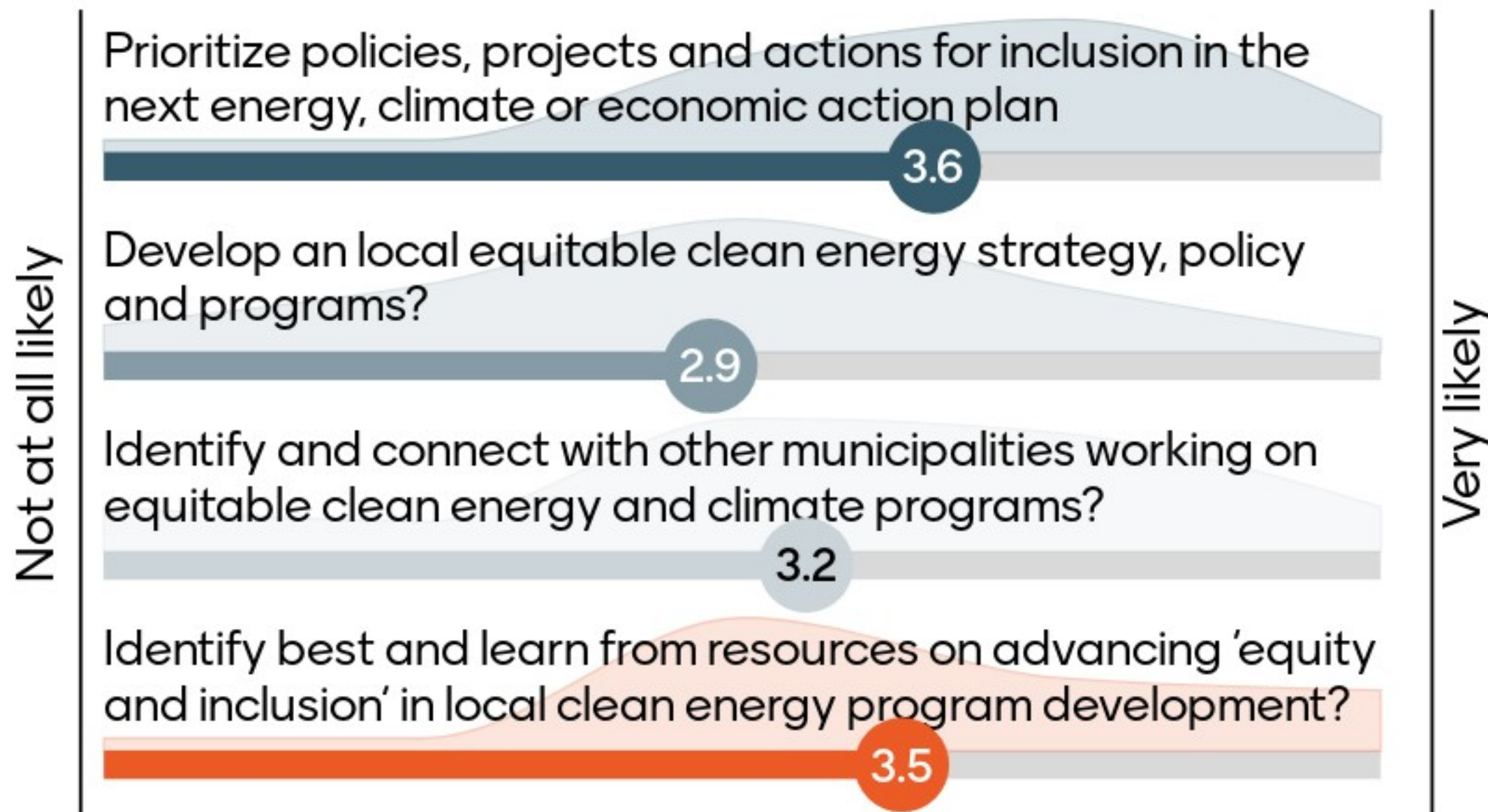
Summary Takeaways

- Many households experience high energy cost burdens
- Households with a range of incomes experience high energy cost burdens. High energy cost burden not merely another facet of low household income
- Households with high energy cost burdens have higher median home energy expenditures in absolute and relative terms.
- Households across housing tenure type experience high energy cost burdens
- High energy cost burden is also an issue of equity, with high *incidence* among certain groups based on household income, **demographics**, **housing tenure** and **building stock** characteristics.
- High energy cost burden compounds other known inequities - with higher *prevalence* among certain households based on household income, **demographics**, **housing tenure**, **building stock** characteristics
- *Incidence* and *prevalence* of high energy cost burdens also varies by geography and neighborhood (homework 😊)

As a next step, how likely are you to use this report, presentation, data and tools to



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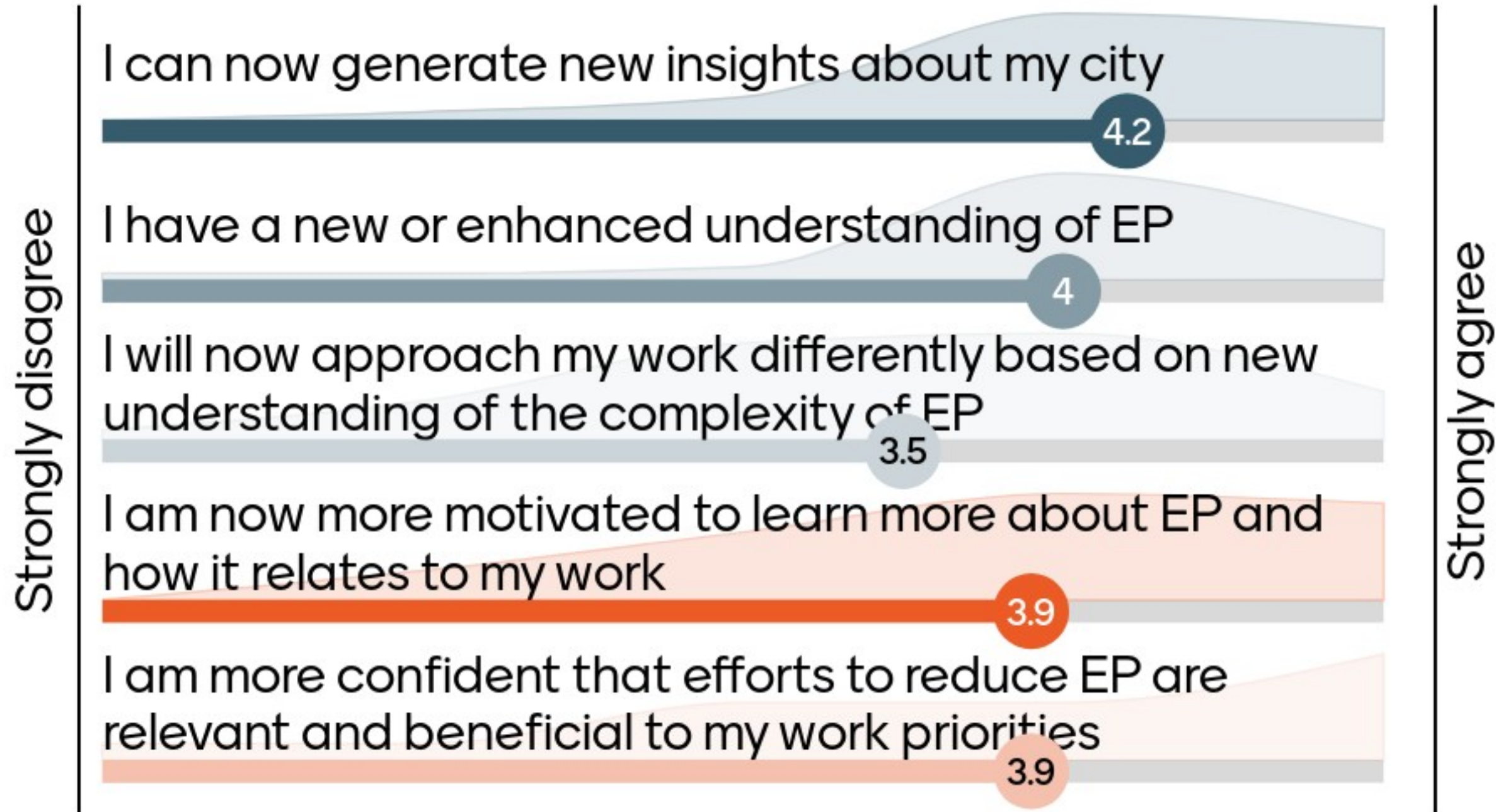


Recommended Next Steps

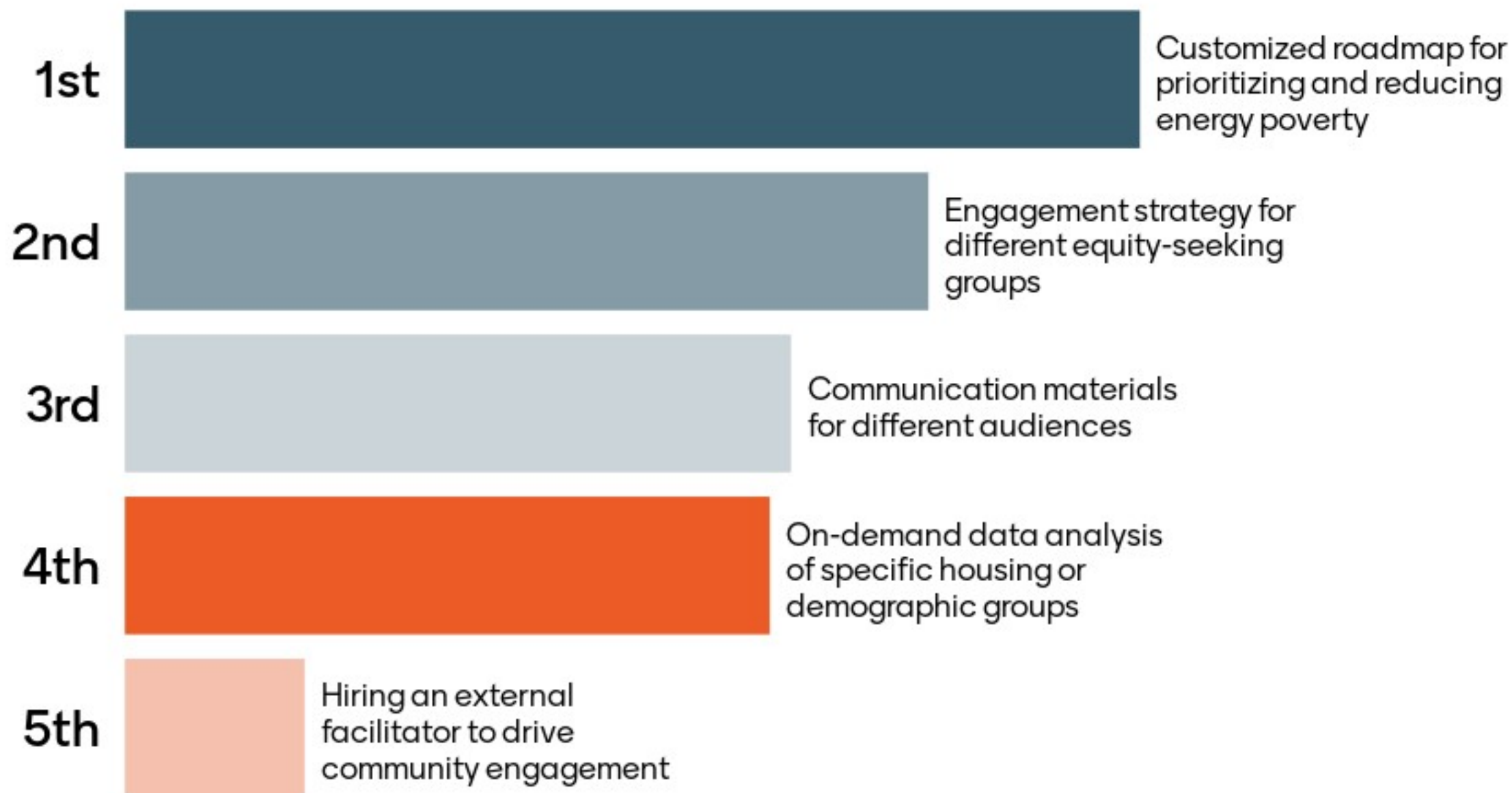
Address the root causes of high energy cost burdens by partnering with impacted communities to:

- **Go beyond** high energy cost burden as an indicator and **better understand** local patterns through which energy poverty shows up* (eg: households in utility arrears, disconnections, inadequate thermal comfort) and how it impacts lives (too hot or cold, food spoilage, physical and mental health).
- **Further examine** intersectionality of households in energy poverty. Investigate patterns in building typology and age, housing condition, and housing tenure among impacted communities.
- **Connect** interdepartmentally with colleagues working in equity and human rights, poverty reduction and housing affordability, as well as, local community partners and equity-seeking groups; integrate energy poverty across multiple strategic priorities and parties.
- **Examine** what existing policies, programs or structural factors are contributing to energy poverty, and **align findings** with appropriate responses and interventions.
- **Develop** equity-centred** energy efficiency and clean energy programs, prioritize **equitable wellbeing** of those households **most impacted** by energy poverty and other systemic inequities, and with **least ability to influence** policymakers **and to access** programs.

As a result of this presentation and from using the tool,



What additional resources will help you understand or use this information more effectively?



LEAP – Program structure in development



Halifax: Equity in green financing mechanism for deep energy retrofits. (consumer protection etc.)

Ottawa: Embedding equity and inclusion in climate action plan

Toronto: Equity as a Key Performance Indicator (KPI) in climate resilience (eg: EV strategy)

Winnipeg: Equity in passive-housing workforce development

Saskatoon: Deep retrofit financing and water conservation plans that integrate equity

Surrey: Equity in EV strategy as a pilot for integrating equity into climate action plan

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