



The Next 20 in  
**Buildings**  
Effective Clean Heat Planning



February 13, 2025

## Webinar Participation

- ▶ Due to the great turnout, **the chat has been disabled.**
- ▶ **Submit questions using the Q/A function**  
*(les questions en français sont les bienvenues !)*
- ▶ Turn on **closed captioning** by clicking the icon that says "cc" then more > show subtitles



# Agenda

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## **Opening Remarks**

*Philippe Dunsky*

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## **The Next 20 Years in Buildings**

*William Harvey and Lauren McNutt*

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## **Discussion**

*Hydro-Québec and Énergir*

4

## **Audience Q&A**

# Opening remarks

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**Philippe Dunsky**  
PRESIDENT & FOUNDER



ACCELERATING THE CLEAN ENERGY TRANSITION



ANALYSIS + STRATEGY



BUILDINGS



MOBILITY



INDUSTRY



ENERGY



20 Years



60+ Dedicated Professionals



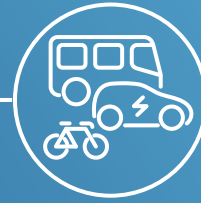
1000+ Projects across 35 States & Provinces



ANALYSIS + STRATEGY



BUILDINGS



MOBILITY



INDUSTRY



ENERGY





ANALYSIS + STRATEGY



BUILDINGS



MOBILITY



INDUSTRY



ENERGY

Clean heat pathways

Technology assessments

Load forecasting

Market potential studies

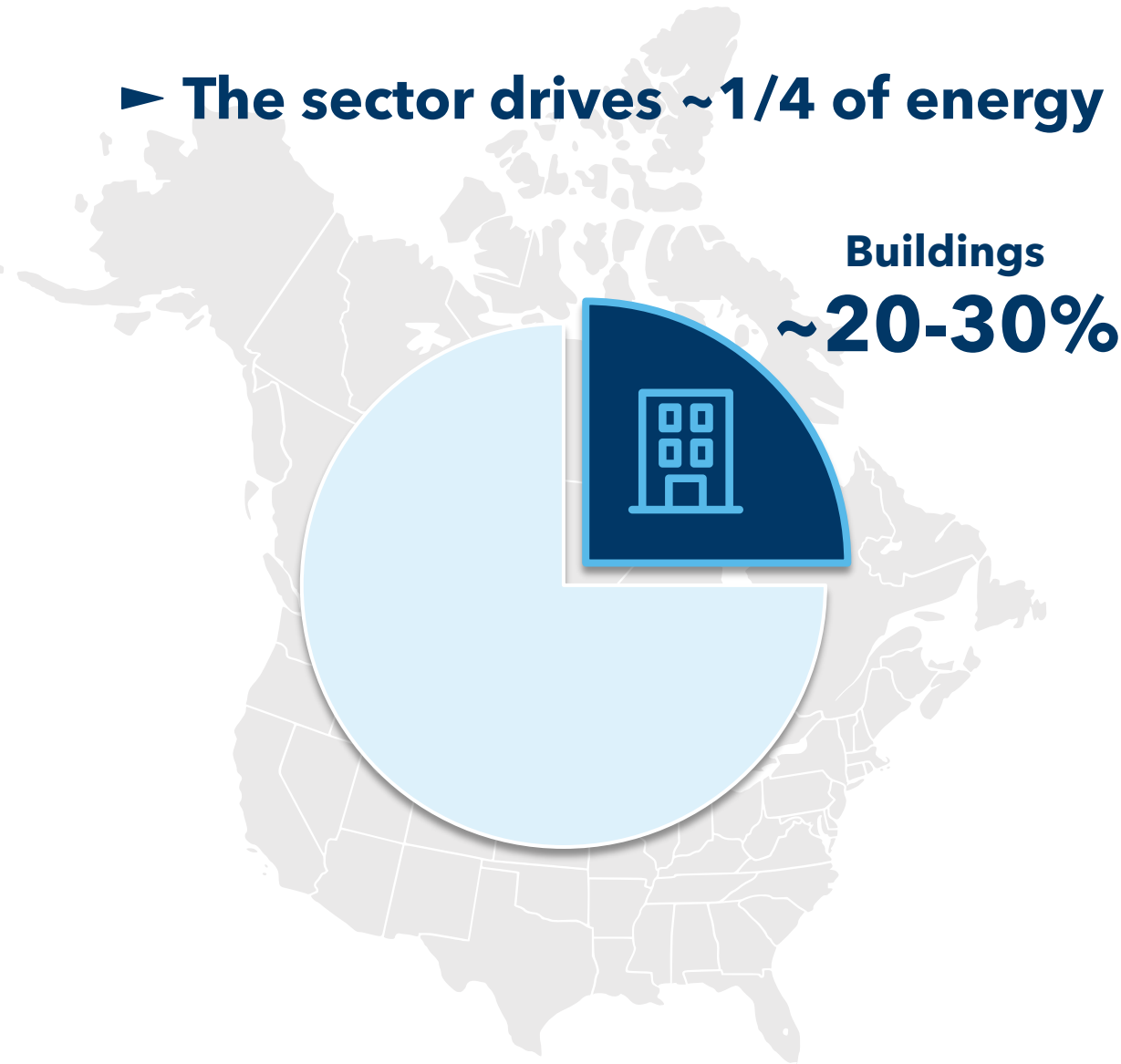
Go-to-Market strategies

Performance evaluations

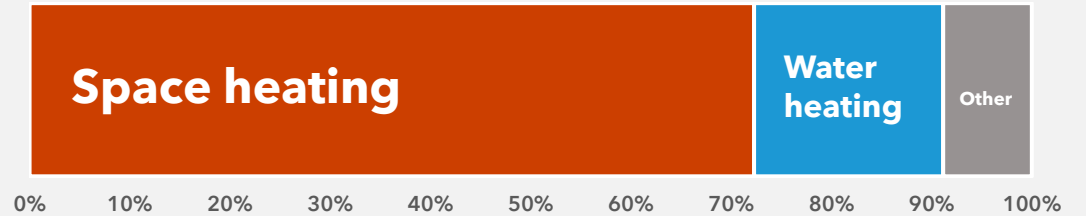
... much more...

# BUILDINGS ARE KEY

► The sector drives ~1/4 of energy use and emissions



Direct GHG emissions across buildings by end-use (Can & US)



**>90%**  
of building's operating  
emissions are from **space  
& water heating**



# Clean Heat Planning

A faint, light-colored map of North America is visible in the background on the left side of the slide.

QUESTION

How to optimize  
the transition to  
clean heat?

CASE STUDY

Québec's  
innovative clean  
heat pathway.

# Speakers


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**Lauren McNutt**  
MANAGING CONSULTANT



**William Harvey**  
CONSULTANT



# Strategic Principles for Clean Heat Planning

# One-size-fits-all strategies raise more questions

We often hear what seem like **simple and obvious approaches...**



*"Electrify everything"*



*"Go all in on energy efficiency"*



*"Decarbonize gas supply with clean fuel"*

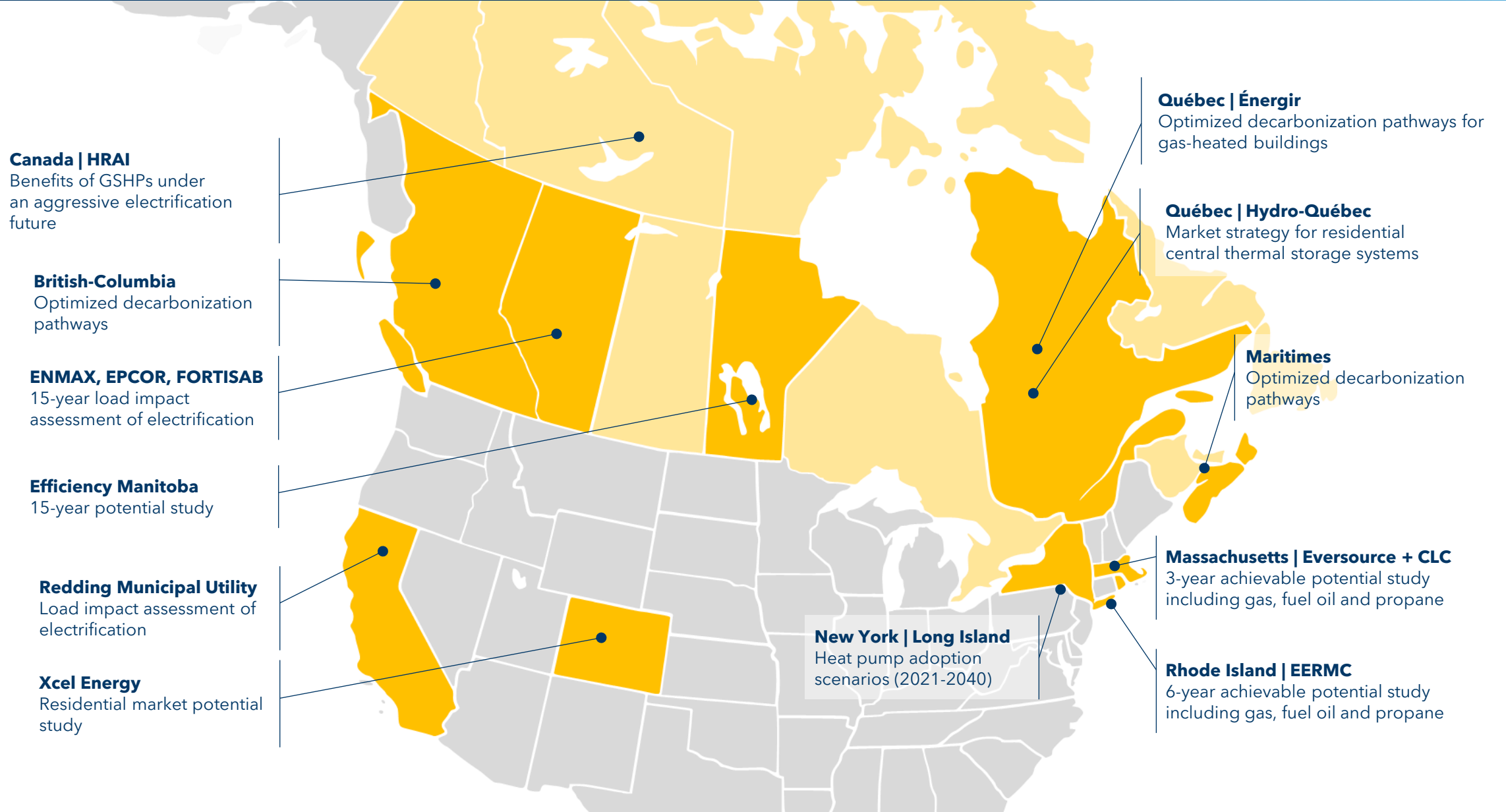
...but each approach **raises additional questions and complexities**

How do we manage **peak demand**?

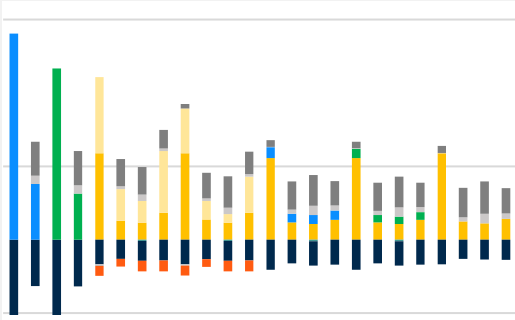
How quickly can we **scale**?

Will there be **enough**, and at what **cost**?

**Nuance matters:** Clean Heat Planning requires a **robust, comprehensive** and **granular** assessment

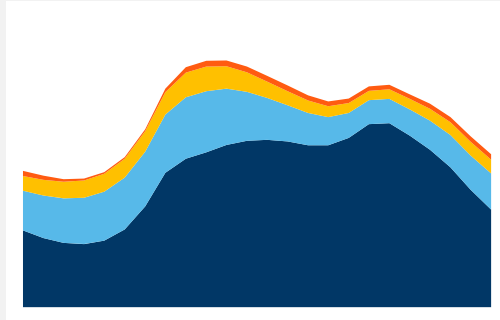


# Robust, comprehensive and granular assessments



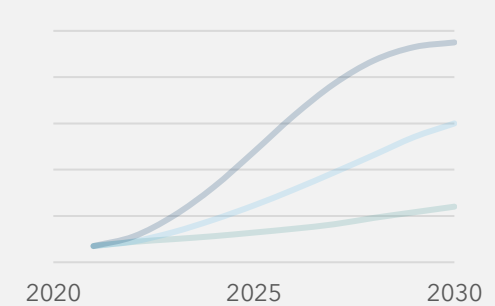
Comprehensive and Granular **Opportunities**...

...including all archetypes, systems, technologies and configurations



Precise Modelling of **Heat Pump Systems**...

...accounting for peak impacts in the winter and summer



Understand all **Perspectives**...

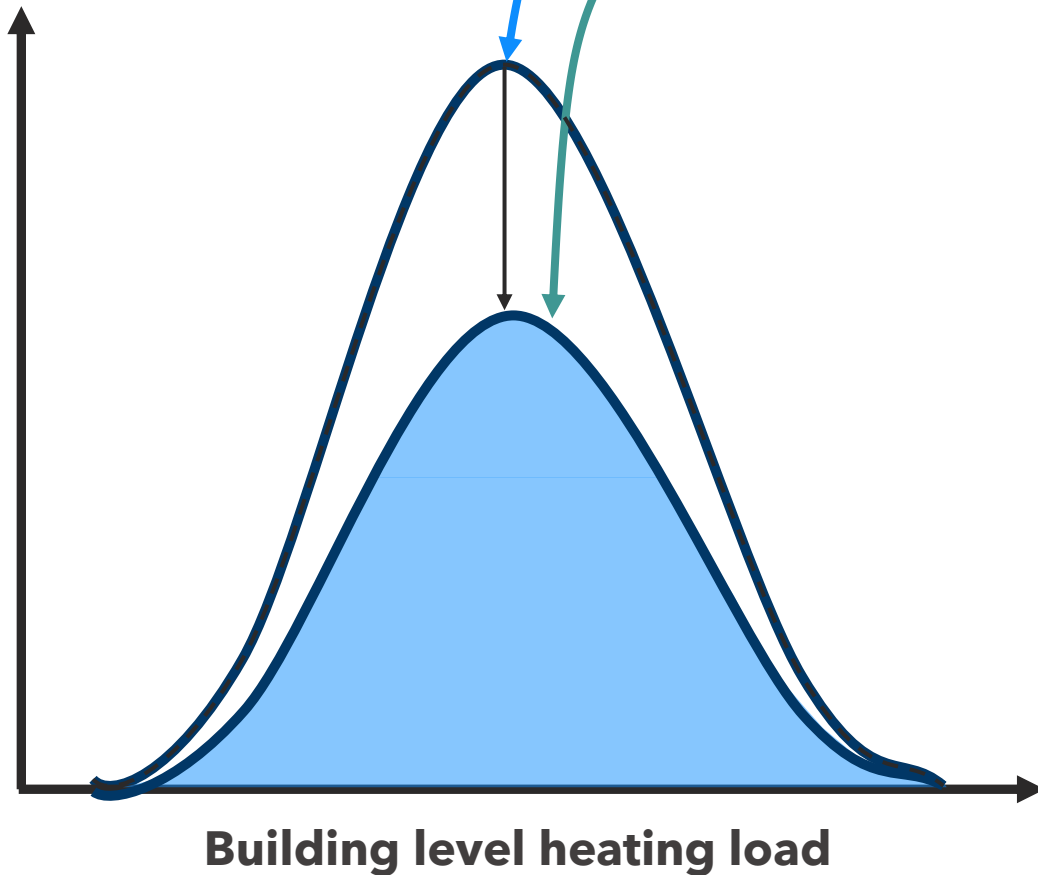
...to bridge the gap between them

# Robust, comprehensive and granular assessments

To assess interplay between system constraints and technology choices at the building level

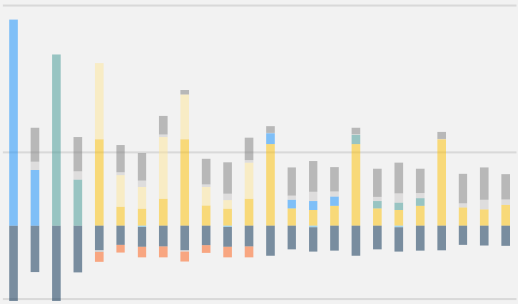
**Electricity** system costs increase with peak demand.

**Decarbonized gas** marginal costs increase with volumes.



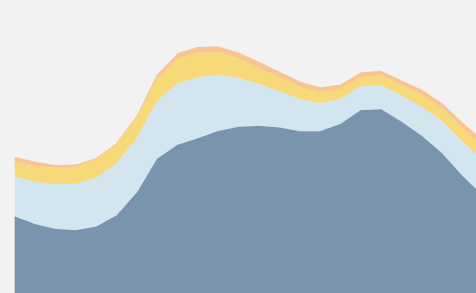
...what about **efficiency**?

# Understanding the different perspectives



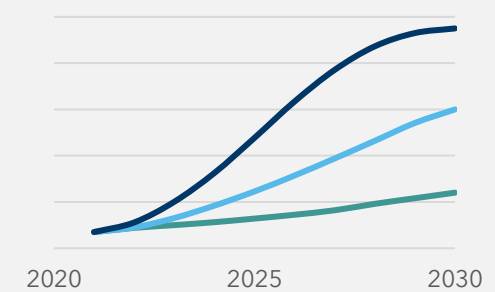
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# Understanding the different perspectives

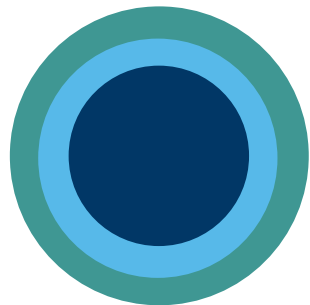
**Different actors have different goals ...**

**Society:** GHG emissions, non-energy benefits.

**Energy system:** Avoided system costs (generation, T&D, etc.), reliability

**Participants:** Equipment costs, bill impacts, etc.

**Modelling the different perspective will help understand ...**



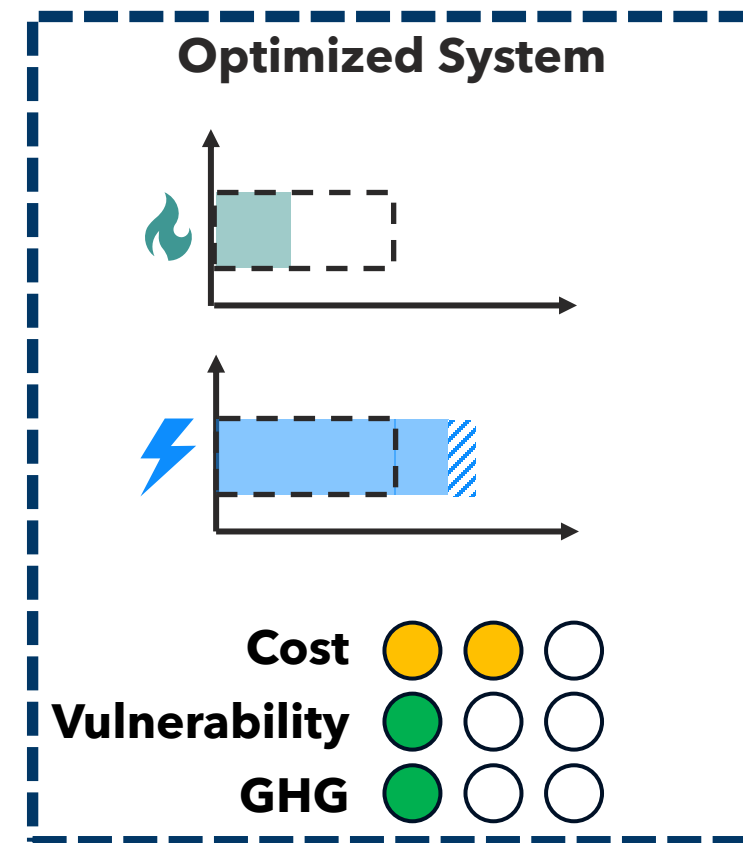
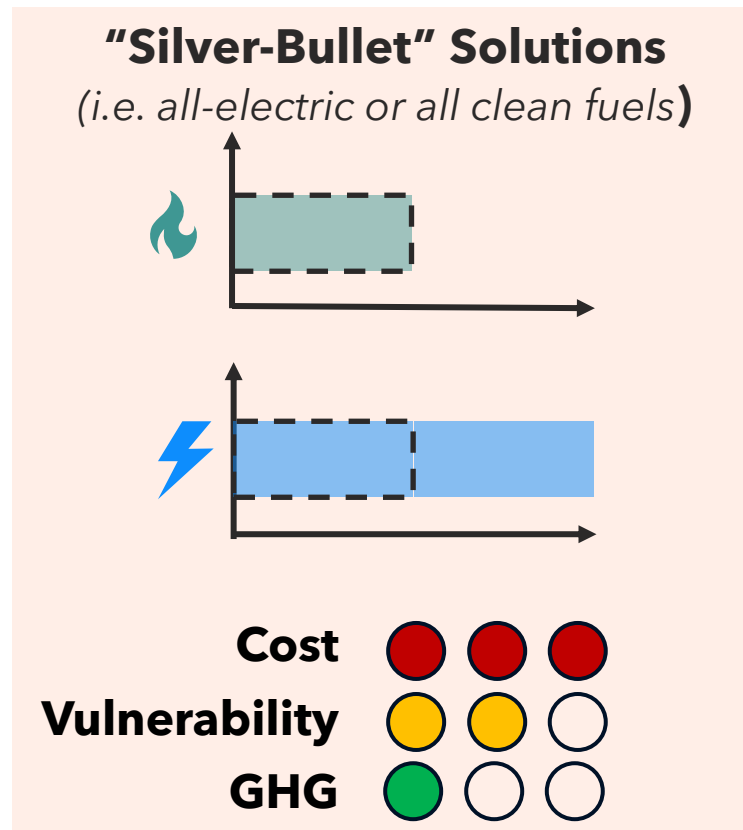
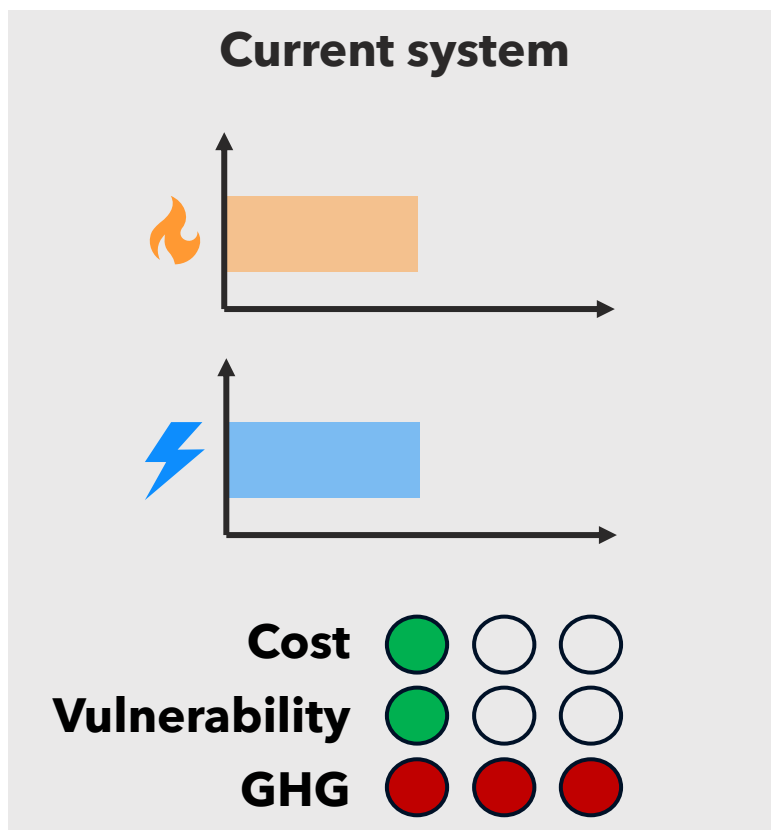
What is most cost-effective approach from a **societal perspective**.



Technology adoption by 2035

# Understanding the different perspectives

... how different approaches **affect the energy system**...



... to ensure affordable, reliable and clean system

# Understanding the different perspectives

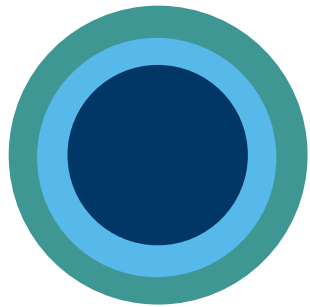
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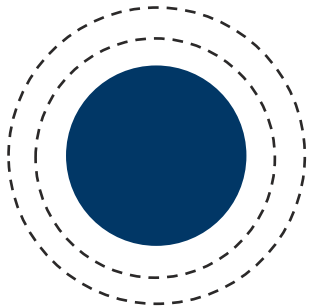
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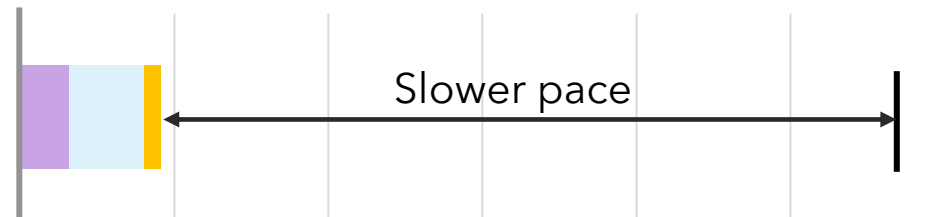
What is most cost-effective approach from a **societal perspective**.



Technology adoption by 2035



What **participants** are likely to do.



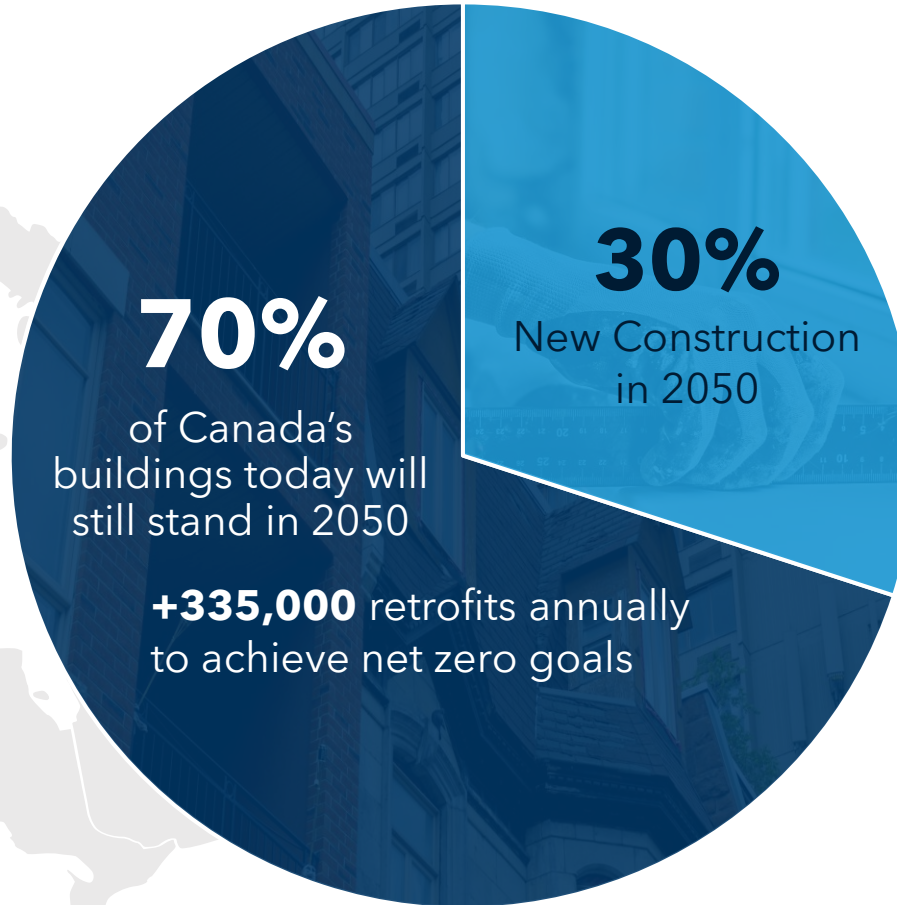
How do you **bridge the gap**?

The background is a photograph of a modern, multi-story apartment building with a grid of windows and balconies, overlaid with a semi-transparent blue filter. A thin vertical yellow line is positioned to the left of the main text.

# What Strategies Can Guide the Path to Decarbonization?

# The Current Pace To Decarbonize Buildings Is Slow

## Canada's Building Stock in 2050



**+500,000 additional units / year**  
(2x current construction rate) to restore affordability by 2030

# A Paradigm Shift



**Today:**

**HELP & HOPE**

**Slow incremental change** through voluntary programs targeting early adopters followed by regulation.



**Tomorrow:**

**MANDATE & SUPPORT**

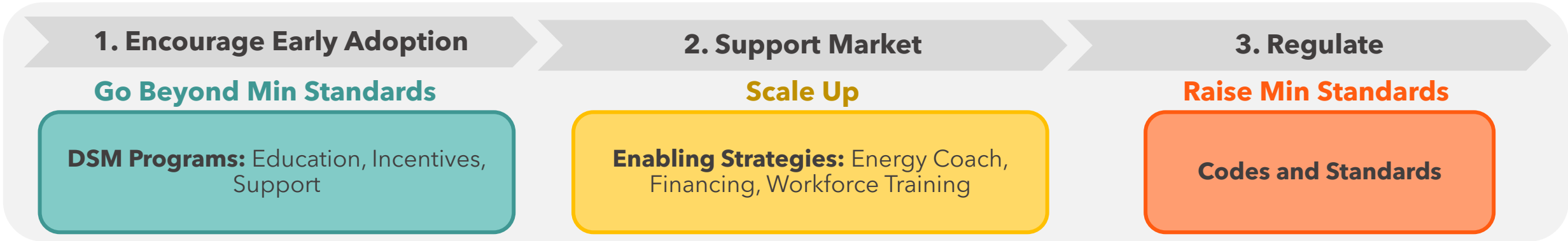
**Accelerated transformational change** that requires everyone do more and helps everyone comply.

**Process-Based to Outcome-Based**



# A Paradigm Shift

## TODAY: HELP & HOPE



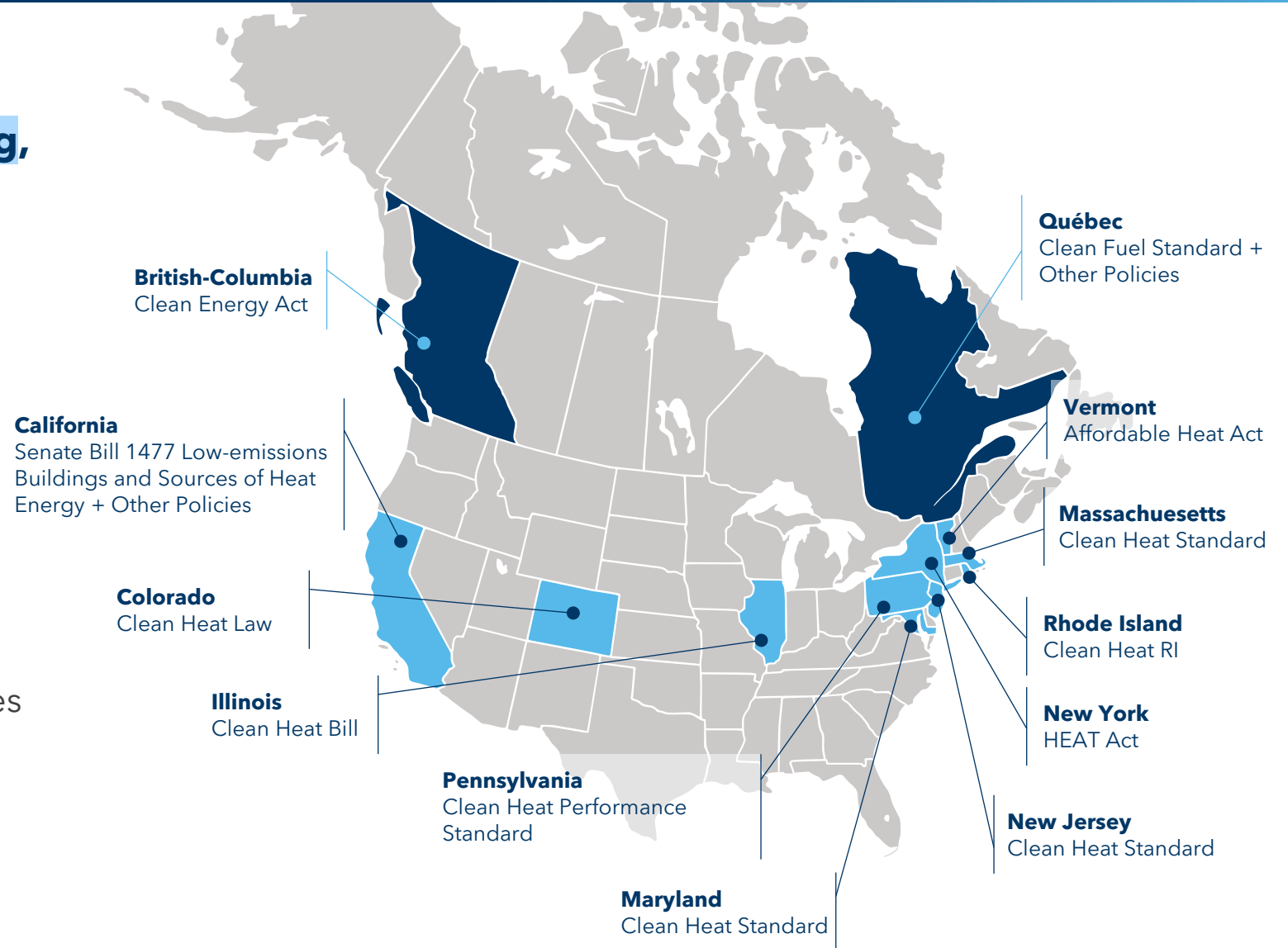
## TOMORROW: MANDATE & SUPPORT



# Clean Heat Legislation – A New Policy Tool

Jurisdictions are taking different approaches to **Clean Heat Planning**, but they all include:

- Clean heat + other complementary **policies**
- Emissions reduction **targets**
- Utility **obligations**
- Decarbonize heat through **electrification** and **cleaner alternatives**
- **Equity and affordability** measures





# Pillars of Clean Heat Planning

## Comprehensive Approach

- A measured approach to model energy system, customer and societal impacts

## Consistent Goals & Mandates

- Policies, regulatory frameworks, and utility obligations aligned to support decarbonization

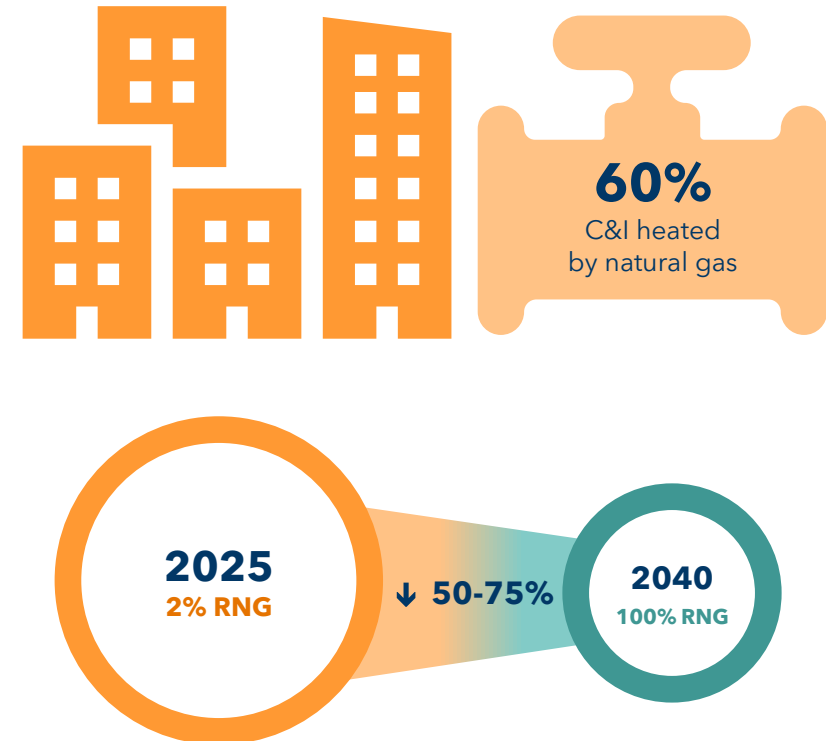
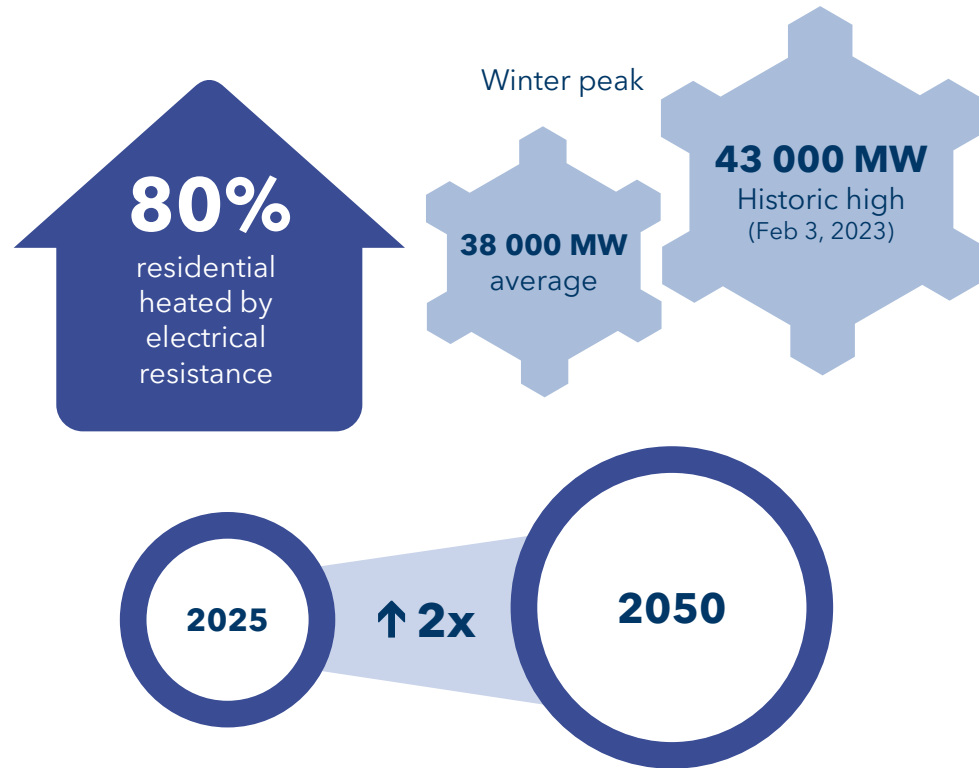
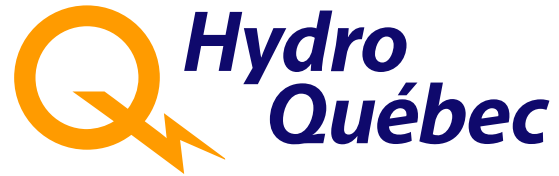
## Collaborative Utility and Energy Policy

- Multi-stakeholder collaboration and coordination to enable the transition



**Hydro-Québec and Énergir:**  
**A Model for Clean Heat Collaboration**

# Hydro Québec & Énergir at a glance



# Guest Speakers

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**Jean-Pierre Croteau**

Director,  
Residential Programs



**Jerry Joseph**

Executive Director,  
Customer Experience





## The Next 20 in **Energy**

February 27, 2025 - 12 pm ET

# Contact

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