

HOW LOW CAN YOU GO?





NET ZERO READY MURBS

Affordable, Replicable and Marketable



To support decarbonization targets the industry is exploring electrification and the technology that demonstrates options to remain on existing or smaller electrical panels - **but is it enough?**

What's the best approach for new construction, and what are the **opportunities and limitations?**

How is **electrification impacting deep energy retrofits** and the infrastructure in existing communities?

What technology, programs, and policies will allow the industry to move towards **electrification with right-sized panels?**



NET ZERO READY MURBS

Affordable, Replicable and Marketable



How Low Can You Go? Electrification on 100 amps?



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DEREK SATNIK
VICE PRESIDENT OF
TECHNOLOGY, S2E



All-Electric MURB: minute-level data

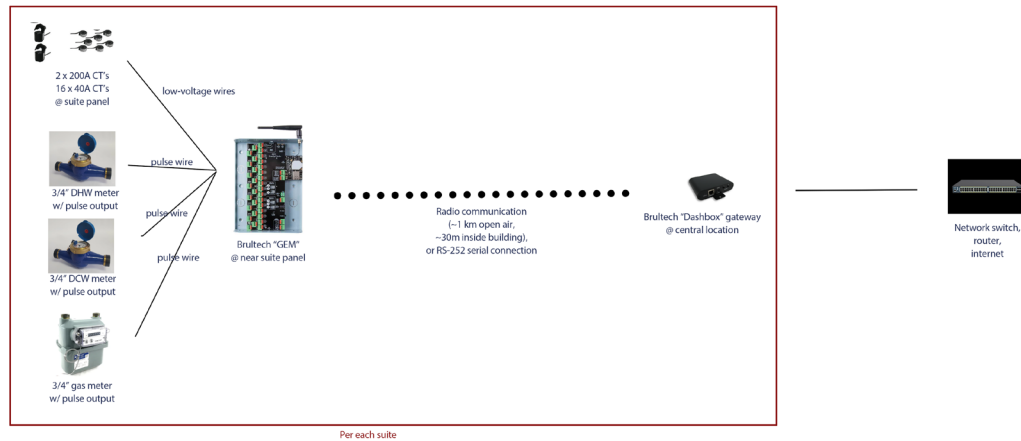
- **S2E TECHNOLOGIES**

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Seungyeon Hong (seungh@s2etech.com)

All-Electric MURB: minute-level data

CHBA Monitoring setup schematics (revised 2021-08-12)



**UNIVERSITY
OF ALBERTA**

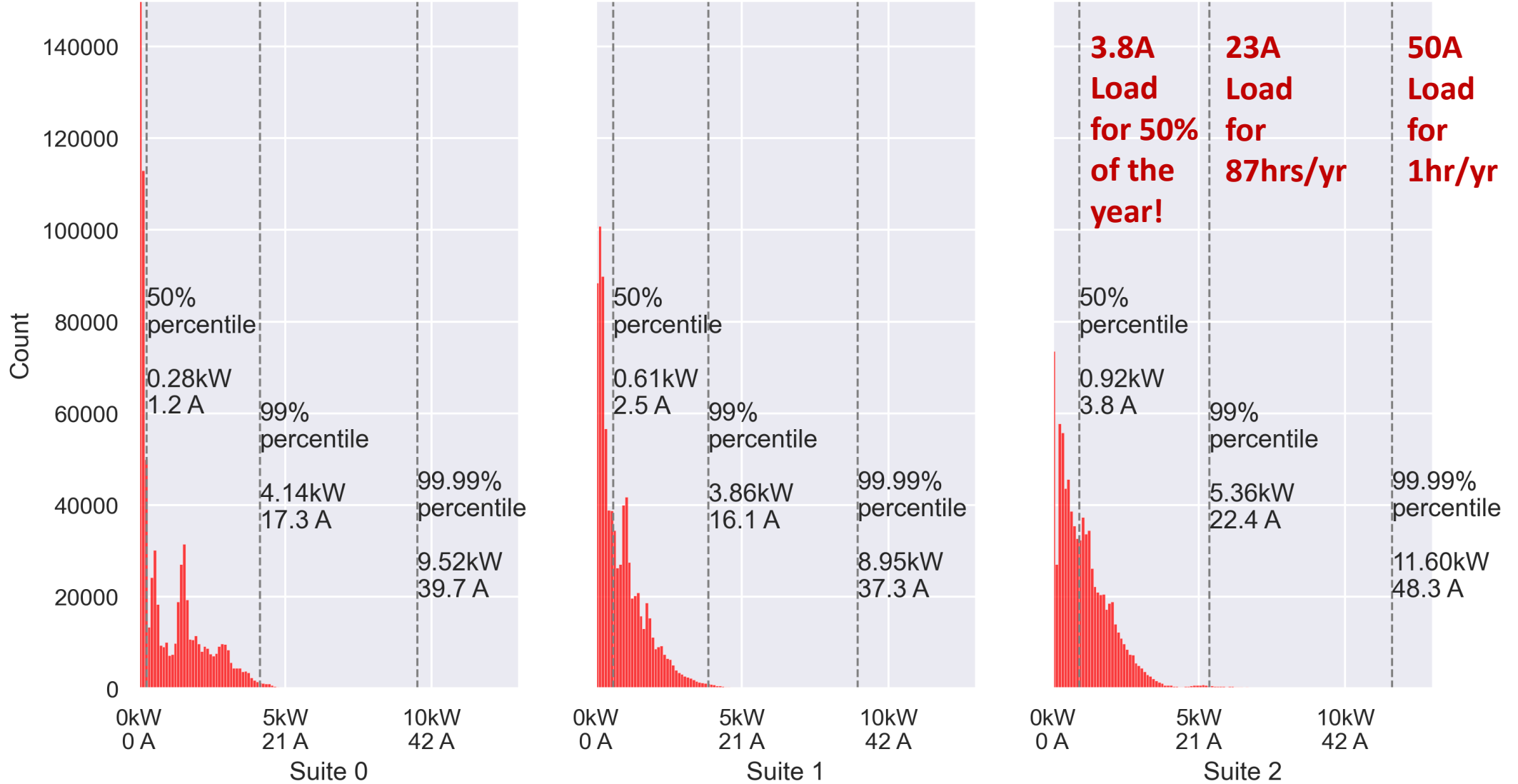


Model 24x36 Standard Stacked Units
Floor Area 927 / 1024 SqFt
Front Orientation South-West
NetZero Ready Spec

Attic Insulation	2x4 truss @ 24" OC with R60
Roof heel height	7"
Above-grade Exterior Wall	2x6 @ 24" wall w/ 5.5" batt in cavity (R22) + 1" Exterior XPS (R5)
Ground floor garage wall	2x6 @ 24" wall w/ 5.5" batt in cavity (R22) + 1" Exterior XPS (R5)
Slab-on-ground under slab insulation	2" Type-II EPS (R8)
Foundation wall	2-1/2" XPS exterior insulation down to the top of footing
Windows	PVC Frame, Triple Pane, Argon and 2 LowE (All Weather HS3A)
Door	Fiberglass w/ Polyurhtane Core
Partywall between units	Poly on one side of party wall between units
Building Envelop Seal	≤ 2.0 ACH @ 50 Pa
Space Heating & Cooling	Electrical Baseboard + Single-Zone Minisplit ASHP (Fujitsu AUU9RLF /AOU9RLFC or equivalent)
HRV	Venmar AVS X24HRV-ECM, or equivalent
Domestic Hot Water	Hybrid Electric Heat Pump Water Tank (AO Smith ProLine 50 Gal)
Drain Water Heat Recovery	EcolInnovation Technologies Inc. TD372B, or equivalent
Shower heads	Ultra Low Flow (5.7 L/min or less)
Faucets	Ultra Low Flow (3.8 L/min or less)
Appliances	Energy Star, high efficiency (Clothes Washer: 90 kWh/yr; Dish Washer: 240 kWh/yr; Clothes Dryer 531 kWh/yr; Stove: 565 kWh/yr; Refrigerator: 500 kWh/yr)
Lighting	100% LED lamps in all fixtures



Histogram: minute-by-minute



-Each plot represents 820,000 datapoints from Nov 2022 to May 2024. Each bin is 100W.

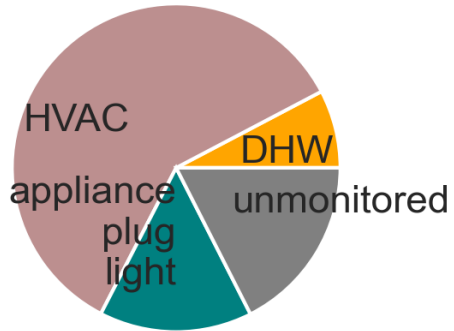
-Sum of the major circuits monitored shown on plots

-Data may have some gaps



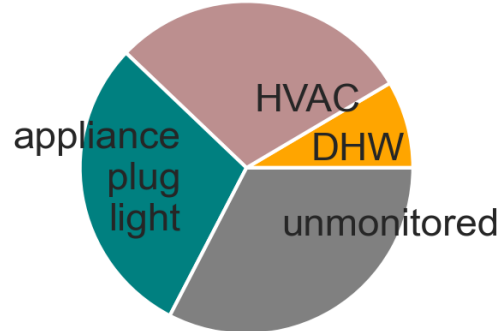
End Use Breakdown (Net-zero Energy Ready)

Suite 0



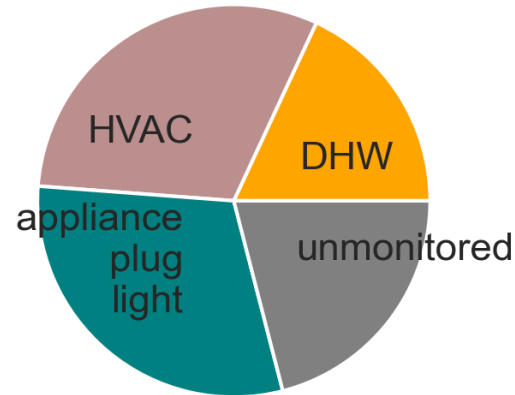
6597 kWh

Suite 1



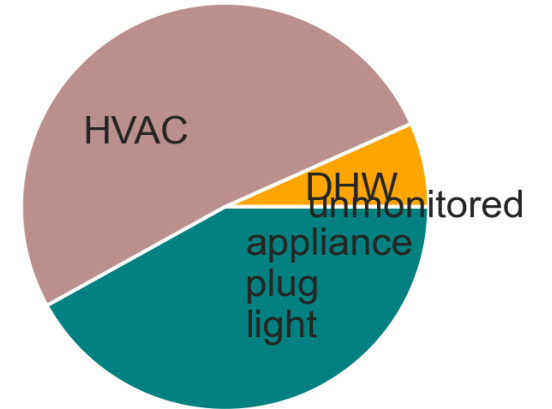
6792 kWh

Suite 2



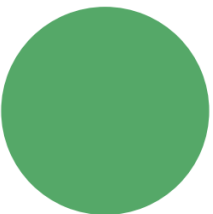
9435 kWh

Modelled



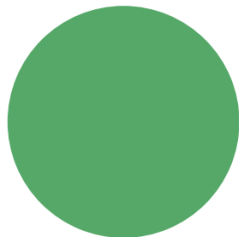
10164 kWh

solar generation



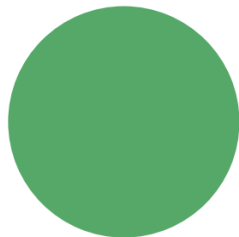
2740 kWh

solar generation



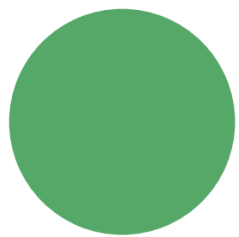
3392 kWh

solar generation



3376 kWh

solar generation



3222 kWh

-Represents 525,600 datapoints from Jan 2023 to Dec 2023.

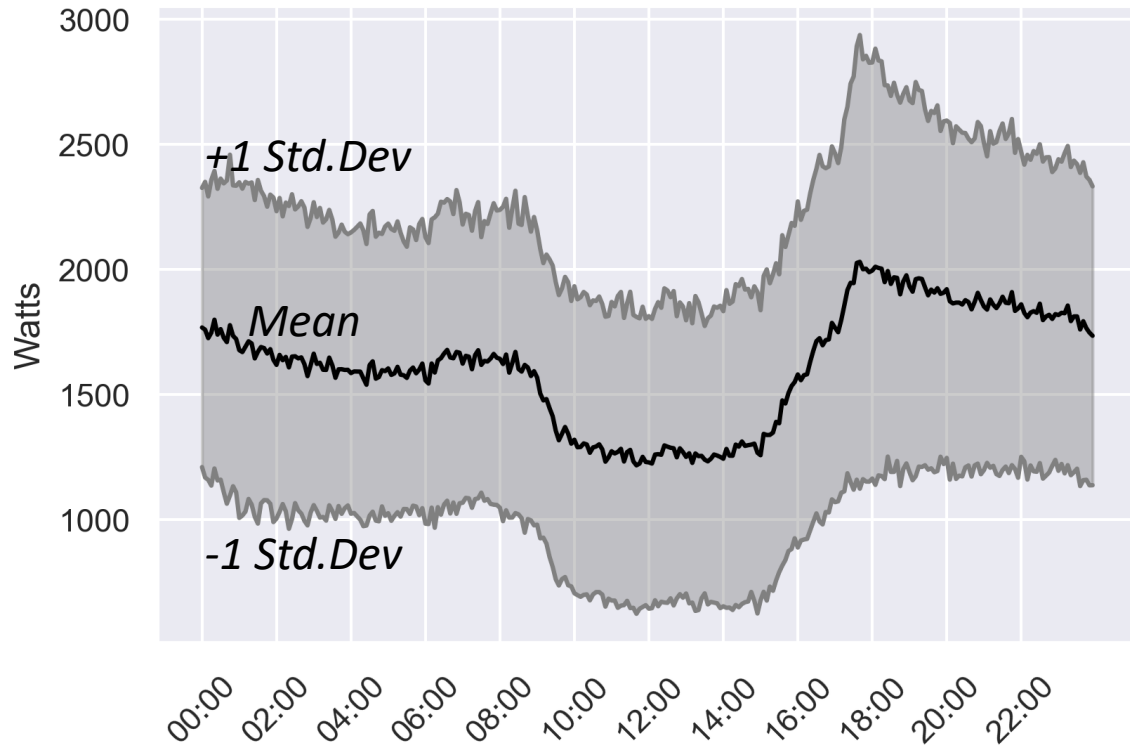
-Data may have some gaps



Daily Load Patterns

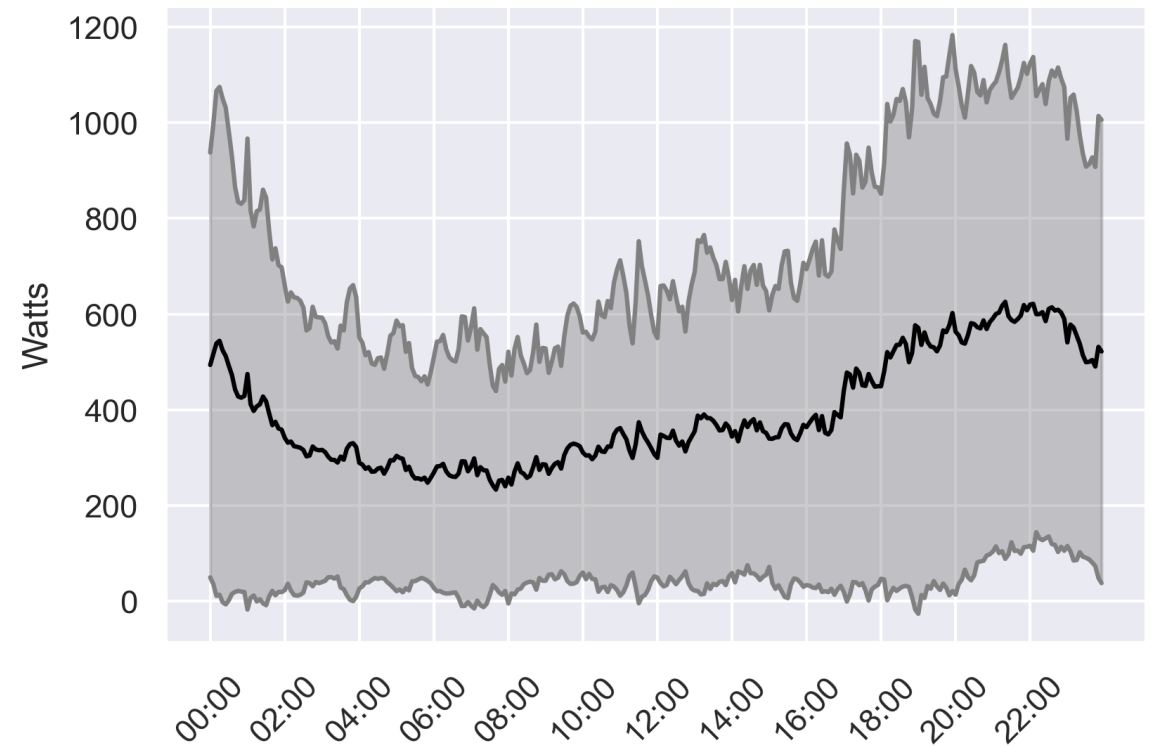
WINTER

Avg. Mean and Standard Deviation of Daily Electricity Demand
Winter profile: Dec,Jan,Feb included. Interval 5Min.



SUMMER

Avg. Mean and Standard Deviation of Daily Electricity Demand
Summer profile: Jul,Aug,Sep included. Interval 5Min.



-Represents 525,600 datapoints from Nov 2022 to May 2024. Resampled at 5-min intervals.

-Sum of the major circuits monitored shown on plots

-Data may have some gaps, especially during solar hours. Updated graphs will be presented in the project report.



Conclusions

- All electric homes in the MURB case study can run on a 60A utility feed.
- Controls/storage could reduce the service entrance size to 30A with ease.
- Homes twice this size would safely stay below a 100A service size.
- Controls/storage can be used to help turn new communities into grid positive or grid buffering assets: utilities can save money by reducing transformer and infrastructure sizes in favour of adding distributed storage and controls.

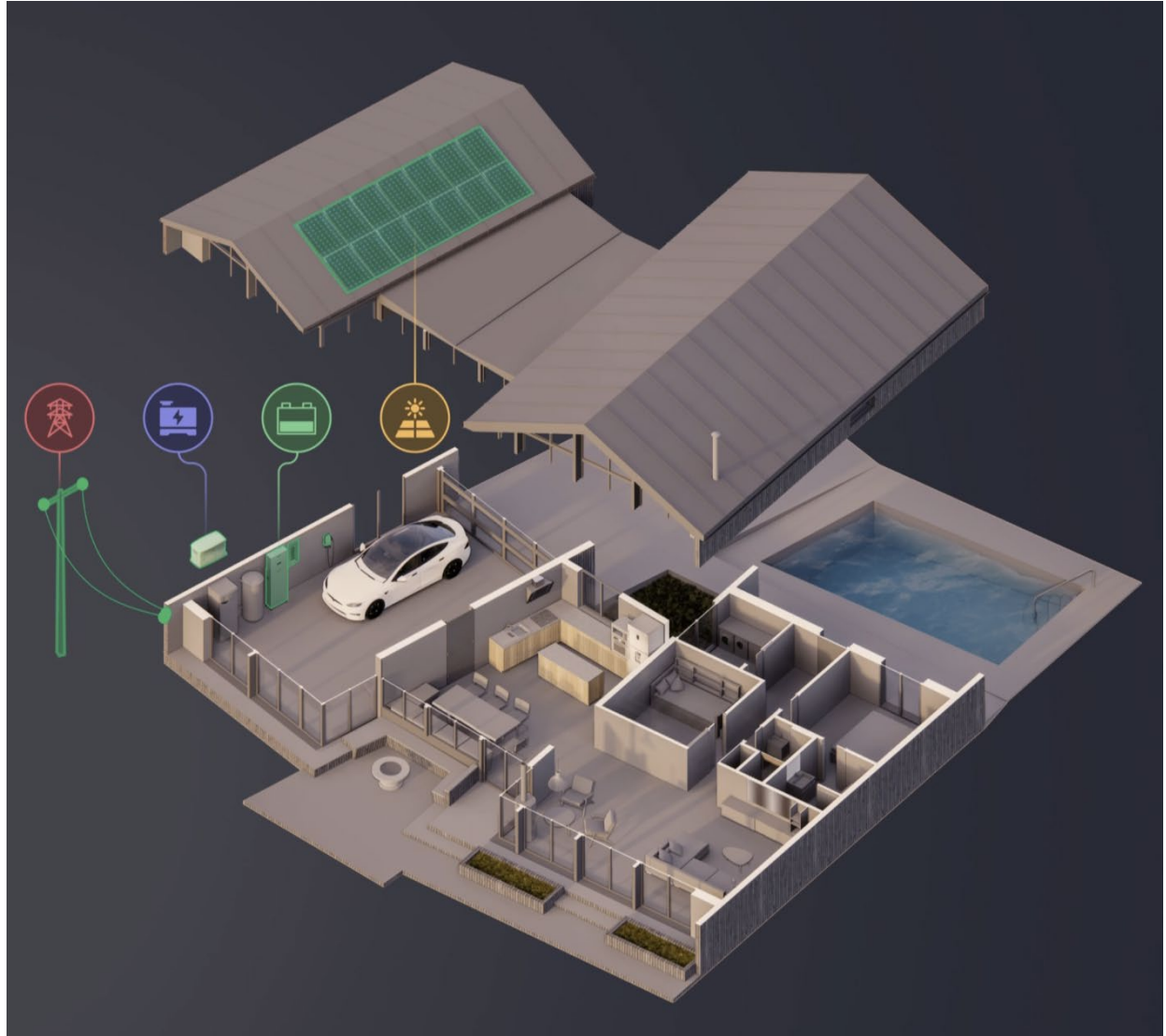
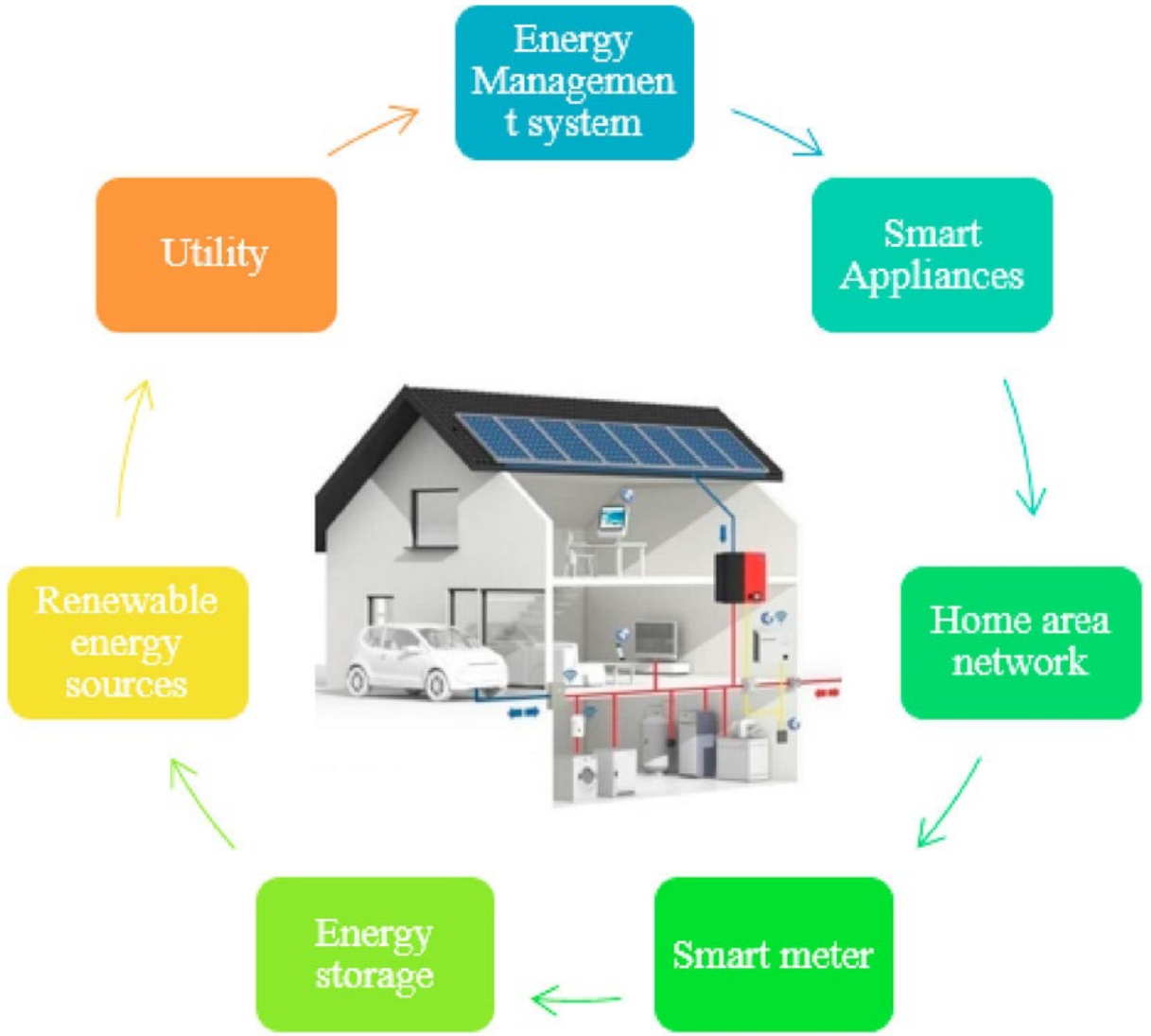


**WIL BEARDMORE
PRESIDENT AND FOUNDER,
BLUEWATER ENERGY**

Electrification

Battery Energy Storage Systems & Impact on Service/Panel Sizing

The Home Energy Ecosystem



Canadian Electric Code (CEC)

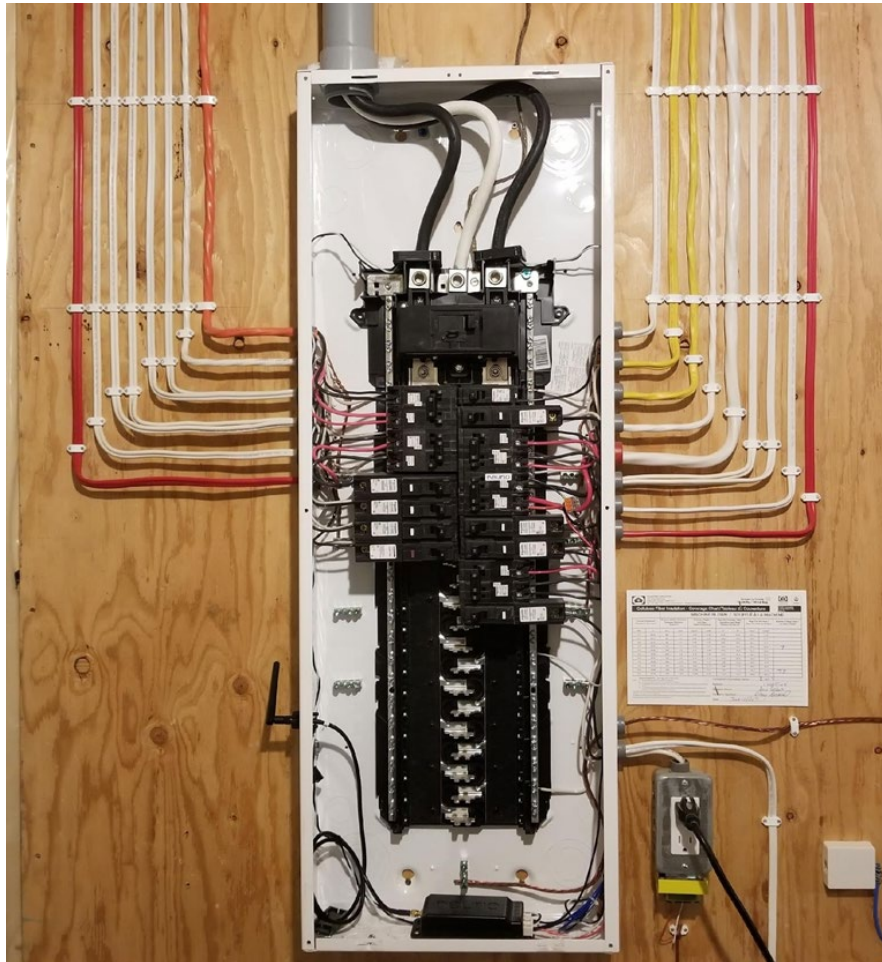


Calculated load for services and feeders

8-200 Single dwellings (see Appendix B)

- 1) The calculated load for the service or feeder supplying a single dwelling shall be based on the greater of Item a) or b):
 - a)
 - i) a basic load of 5000 W for the first 90 m² of living area (see Rule [8-110](#)); plus
 - ii) an additional 1000 W for each 90 m² or portion thereof in excess of 90 m²; plus
 - iii) any electric space-heating loads provided for with demand factors as permitted in Section [62](#) plus any air-conditioning loads with a demand factor of 100%, subject to Rule [8-106](#) 3); plus
 - iv) any electric range load provided for as follows: 6000 W for a single range plus 40% of any amount by which the rating of the range exceeds 12 kW; plus
 - v) any electric tankless water heaters or electric water heaters for steamers, swimming pools, hot tubs, or spas with a demand factor of 100%; plus
 - vi) except as permitted by Rule [8-106](#) 11), any electric vehicle supply equipment loads with a demand factor of 100%; plus
 - vii) any loads provided for that have a rating in excess of 1500 W, in addition to those outlined in Items i) to vi), at
 - A) 25% of the rating of each load, if an electric range has been provided for; or
 - B) 100% of the combined load up to 6000 W, plus 25% of the combined load that exceeds 6000 W, if an electric range has not been provided for; or
 - b)
 - i) 24 000 W where the floor area, exclusive of the basement floor area, is 80 m² or more; or
 - ii) 14 400 W where the floor area, exclusive of the basement floor area, is less than 80 m².

Electrical Panel



Generation Backfeed Limitations

100A Panel = 25A = 6kW
Largest PV/Bty Inverter = 3.8kW

200A Panel = 50A = 12kW
Largest PV/Bty Inverter = 9.6kW

***Generation Limit does not apply when feeding the Main Breaker Directly from Generation Source Output

Canadian Electric Code (CEC)



Δ 64-112 Interactive point of connection (see Appendix [B](#))

- 4) Where equipment or conductors located on the premises are supplied simultaneously by a primary power source and one or more interactive inverters, and where equipment connected as permitted by Subrule 3) is capable of supplying multiple branch circuits or feeders, or both, provisions for interconnection between the primary power supply source and the interactive inverter(s) shall comply with the following conditions:
 - f) notwithstanding Section [14](#), for a dwelling unit, the sum of the ampere ratings of the overcurrent devices supplying power to equipment or conductors shall be permitted to exceed the equipment or conductor ratings to a maximum of 125%;

Batteries

Note CEC Rule 64-1100 for Locating BESS in Homes



Other Equipment

Design Pre-Planning and Rough-ins are Essential



Δ Installation of energy storage systems at residential occupancies

64-1100 Location and separation requirements (see Appendices [B](#) and [G](#))

- 1) Except as required by Subrule 2), energy storage systems installed at a dwelling unit or building of residential occupancy shall be suitable for residential use, and be located
 - a) in an attached garage;
 - b) in or on an associated detached garage, or other freestanding structure;
 - c) on the exterior surface of the building;
 - d) in a dedicated room or utility room having a door equipped with a self-closing device and enclosed with a minimum construction of
 - i) ceilings and walls finished with gypsum board; and
 - ii) floors finished with lumber sheathing; or
 - e) in other locations where permitted.

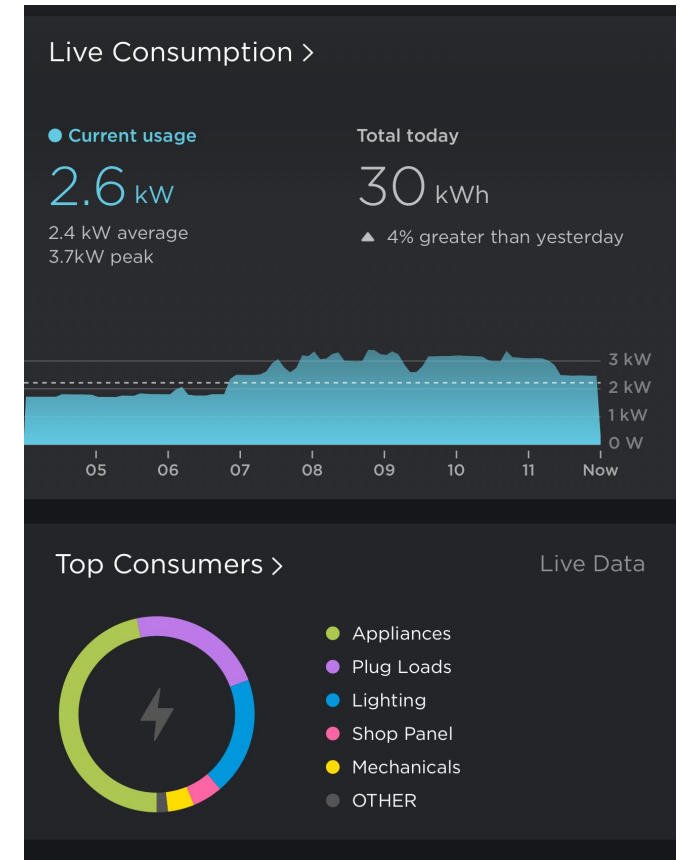
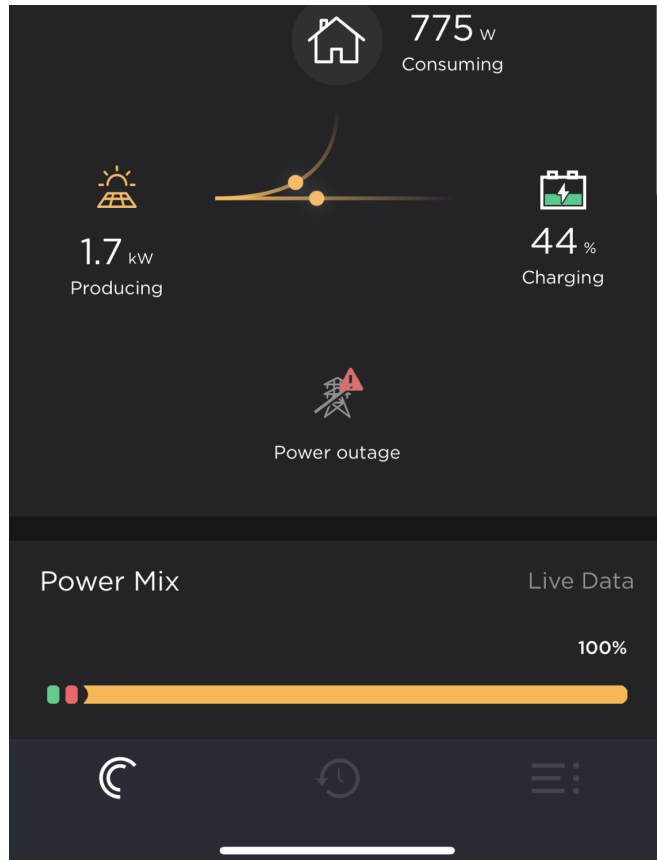
Energy Management Systems (EMS)

- A system consisting of any of the following: a monitor, communications equipment, a controller, a timer, or other device that monitors and/or controls an electrical load or power production or storage source



Controls UI

How is the system programmed and controlled - Critical



Electric vehicle energy management systems

8-500 Electric vehicle energy management systems

- 1) Electric vehicle energy management systems shall be permitted to monitor electrical loads and to control electric vehicle supply equipment loads.
- 2) An electric vehicle energy management system shall not cause the load of a branch circuit, feeder, or service to exceed the requirements of Rule [8-104](#) 5) or 6).
- 3) An electric vehicle energy management system shall be permitted to control electrical power by remote means.



DAMAN GILL
ADVISOR RESIDENTIAL
TECHNOLOGIES, ENBRIDGE

Benefits of Hybrid Heating in Ontario

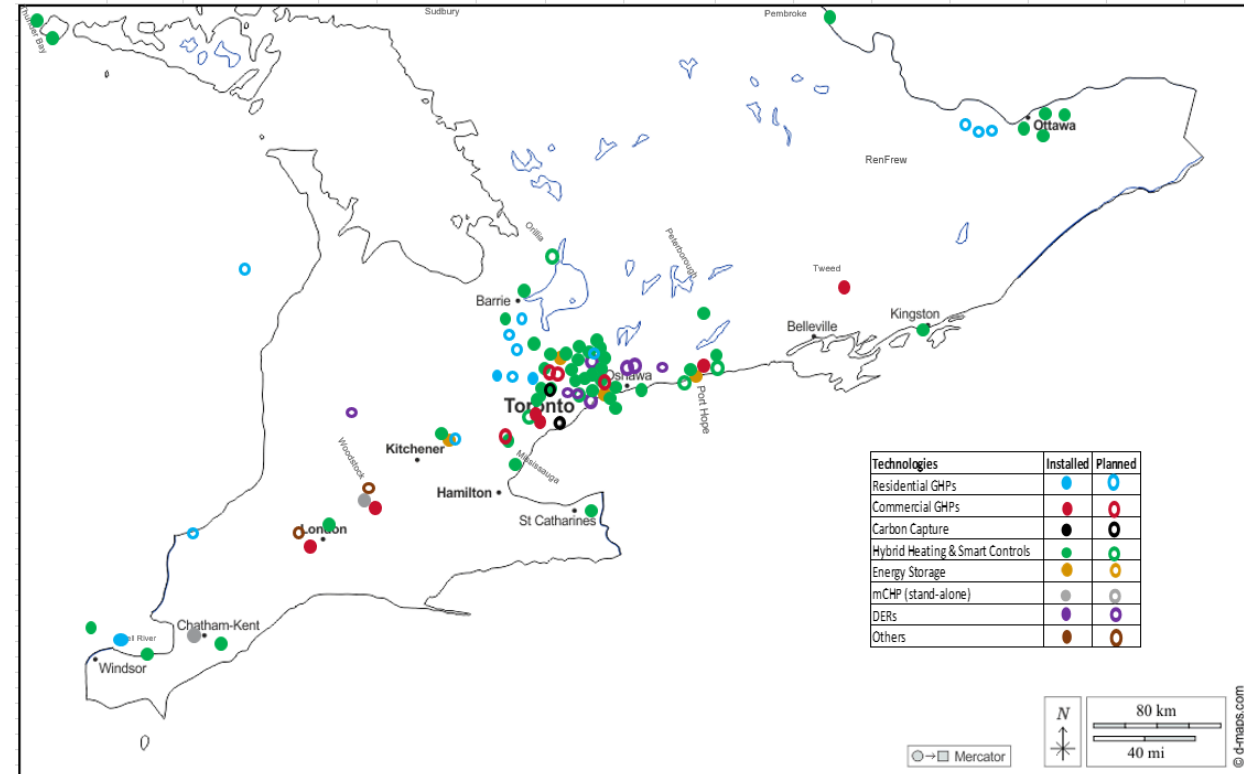
Daman Gill
Technology Development
Enbridge Gas

June 12, 2024

Enbridge Gas Technology Development Team

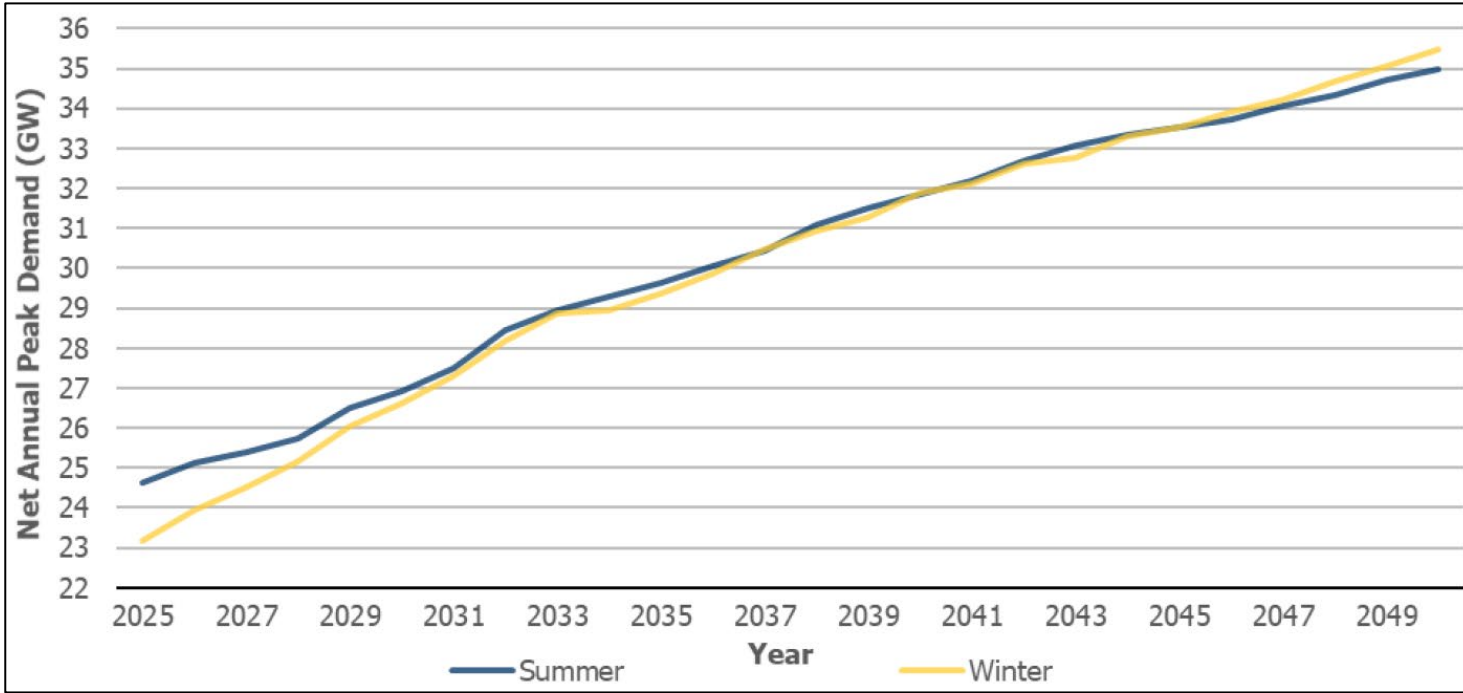


2024 TD Team Pilots – Installed and Planned



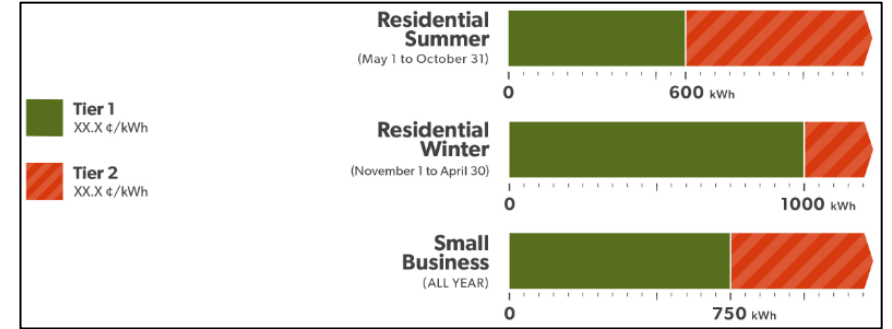
Ontario IESO Projects Increased Electricity Demand in Ontario

IESO Peak Demand Forecast (Source IESO March 2024 APO)

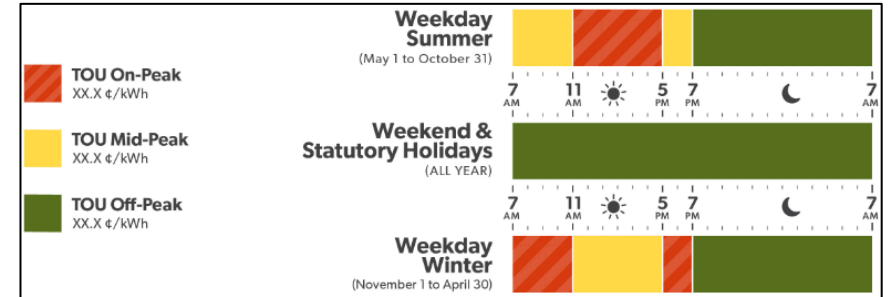


Enbridge has served energy demand in excess of **90 GW** during winter peak

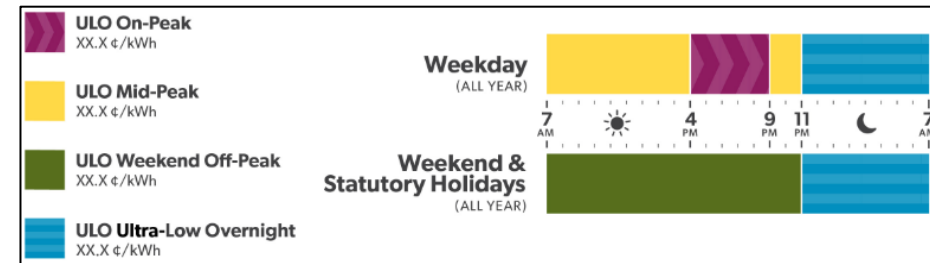
Ontario Tiered Electricity Pricing



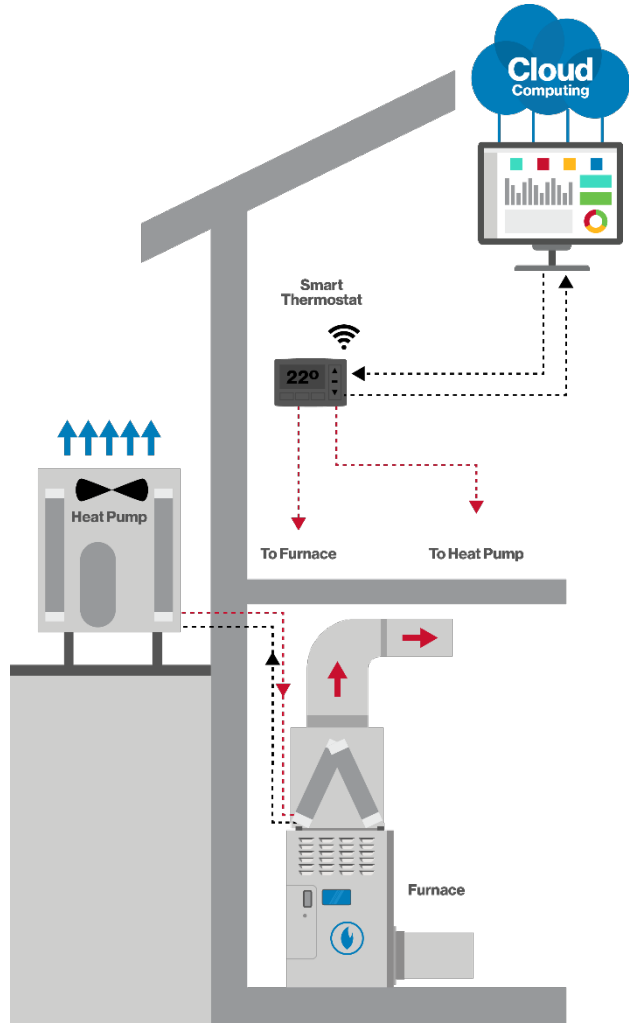
Ontario Time-of-Use (TOU) Pricing



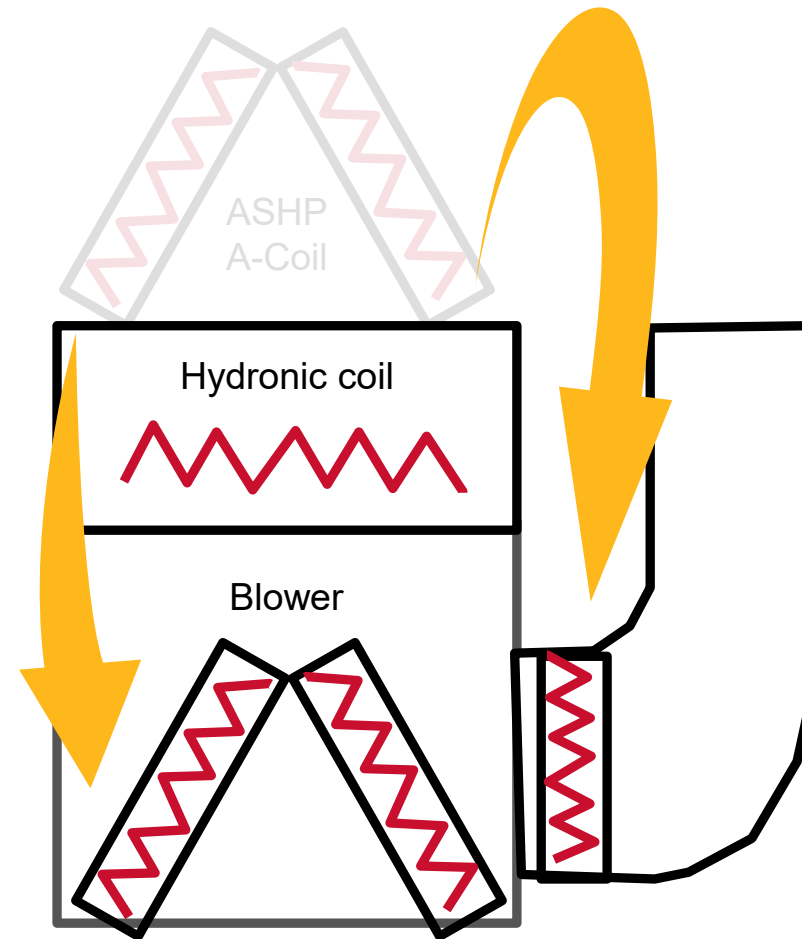
Ontario Ultra-Low Overnight (ULO) Pricing



Hybrid Heating and Smart Controls



Simultaneous Hybrid Heating



Clean Home Heating Initiative

- Launched Fall 2022 and ended Spring 2024
- ~1,500 installations achieved
- Training of 80+ contractors in all 8 communities
 - Sales, technical, and smart controls training provided. This included sizing and selection
- Customer focused marketing to support heat pump awareness and understanding

Lessons Learned:

- Various installation considerations for retrofit applications
- Contractor education on technical topics must continue
- Customer education must continue



CLEAN HOME HEATING INITIATIVE

Hybrid Heating Awareness and Technical Training



"I thank the Government of Ontario for introducing this innovative program, which will not only help homeowners save money on their energy bills, but also help significantly reduce their emissions. It's a win-win for the wallet and the environment."

- Kevin Ashe
Mayor, City of Pickering



BERTINE STELZER
PROGRAM MANAGER, NEW
CONSTRUCTION MARKET
TRANSFORMATION, BC HYDRO





Power Pathways: Building B.C.'s energy future

Bertine Stelzer, New Construction Market Transformation

**June 12,
2024**

Codes and Standards



ENERGY
STEPCODE
BUILDING BEYOND THE STANDARD



ZERO CARBON
STEPCODE

Zero Emissions Vehicle Act

Timeline for Energy Efficiency Regulatory Requirements in the BC Building Code

Here's what the province's CleanBC plan will mean for new-construction requirements.

2032

STEP 5

STEP 4

NET-ZERO ENERGY-READY

UP TO:
80%

2027*

STEP 4

STEP 3

40%

2022*

STEP 3

STEP 2

20%

* NEW TARGET DEADLINES



PART 9 BUILDINGS



PART 3 BUILDINGS

Energy-efficiency improvement above 2018 BC Building Code requirements

ENERGY
STEPCODE
BUILDING BEYOND THE STANDARD



Part 9 Buildings: The performance path for Zero Carbon Step Code compliance

Builders choosing this approach will focus on decarbonizing heat and hot water; they can still include fossil fuels in cooking and other minor end uses.



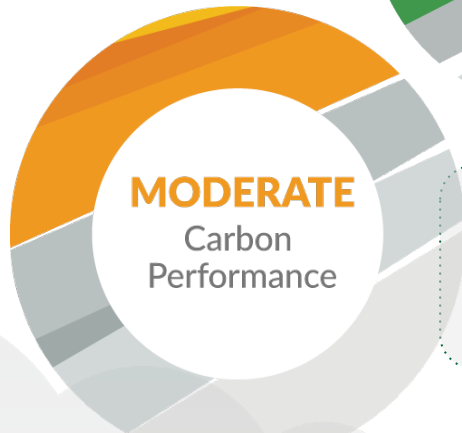
Homes at this tier must emit:

- <500 kg CO₂e per year *and*
- <1.5 kg CO₂e per m² per year GHG intensity



Homes at this tier must emit:

- <800 kg CO₂e per year *and*
- <2.5 kg CO₂e per m² per year GHG intensity

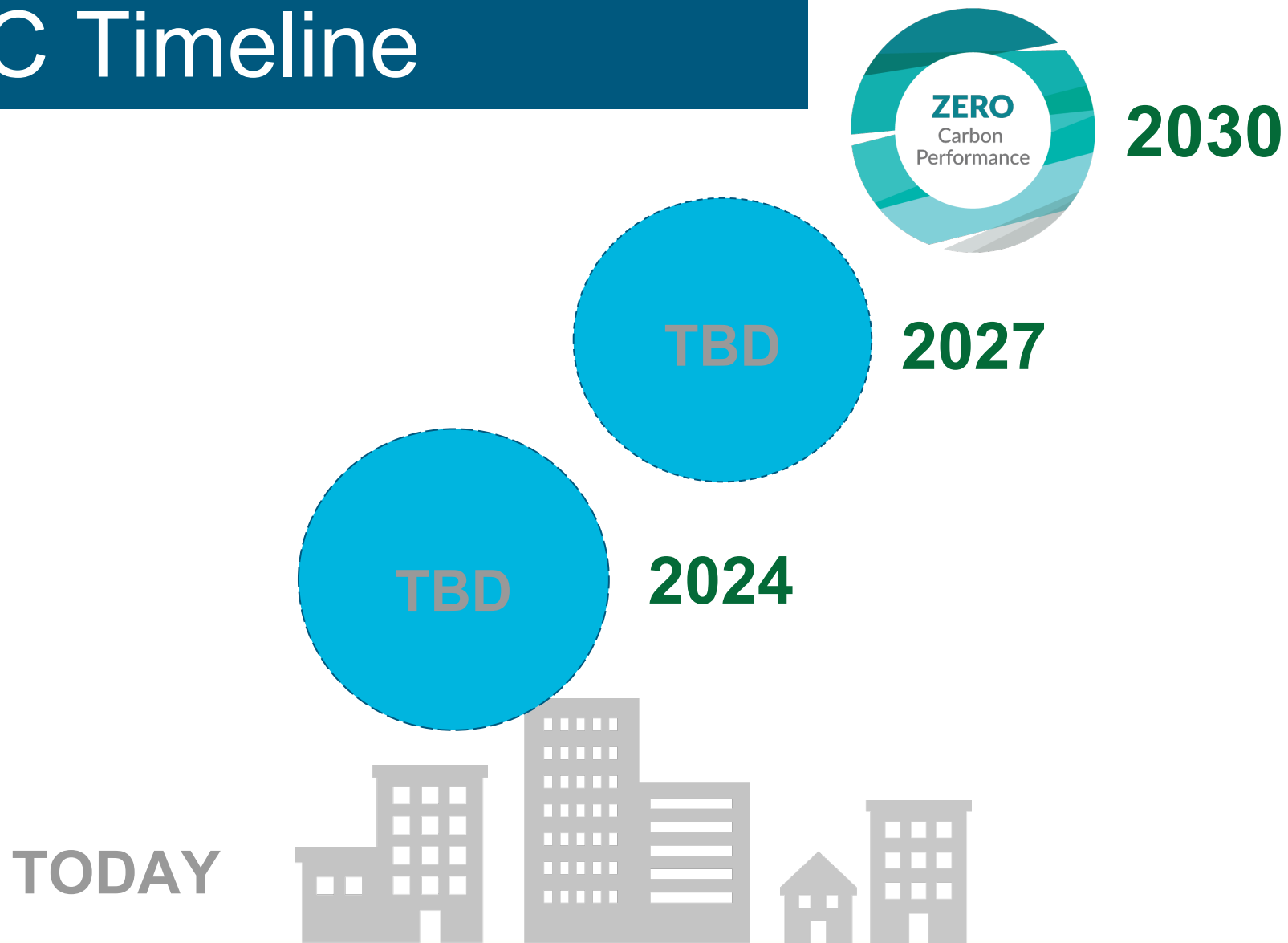


Homes at this tier must emit:

- <2,400 kg CO₂e per year *and*
- <6 kg CO₂e per m² per year GHG intensity

Note: Calculations only consider emissions produced by heating, cooling, ventilation, and domestic hot water equipment. Builders need not include emissions from auxiliary end uses (e.g., cooktops or clothes dryers) nor backup heating sources (e.g., wood stoves or decorative gas fireplaces) that are not designed to cover the home's entire heating load. They may include this equipment at any tier.

ZCSC Timeline

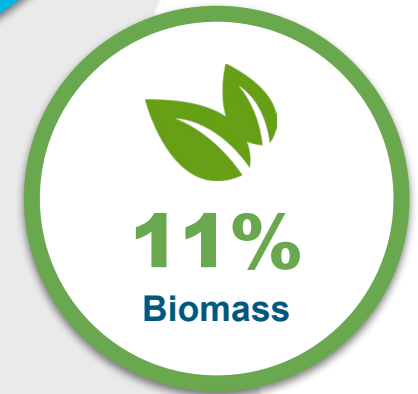
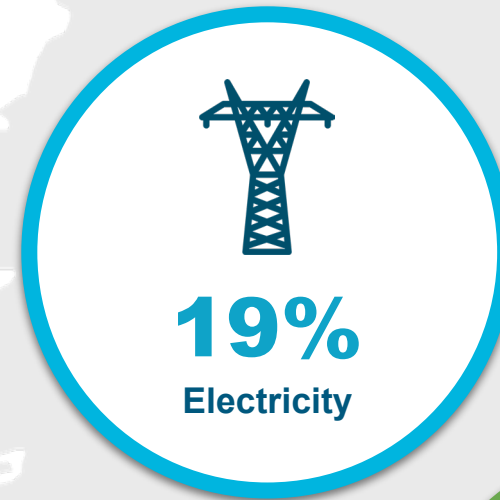
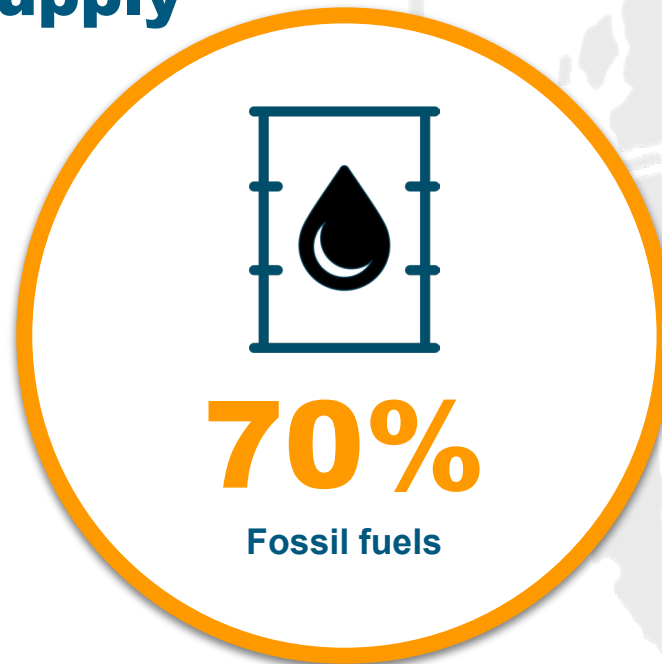


Impacts on BC Hydro

- Policy Changes and CleanBC targets to reduce GHG emissions
 - Densification + New Construction + Retrofits + Cooling
 - Growth in new light- and medium duty EVs
- Electrification of industrial processes (mining, oil, gas)
- Population growth and economic recovery from COVID 19

BC's starting point

Fossil fuels currently supply most of our province's energy needs



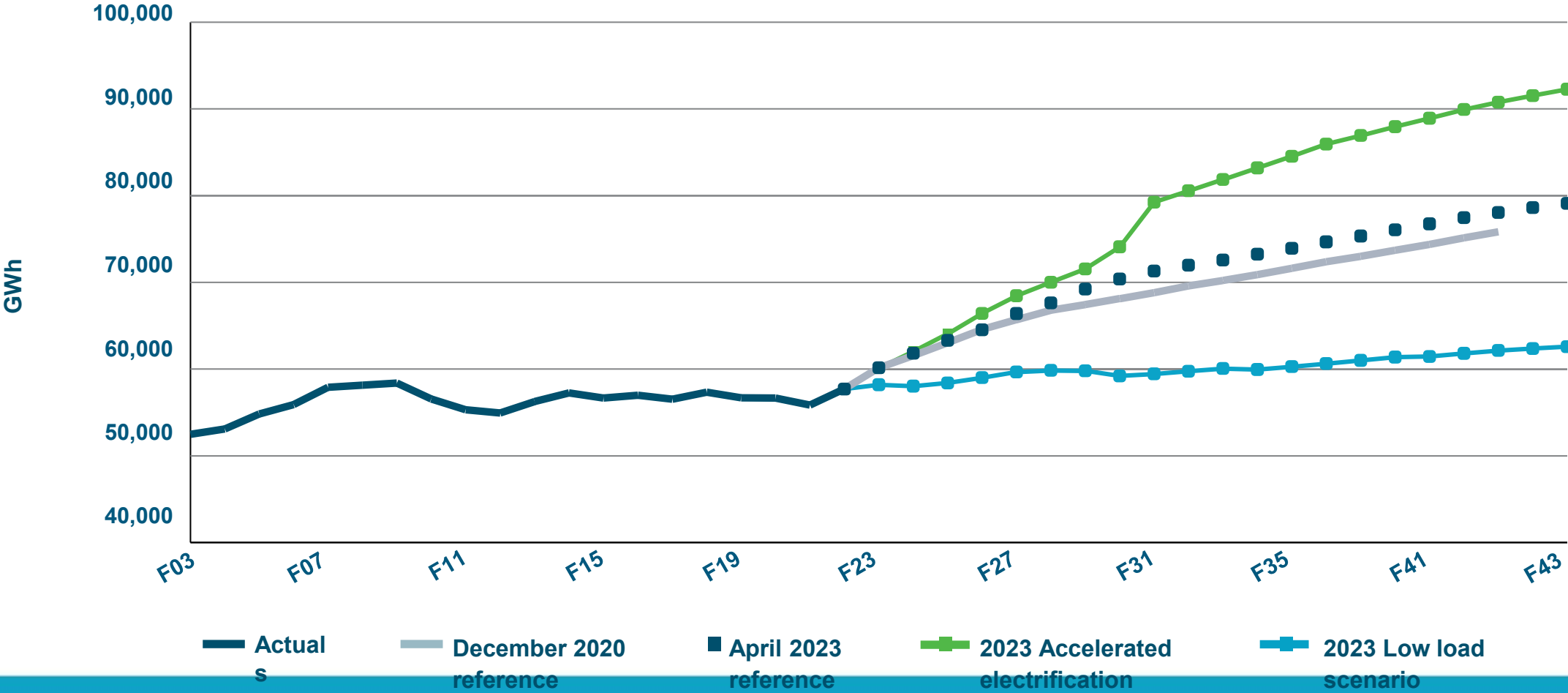
Planning for the Future

Clean Power 2040
Powering the future

 **BC Hydro**
Power smart

BC Hydro and Power Authority
2021 Integrated Resource Plan

Flexible planning



Bringing on generation: Site C



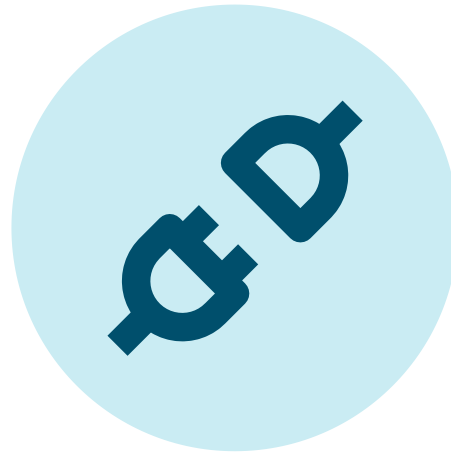
Bringing on generation: Call for Power



Connecting communities: BC Hydro's \$36 billion capital plan



Sustainment
\$21 BILLION



**Electrification and
GHG reduction**
\$10 BILLION



Reinforcement
\$5 BILLION

Energy Efficiency is key

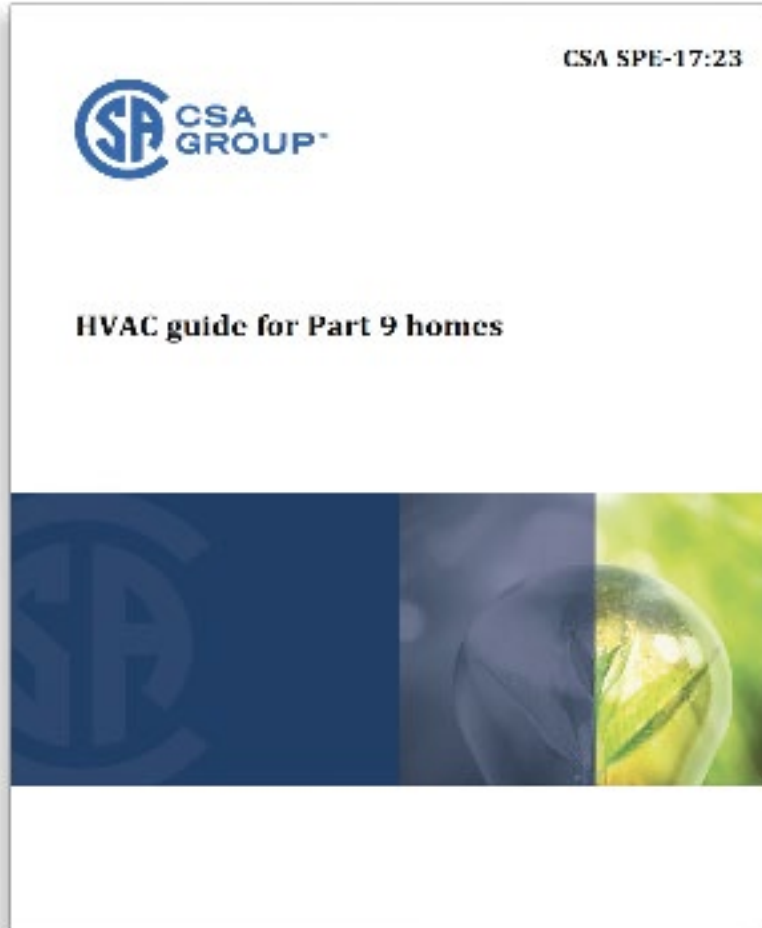
- Continue to encourage energy efficiency
- Annual savings = 5,400 gigawatt hours
 - Equivalent of powering 540,000 homes per year

Managing Panel Sizing

- Rates, incentives, connection policies
- Design solutions (SPE17:23)
- Technology solutions



Design, Installation, Verification



Canadian Standards Association Publication



Published 2023 (Capacity Building)

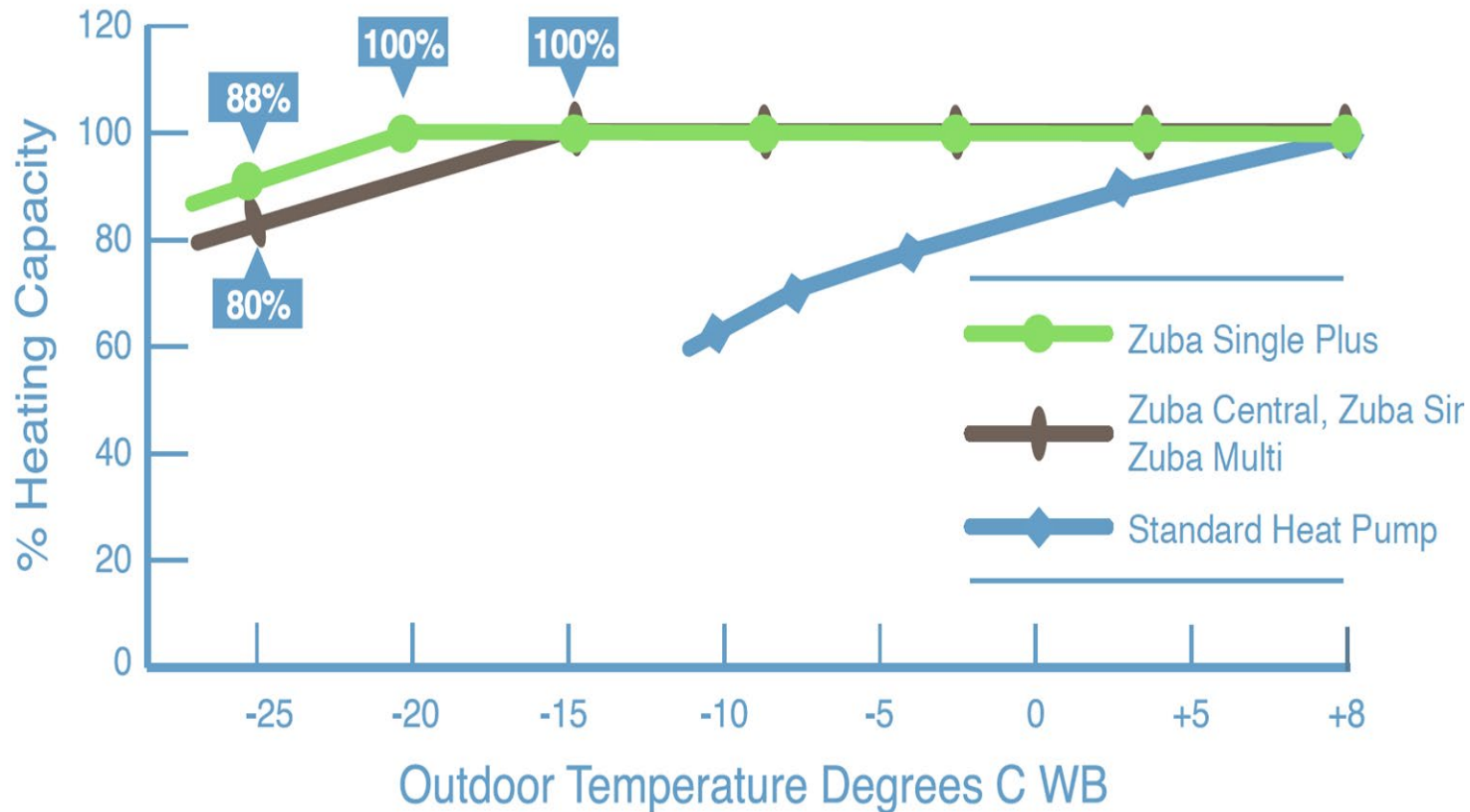


Specifically for Residential (non-commercial)



HVAC Specific - Best Practices!

Careful Heat Pump Selection



Temperature operating range can be extended with cold climate heat pumps

Supplementary electric heat may not be needed – depending on climate zone

A few thoughtful selections can save you thousands of dollars and months of waiting for service upsizing.

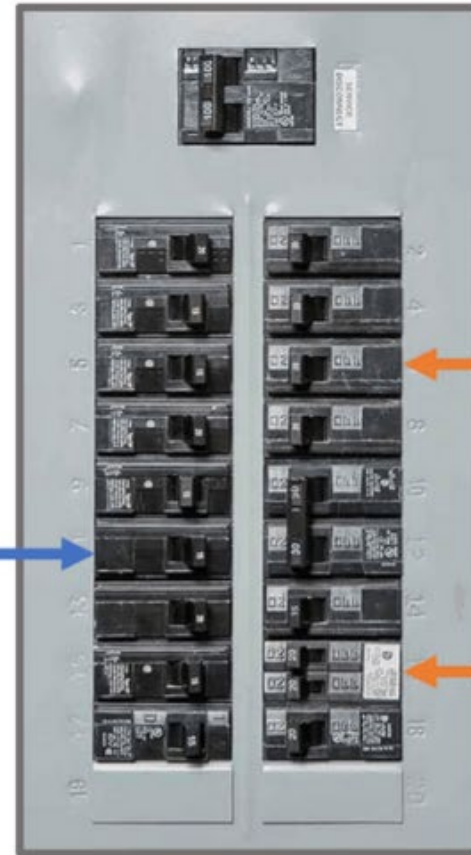
Rules 8-106 2) 3):

requires only the larger of the two loads to be considered



Rule 8-106 11:

EV charger load can be neglected



Combined Washer/Dryer



Air handler and heat pump on same circuit

Technical Safety BC Bulletin:

Historical load can be used to calculate and justify lower panel sizing

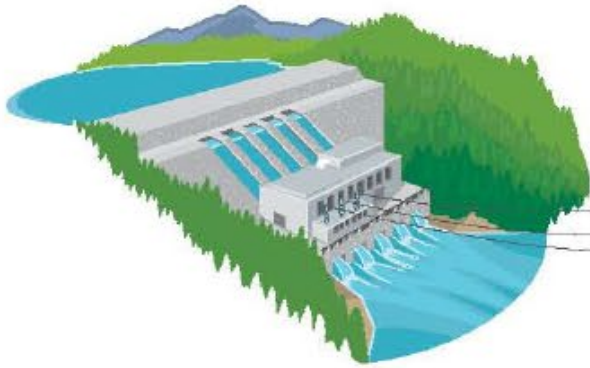
Share amperage between major appliances to better allocate circuit panel breaker capacity

Source: redwoodenergy.net/watt-diet-calculator



BC Hydro Power System Capacity

Available capacity depends on location, load, and timeline.



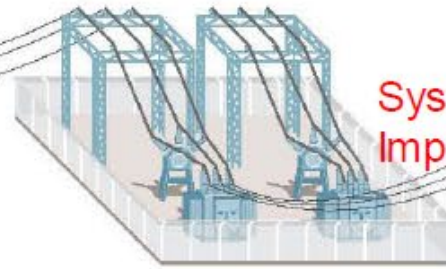
Generation:

Electricity is generated by BC Hydro and independent power producers.



Transmission:

Electricity is moved from where it is produced to where it is used.



Substations:

Voltage is reduced at substations to provide power suitable for use in homes and businesses.

System Improvement



Distribution:

Low-voltage electricity is provided safely to neighbourhoods and businesses.



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SENIOR MANAGER, TECHNICAL
RESEARCH & EDUCATION, BC HOUSING





Net Zero Leadership Summit 2024

Session 6 - HOW LOW CAN YOU GO. Electrification on 100 amps?

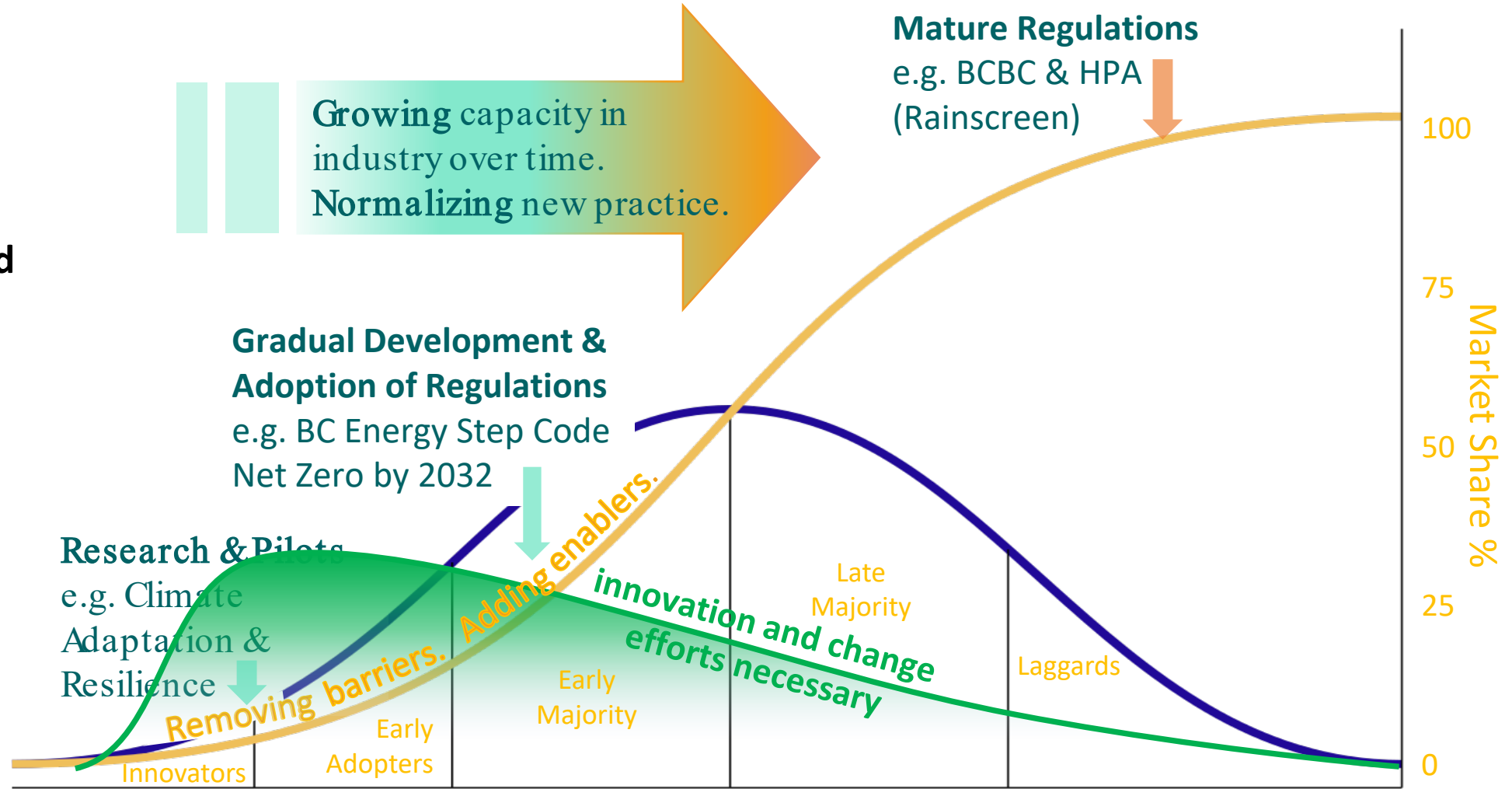
June 12, 2024

Wilma Leung
Senior Manager, Technical Research & Education
BC Housing Research Centre



NZE: Transforming Industry Practice

CHBA's Net Zero Home and MURB programs have been leading industry in **honing our craft on developing and using passive measures**, making it much more feasible to address emerging needs e.g. meeting cooling demands and protecting thermal safety in a most sustainable and affordable manner.



MBAR started as a research initiative with funding from NRCan and others, and is being redefined as an Innovation Program



Mobilizing Building Adaptation and Resilience (MBAR) has been a multi-year, multi-stakeholder knowledge and capacity building project funded by BC Housing, the Province of BC, NRCan, BC Hydro, City of Vancouver, and the Lower Mainland Health Organizations, with participation and contribution from over 30 organizations, including national, provincial, and local agencies; and industry partners.

Resources on Overheating

HEAT WAVES

Risks to Buildings, Occupant Safety & Environment

- Overheating beyond typical comfort conditions
- Electrical system overload due to increased energy usage associated with ventilation and air conditioning systems
- Potential utility service interruption due to increased energy usage
- Decreased lighting and communications connectivity
- Risk of heat exhaustion or loss of life due to overheating, dehydration or hyperthermia
- Decreased outdoor and indoor air quality due to smog and associated risk to human health

Heat waves are prolonged periods of abnormally hot weather that are often paired with high humidity in maritime climates such as the Pacific Northwest. What is considered a heat wave depends on the degree to which temperature exceed the normal temperature range for the area and season. Heat waves can be particularly intense in urban environments, as the number of heat-absorbing structures and buildings can act to increase overall temperature in what is known as the urban heat island effect. Heat waves are projected to increase in frequency and intensity as a result of climate change, and are projected to have adverse impacts on human health and well-being as risks of overheating increase. Building designers and operators should consider a range of strategies to reduce impacts to health and comfort of building occupants.

Site Strategies	Strategy	Cost	Impact	Alignment
	Identify and incorporate opportunities for cross ventilation during floorplan development to increase air flow without dependence on mechanical systems	\$\$	***	⊕
	Reduce parking areas and/or add shading or vegetation to reduce the heat island effect	\$\$	**	

Design Strategies	Strategy	Cost	Impact	Alignment
	Use high-efficiency lighting, equipment and appliances to reduce internal heat gains	\$	*	🔥
	Place equipment and furniture with air circulation and temperature control in mind	\$	**	🔥

Design Strategies	Strategy	Cost	Impact	Alignment
	Conduct simulations to explore the thermal performance of individual suites and the building as a whole, focusing on window to wall ratio, window to floor area ratio, window thermal performance and solar heat gain coefficient, wall thermal performance, airtightness, shading, natural ventilation, stack effect and solar orientation	\$\$	***	⊕🔥

Operations Strategies	Strategy	Cost	Impact	Alignment
	Ensure a minimum of 72 hours of fuel storage (natural gas) for power to refuge area and key services, including building pumps, fans, emergency lighting, and security systems	\$\$	***	🔥🚒
	Establish operations and maintenance procedures and building management systems (BMS) to determine the level of cooling required in extreme heat events	\$	**	🔥

BC Energy Step Code Design Guide Supplement S3 on Overheating and Air Quality

June 2019



SUPPLEMENT S3
Version 1.0



CLIMATE READY HOUSING GUIDE Snapshot

Climate change is one of the greatest challenges of our time and is already having significant impacts on homes and communities across British Columbia - from extreme heatwaves, more frequent flooding, and more severe wind storms.

This Climate Ready Housing Guide is intended to serve as a reference tool for housing providers, developers and other building sector actors across BC on emergent best practices and recommended technical standards for more climate-ready housing design. The Guide provides an editable toolkit of resources that design teams can use to inform more climate resilient design of new or existing housing.

Inside the Guide

This first version of the Guide is focused on resilient design for new Part 3 (multi-family) housing, though content can be applied to other contexts. It includes measures to address a broad range of climate hazards but with more detail provided on approaches for addressing overheating and poor air quality.



The Guide has been designed as a dynamic tool that can be used by diverse audiences, from policy makers and municipalities, housing providers and owners, to developers and designers.

Actor	Role in Resilience	Using the Guide	Example
Municipality	<ul style="list-style-type: none"> Sets and upholds land use & building policy Building inspectors 	<ul style="list-style-type: none"> Guidelines, approaches & standards informing building by-laws, policies & guidelines 	Require a combination of passive and mechanical cooling in building design
Owner	<ul style="list-style-type: none"> Responsible for procurement and ongoing operation of the building 	<ul style="list-style-type: none"> Refer to approaches to inform RFP/procurement Establish plans for ongoing maintenance & safety 	Establish a stormwater management plan for the site
Developer	<ul style="list-style-type: none"> Leads design and construction of housing projects 	<ul style="list-style-type: none"> Refer to approaches, standards and strategies to meet design objectives 	Plan for an amenity room with higher resiliency elements
Designer	<ul style="list-style-type: none"> Leads technical design work for their specific discipline or expertise 	<ul style="list-style-type: none"> Refer to approaches, standards and strategies to meet design objectives 	Design operable windows throughout the building to enable passive cooling in summer



Resources on Overheating



Builder Insight is a series of bulletins and companion videos designed to provide practical information on new technologies, research results, good building practices and emerging technical issues in residential construction to Licensed Residential Builders and others in the industry. This bulletin was prepared by Focal Engineering with support from Integral.

Modelling the Future Climate in Passively Cooled Buildings

Overview

The Province of British Columbia will experience significant climate change in the next several decades. Temperature increases by 2050, and the province is already experiencing frequent and severe heat waves and events pose serious risks to British Columbians, including health, safety, well-being, and financial investments of our province. Energy modelling and design can play a key role in enhancing our resilience. This Builder Insight provides an overview of the risks and how designers must increasingly consider resilience by considering the risk of overheating under future climate scenarios.

This Builder Insight provides an overview of the risks and how designers must increasingly consider resilience by considering the risk of overheating under future climate scenarios. It includes a summary of the potential for passively cooled buildings to overheat under future climate scenarios.

This document is intended for readers with an understanding of energy modelling who are new to this type of analysis, with the goal of establishing a procedure that can be consistently used across the building industry.

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Information Bulletin
Building and Safety Standards Branch
PO Box 9844 Stn Prov Govt
Victoria BC V8W 9T2
Email: building.safety@gov.bc.ca
Website: www.gov.bc.ca/buildingcodes

No. B24-08
April 19, 2024

Protection from Overheating in Dwelling Units

This bulletin provides information about new provisions in the British Columbia Building Code (Building Code) 2024 related to minimizing the risks to health and safety due to overheating in dwelling units. These new Building Code 2024 requirements apply to projects for which a building permit is applied for on or after March 8, 2024. These changes apply to new dwelling units in all large (Part 3) and smaller (Part 9) residential occupancies.

Background

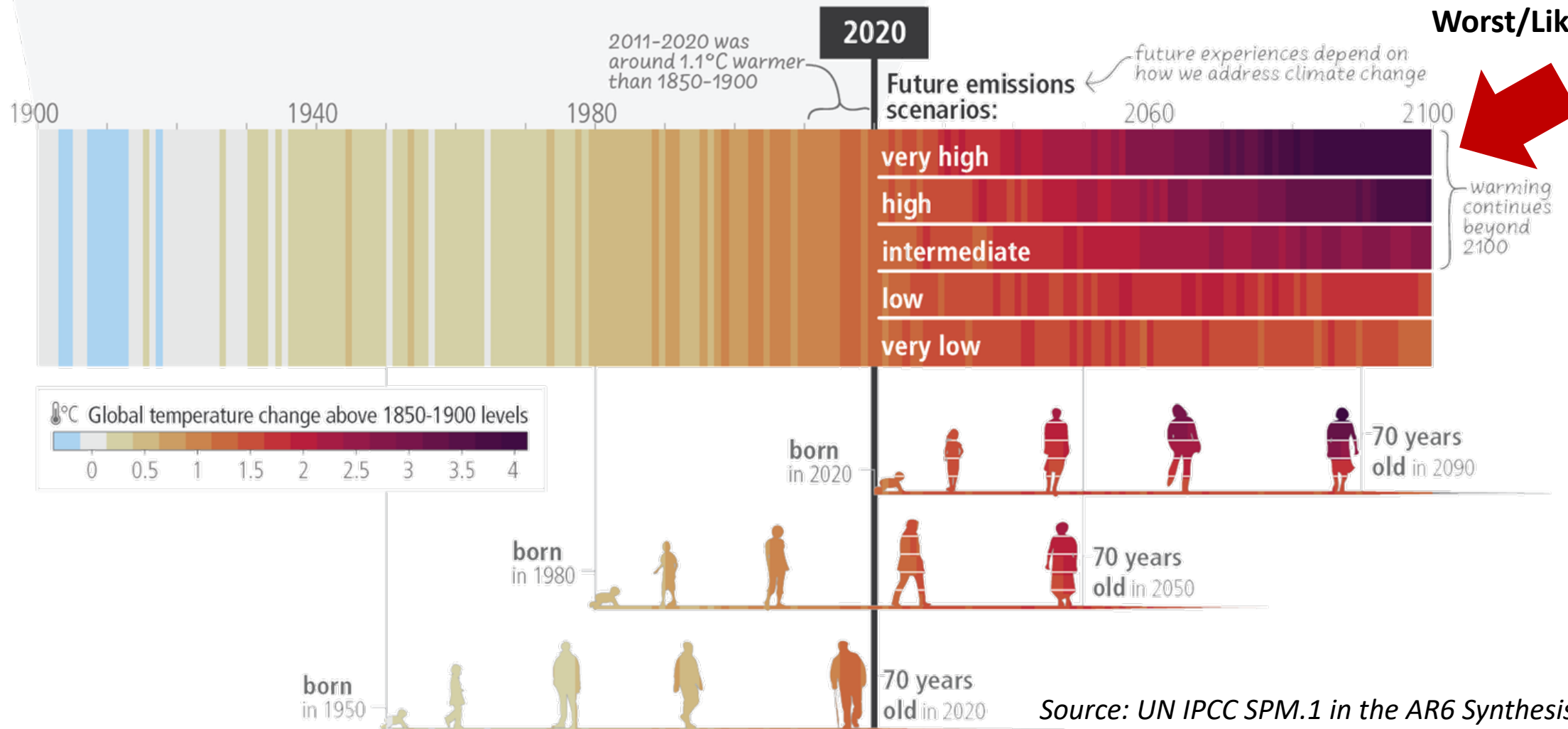
Recent extreme heat events in the summer of 2021 in British Columbia had devastating impacts, attributing to 619 deaths. Similar weather episodes are projected to become hotter, longer, and more frequent as B.C.'s climate changes.

In the Report to the Chief Coroner of British Columbia, titled "Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021" a recommendation was made to "...ensure that the 2024 release of the BC Building Code incorporates both passive and active cooling requirements in new housing construction...".



Risks: Find Yourself On the Graph

c) The extent to which current and future generations will experience a hotter and different world depends on choices now and in the near-term



Source: UN IPCC SPM.1 in the AR6 Synthesis Report

Risks & Strategies for Housing

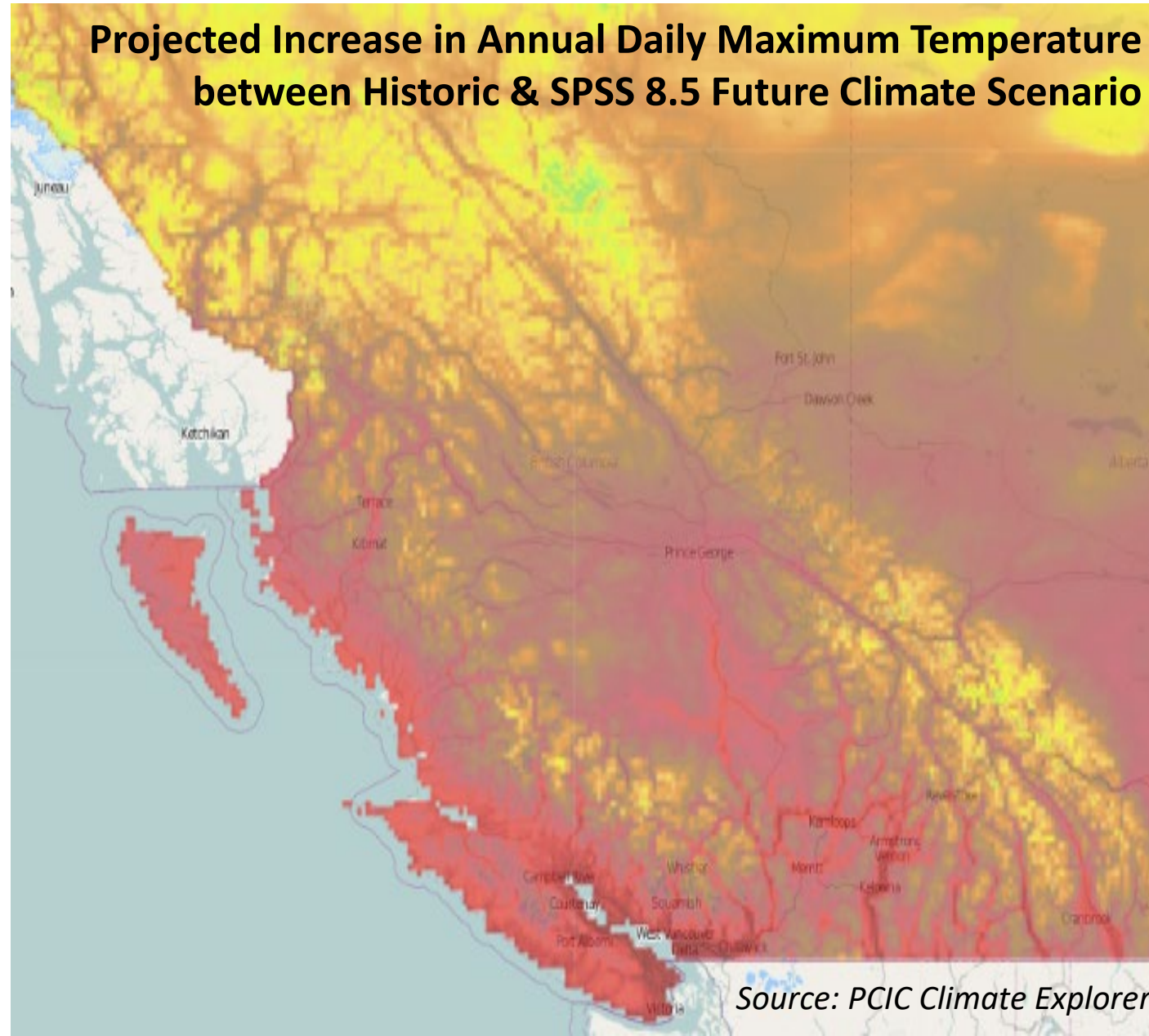
Broad Trends

- Greater temperature increase in southern regions that are less adapted to heatwaves

Potential Impacts to Housing

- **Overheating** & HVAC overload causing discomfort especially for heat-sensitive people
- Regional **brownouts** requiring backup power particular risk to those medically dependent on power
- Increased demand for **shelter spaces** due to extreme outdoor temperatures especially for underhoused with mental illness

Projected Increase in Annual Daily Maximum Temperature between Historic & SPSS 8.5 Future Climate Scenario



Source: PCIC Climate Explorer

Risks & Strategies for Housing

British Columbia

Annual deaths from extreme heat in B.C. could double by 2030 without climate adaptations: report

Future deaths and hospitalizations could cost more than \$12B a year, says a new report from the Climate Institute analysis finds



Moira Wyton · CBC News · Posted: Jul 05, 2023 7:02 PM PDT | Last Updated: Jul 05, 2023 7:02 PM PDT



A paramedic outside St. Paul's Hospital in Vancouver on June 30, 2021, at the height of the deadly heat dome event. Analysis in a new report found the period of extreme heat cost nearly \$6 billion in human life lost. (Ben Nelms/CBC)

Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in B.C. in Summer 2021

Report to the Chief Coroner of British Columbia
Release Date: June 7, 2022



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Be prepared for extreme heat and drought

Last updated on April 30, 2024

Available PDF guides: [English \(9.6MB\)](#) | [Français \(French\) \(9.5MB\)](#) | [简体中文 \(Simplified Chinese\) \(6.3MB\)](#) | [繁體中文 \(Traditional Chinese\) \(6.3MB\)](#) | [ਪੰਜਾਬੀ \(Punjabi\) \(6.2MB\)](#)



On this page

- [What is extreme heat?](#)
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- [As temperatures rise](#)
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New Regulations in B.C.

THE GLOBE AND MAIL

B.C. to require all new homes have a temperature-controlled room

ANDREA WOO >

INCLUDES CORRECTION

VANCOUVER

PUBLISHED AUGUST 17, 2023

UPDATED AUGUST 21, 2023

This article was published more than 6 months ago. Some information may no longer be current.



Cranes above a condo development and other housing projects under construction in Coquitlam, B.C. on May 16, 2023.



BC Gov News

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Office of the Premier

More small-scale, multi-unit homes barriers removed Updated Nov. 2, 2023

Translations

- 繁體中文
- Français
- ਪੰਜਾਬੀ

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News Release

Victoria

Wednesday, November 1, 2023 1:55 PM

Media Contacts

New zoning rules will mean more housing options



StrongerBC
for everyone

(flickr.com)

The Province is introducing new housing legislation to deliver more small-scale,

Journal of Commerce
NEWS CERTIFICATES TENDERS & LEADS PODCASTS FEATU
PRE-BID PROJECTS Click here to see Canada's most comprehensive
GOVERNMENT
B.C. issues RFP for new Standardized Housing Design Project
DCN-JOC News Services November 20, 2023

PROVINCE OF B.C. — Through the new Standardized Housing Design Project, the Province of B.C. is creating new standardized, customizable residential designs for small-scale, multi-unit housing built on single lots.



MOBILIZING
BUILDING ADAPTATION
AND RESILIENCE

Alignment of Climate Resilience with Zero-emission Buildings

Zero-emission building features	Resilient zero-emission building features	Equitable considerations
Energy efficient building envelopes and mechanical systems	<ul style="list-style-type: none"> → Improve airtightness, and include good ventilation and air filtration effective for wildfire smoke 	<ul style="list-style-type: none"> → Prioritize older buildings with more vulnerable occupants
High-efficiency electric heating	<ul style="list-style-type: none"> → Include high-efficiency cooling systems → Add backup power 	<ul style="list-style-type: none"> → Prioritize cooling in units or in rooms on site for populations more vulnerable to heat in units (e.g., reduced mobility, elderly, certain medical conditions)
On-site renewable energy	<ul style="list-style-type: none"> → Add energy storage or backup power suitable for use during future hazard events 	<ul style="list-style-type: none"> → Consider diverse needs for backup power (e.g., refrigeration of medications, technology that supports those with disabilities)
Passive heating and cooling designs	<ul style="list-style-type: none"> → Include options for active heating and cooling in preparation for more extreme conditions 	<ul style="list-style-type: none"> → Consider and prioritize cooling needs for populations more vulnerable to heat



Thank You!

Email: Research@bchousing.org



BC HOUSING
RESEARCH CENTRE



**MOBILIZING
BUILDING ADAPTATION
AND RESILIENCE**



Questions?





CANADIAN HOME BUILDERS' ASSOCIATION
netzero home
LEADERSHIP SUMMIT

Lunch Break

in the Demo Hub. (Whistler Ballroom)

Be back by 1:00 pm.

