



Building to Electrification Coalition

Launch Event

September 29, 2021



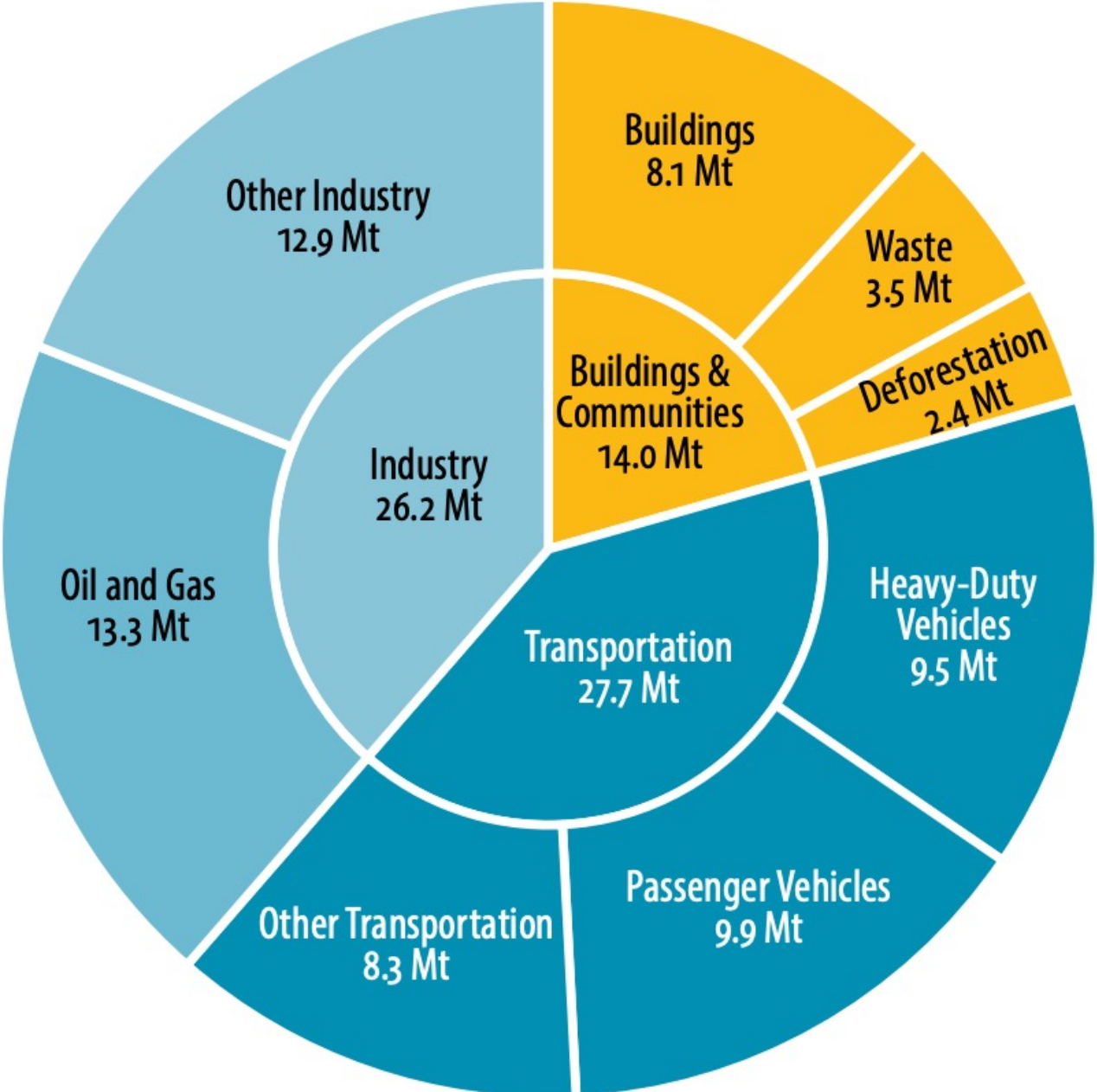
Agenda

- Introducing B2E
- California Building Decarb Coalition
- BC's Building Electrification Road Map
- Industry Perspective from MCABC
- BC Hydro LCE Update

A two-story house with a garage and a porch, overlaid with the text "Why Building Electrification?". The house has light-colored siding, a dark roof, and a white garage door. The porch has a white railing and a small table with chairs. The text is in a large, white, sans-serif font, centered over the house. A vertical line is on the left side of the text.

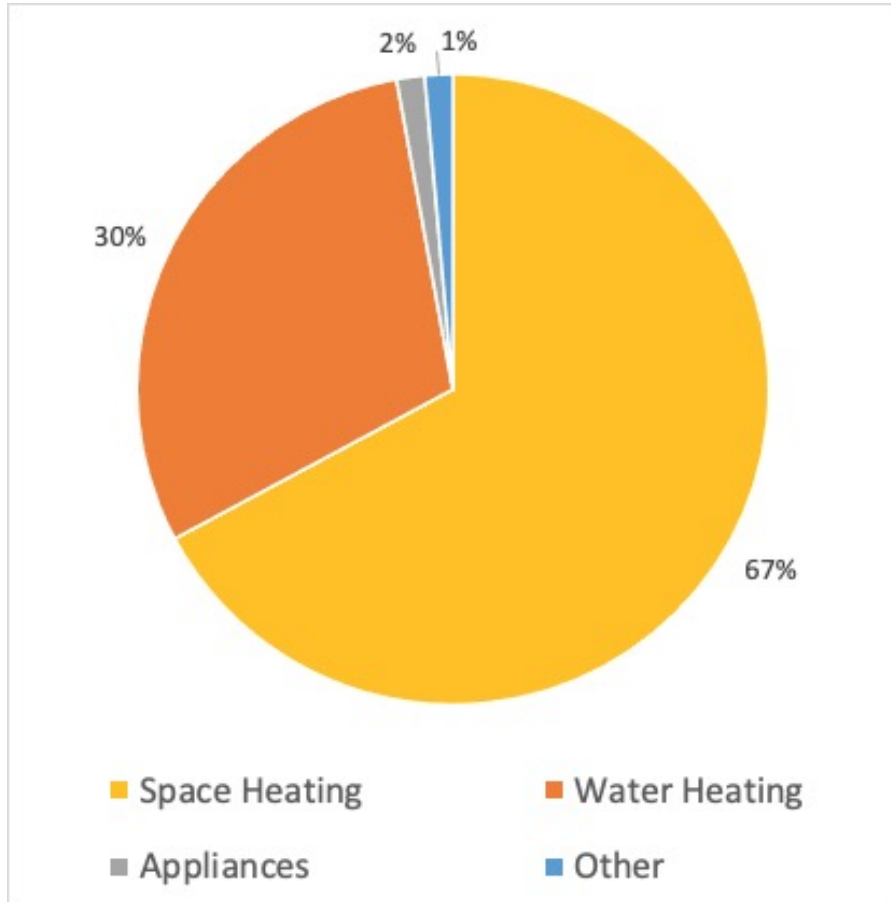
Why Building Electrification?

B.C.'s Gross Emissions by Sector in 2018



Source: Clean BC 2020 Climate Change Accountability Report

Building GHG Emissions by End Use



97% of operational building sector GHG emissions come from **space and water heating**



B2E

**Building to
Electrification
Coalition**



Our Mission

We are a broad coalition working together to electrify buildings in British Columbia in order to reduce their climate impacts and reliance on fossil fuels.



B2E
Building to
Electrification



Panama Bartholomy

Building Decarb Coalition

The California Experience

September 29, 2021



California's Climate Goals

By 2030

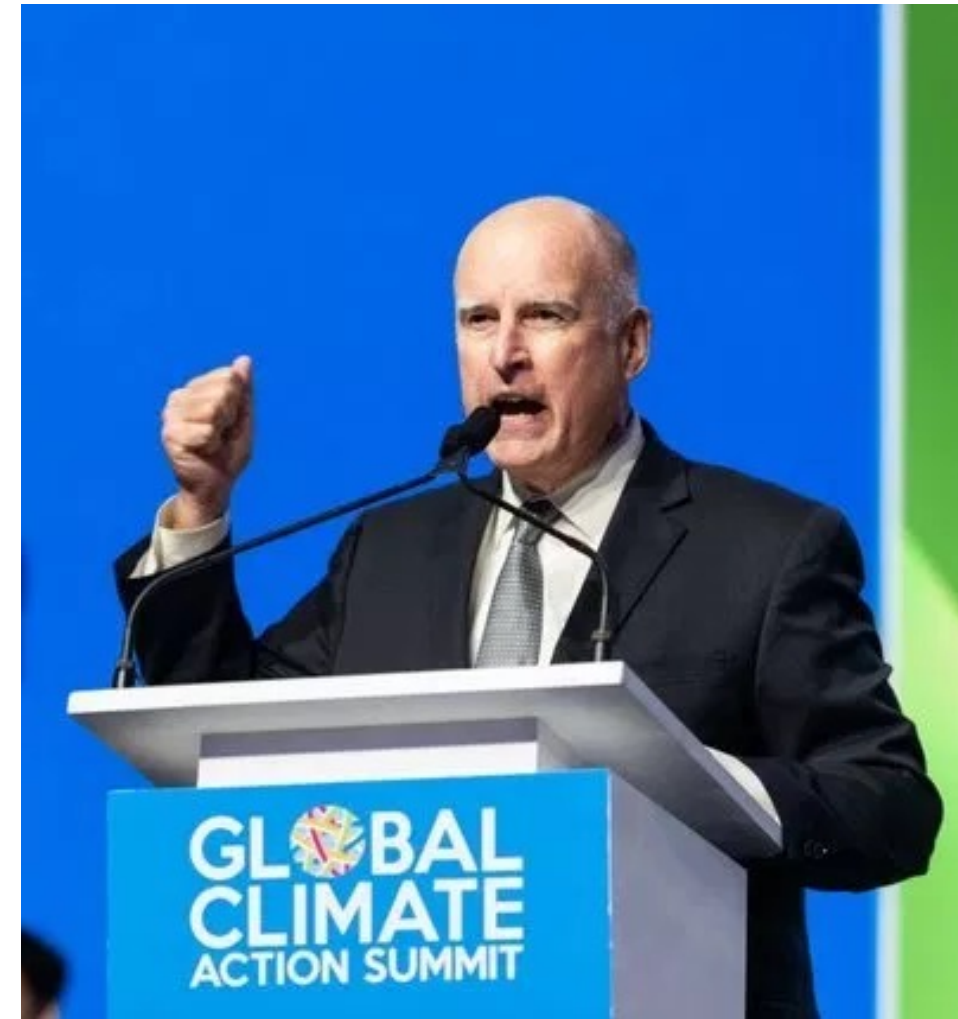
40% below 1990 levels (*SB 32, 2015*)

By 2050

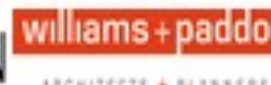
80% below 1990 levels (*EO's B-30-15 & S-3-05*)

By 2045

100% zero-carbon electricity (SB 100) & carbon neutral economy-wide (*EO B-55-18*)



OUR MEMBERS



September 18th, 2018: Kick-off!





Roadmap

- Meetings
 - September
 - November
 - January
- Finished January 2019
- Outreach February-March

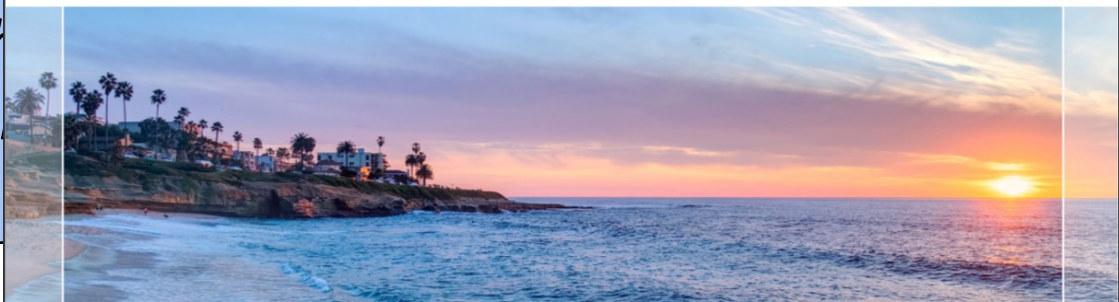
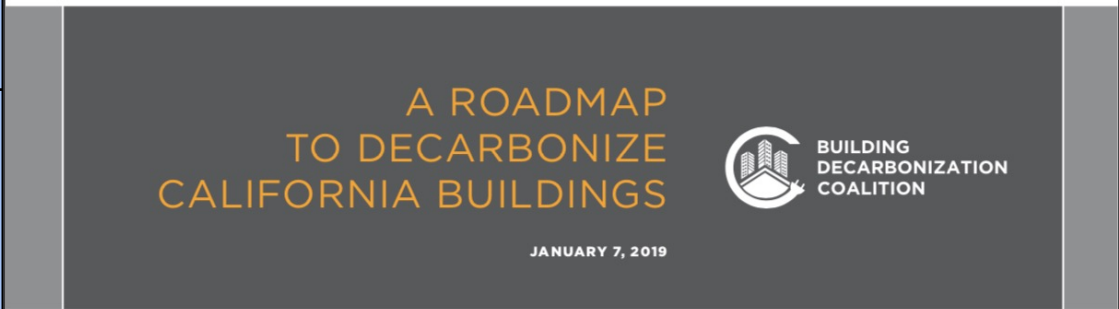
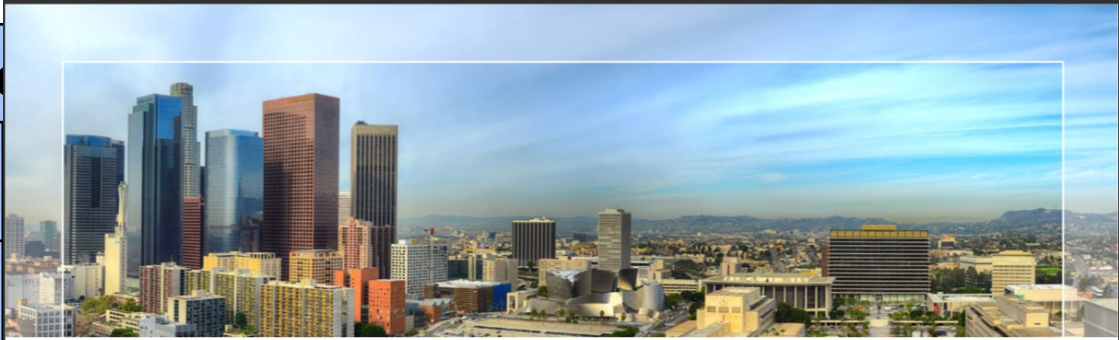
Figure 1: D

New Buildings

Retrofits

• Increase the heating from in 2030.

• Increase the heating from in 2030.



Sector

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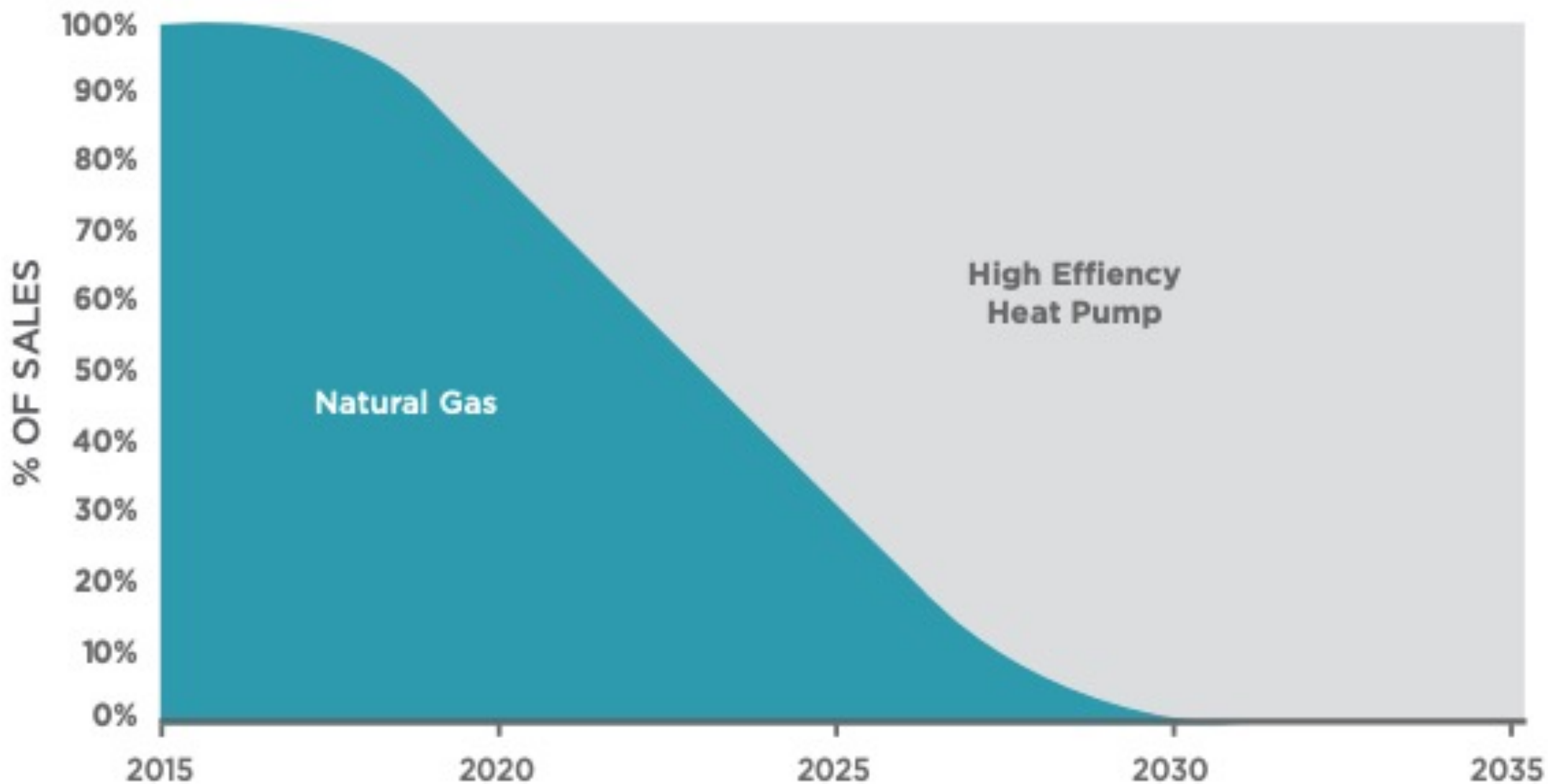
sector
sector
sector

pace
100 %

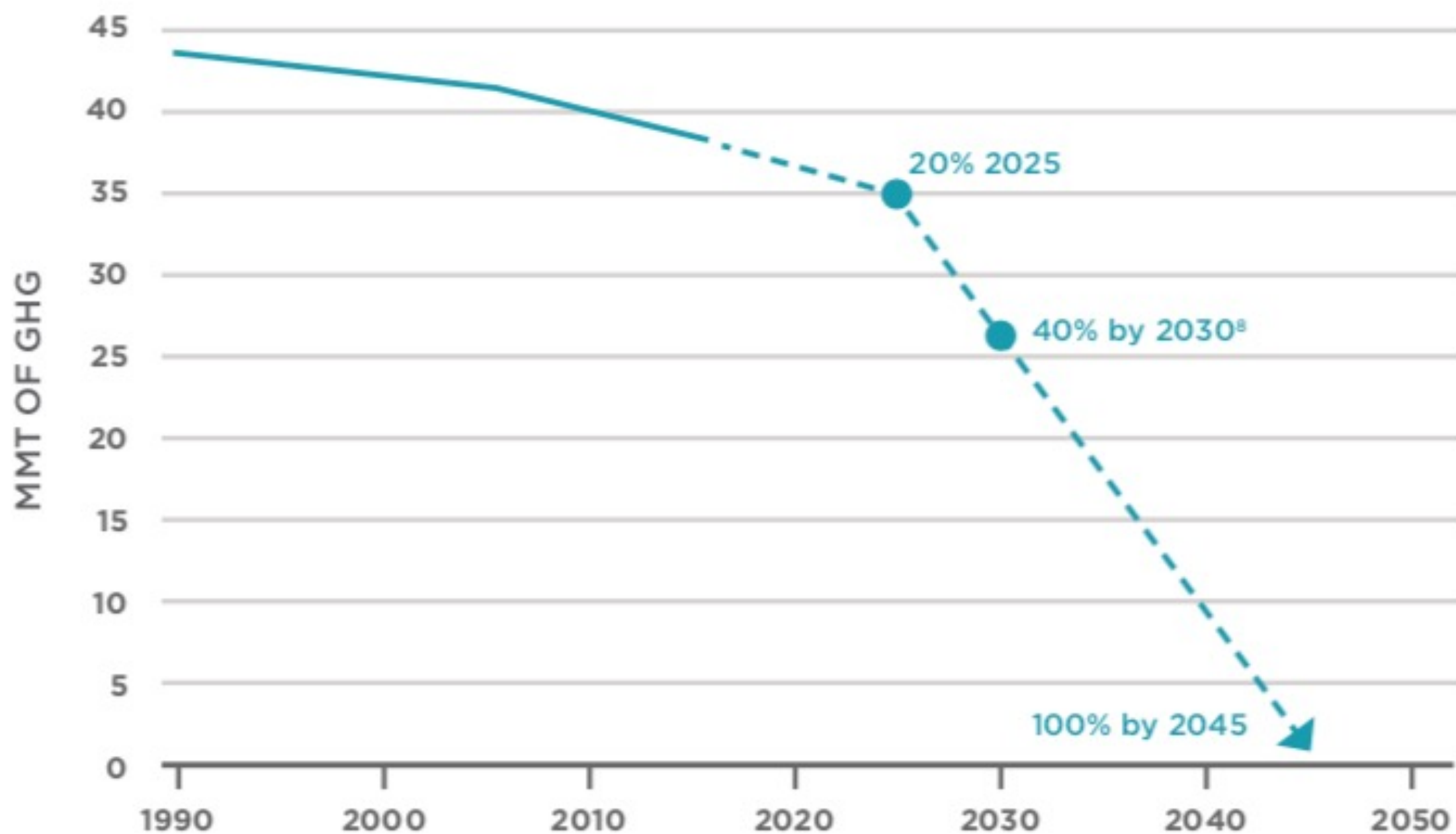
water
100 %

Space Heating

Increase the share of high efficiency heat pumps for space heating from 5% of sales in 2018, to 50% in 2025 and 100 % in 2030.



DECARBONIZING OF THE BUILDING SECTOR⁷



Phasing

PHASE 1

Market Readiness: Today demand for and supply of building decarbonization measures is minimal. To ready the market, reverse these conditions through ambitious targets, policy alignment, coordinated marketing, retail price reductions, clear signals to suppliers and coalition building.

PHASE 2

Market Deployment: Once readied, deployment of building decarbonization measures can be accelerated through support of the full- supply chain via mid- and upstream incentives to manufacturers and builders and financing solutions ready to reach all customers, including underserved communities.

PHASE 3

Scaling the Market: Leverage the success of Phases 1 and 2 to reach scale through downstream incentives, grid integration, and targeted solutions for hard to reach customers.

Barriers to Electrification

**LOW
AWARENESS
AND INTEREST**

**LOW PERCEIVED
CUSTOMER
VALUE**

**LOW PERCEIVED
CONTRACTOR
AND BUILDER
VALUE**

**LOW
AVAILABILITY**

**MISALIGNED
POLICY**

Roadmap Goals

Goal 1: Build customer, builder, contractor and policy-maker awareness and interest in decarbonization.

Goal 2: Ensure that customers receive a good value from adopting building decarbonization measures.

Goal 3: Ensure that building decarbonization provides a better value to builders and contractors than fossil-fuel heating.

Goal 4: Prepare supply-chains and delivery agents are to meet rising demand for carbon-free building technologies with a quality product.

Goal 5: Align Policy to meet other goals.

Principles

EQUITABLE AND AFFORDABLE: Deliver building decarbonization **equitably and affordability to all communities** to prevent disproportionately burdening customers least likely to be able to overcome the awareness and capital costs barriers.

ALIGNED: All stakeholder (customer, contractor, utility, agency, manufacturer) value propositions for building decarbonization must be **recognized and aligned** to achieve the speed and scale of transition California needs.

GRID FRIENDLY: Ensure building decarbonization solutions serve **as a benefit to the grid**, especially the need to reliably integrate renewable energy into California's power supply at least cost.

FORWARD THINKING: Transform the building heating market through **forward-thinking, long-term commitments** and investments, avoiding the uncertainty and churn of start-stop programmatic cycles, and working in concert with decarbonization of other sectors of the economy.

DATA-DRIVEN: Measure marginal carbon values correctly and send a price signal to ensure the actions taken to decarbonize buildings are **data-driven** and produce the results they are intended to.

INNOVATIVE: Let California's **innovators design the business models** to meet the need. Keep it simple and do not micromanage.

NEAR-TERM PRIORITY ACTIONS AND STAKEHOLDERS CRITICAL TO THEIR SUCCESS

KEY INITIATIVES

Initiative	Building Decarb Coalition	Utilities	CCAs	Manufacturers	CEC	CPUC	Local Governments	Workforce Associations	Environmental NGOs
1 GENERAL MARKETING CAMPAIGN	●	●	●	●			●		
2 STRATEGIC LONG TERM CUSTOMER INCENTIVES		●	●			●			●
3 BUILDING ELECTRIFICATION FINANCE	●	●	●						
4 MIDSTREAM INCENTIVE PROGRAMS FOR BUILDERS		●	●			●	●		●
5 BUILDER SUPPORT THROUGH INQUIRY, ASSISTANCE, AND POLICY	●	●	●		●		●	●	●
6 VOLUNTARY CONTRACTOR SUPPORT AND ACCREDITATION PROGRAM	●	●	●	●	●		●	●	
7 ELECTRICAL PANEL UPGRADE AND SERVICE INNOVATION PROGRAMS	●	●	●				●	●	
8 LEGACY SYSTEM EVALUATION	●	●				●			
9 REACH CODE SUPPORT	●	●	●		●	●	●		●

Since Then.....

EAST BAY TIMES

WEATHER
TODAY'S E EDITION
MANAGE SUBSCRIPTION
SIGN UP FOR NEWSLETTERS



- 50 c

- New

Business > Real Estate

Berkeley bans natural gas in new buildings, the first U.S. city to do so

- Resi



- Residential existing buildings market transformation program

- \$400 million in incentives

- HPWH rate reform

- Retrofit-Ready HPWH

- Air Quality rules being

- Monthly calls on coord



change

Lessons Learned/Advice

- Coalition + Unifying Vision + Simple, easy to follow process around a few key levers
- Understand the leverage points and power structure, and work with allies to clarify the inside and outside game
- Recognize where we are and where we want to be going
- Get little wins because they help with bigger wins



Building Decarbonization Coalition

[Buildingdecarb.org](https://buildingdecarb.org)



Tom Berkhout

Lead Author – Building Electrification Road Map



Building Electrification Road Map

B2E LAUNCH

September 29th, 2021

What is the Road Map?

- **Proposed pathway** to achieve a low-carbon building sector over the next 10 years through building electrification
- **Collaborative plan** both in terms of its development and implementation
 - 2 all day workshops
 - Multiple subject matter expert interviews
 - Four focus groups
 - Supply chain email survey
 - Stakeholder feedback survey on penultimate draft
- **Action Oriented**
 - What: Scalable strategies and actions
 - When: Specific timeline
 - Who: Key organizations identified



Road Map's Guiding Vision

By 2030, nearly all new and most replacement space heating and domestic hot water systems in BC's homes and buildings will be high-efficiency electric, in pursuit of a province-wide shift to low-carbon buildings

Creating the BC Building Electrification Road Map 3

Executive Summary 4

Section 1 Introduction 13

Reducing Emissions in BC's Building Sector	13
Why Do We Need a Building Electrification Road Map?	14
How was the Road Map Created?	17
From Road Map to Implementation	17
Reading the Road Map	18

Section 2 Building Electrification 101 24

Electrification Technologies	24
Design Considerations	28
The Benefits of Electrification	33

Section 3 State of the Building Electrification Market in BC 38

Building Sector Greenhouse Gas Emissions in BC	40
BC's Electrification Opportunities & Challenges	42
BC's Rural Communities	49
Summary	53

Section 4 Key Building Electrification Strategies and Actions 55

Key Strategy #1: Create Market Demand	56
Key Strategy #2: Improve Cost Competitiveness	60
Key Strategy #3: Address Systemic Barriers	64
Key Strategy #4: Expand Industry Capacity	67
Key Strategy #5: Increase Available Technologies	73

Section 5 Navigating the Road Ahead 77

Proposed Implementation Timeline	77
Regulatory Timeline	80
Summary of Key Initiatives and Actors	82
Tracking Progress	84
Additional Research	86
Moving Forward	87

Appendices 88

Appendix A: Schedule of Stakeholder Engagement	90
Appendix B: Complete list of Strategies, Objectives & Actions	92
Appendix C: Logic Maps for the Building Electrification Road Map	96

References 98

Five Core Road Map Strategies

1

**Create Market
Demand**

2

**Improve Cost
Competitiveness**

3

**Address
Systemic Barriers**

4

**Expand Industry
Capacity**

5

**Increase Available
Technologies**

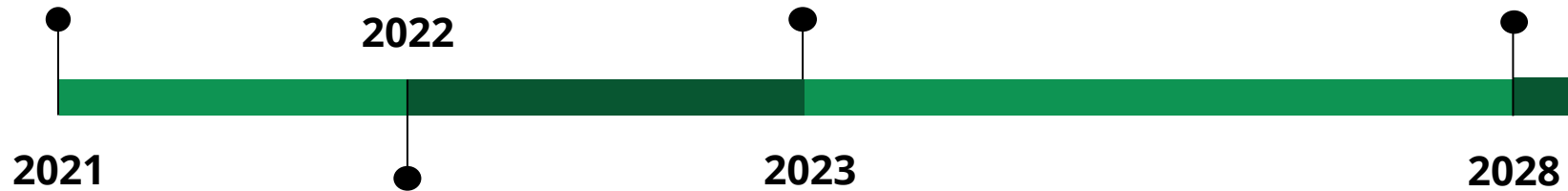
Recommended Timeline: New Construction

Provincial Track

GHG Requirement
Added to Building Code

Province-wide GHG
requirements start

**Province-wide zero
emissions
requirements**



Local Government Track

Local governments opt-in 

Recommended Timeline: Existing Buildings

Provincial Track

Provincial Regulatory Timeline Announced for Zero Emissions Buildings

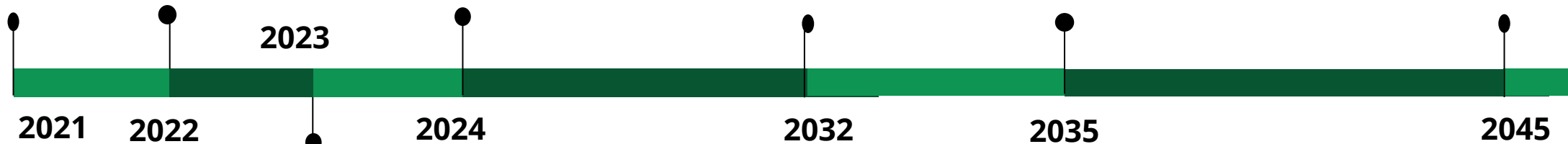
Mandatory Energy Benchmarking & Labelling

Province-wide minimum GHG requirements come into effect and are gradually expanded

Province-wide zero GHG emissions requirements start to come into effect

Provincial Equipment Standard: COP>1

All Buildings are Zero Emissions



Local Government Track

Local Governments Opt-in to GHG Requirements

All Buildings are Zero Emissions



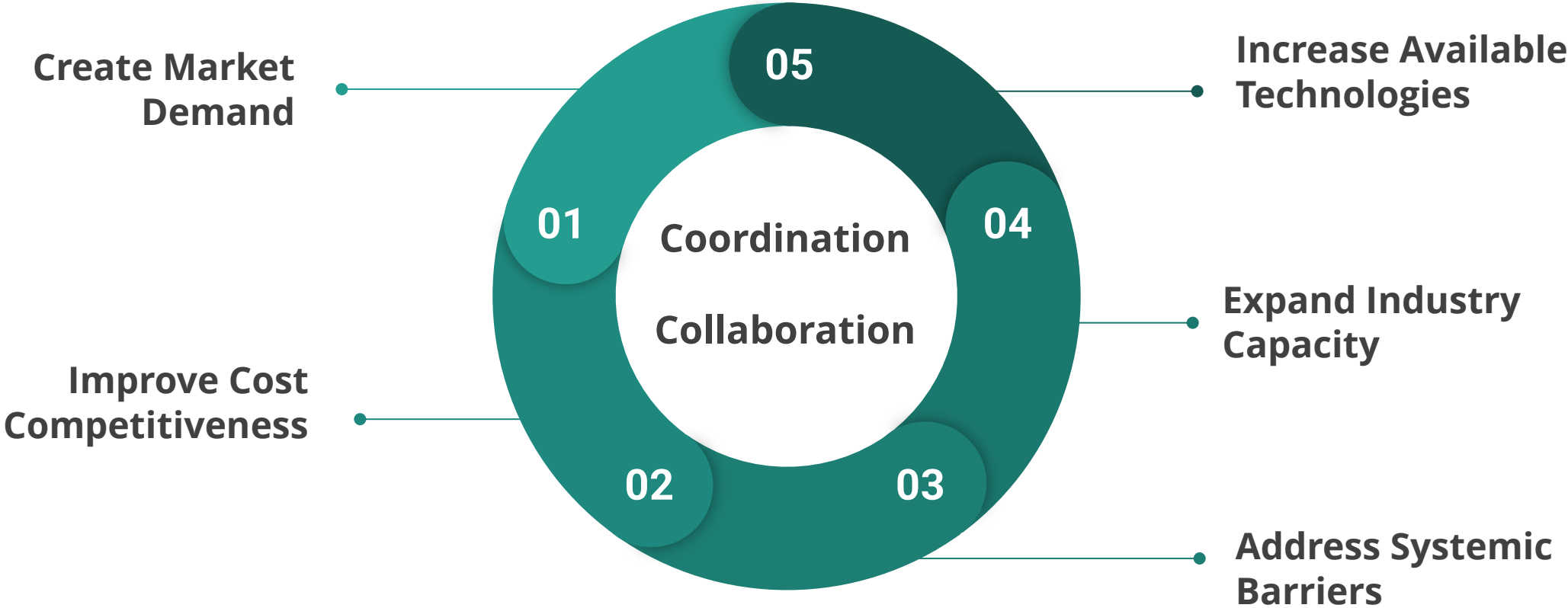
Consistent Approach

- **City of Vancouver:**
 - Zero Emissions Building Plan & Zero Emissions Building Retrofit Plan
- **Metro Vancouver Regional District:**
 - Draft Climate 2050 Buildings Roadmap
- **California**
 - New construction emissions requirements in 50 communities
- **New York City, Boston, Colorado, Tokyo**
 - Existing complex buildings - carbon performance standard
- **France, UK, Toronto (proposed)**
 - Small residential buildings – energy and/or GHG minimum requirements

Building Momentum

- **Launch of B2E Coalition**
- **Strong electrification mandate for BC Hydro**
- **Phase 2 Comprehensive Review of BC Hydro**
 - Electrification rates, incentives, connection tariffs, affordability
- **Ongoing Provincial Government Work:**
 - GHG requirements for new and existing buildings, PACE financing, home energy labelling, CleanBC programs
- **Other Initiatives:**
 - Industry: EGBC, BOMA BC, Vancouver Economic Commission, Technical Safety BC + B2E involvement
 - Local Government Climate Plans and Peer Networks,

Keep Our Eye on the Ball





Kim Barbero

Mechanical Contractors Association of BC (MCABC)

Leading the Change

for mechanical contractors in BC

Kim Barbero, CEO
B2E Launch Event
September 29, 2021

MCAE

/ Who We Are

MCABC is the connection to industry excellence, laser-focused on delivering education and professional development that set a new benchmark for professional excellence.

- ✓ 116 years old trade Association
- ✓ \$2B industry workforce
- ✓ Mechanical contractors are significant contributors to BC's GDP



Who We Are

Our Mission

Our mission is to develop a diverse, skilled and innovative mechanical contracting industry recognized for excellence in the Industrial, Commercial, Institutional and residential sectors.

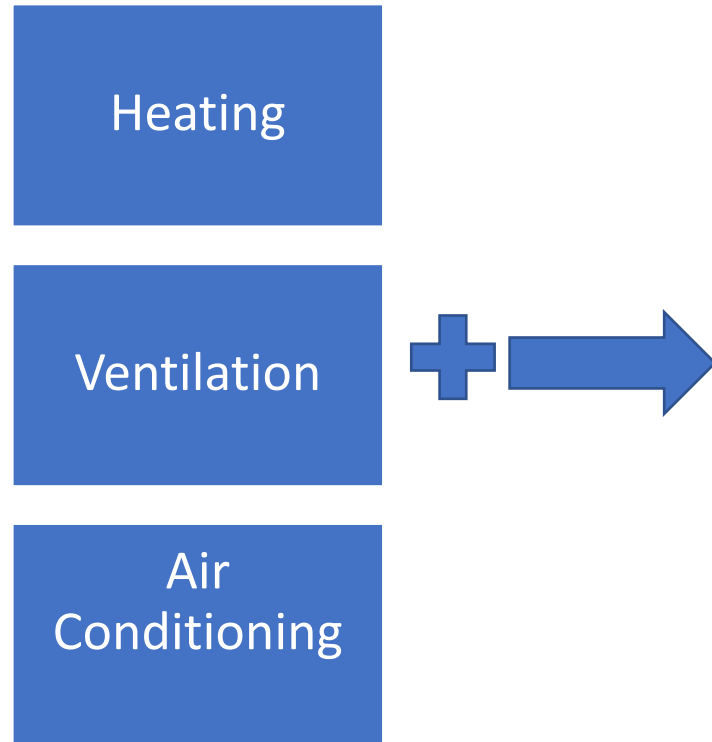
Our Vision

Best-in-class delivery of clean water, clean air and comfort for all British Columbians.



MTABI

What We Do



Collaborating for Change

B2E Leadership Council

Collaboration is one of six strategic priorities.

- ✓ Mechanical Contracting industry is a key stakeholder
- ✓ De-carbonization supports all 6 pillars
- ✓ Driving excellence together through strategic partnerships

Our Pillars

Leadership

Collaboration

Education

Skilled Trades

Advocacy

Innovation

/ Why We Care

We have a significant role to play. Our members are at the core of community development and sustainability.

- ✓ New construction mechanical installations
- ✓ Service & Maintenance for the existing building sector
- ✓ Retrofitting existing buildings and homes



/ Leading the Change

MCABC's involvement in climate solutions in BC:

- ✓ A resource
- ✓ An educator
- ✓ An influencer
- ✓ A partner



B2E
Building to
Electrification



MCABC
Mechanical Contractors Association
of British Columbia

**VIRTUAL
CONFERENCE AND EXPO**

LEADING THE CHANGE
May 27 & 28, 2021

Platinum Sponsor

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/ Thank you



mcabc.org/



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linkedin.com/company/mechanical-contractors-association-of-bc



Keith Anderson

VP of Customer Service at BC Hydro

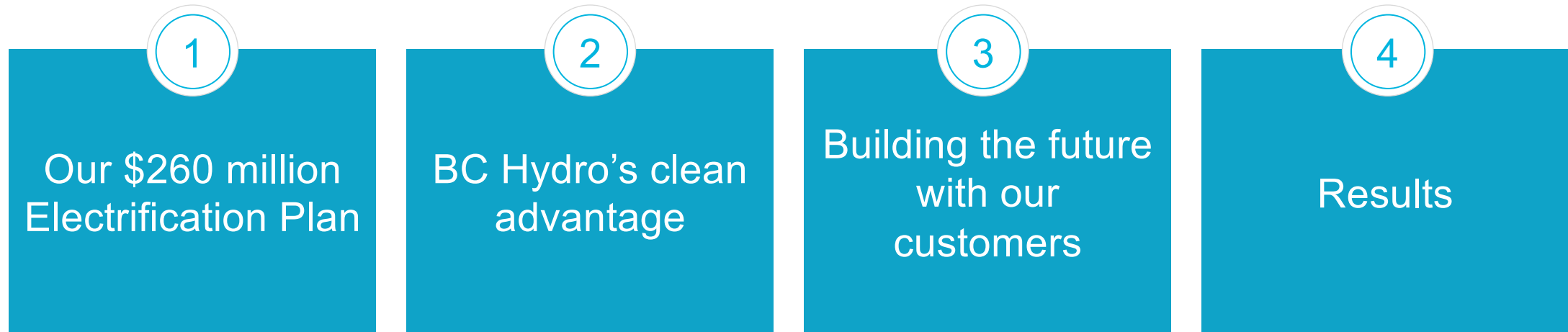
BC Hydro

Electrification Plan

Keith Anderson, VP Customer Service

How BCH will enable the Electrification Plan

Our 5-year Electrification Plan supports our strategy to power a cleaner more sustainable future for all British Columbians



1

Our \$260 million
Electrification Plan

BC Hydro's clean
advantage

Building the future
with our customers

Results



Our \$260 million Electrification Plan focus on attracting new customers; encouraging existing customers to switch from fossil fuels to clean electricity in 3 key areas:

1. Homes and Buildings
2. Transportation
3. Industry

2

Our \$260 million
Electrification Plan

BC Hydro's clean
advantage

Building the future
with our customers

Results



- BC Hydro's abundant supply of clean electricity
- Leader in helping fight climate change by reducing greenhouse gas emission
- Attract new industry to BC
- Keep rates low

Our \$260 million
Electrification Plan

BC Hydro's clean
advantage

3
Building the future
with our customers

Results



- Introduced incentives and market support for customers and industry partners
- Improved interconnection process
- Continued focus on **efficient** electrification with energy conservation and demand side management initiatives in combination with our new electrification initiatives

Our \$260 million
Electrification Plan

BC Hydro's clean
advantage

Building the future
with our customers

Results



- 3,100 GWh of new electricity load
- 930,000 tonnes CO₂e reduced per year
- 1.6% reduction in rates

Thank you



B2E

**Building to
Electrification
Coalition**

A scenic view of a city coastline, likely Vancouver, featuring a large body of water in the foreground, a sandy beach, a green park area with a paved walkway, and several high-rise apartment buildings in the background under a cloudy sky. A large, semi-transparent circular overlay is positioned on the left side of the image, containing the title and a list of benefits.

B2E Member Benefits

- Early access to news, updates and events
- Collaboration opportunities
- Recognition

Be a B2E Member



1. SIGN MEMBER
DECLARATION



2. SUBMIT LOGO



3. GET APPROVED

Get Involved!

- Sign-up for our newsletter
- **Be a member**



B2E
Building to
Electrification

Thank you!

For more information contact:

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Contact@b2electrification.org

604.330.2017



B2E

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