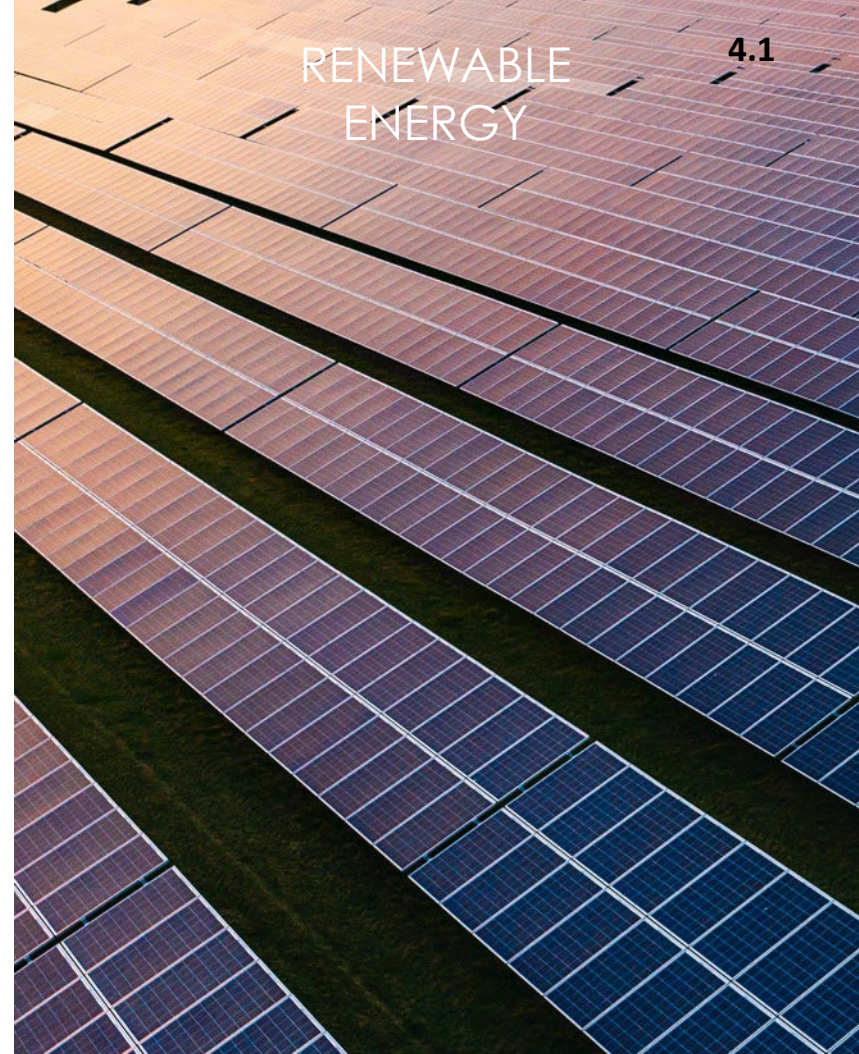


LOW CARBON
BUILDINGS

LOW CARBON
TRANSPORTATION

RENEWABLE
ENERGY

4.1



ZERO
EMISSIONS
INNOVATION
CENTRE

Serving the Metro Vancouver
region and beyond

www.zeic.ca

ACCELERATING CLIMATE ACTION IN METRO VANCOUVER – INTRODUCTION TO ZEIC

Presentation to the Metro Vancouver Climate Action Committee

By Melina Scholefield, P. Eng., Executive Director

Apr 6, 2023

**ZERO
EMISSIONS
INNOVATION
CENTRE**

Serving the Metro Vancouver
region and beyond

www.zeic.ca

Overview

1. About ZEIC & Low Carbon Cities Canada
2. ZEIC emissions reduction programs underway

Appendices

- ZEIC'S Board & Team
- ZEIC Strategic Plan (2023-2025)
- Metro Vancouver within BC building sector emissions context
- Alignment of ZEIC programs with CleanBC Plan

1 ABOUT ZEIC & LOW CARBON CITIES CANADA



LC3

low carbon cities canada network



\$183M investment from Government of Canada for Centres in seven most populous cities, representing 43% of population (2019)



Canadian Centres include Metro Vancouver, Calgary, Edmonton, Greater Toronto & Hamilton, Ottawa, Metro Montreal, Halifax region



\$21.7 federal endowment to establish ZEIC in Metro Vancouver (2022) – Requirement to match within 10 yrs



National Network Office Federation of Canadian Municipalities – Green Municipal Fund



www.lc3.ca

strategies for climate mitigation

Strategy 1:

Go where public and private dollars can't

Strategy 2:

Go where the emissions are

Strategy 3:

Go where the ideas are and fill gaps

Strategy 4:

Unlock co-benefits for communities



Geographic area centred in the Metro Vancouver region with program and network outreach across BC and beyond. |



Status and governance registered Canadian not-for-profit & charity governed by a purpose-built Board including Provincial Climate Action Secretariat, regional and local government representatives



Tools to catalyze, accelerate & scale climate innovation through

PROGRAMS,
COLLABORATIONS
& PARTNERSHIPS

GRANTS

IMPACT
INVESTING



OUR approach to impact

1

Connect & activate partners, investors, and action-takers

2

Demonstrate & showcase viable solutions

3

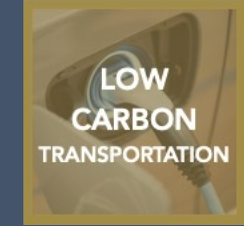
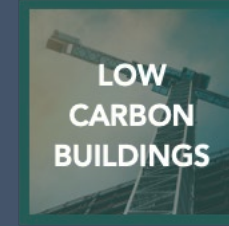
Invest in capacity building & readiness to scale climate actions

MARKET transformation

To support the clean economy & market transformation, we:

- Help make GHG reduction actions mainstream
- Contribute directly to workforce development + readiness for regulations
- Work across sectors and partner broadly

OUR
SECTORAL
FOCUS



We enable implementation by focusing on:

PEOPLE



INNOVATION & CLEAN TECHNOLOGIES

Build confidence, commitment & know how for zero carbon solutions

Enable peer-to-peer learning & influence for collective action

Provide supports & address barriers & misperceptions

Work to normalize known, effective decarbonization technologies & strategies

Amplify what works, staying open to a range of methods & clean technologies

Create tools, guides and demonstrations to facilitate implementation

2

ZEIC EMISSIONS REDUCTION PROGRAMS UNDERWAY



OUR programs to deliver impact

1

Zero Emissions Building Exchange (ZEBx)

2

Building to Electrification (B2E) Coalition Secretariat

3

Embodied Emissions Centre for Excellence

4

Near Zero Incentive Program

5

Zero Emissions Retrofit Accelerator

6

Women4Climate Mentorship Program

7

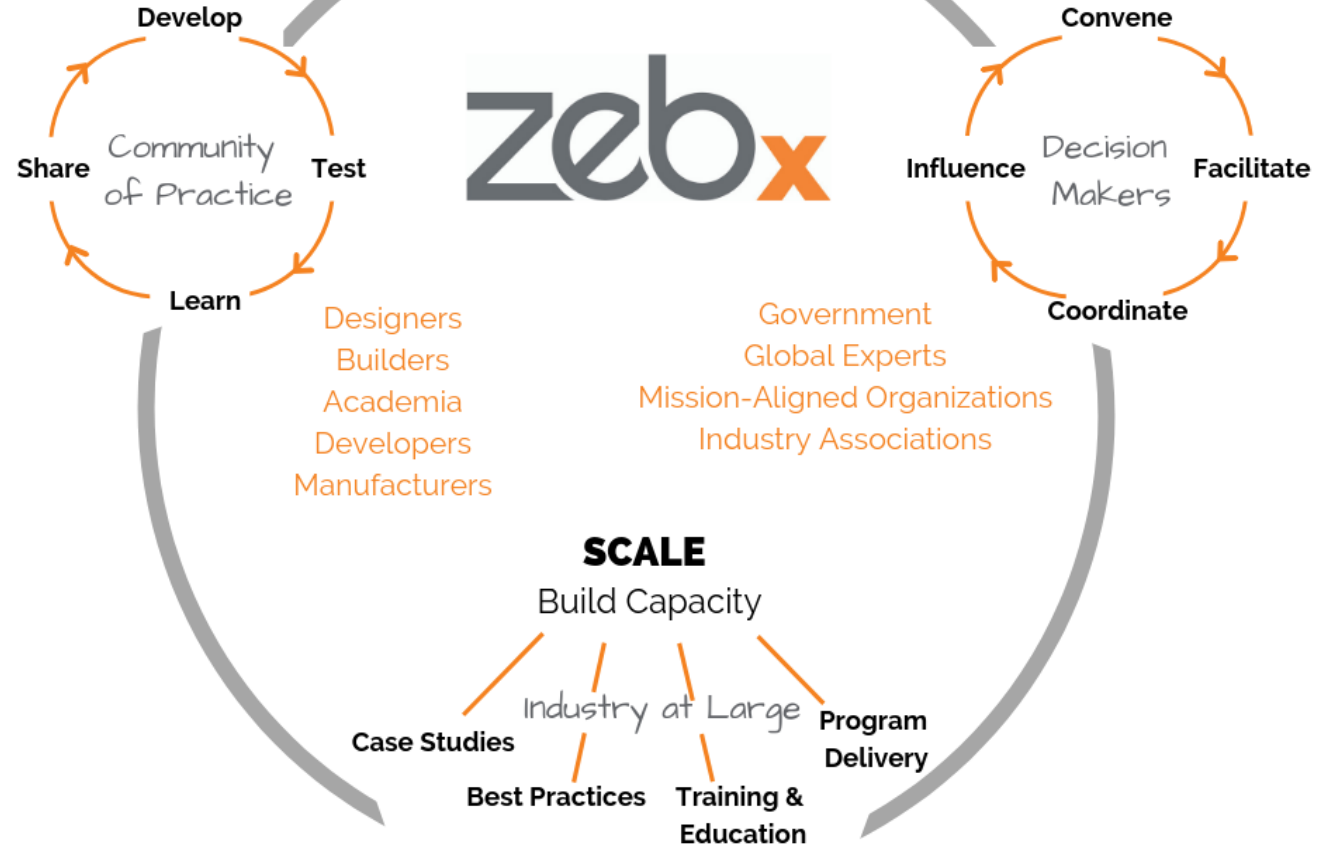
LC3 Network Initiatives

1

ZEBx program & approach

COLLABORATE
Accelerate Solutions

~~ADVANCE~~ **ACCELERATE**
Remove Barriers & Identify Opportunities



Dialogue Series



Podcasts



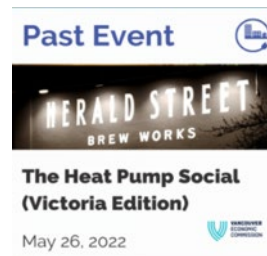
Videos & Playbooks



Webinars



Tech Demo Series



Events & Tours

reach in the past year

Who is our audience?



1. Architects / Designers
2. Government
3. Engineer consultants
4. Builders

1334

LinkedIn followers
(most favoured social media platform with our audience)

 48

Resources produced
(playbooks, case studies, videos, podcasts)

What is our reach?

 3737

Monthly newsletters subscribers

 >29000

Attendees at 20 ZEBx-hosted Events
(Decarb Lunch webinars, Deep Emissions Retrofit Dialogues, Technology demos and Networking)

 8215

Views at the BC Green Building Events Calendar in the first 3 months after launching

ZEBx impact



88.5%

of ZEBx event attendees indicated that what they have learned will change the way they work

64%

of survey respondents said that the ZEBx network enabled them to expand their network

"The fast-moving world of low-carbon buildings can be overwhelming to navigate but with ZEBx, the path is more approachable and clear. They and their offerings have greatly assisted the City of Nelson in our work to reduce embodied carbon."

Natalie Douglas

Climate Resilience Planner, Development Services & Climate and Energy, City of Nelson



99%

of survey respondents recommend ZEBx events to others in the industry

2 Building2Electrification (B2E) coalition

BC-based coalition of industry experts, contractors, policy-makers, researchers, suppliers and financial institutions working collaboratively to ID and address barriers to electrification and catalyze a market shift towards building decarbonization

1st

Canada's first Building Electrification Coalition aligned with BC's Building Electrification Roadmap

110

new members welcomed from across BC and continues to grow

Leadership Council & working groups:

- Awareness Building Ctte
- Technology Ctte
- Workforce Development Ctte

Dedicated \$220K project fund for BC Electrification Road Map implementation

2022 Initiatives

Organization	Project	Grant	Others	Total Leverage
1 City Green Solutions	Heat pump contractor certification pathways for mid-career gas fitter & plumbing trades	\$8K	\$0K	\$6K
2 SES Consulting	Guide for engineers: Advanced heating and water system electrification retrofits design and operations in commercial buildings	\$20K	\$80K (incl \$20K in-kind)	\$100K
3 City of Vancouver	Pilot on fuel switching barriers & incentives program for electric hot water retrofits	\$20K	\$52K	\$72K
4 Community Energy Association	Climate-friendly Homes Tour (Province-wide open houses)	\$20K	\$55K	\$75K
TOTAL		\$68K	\$187K	\$255K

3 EMBODIED EMISSIONS

centre of excellence

Aims of the network:

- Provide peer learning & support
- Attract new audiences
- Share new & existing knowledge
- Share lessons learned & successes
- Influence & engage policy-makers

Carbon Leadership Forum BC (CLFBC) Program focus areas:

- Education training & capacity building
- Local government peer network
- Embodied emissions research coordination and case studies
- Annual awards ceremony

13

Volunteer Advisory
Ctte Members

30

Local Government
Peer Network
Members

500+

Network Subscribers

4 NEAR ZERO incentive program

A cross industry, green initiative to accelerate and incentivize the rapid decarbonisation of Vancouver homes

STREAM 1

Operational
Emissions

STREAM 2

Embodied
Emissions

STREAM 3


Domestic Hot
Water Fuel
Switching

STREAM 4

Energy Use &
Costs for High
Performance
Builds

Coming
Soon!

5 RETROFIT accelerator

Program is under construction 

A Metro Vancouver *Sustainability Innovation Fund* initiative focused on supporting large buildings retrofits



Multi-unit residential buildings



Commercial buildings

1

Convene,
Collaborate &
Support

2

Best Practices,
Regional Needs,
Gaps + Finance &
Funding

3

Building
Benchmarks,
Decarbonization
Plans & Concierge
Supports

4

Aggregate,
Replicate &
Scale



WOMEN4CLIMATE

mentorship



MAE FLANDERS

Indigenous Energy Advisor,
Aboriginal Housing
Management Association



MELISSA HAMER

Director of Project lead, BCIT
Zero Energy/Zero Emissions
Buildings Learning Centre



ARUSHI RAINA

Director of Commercialization,
Praxis Spinal Cord Institute



AUBREE MCATEE

Western Canada Regional
Manager, Cascades Project
(UBC, Planetary Healthcare Lab)



NAZLI AZIMIKOR

Supervisor of Continuous
Improvement,
Metro Vancouver



CAROLINE WISHEART

Groundwater Scientist,
BGC Engineering



MAHDIS ARAUJO

Electric Vehicle Advisor,
Fraser Basin Council



JUSTINE WIKLO

Business Development
Coord., Open Technologies



CHRISTINE THURING

Faculty, BCIT Centre for
Architectural Ecology



DARLA SIMPSON

Sustainability Services
Manager, SES Consulting



MOLLY HENRY

Senior Policy Analyst,
Vancity

Equity lens:
45% of mentees are
Black, Indigenous or
People of Colour
(BIPOC)

7

LC3 NETWORK

national initiatives

Collaborative initiatives with LC3 centres across the country that provide local benefits and value

1

Efficiency Canada workshops & guides:
Municipal Guide to Canada's Net-Zero Emissions Codes

[resource link](#)

2

Knowledge Product for elected officials:
Priority municipal actions to enable EV adoption

[resource link](#)

3

Fundraising:
Equity & Indigenous priority grants & initiatives

4

Studies & resources:
Enabling retrofits for 'EV ready' multi-residential buildings (technical, legal, financial)

CONNECT

with us

ZERO EMISSIONS INNOVATION CENTRE

Serving the Metro Vancouver
region and beyond

www.zeic.ca

info@zeic.ca | www.zeic.ca | follow us on [LinkedIn](#)

Melina Scholefield, P. Eng.

Executive Director, ZEIC
melina.scholefield@zeic.ca
604-209-5208

ZEIC Program Areas:

Zero Emissions Building Exchange: www.zebx.org

Building 2 Electrification Coalition: www.b2electrification.org

Carbon Leadership Forum BC: www.clfvancouver.com

Near Zero Incentive Program: www.nearzero.ca

Women 4 Climate Vancouver: <https://w4c.org/mentorship/women4climate-Vancouver>

BC Green Building Calendar: <https://bcgreeneventcalendar.ca>

Appendix A

ZEIC'S BOARD & TEAM



MEET the Board



Dr. Peter Robinson
(Chair, former David Suzuki Found.)



Chih-ting Lo
(Vice-chair, EELO Solutions)



Cllr. Adriane Carr
(City of Vancouver)



Dir. Jen McCutcheon
(Metro Vancouver)



Chris Gilmore
(Province of BC – ex-officio)



Elaine Wong
(Pine Street Ventures)



Brenda Knights
(Vancouver Native Housing Society)



Colin Doylend
(Solar Earth Technologies)



Cllr. Curtis Thomas
(Tsleil-Waututh Nation, Warrior Plumbing)



Karen Tam Wu
(Climate Policy Advisor, former Pembina Institute)



Kira Gerwing
(Sacha Investments)

MEET the team



Melina Scholefield
Executive Director



Roberto Pecora
Director of ZEBx



Lawrence Guerra
Assistance Director, Finance & Compliance



Gordon Patrick Newell
Communications & Events Manager



Mariko Michasiw
Building To Electrification Coalition (B2E) Program Manager



Wendy de Hoog
Grants, Programs & Engagement Manager



Kim McClymont
Green Buildings Project Manager



Caroline Butchart
Embodied Emissions Program Manager



Darla Simpson
Retrofits Program Manager



Anna Henderson
Communications Coordinator



Mackenzie Fleming
Program Coordinator



Nadine Jarry
Program Coordinator



Appendix B

ZEIC STRATEGIC PLAN (2023-2025)



OUR purpose

VISION

Together, we enable a new era of climate action and innovation for an inclusive, prosperous and healthy zero carbon future in our region by 2050

MISSION

Working with governments, Indigenous partners, industry and others, we support ambitious climate policy, address barriers, and catalyze, accelerate and scale innovation to strengthen equitable and resilient communities for current and future generations

OUR values

Innovation

Collaboration

Empowerment

Stewardship

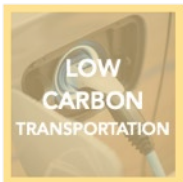
OUR approach

- 1 Connect & activate partners, investors, and action-takers
- 2 Demonstrate & showcase viable solutions
- 3 Invest in capacity building & readiness to scale climate actions

OUR sectoral focus



LOW
CARBON
BUILDINGS



LOW
CARBON
TRANSPORTATION



RENEWABLE
ENERGY

OUR strategic directions

to support impactful outcomes by 2030



Serve as the leading hub for urban decarbonization in Metro Vancouver and beyond



Invest in leaders to bolster and sustain bold climate actions

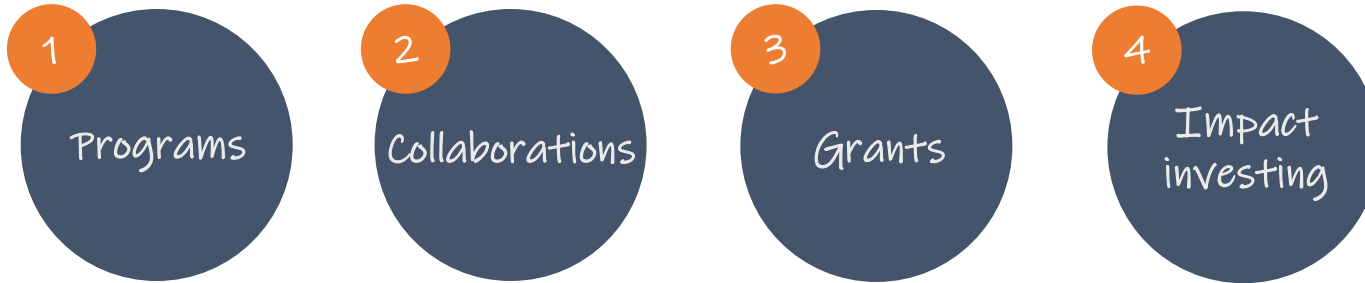


Stimulate market transformation and mobilize capital to enable implementation at scale



Reduce carbon dependency while contributing to health, well-being, and long-term affordability

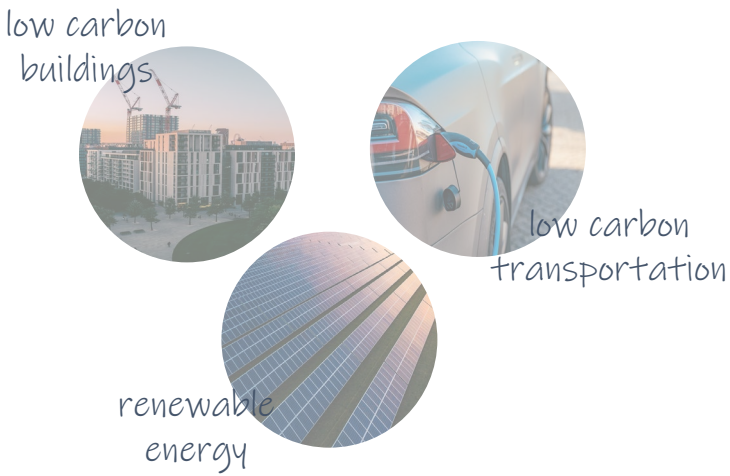
OUR tools



OUR impact indicators



OUR sectoral focus



TOOLS	Year 1 (2023)				Year 2 (2024)				Year 3 (2025)			
	P	C	G	I	P	C	G	I	P	C	G	I
Low carbon buildings (incl renewable energy & low carbon transportation related to bldgs.)	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Low carbon transportation	Orange	Yellow	Yellow	Yellow	Orange	Yellow	Green	Green	Yellow	Green	Green	Green
Renewable energy	Orange	Orange	Yellow	Yellow	Orange	Orange	Yellow	Green	Yellow	Green	Green	Green
Other high carbon sectors in the region	Orange	Orange	Orange	Yellow	Orange	Orange	Orange	Yellow	Orange	Orange	Orange	Yellow

■ High priority to pursue
■ Opportunistic approach
■ Low priority to pursue
P = Programs (ZEIC-led)
C = Collaborations (ZEIC contribute)
G = Grants
I = Impact Investing/Direct Investing

Appendix C

METRO VANCOUVER WITHIN BC BUILDING SECTOR EMISSIONS CONTEXT



CONTEXT

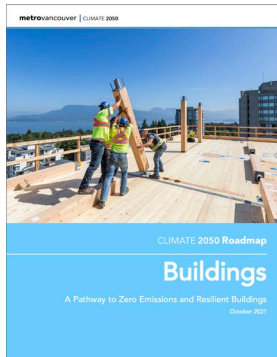
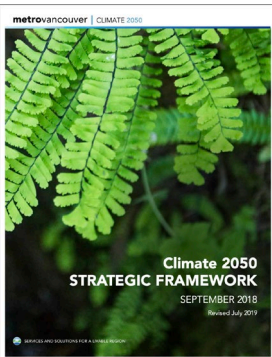
emissions within the region

Metro Vancouver

Climate 2050

Reduce GHGs from 2010 levels by 45% by 2030

Carbon neutral by 2050



31%
CARS AND TRUCKS



17%
INDUSTRY



8%
NON-ROAD
ENGINES



26%
BUILDINGS



7%
AIR, MARINE, RAIL



3%

AGRICULTURE



3%

WASTE



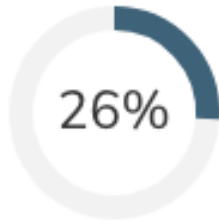
5%
HEAVY DUTY
VEHICLES



CONTEXT

emissions within the region

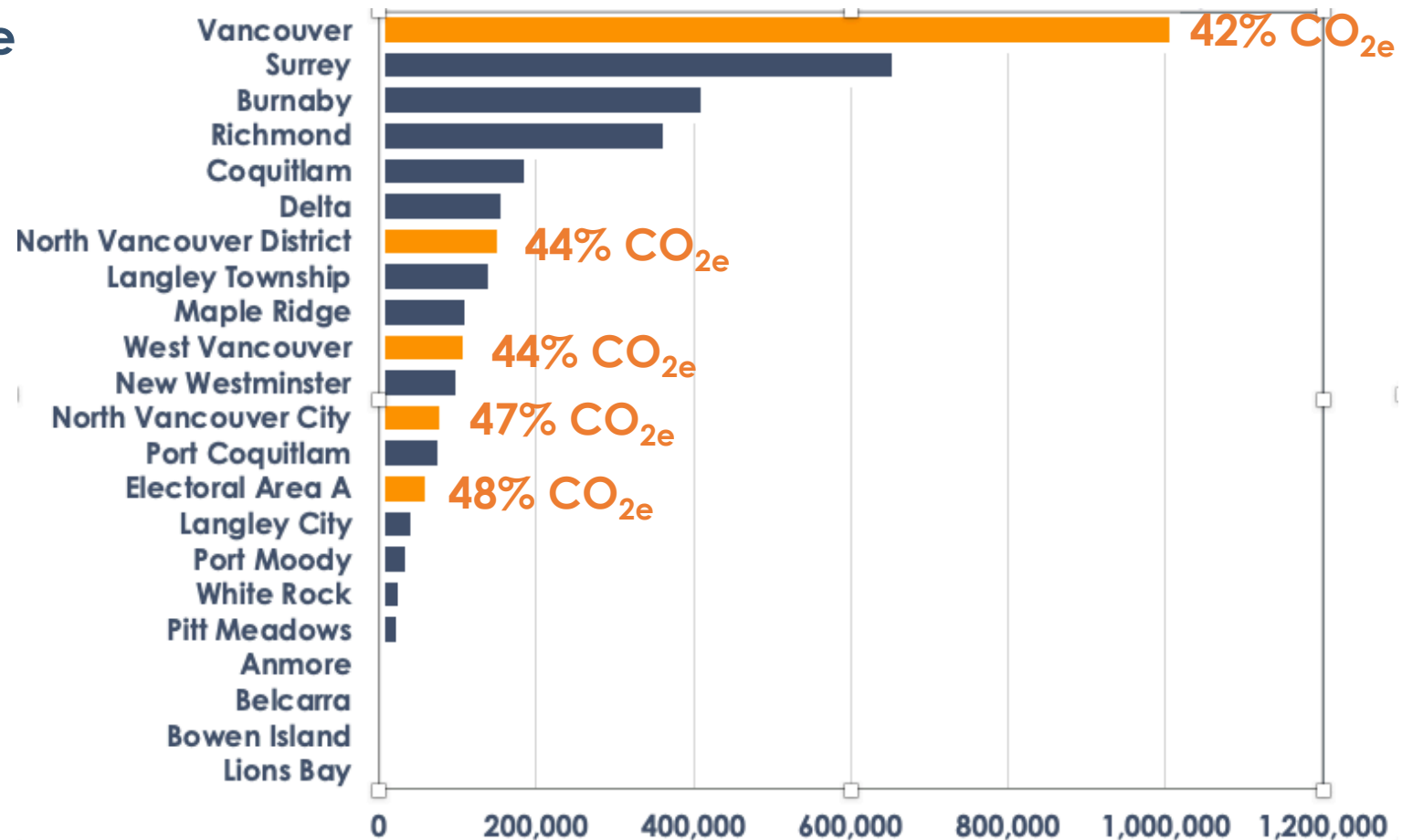
2019 Metro Vancouver Region-wide GHGs from Buildings



In the urban context, addressing building emissions is **essential** for municipalities to meet their overall climate targets

In several Metro Vancouver municipalities with less industry, building sector emissions form nearly half of overall GHGs

2019 GHGs from Building Sources by Municipality (tCO_{2e})



CONTEXT

emissions within BC



Metro Vancouver region represents a strategic, concentrated opportunity for targeted interventions to achieve CleanBC emissions reduction targets

- 23 member jurisdictions, representing over half of BC's population
- 2.8 million people + 100,000 businesses + 1.5 million workers
- Metro Vancouver actions catalyze province-wide transformations



Total BC emissions were 67.9 MtCO₂e in 2019

13% Of BC's emissions are from the building sector (2019, 8.6 MtCO₂e or 16% excl. fossil fuel sector)

43% Of BC's building sector emissions are from **Metro Vancouver** (2015, 3.7 MtCO₂e)



Embodied emissions in BC buildings rival operational emissions

54% Of BC's building sector emissions are **operational** emissions (2018, 8.3 MtCO₂e)

46% Of BC's building sector emissions are **embodied** emissions (2018, 7.2 MtCO₂e)



Sources:

Province of BC. (2021). Provincial greenhouse gas emissions inventory. <https://www2.gov.bc.ca/gov/content/environment/climate-change/data/provincial-inventory>

Metro Vancouver. (2021). Metro Vancouver Regional Consumption-Based Emissions Inventory. <http://www.metrovan30of69g/services/air-quality/AirQualityPublications/MetroVancouverConsumption-BasedEmissionsInventory.pdf>

Pak, A. (2022). BC Embodied Carbon Modelling Study. Priopta. <https://www.priopta.com/downloads/bc-embodied-carbon-modelling-study>

Appendix D

ALIGNMENT OF ZEIC PROGRAMS WITH CLEAN BC PLAN



CLEAN BC

ZEIC Building Programs that Align with CleanBC Roadmap to 2030

Zero Emissions Building Exchange (ZEBx)



ZEBx is a Centre of Excellence that strengthens the public, private, and civic capacities for zero-emissions buildings throughout BC. ZEBx facilitates knowledge exchange in the building industry and amongst governments, maintaining a community of practice through (1) resources, events, and communications and (2) inter-connecting industry silos, and (3) collaborations with industry associations, governments, utilities, researchers, academia, suppliers and global experts.

www.zeic.ca | www.bcgreeneventcalendar.ca

Building 2 Electrification Coalition (B2E)



This province-wide coalition of over 110 organizations is working to implement BC's Building Electrification Roadmap to transition building heating and hot water to all-electric solutions. The coalition, composed of government, industry and non-profit sectors, is working together to address barriers, build capacity and catalyze action through deployment of technologies, workforce development and awareness-raising.

www.b2electrification.org

NearZero Incentive Program



This direct GHG reduction program is aimed at building industry experience and capacity in reducing both embodied and operational emissions in new and existing buildings. This program is unique in how it combines project delivery with pragmatic industry capacity-building. Participant insights on what worked, barriers and how to accelerate and scale progress are amplified through our ZEBx, B2E & CLF networks.

www.nearzero.ca

Retrofit Accelerator



The retrofit accelerator, a partnership with Metro Vancouver, will act as a one-stop resource support hub to rapidly increase the number of deep carbon reduction building retrofits undertaken in the Metro Vancouver region. The accelerator will incorporate concierge-type services and initiatives to support access to financing and grants and overcome barriers to implementation across a range of building types from strata, commercial and non-market housing.

Embodied Emissions Centre of Excellence



In BC, new building construction embodied GHGs in 2019 was an estimated 7.19 MtCO₂e/yr, rivaling operational GHGs of 8.31 MtCO₂e/yr, 12% of BC's GHG inventory. Targeting embodied GHGs, which are largely incurred up front in a building's lifecycle is a strategic and cost-effective means of accelerating GHG reductions and the circular economy. Working through the Carbon Leadership Forum Vancouver network, this province-wide program includes capacity-building, tools, peer learning, and awards.

www.clfvancouver.com

ZEIC programs support transformative actions and positive outcomes for

Housing

Health

Climate Resilience

Equity & Affordability

- ✓ Zero-carbon new construction by 2030
- ✓ CleanBC Workforce Readiness Plan, education, training & capacity building

- ✓ Advancing BC Hydro's Electrification Plan
- ✓ Supporting GHG efficient practices
- ✓ High efficiency new space & water heating equipment
- ✓ Low carbon bldg energy

- ✓ Advancing BC Hydro's Electrification Plan
- ✓ Enhancing energy efficiency programs

- ✓ High efficiency new space and water heating equipment
- ✓ Advances implementation of the BC Building Electrification Roadmap

- ✓ Zero-carbon new construction by 2030
- ✓ Low carbon building materials
- ✓ Circular economy

- ✓ CleanBC Workforce Readiness Plan, education, training & capacity building
- ✓ Supporting GHG efficient practices

- ✓ Advancing BC Hydro's Electrification Plan
- ✓ Low carbon bldg energy solutions

- ✓ High efficiency new space & water heating equipment
- ✓ Clean Transportation Action Plan
- ✓ EV charging retrofits

- ✓ Zero-carbon new construction by 2030
- ✓ Low carbon building materials

- ✓ Circular economy
- ✓ Workforce readiness, education, training & capacity building

Energize our Province

Presentation to the Metro Vancouver Climate Action Committee



 **BC Hydro**
Power smart

Our System



BC Hydro has a
network of approximately
80,000 kms
of transmission &
distribution lines

Over 300



substations

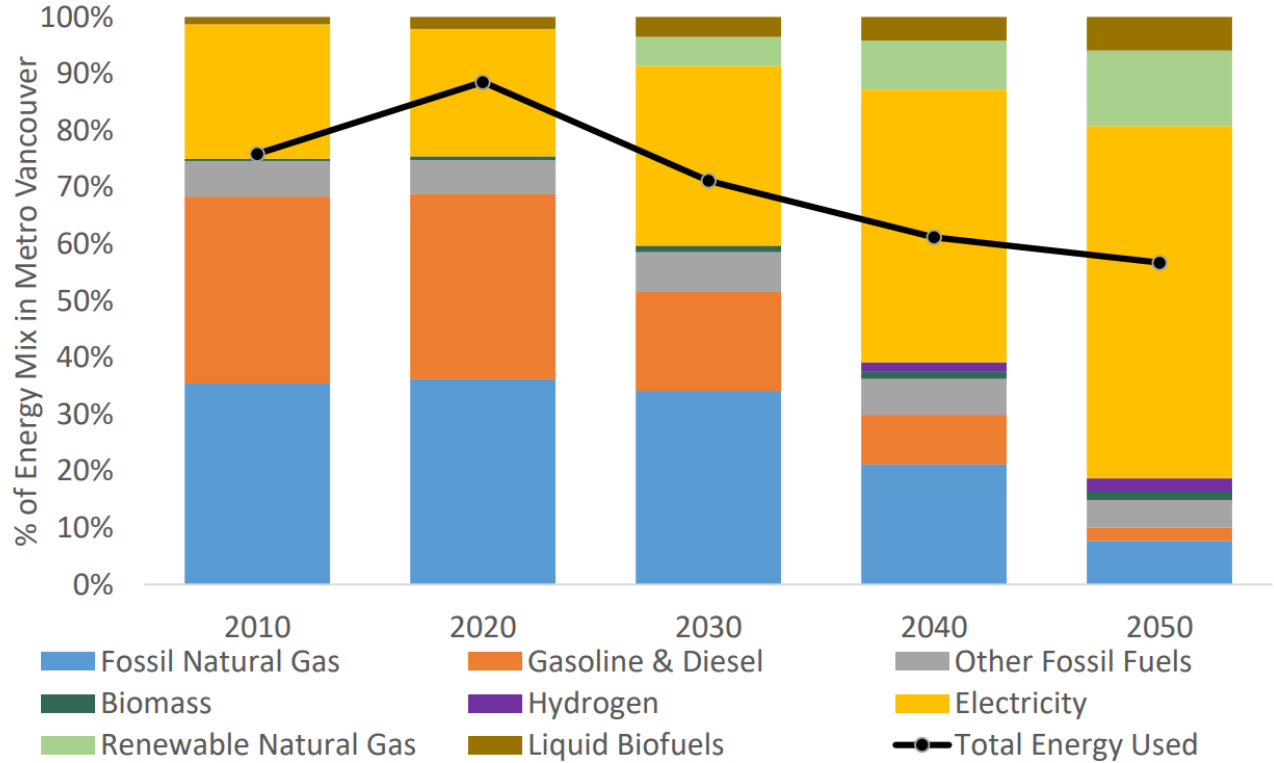
Provides approximately **5,000,000**
customers with reliable electricity

7000 employees

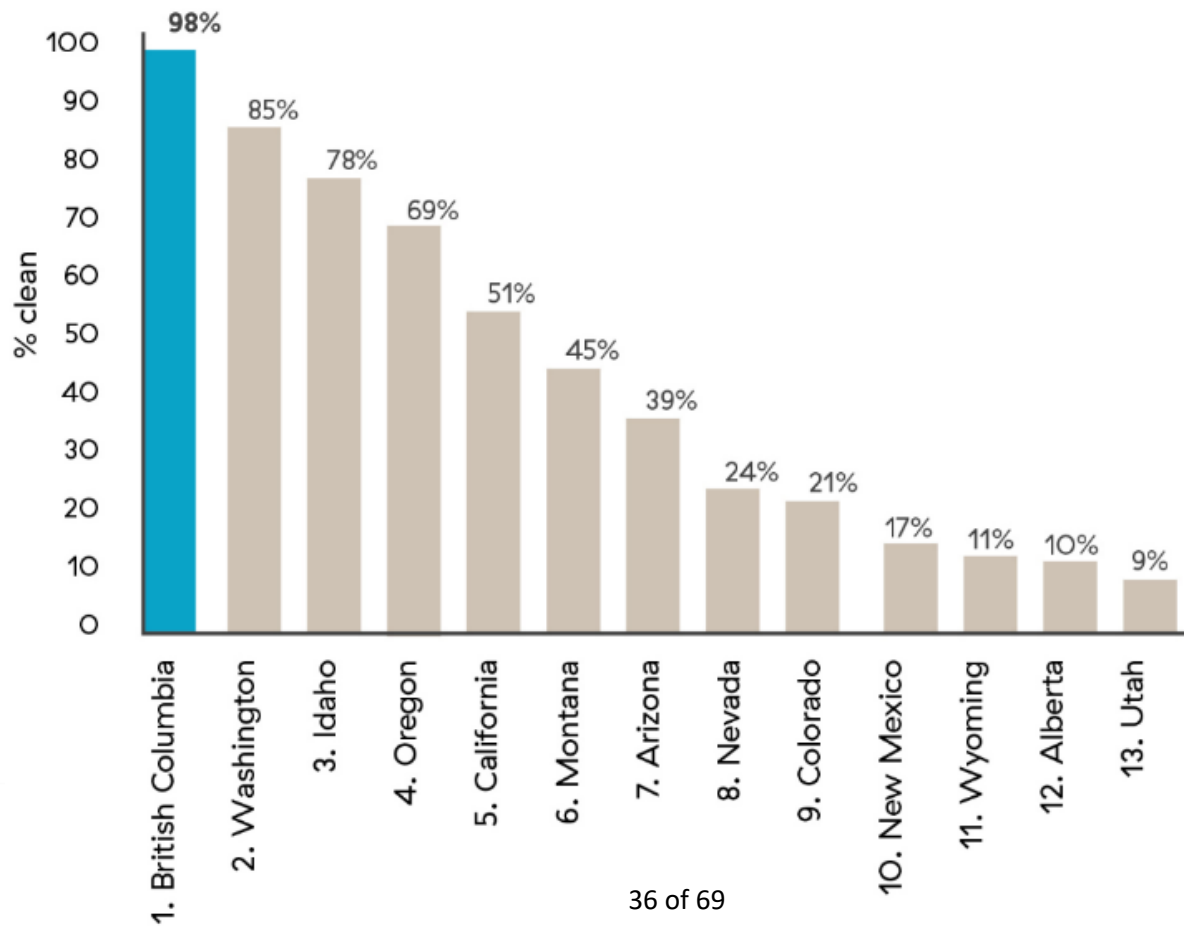
Energy Roadmap

Future Energy System

POTENTIAL IMPACT OF THE STRATEGIES AND ACTIONS DESCRIBED IN THE *CLIMATE 2050 ROADMAPS*

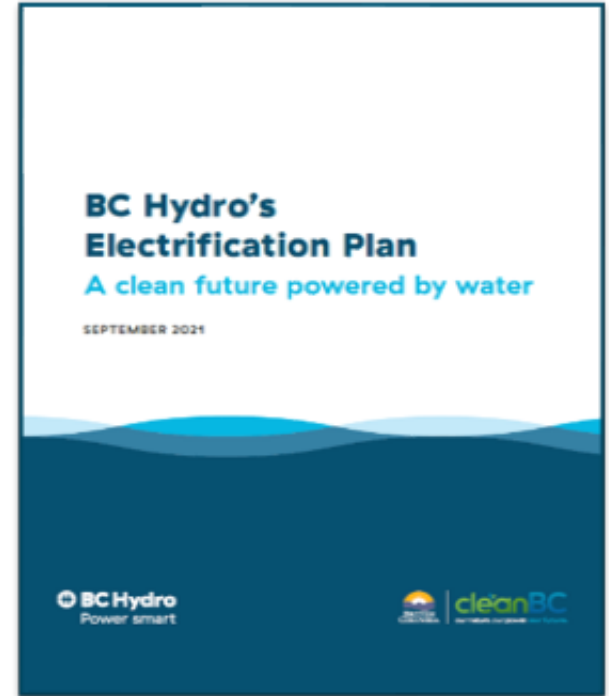


Cleanest electricity generation in western North America



BC Hydro's Electrification Plan

- 5-year Electrification Plan
- Supports CleanBC targets
 - \$260M in new investments
 - Programs to help customers switch to clean electricity across key sectors: Building, Transportation and Industry
 - Making it easier for current and future customers to connect to our grid



Current and Future Energy Supply



Grid Capacity



Investing in capacity upgrades

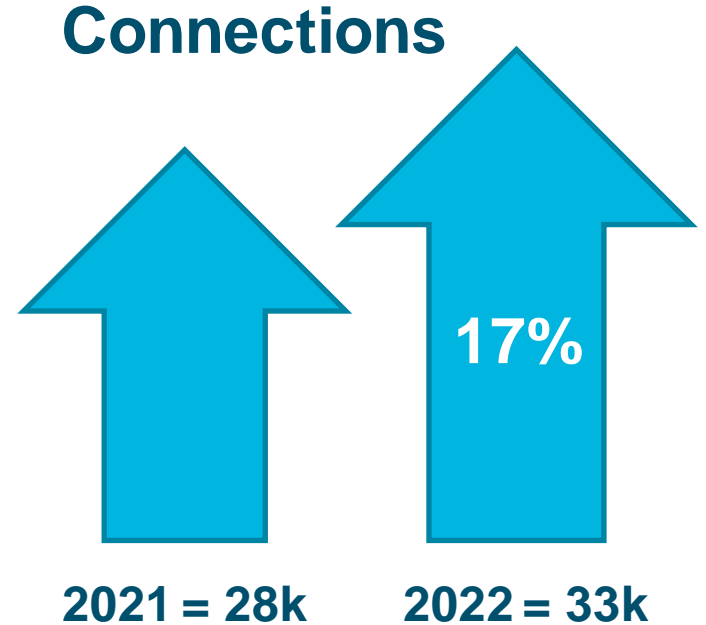
Updating our planning criteria

Advancing major underground projects

Optional time of use rate and programs targeting peak reduction

Improving Customer Connections

- Process improvements
- Hiring more people
- Looking at different ways to deliver work
- Review of our extension policy



Strengthening our Partnership

- Gain a better understanding of your future goals and plans
- Identify areas for collaboration and future problem solving
- Deploying electrical infrastructure





Metro Vancouver Climate Action Committee

Climate 2050 Energy Roadmap Considerations

Mandy Assi, Senior Manager, Community & Indigenous Relations
Brent Graham, Senior Manager, Government Relations & Public Policy

April 6, 2023

Metro Vancouver and FortisBC Alignment

- Create a renewable, resilient and equitable energy future
- Commitment to develop solutions to achieve carbon neutrality by 2050
- Increased use of renewable fuels and energy efficiency



Metro Vancouver and FortisBC Continued Collaboration

- Energy efficiency
- Renewable Natural Gas
- Hydrogen
- Innovation



Positive Updates to 2050 Energy Roadmap

- 1. Inclusion of hydrogen and renewable natural gas (RNG) as forms of clean, renewable energy**
 - a) Importance of building confidence in RNG
 - b) Hydrogen hub in Metro Vancouver

- 2. Creation of key climate policies section, including important role of utilities**
 - a) Recognition of role of decarbonization of gas system

Further Updates Needed for the 2050 Energy Roadmap

1. Accurately reflect the potential and status of hydrogen and renewable natural gas

- a) Refer to the study conducted with the Province, BC Bioenergy Network and FortisBC
- b) FortisBC has 33 projects approved by BCUC. 18 PJ of supply which is equivalent to Site C


B.C. RENEWABLE AND LOW-CARBON GAS SUPPLY POTENTIAL STUDY


FINAL REPORT

Prepared for
BC Bioenergy Network
FortisBC
Province of British Columbia

 **BC Bioenergy Network**
PARTNERING FOR
A GREENER FUTURE

 **BRITISH COLUMBIA**

 **FORTIS BC™**

Prepared by
 **envint Consulting** and  **CBER**
Canadian Biomass Energy Research Ltd

Terrebonne, QC
Revelstoke, B.C.

Martin Tampier
E: martin@envint.ca

with
Matt Dickson, Hallbar Consulting
Len Bykowski, VRM Management Solutions
Dr. Warren Mabee, Queens University
Geoff Budd, G&S Budd Consulting
Thomas Cheney, T. Cheney Consulting

January 28, 2022

Further Updates Needed for the 2050 Energy Roadmap

2. Reflect current and future status of utility long-term resource plans by updating Metro Vancouver’s two main utility strategies: electrification and decarbonization of the gas system.*

a) *“FBC’s 2021 LTERP, including the 2021 LT DSM Plan, is accepted in whole as being **in the public interest.**”**

b) *“BC Hydro’s filing regarding its Signposts Update, suggests this update will result in **significant changes to many aspects of the 2021 IRP.** BC Hydro submits that these changes are extensive and as a result, continuing with the current regulatory timetable is impractical.”***

c) *Kelowna Electrification Case study in FortisBC’s Long Term Gas Resource Plan.****

*Order G-380-22, Dec. 21, 2022. FortisBC Inc. 2021 Long-Term Electric Resource Plan and 2021 Long-Term Demand-Side Management Plan

**Order G-75-23. April 4, 2023. British Columbia Hydro and Power Authority – 2021 Integrated Resource Plan – Project No. 1599287 – Regulatory Timetable

***FEI LTGRP ~Project No. 1599324 FEI Evidentiary Update, February 24, 2023.

Summary of Recommendations

Proceed with alternative 2: endorse the Climate 2050 Energy Roadmap, with the following two amendments to be put forward by the Climate Action Committee:

1. Accurately reflect the potential and status of hydrogen and renewable natural gas

- a) Potential: Refer to the Renewable Gas potential study done in partnership with BC Bionetwork, FortisBC and the Province of British Columbia [B.C. Renewable and Low-Carbon Gas Supply Potential Study](#)
- b) Current status: FortisBC has 33 projects approved by the BCUC representing 18 PJ of supply which is equivalent to Site C

2. Reflect current and future status of utility long-term resource plans by updating Metro Vancouver's two main utility strategies: electrification and decarbonization of the gas system.

- a) FortisBC Electric: [BCUC Decision and Order G-380-22](#)
- b) BC Hydro: [BCUC Order G75-23 with Reasons for Decision and regulatory timetable](#)
- c) FortisBC Gas: [Kelowna Electrification Case Study](#)

Thank you



For further information, please contact:

Mandy Assi & Brent Graham

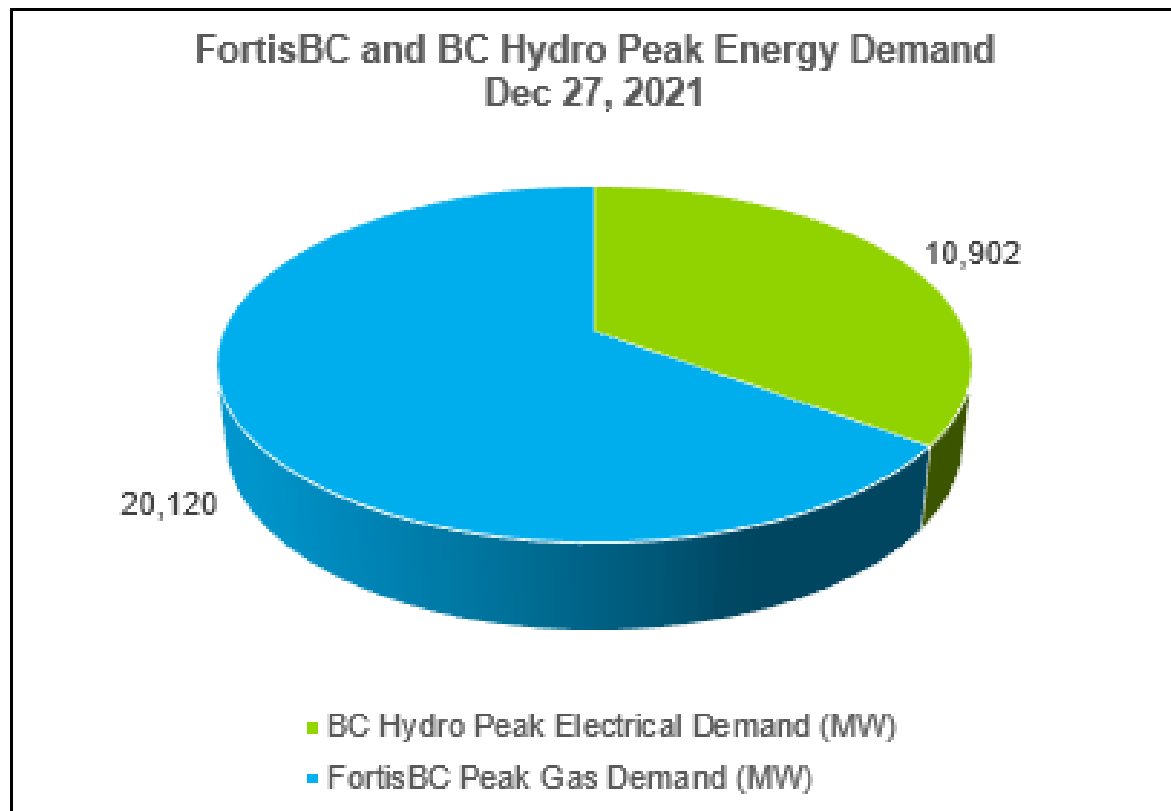
Mandy.Assi@fortisbc.com or Brent.Graham@fortisbc.com

Find FortisBC at:
fortisbc.com
talkingenergy.ca
604-576-7000

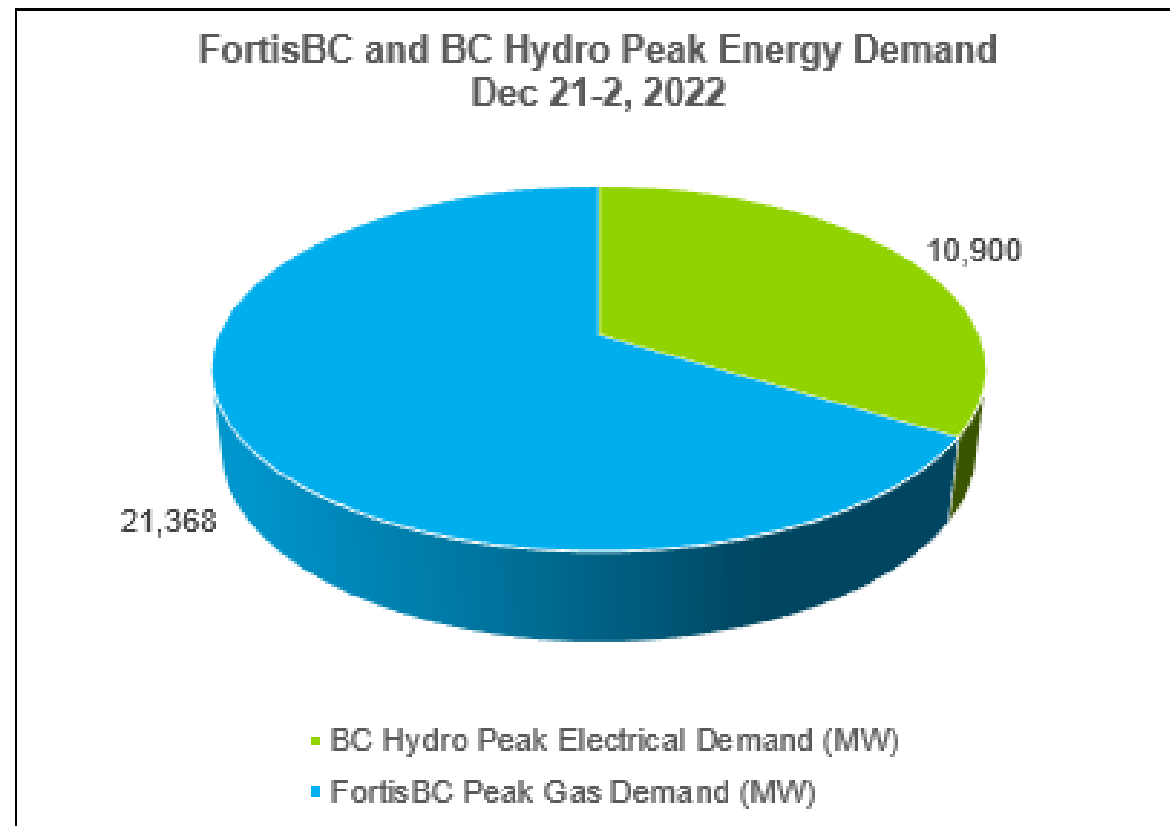
Follow us **@fortisbc**



Appendix: FortisBC Delivered Nearly Double BC Hydro During Peak Energy Demand Events in 2021 and 2022



Source: 2021 BC Hydro news release and FortisBC demand



Source: 2022 BC Hydro news release and FortisBC demand

Appendix: BC Hydro and Power Authority 2021 Integrated Resource Plan Regulatory Timetable

Action	Date (2023)
Responses to Information Requests on Rebuttal Evidence	Thursday, April 20
BC Hydro files Signposts Update	Friday, June 9
Information Requests on Signposts Update	Friday, July 7
Responses to Information Requests on Signposts Update	Friday August 4
Submissions on Oral Hearing need and scope	Tuesday, August 15
Reply Submissions on Oral Hearing need and scope	Tuesday, August 22
Placeholder Oral Hearing	To be determined



Metro Vancouver's *Climate 2050 Energy Roadmap*

A PATHWAY TO A CARBON NEUTRAL AND CLIMATE RESILIENT REGION

Nicole Chan

Project Engineer, Air Quality and Climate Change

Climate Action Committee | April 6th, 2023

metrovancouver

VISION

By 2050, the region has transitioned away from fossil fuels to 100% clean, renewable, and resilient energy



GOALS AND TARGETS

Energy Roadmap

Goal: Emissions

All of the energy used in Metro Vancouver region is derived from clean, renewable sources

By 2030

- 60% of the energy used in Metro Vancouver is derived from clean, renewable sources

By 2050

- 100% of the energy used in the region is derived from clean, renewable sources

Goal: Resiliency

All regional energy infrastructure is reliable and resilient to the current and future impacts of climate change.

By 2030

- All energy providers have identified known, unmitigated climate hazards that could impact energy infrastructure.
- All new energy infrastructure is protected from known, unmitigated climate hazards.

By 2050

- The energy system is protected from the current and future impacts of climate change.

STRATEGIES

Energy Roadmap

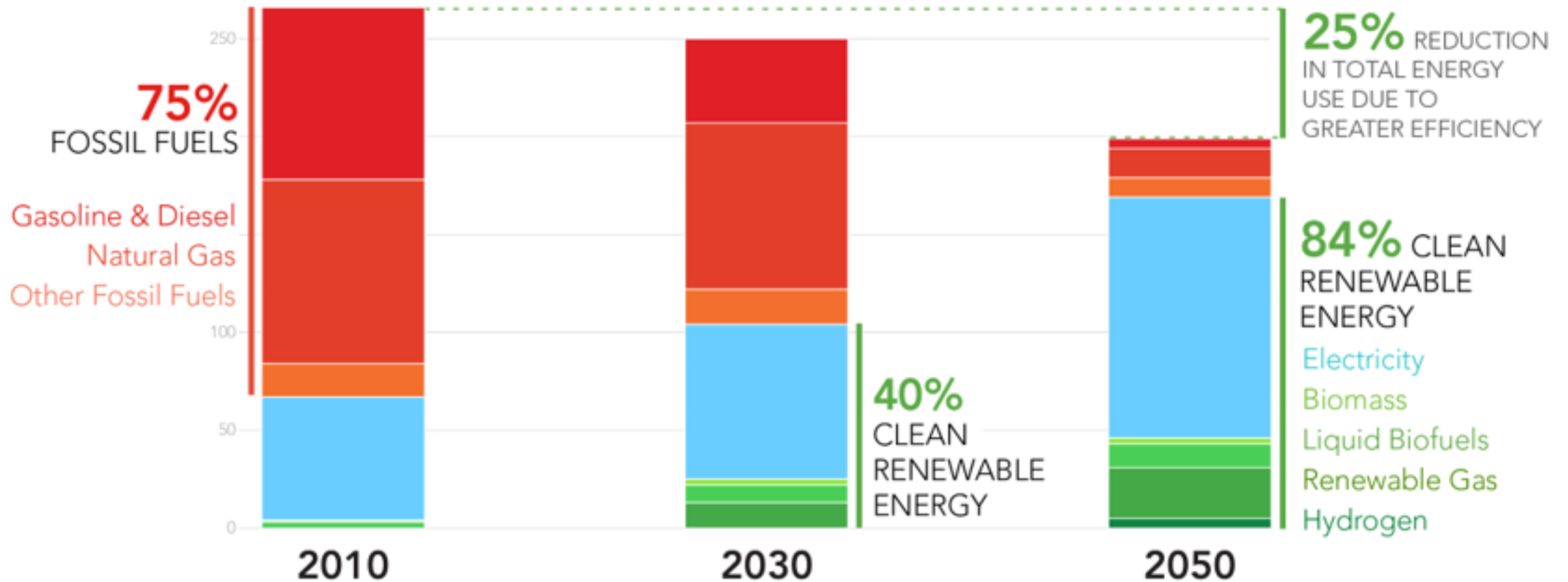
Clean, Renewable Energy

1. Plan for the Transition to Clean, Renewable, and Resilient Energy
2. Accelerate Electrification
3. Increase Sustainable Production of Low Carbon Biofuels and Hydrogen
4. Limit Expansion of Fossil Fuel Production

Resilient Energy

5. Protect Existing Energy Systems from Current and Future Climate Impacts
6. Build New Energy Systems that are Climate Resilient

PATHWAY TO CLEAN, RENEWABLE ENERGY



2022 ENGAGEMENT FEEDBACK

Energy Roadmap

- Actions added related to
 - addressing energy poverty,
 - modernizing the electrical grid,
 - renewable natural gas supply;
 - and corporate energy use
- Modified specific actions
- Added additional context



ROADMAP IMPLEMENTATION

- Accelerate action on Big Moves
- Consider costs and equity during implementation
- Report on annual progress
- Respond to significant policy, technology, and social shifts
- Advance partnerships to move all actions forward



Feedback and Questions

metrovancouver
Together we make our region strong

Climate 2050 Nature and Ecosystems Roadmap

A PATHWAY TO STORING CARBON AND BUILDING A RESILIENT REGION BY 2050

Josephine Clark

Natural Resource Management Planner, Regional Parks

Climate Action Committee | April 6th 2023

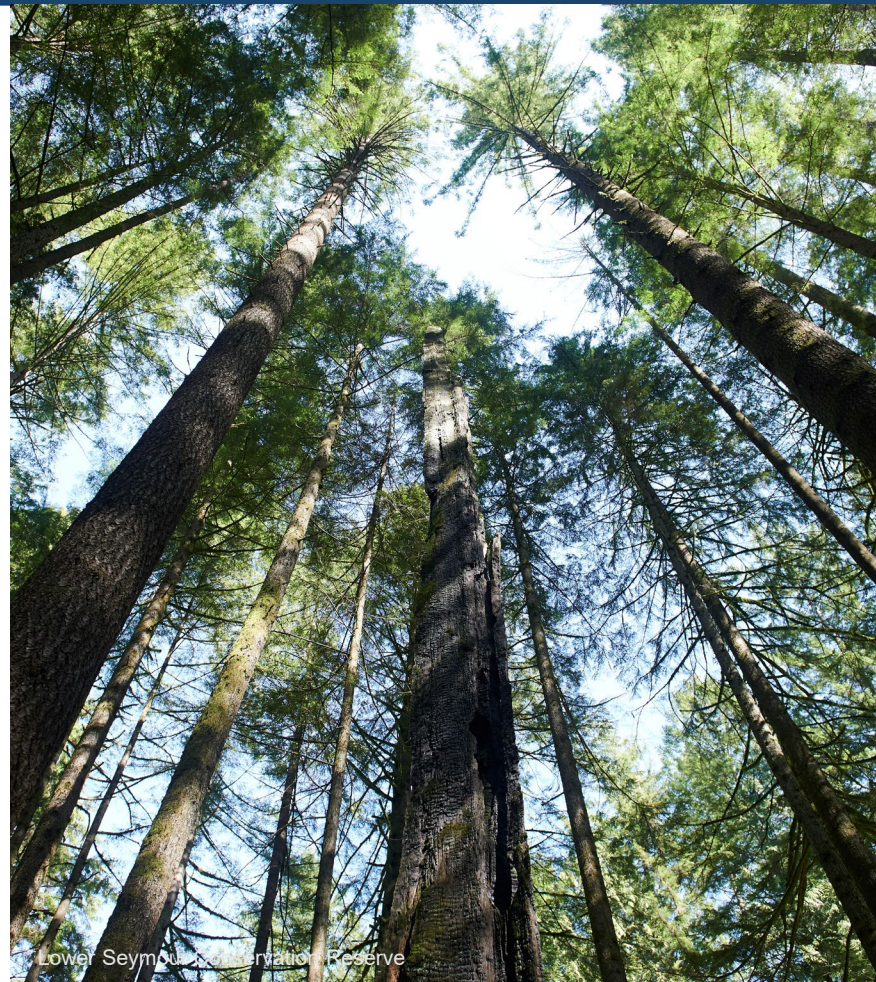
Edward Nichol

Planner, Regional Planning and Housing Services

metrovancouver

VISION

- Closer relationship between people and nature
- Indigenous Knowledge
- Healthy ecosystems
- Integration of nature into practices and decision-making



Lower Seymour Conservation Reserve

GOALS AND TARGETS

GOAL: Nature and ecosystems are resilient, protected, maintained, enhanced, restored and connected, to maximize ecosystem services across the region.

- **By 2050:**
- 40% tree canopy cover
- 50% of the region protected for nature

GOAL: Nature-based solutions that support biodiversity are included in the region's response to climate change.

- Measurable outcomes to be determined based on additional review and discussion

STRATEGIES

The *Nature and Ecosystems Roadmap* lays out **31 actions** for storing carbon and increasing resiliency, organized under the following **5 strategic areas**:

1. Protect, Restore, and Enhance the Region's Ecosystems
2. Connect Green Infrastructure
3. Integrate Natural Assets into Conventional Asset Management and Decision-Making Processes
4. Support a Resilient, Robust, and Healthy Urban Forest
5. Advance Nature-based Solutions to Climate Change

CARBON STORAGE AND RESILIENCE

- Carbon sequestration and storage
- Resilience
- Co-benefits



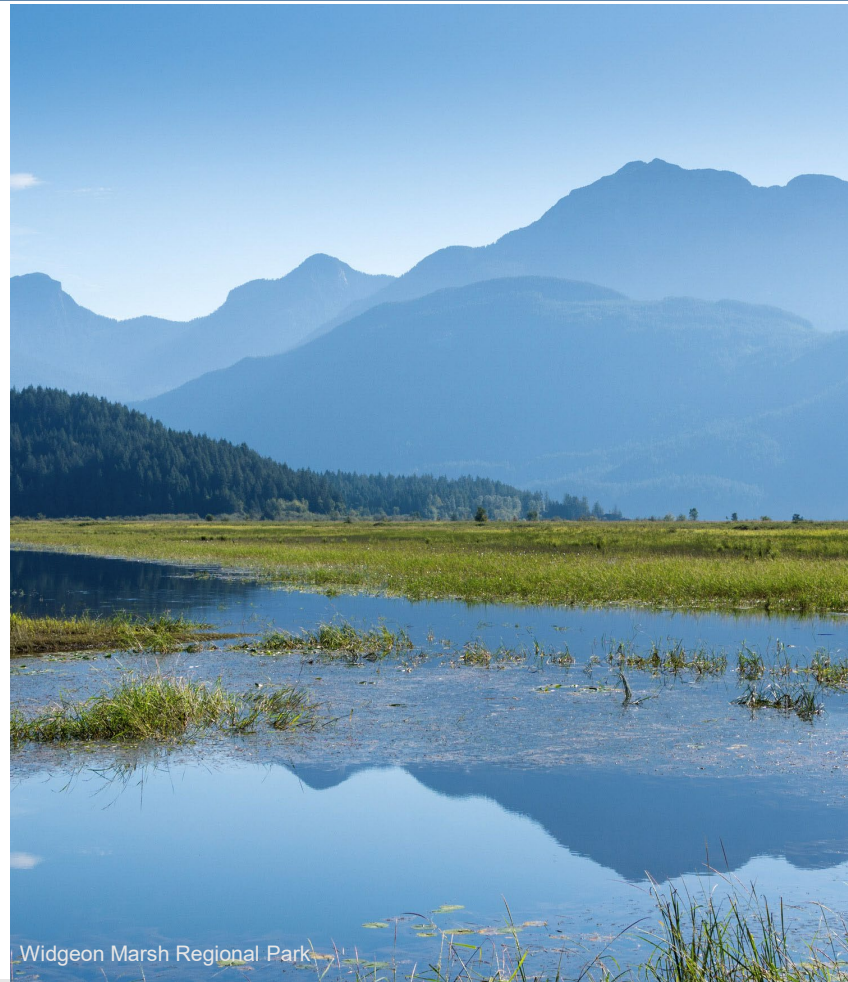
ENGAGEMENT

- Edits to actions
 - 5.1 - Innovative financial mechanisms
- Convening and sharing information
- Advancing green infrastructure



FIRST NATIONS ENGAGEMENT AND PERSPECTIVES

- Indigenous Knowledge
- Exploring partnerships
- Future alignment with traditional laws
- Recognition of climate impacts



Widgeon Marsh Regional Park

ROADMAP IMPLEMENTATION

- Consider costs and equity during action implementation
- Report on annual progress
- Update with new information
- Advance partnerships to move all actions forward



Burnaby Lake Regional Park

Thank you

metrovancouver
Together we make our region strong