

Climate Action Strategy

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Presentation Outline

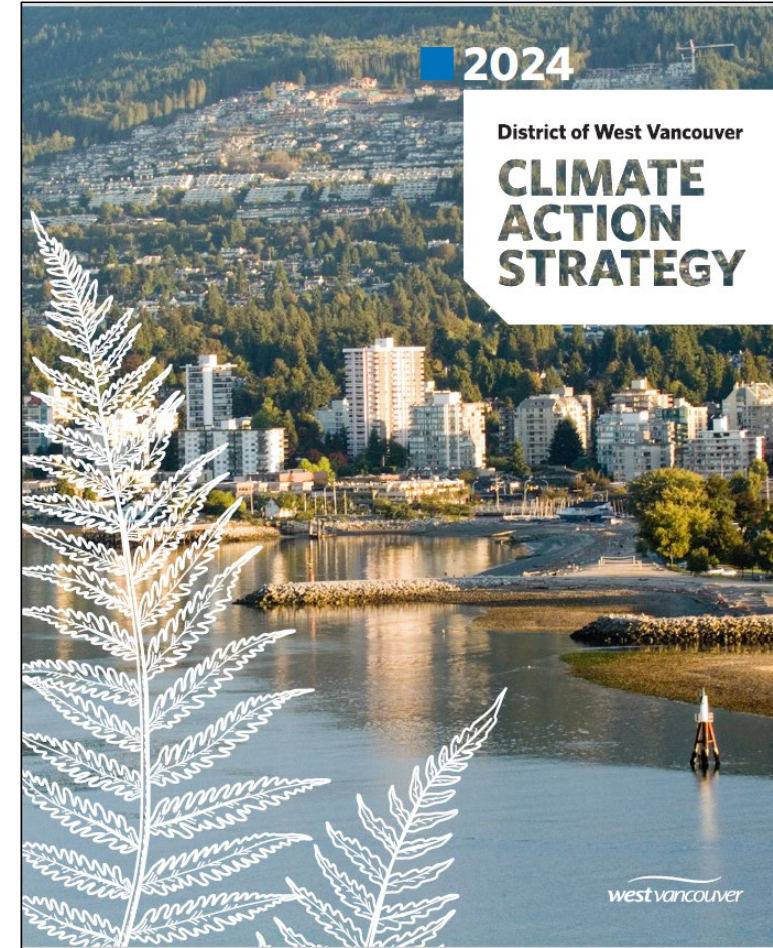
1. Strategy Development
2. 2021 Emissions Inventory and Reduction Scenarios
3. Financial Implications
4. Co-Benefits to Climate Action
5. Implementation Framework
6. Recommendations

1 Strategy Development

Strategy Foundation

Built on existing District and provincial plans:

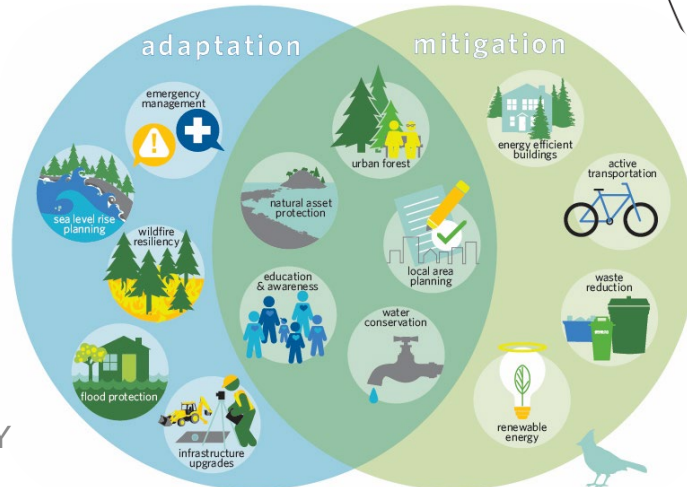
- Clean BC Roadmap to 2030 – Provincial climate action plan
- Official Community Plan
- Corporate Energy and Emissions Plan
- Community Energy and Emissions Plan
- Sustainable Buildings Policy
- District Fleet Strategy
- Building Bylaw – Step Code and Zero Carbon Step Code
- Zoning Bylaw – EV station and active transportation infrastructure
- Environmental Reserve Fund Bylaw
- Annual corporate GHG emissions reporting



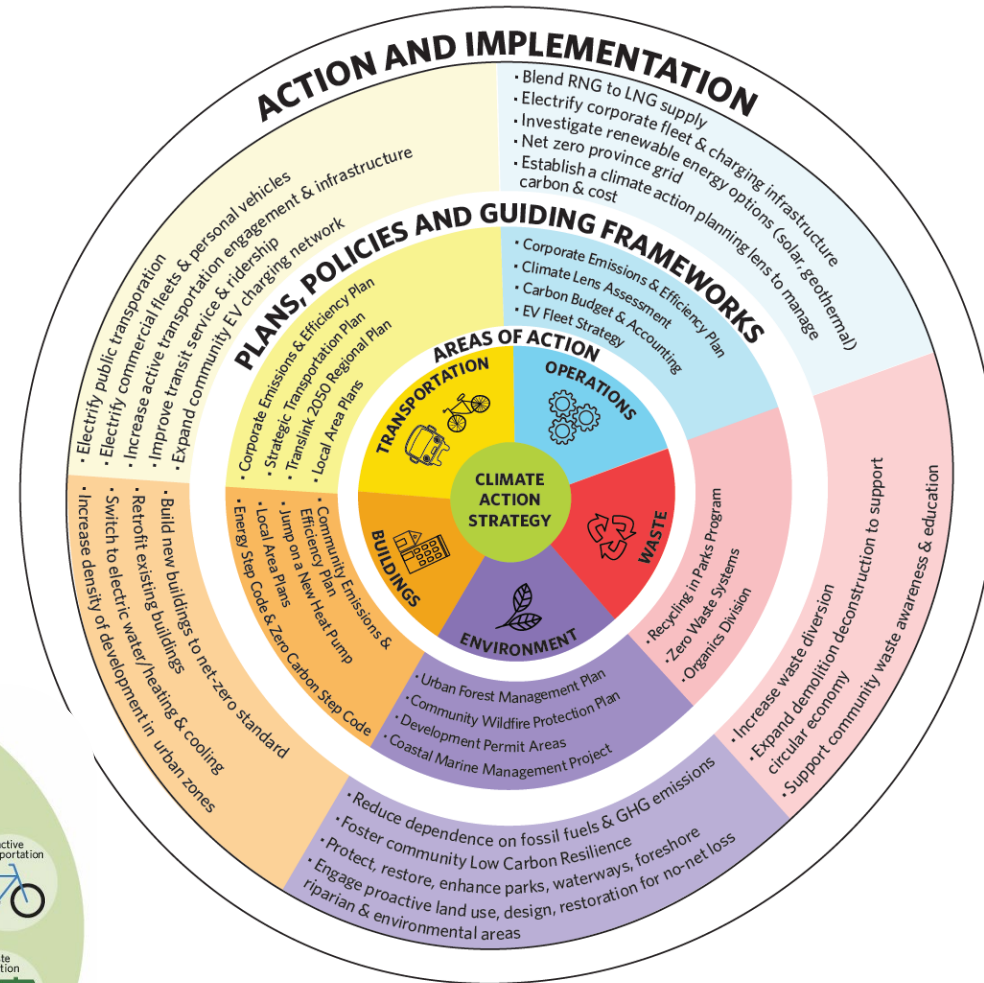
Policy Alignment

1. Protect the natural environment.
2. Reduce community and corporate GHGs:
 - 45% by 2030 from 2010
 - 100% or net zero by 2050.
3. Adapt to climate change.

➤ **Goal - Connect adaptation & mitigation efforts to achieve a low carbon resilient community.**



CLIMATE ACTION STRATEGY



westvancouver

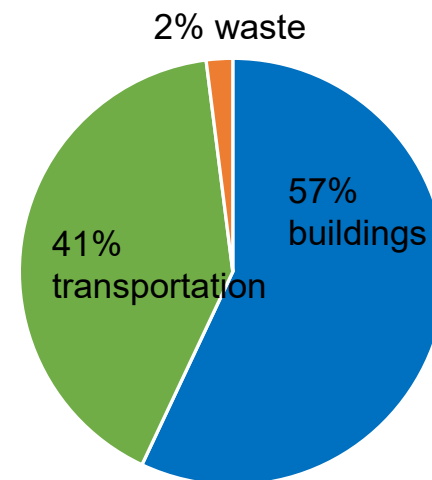
Strategy Timeline

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7
2021 Emissions Inventory	Scenario Modelling And Financial Assessment	Staff Review and Input	Environment Committee Engagement	Draft Strategy	Staff and Environment Committee Review	Final Strategy
Gather data (municipal, local, regional) to calculate quantity of GHG emissions both corporately and for the community.	Identify emissions pathways (Business-as-Usual, Business-as-Planned, Low Carbon) and year-over-year financial implications	Staff verification and input on data sources and identified measures to reduce emissions	Presentations to the Committee on the Scenario Modelling and Financial Assessment	Preparation of Draft Strategy for Review	Staff and Environment Committee review of Draft Strategy	Final Strategy for Council decision

↑
Progress Update to Council (Dec 2023)

2 2021 Emissions Inventory and Reduction Scenarios

2021 Community Emissions Inventory



Sector	GHG Emissions (tCO ₂ e)		
	2010	2021	2030 Target
Stationery Energy (Buildings)	133,132	155,278	
Transportation	101,862	109,207	
Waste	34,605	4,170	
Total	269,600	268,475	148,000

~2% from municipal operations

Emission Reduction Modelling Scenarios

Business-as-Usual:

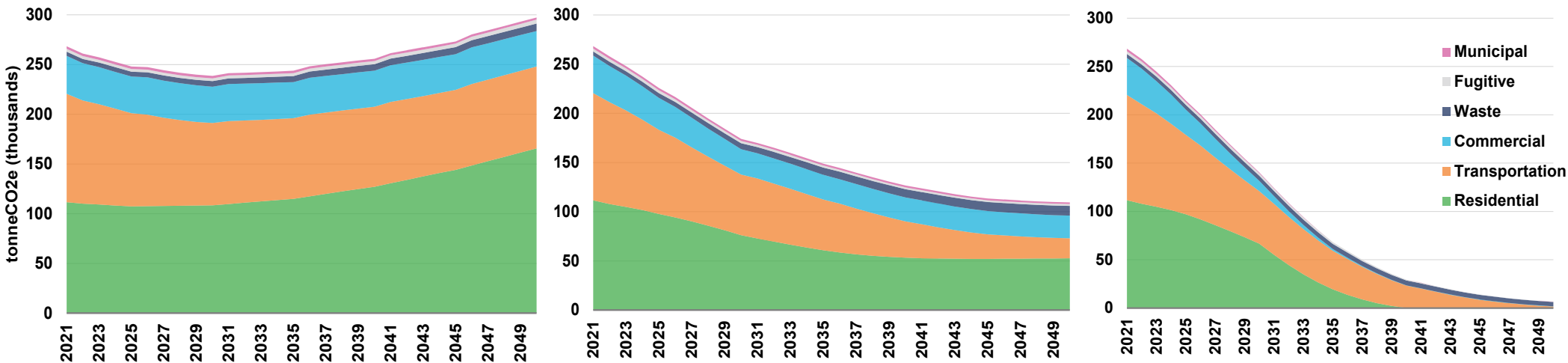
Assumes no emission reduction interventions beyond those currently expected.

Business-as-Planned:

Accounts for CleanBC and planned District land use planning, building, and transportation measures.


















Low Carbon Scenario:

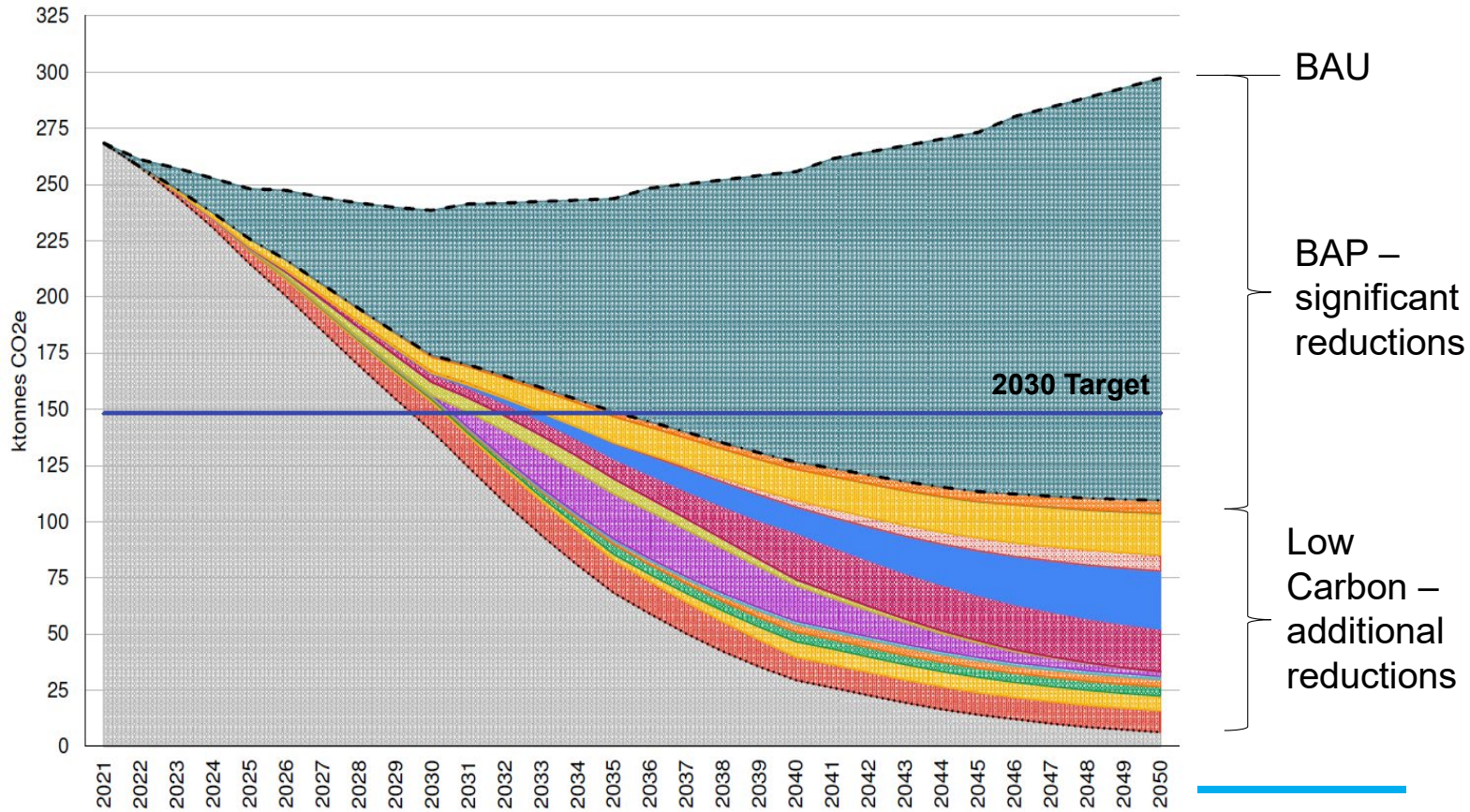
Additional potential measures to reach the 2050 emissions reduction target.



Low Carbon Scenario - Emission Reduction Measures

Cumulative emission reductions beyond Business-as-Planned measures.

-  Increased waste diversion
-  Municipal ZEVs+
-  Commercial ZEVs+
-  Home heat pumps - hot water+
-  Home heat pumps - space heating+
-  Residential retrofits
-  Municipal LAPs - increased transit+
-  Energy storage systems
-  Solar PV systems
-  Hydrogen blending
-  RNG blending
-  Municipal heat pumps - hot water
-  Commercial retrofits
-  Municipal retrofits
-  Institutional retrofits
-  ICI cooling efficiency+
-  Carbon liability



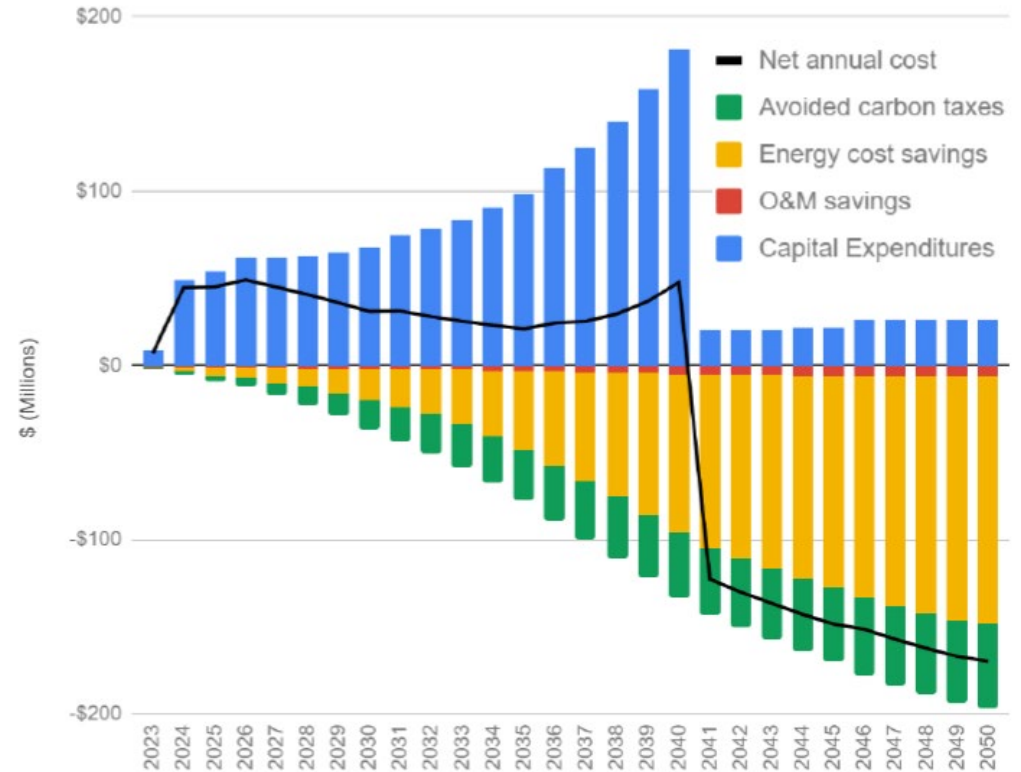
CLIMATE ACTION STRATEGY



3 Financial Implications

Community Financial Implications




- Year over year capital expenditures to implement measures.
- Expected to generate a net savings of ~\$286M over 26 years through:
 - energy efficient buildings.
 - lower fuel and EV maintenance costs.
 - expanded public transportation.



4 Climate Action Co-Benefits

Climate Action Co-Benefits

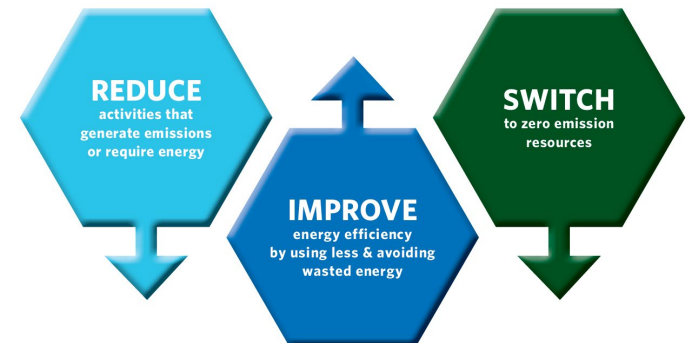
- Emission reduction measures deliver co-benefits to strengthen community support and maximize opportunities to address social, economic, and ecological challenges.

HEALTH & SOCIAL WELL-BEING	ECONOMIC OUTCOMES	ENVIRONMENTAL CONDITIONS
<ul style="list-style-type: none"> improved mental/physical health expanded social equity community cohesion & civic pride reduced air pollution reduced extreme heat exposure shift to sustainable behaviours social inclusion 	<ul style="list-style-type: none"> higher employment & job creation reduced goods & infrastructure losses operational savings reduced climate impacts on businesses & local economy labour & work improvements shift to circular economy 	<ul style="list-style-type: none"> reduced fossil fuel dependence & emissions improved habitat & biodiversity green space access waste stream reduction improved air, water, soil quality disaster risk reduction reduced traffic congestion 

5 Implementation Framework

Key Messages

- District continues to make significant progress on reducing GHG emissions through existing programs, initiatives, bylaw requirements, etc.
- CAS indicates that there is a need to expedite existing initiatives and add measures now to reach emission reduction targets.
- Most emissions come from community sources (transportation and buildings).
- District's role is to:
 - support, facilitate, inform, and unlock opportunities for residents.
 - lead by example in municipal operations in transitioning to low carbon energy sources.
 - communicate community co-benefits.



Emission Reduction Measures - Examples

- Progressing on Energy Step Code and Zero Carbon Step Code
- Retrofit support for existing buildings:
 - Jump on a New Heat Pump Program service.
 - Incentives and rebates for all housing types.
 - Education and outreach of other programs.
- Continuing to implement District's fleet strategy.
- Developing a public charging station strategy.
- Transitioning to low carbon small non-road engine equipment.
- Installing infrastructure for active transportation and micro-mobility transportation modes (bikes, e-bikes, e-scooters, bike lanes, sidewalks).
- Implementing Local Area Plans to support new low-carbon housing and walkable neighbourhoods.
- Increasing waste diversion efforts (e.g., demolition waste reduction).
- Continuing to collaborate with senior government, utilities, and other partners to reduce GHG emissions.

Implementation Framework

ACTION	SPECIFICATION	PRIORITY	KEY MEASURES to monitor & report	CUMULATIVE EMISSIONS REDUCTIONS (ktCO ₂ e)	CUMULATIVE ENERGY REDUCTIONS (million GJ)	START DATE	END DATE	RESPONSIBLE/ROLE
BUILDINGS								
Increase density of development in urban zones	Implementation of Taylor Way LAP by 2040, 600 new high density units.	high	N/A	0.2	0.006	2024	2040	IMPLEMENTATION ROLE: DWV (Planning & Development Services)
Deep retrofits in the residential building stock	Retrofit 95% of existing buildings by 2040 to achieve a 50% reduction in space heating/cooling and a 20% reduction other non water heating energy use.	high	16,000 dwelling units	319	16	2025	2040	FACILITATOR/SUPPORT ROLE: DWV (Climate Action & Environment Department, Building Department, Environment Committee) IMPLEMENTATION ROLE: home and MURB owners, stratas
Deep retrofits in the commercial and institutional building stock	Retrofit 95% of existing buildings by 2040 to achieve a 50% reduction in space heating/cooling and a 20% reduction other non water heating energy use.	moderate	670 buildings	156	2	2025	2040	FACILITATOR/SUPPORT ROLE: DWV (Climate Action & Environment Department, Building Department, Environment Committee) IMPLEMENTATION ROLE: business owners, business associations, Park Royal
Deep retrofits in the municipal building stock	100% of municipal buildings use zero emissions energy by 2035.	moderate	48 buildings	77	2	2025	2035	IMPLEMENTATION ROLE: DWV (Climate Action & Environment Department, Purchasing Department, Facilities Department, Financial Services)
Transition to heat pumps for residential space conditioning and water heating	95% of existing buildings are equipped with electric heat pumps for space and water heating by 2040. Heat pumps are installed when existing equipment needs to be replaced.	high	16,000 heat pumps	341	6	2024	2040	FACILITATOR/SUPPORT ROLE: DWV (Climate Action & Environment Department, Building Department, Environment Committee) IMPLEMENTATION ROLE: home and MURB owners, stratas
Transition to heat pumps for commercial space conditioning and water heating	95% of existing commercial buildings are equipped with electric heat pumps for space and water heating by 2040. Heat pumps are installed when existing equipment needs to be replaced.	moderate	718 buildings	326	6	2024	2040	FACILITATOR/SUPPORT ROLE: DWV (Climate Action & Environment Department, Building Department, Environment Committee) IMPLEMENTATION ROLE: business owners, business associations, Park Royal

6 Recommendations

Recommendations

THAT:

- the Climate Action Strategy be approved.
- staff be directed to continue to enhance and accelerate programs and initiatives to reduce GHG emissions through the implementation schedule in the Climate Action Strategy and request supportive funding through the annual budget process.