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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

METRO VANCOUVER REGIONAL DISTRICT
AIR QUALITY AND CLIMATE COMMITTEE

MEETING

Friday, September 12, 2025
1:00 pm
28th Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia
Webstream available at https://www.metrovancouver.org

A G E N D A

A. ADOPTION OF THE AGENDA

1. September 12, 2025 Meeting Agenda
That the Air Quality and Climate Committee adopt the agenda for its meeting scheduled for September 12, 2025 as circulated.

B. ADOPTION OF THE MINUTES

1. July 4, 2025 Meeting Minutes *pg. 4*
That the Air Quality and Climate Committee adopt the minutes of its meeting held July 4, 2025 as circulated.

C. DELEGATIONS

D. INVITED PRESENTATIONS

1. Andrew Giles, Director, River Forecast Centre and Flood Safety; and Kaitlin Klimosko, Senior Flood Policy Analyst, Ministry of Water, Land and Resource Stewardship
Subject: BC Flood Strategy Update

E. REPORTS FROM COMMITTEE OR CHIEF ADMINISTRATIVE OFFICER

1. Climate 2050 Progress Report 2025

pg. 11

Executive Summary

Despite regional economic and affordability challenges, Metro Vancouver and its member jurisdictions continue to successfully implement climate policy and initiatives. The Climate 2050 Progress Report highlights a range of impactful projects, such as the implementation of EV-ready bylaws in 15 member jurisdictions, a collaborative project with Vancouver Coastal Health to create a Local Government Policy Toolkit for Thermal Safety in Apartment Buildings, and municipal incentives for homeowners to make clean energy upgrades.

As of 2023, regional greenhouse gas (GHG) emissions were still above 2010 levels, but year over year emissions decreased across several sectors, including personal transportation (due to the uptake of EVs and more active transportation use) and waste management. Per capita emissions have decreased by 16% from 2010. Underlying key performance indicators also signal a potential downward trend in emissions over the next few years. Continued implementation of existing climate policies and additional targeted policies, programs and investments can support progress while improving health, affordability, and economic growth in the region.

Recommendation

That the MVRD Board receive for information the report dated August 12, 2025, titled “Climate 2050 Progress Report 2025”.

2. Corporate Climate and Energy Performance Report

pg. 65

Executive Summary

Metro Vancouver is on track to meet its 2030 target of reducing corporate energy-related greenhouse gas (GHG) emissions by 45% below 2010 levels. In 2024, Metro Vancouver emitted 24,888 tonnes of carbon dioxide equivalent (CO2e), a 7% reduction from the 2010 baseline, while also decreasing energy purchased and GHG emissions per capita by 2% and 3% respectively from 2023. These improvements were largely driven by increased self-generated renewable energy and the transition to renewable fuels in operations. Metro Vancouver is also implementing projects to proactively manage climate risk, which helps to ensure that infrastructure and facilities remain strong and viable into the future.

Recommendation

That the MVRD Board receive for information the report titled, “Corporate Climate and Energy Performance Report”, dated August 28, 2025.

3. Manager's Report *pg. 107*

Recommendation
That the Air Quality and Climate Committee receive for information the report dated August 15, 2025, titled "Manager's Report".

F. INFORMATION ITEMS

1. Solid Waste Management Plan Goals and Hierarchy *pg. 115*

2. Solid Waste Management Plan Update – Idea Generation Engagement Summary *pg. 128*

G. OTHER BUSINESS

H. RESOLUTION TO CLOSE MEETING
Note: The Committee must state by resolution the basis under section 90 of the Community Charter on which the meeting is being closed. If a member wishes to add an item, the basis must be included below.

I. ADJOURNMENT
That the Air Quality and Climate Committee adjourn its meeting of September 12, 2025.

Membership:

Dominato, Lisa (C) – Vancouver
Marsden, Dennis (VC) – Coquitlam
Baillie, Tim – Langley Township
Berry, Ken – Lions Bay
Dueck, Judy – Maple Ridge
Elford, Doug – Surrey
Gu, Alison – Burnaby
Lahti, Meghan – Port Moody
McCutcheon, Jen – Electoral Area A
McNulty, Bill – Richmond
Ross, Jamie – Belcarra
Ruimy, Dan – Maple Ridge
Wallace, Rosemary – Langley City
Watt, Linda – West Vancouver

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

METRO VANCOUVER REGIONAL DISTRICT
AIR QUALITY AND CLIMATE COMMITTEE

Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Air Quality and Climate Committee held at 9:01 am on Friday, July 4, 2025 in the 28th Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia.

MEMBERS PRESENT:
Chair, Director Lisa Dominato, Vancouver
Vice Chair, Councillor Dennis Marsden, Coquitlam
Councillor Tim Baillie, Langley Township
Councillor Judy Dueck, Maple Ridge*
Director Doug Elford, Surrey
Councillor Alison Gu, Burnaby
Director Meghan Lahti, Port Moody
Director Jen McCutcheon, Electoral Area A*
Director Bill McNulty, Richmond
Director Jamie Ross, Belcarra*
Director Dan Ruimy, Maple Ridge*
Councillor Rosemary Wallace, Langley City
Councillor Linda Watt, West Vancouver

*denotes electronic meeting participation as authorized by the *Procedure Bylaw*

MEMBERS ABSENT:
Director Ken Berry, Lions Bay

OTHERS PRESENT:
Dr. Mark Zacharias, Adjunct Professor, School of Public Policy, SFU and Special Advisor, Clean Energy Canada

STAFF PRESENT:
Jerry W. Dobrovolny, Chief Administrative Officer
Conor Reynolds, Director, Air Quality and Climate Action Services
Hadir Ali, Legislative Services Coordinator, Board and Information Services
Esther Bérubé, Division Manager, Air Quality Bylaw and Regulation Development, Air Quality and Climate Action Services
Erik Blair, Senior Planner, Air Quality and Climate Action Services
Jason Emmert, Program Manager, Regional Climate Action Policy, Air Quality and Climate Action Services
Daphne Mazarura, Senior Policy Analyst, Air Quality and Climate Action Services
Heather McNell, Deputy Chief Administrative Officer, Policy and Planning
Derek Jennejohn, Lead Senior Engineer, Air Quality and Climate Action Services
Shelina Sidi, Senior Project Engineer, Air Quality and Climate Action Services
Laura Taylor, Senior Engagement Specialist, External Relations

A. ADOPTION OF THE AGENDA

1. July 4, 2025 Meeting Agenda

It was MOVED and SECONDED
That the Air Quality and Climate Committee adopt the agenda for its meeting scheduled for July 4, 2025 as circulated.

CARRIED

B. ADOPTION OF THE MINUTES

1. May 9, 2025 Meeting Minutes

It was MOVED and SECONDED
That the Air Quality and Climate Committee adopt the minutes of its meeting held May 9, 2025 as circulated.

CARRIED

C. DELEGATIONS

No items presented.

D. INVITED PRESENTATIONS

1. Dr. Mark Zacharias, Adjunct Professor, School of Public Policy, SFU and Special Advisor, Clean Energy Canada

Subject: BC's Electricity Grid Is Ready For 2030 And A Rapidly Electrifying Economy

Dr. Mark Zacharias provided the committee with a presentation titled "BC's Electricity Grid Is Ready For 2030 And A Rapidly Electrifying Economy" noting that Clean Energy Canada released a report that assessed the electricity systems in BC, based on publicly available data, to provide a reality check on the status of the energy supply. Corrections to common misconceptions about BC's electricity system were provided, including the perceived electricity supply shortfall, inadequate energy planning for future demand, and climate policies conflicting with electricity planning.

Members discussed mounting concerns around misinformation and expressed a desire for more consistent and credible information about the BC electricity system.

It was MOVED and SECONDED
That the Air Quality and Climate Committee request that the MVRD Board request that the MVRD Board Chair invite the Minister of Energy and Climate Solutions to an upcoming Board meeting to provide an update on provincial energy planning; and the Chief Executive Officers from BC Hydro and FortisBC to provide information on how their organizations are managing energy capacity and connections in the Metro Vancouver region.

CARRIED

E. REPORTS FROM COMMITTEE OR CHIEF ADMINISTRATIVE OFFICER

1. Update on Approach to Reduce Health-Harming Air Contaminants from Small Gas-Powered Equipment

Report dated June 17, 2025 from Daphne Mazarura, Senior Policy Analyst, Air Quality and Climate Action Services and Laura Taylor, Senior Engagement Specialist, External Relations updating the Air Quality and Climate Committee and MVRD Board on engagement and development work on a potential regulatory and supportive approach to reduce health-harming emissions from small gas-powered equipment.

Daphne Mazarura, Laura Taylor, and Esther Bérubé, Division Manager, Air Quality Bylaw and Regulation Development, Air Quality and Climate Action Services, provided the committee with a presentation titled "Update on Approach to Reduce Health-Harming Air Contaminants from Small Gas-Powered Equipment". Members were informed that currently an estimated 400-600,000 equipment units in Metro Vancouver generate as much as half the health-harming emissions from light-duty vehicles in the region, and to address this, work is underway to develop and engage on a proposed emission regulation to phase out small gas-powered equipment over time which will be brought to the MVRD Board for consideration in the first quarter of 2026.

It was MOVED and SECONDED
That the MVRD Board receive for information the report dated June 17, 2025, titled "Update on Approach to Reduce Health-Harming Air Contaminants from Small Gas-Powered Equipment".

CARRIED

2. BC Utilities Commission Proceeding on Renewable Natural Gas Definition and Accounting

Report dated June 19, 2025 from Lise Townsend, Division Manager, Air Quality and Climate Action Policy, Air Quality and Climate Action Services seeking the MVRD Board's direction for staff to participate in a BC Utilities Commission-initiated inquiry on Renewable Natural Gas definition and accounting, and to advocate for transparent and verifiable greenhouse gas accounting practices aligned with regional climate policy goals.

It was MOVED and SECONDED

That the MVRD Board direct staff to:

a) participate as an intervener in the BC Utilities Commission proceeding titled "BCUC Review of Renewable Natural Gas Definition and Accounting";
b) analyze and provide input to the proceedings to align with Board-adopted policies and targets including for regional air quality, clean and renewable energy, and GHG reduction, potentially including requests for information, comments, evidence, and replies; and
c) report back to the Air Quality and Climate Committee and the MVRD Board on the outcomes of the proceeding.

CARRIED

3. Air Pollutant Emissions Inventory and Trends in the Lower Fraser Valley

Report dated June 5, 2025 from Derek Jennejohn, Lead Senior Engineer, and Shelina Sidi, Senior Project Engineer, Air Quality and Climate Action Services providing the Air Quality and Climate Committee and MVRD Board with a summary of air pollutant emissions in the Metro Vancouver region and the broader Lower Fraser Valley, and an examination of emissions trends, highlighting potential implications for plans, policies, and programs related to air quality and climate action.

Derek Jennejohn and Shelina Sidi provided the committee with a presentation titled "Air Pollutant Emissions Inventory and Trends in the Lower Fraser Valley" noting that emissions of most air pollutants are trending down, including ozone precursors; however, ambient ozone concentrations remain unchanged. Members were informed that staff are reviewing Metro Vancouver's *Regional Ground-Level Ozone Strategy* and will report back to the committee with findings.

In response to questions, members were informed that staff will provide additional information regarding the methodology of the work conducted in a cover report when the report is presented at the July 25, 2025 MVRD Board meeting.

It was MOVED and SECONDED
That the MVRD Board receive for information the report dated June 5, 2025, titled "Air Pollutant Emissions Inventory and Trends in the Lower Fraser Valley".

CARRIED

4. Trends in Emissions from Transportation (Personal Mobility)

Report dated June 16, 2025 Morgan Braglewicz, Air Quality Planner, and Margaryta Pustova, Senior Policy and Planning Analyst, Air Quality and Climate Action Services providing the Air Quality and Climate Committee and MVRD Board with information about trends in the personal mobility sector, including emissions, technology, policy and practice, to inform discussion and decision-making.

Margaryta Pustova and Jason Emmert, Program Manager, Regional Climate Action Policy provided the committee with a presentation titled "Trends in Emissions from Transportation (Personal Mobility)" providing members with an overview of mobility emissions trends in the region. Members were informed of mobility-based trends, noting that there is a decrease in vehicle use, mixed trend in transit use, rise in walking and cycling, and an increase in electric vehicle purchases across the region.

It was MOVED and SECONDED
That the MVRD Board:
a) receive for information the report dated June 16, 2025, titled "Trends in Emissions from Transportation (Personal Mobility)"; and
b) direct staff to forward a copy of the report dated June 16, 2025, titled "Trends in Emissions from Transportation (Personal Mobility)" to member jurisdiction staff, with an offer of a presentation to Council upon request.

CARRIED

5. Trends in Emissions from Buildings

Report dated June 16, 2025 from Erik Blair, Senior Planner, and Margaryta Pustova, Senior Policy and Planning Analyst, Air Quality and Climate Action Services providing the Air Quality and Climate Committee and MVRD Board with information about trends in the buildings sector, including emissions, policy and practice, to inform discussion and decision making.

Erik Blair and Margaryta Pustova provided the committee with a presentation titled "Trends in Emissions from Buildings" noting that building emissions are continuing to increase, and that stronger Zero Carbon and/or Energy Step Codes are resulting in new buildings being more efficient while ongoing building upgrades are needed to protect residents from increasing extreme heat events and reduce emissions in existing buildings.

It was MOVED and SECONDED
That the MVRD Board:
a) receive for information the report dated June 16, 2025, titled "Trends in Emissions from Buildings"; and
b) direct staff to forward a copy of the report dated June 16, 2025, titled "Trends in Emissions from Buildings" to member jurisdiction staff, with an offer of a presentation to Council upon request.

CARRIED

6. 2025 Update on Regional District Sustainability Innovation Fund Projects - Air Quality and Climate Action

Report dated June 6, 2025 from Conor Reynolds, Director, Air Quality and Climate Action Services providing an update on Air Quality and Climate Action projects funded under the Regional District Sustainability Innovation Fund that are currently in progress, been completed or discontinued since the last annual update to the designated Standing Committee.

It was MOVED and SECONDED
That the MVRD Board receive for information the report dated June 6, 2025, titled "2025 Update on Regional District Sustainability Innovation Fund Projects – Air Quality and Climate Action."

CARRIED

7. Manager's Report

Report dated June 13, 2025 from Conor Reynolds, Director, Air Quality and Climate Action Services providing the committee with an update on the Provincial review of CleanBC, (the primary policy framework for reducing province-wide GHG emissions). Members were informed that staff are preparing to provide input for the review that conveys prior direction and advocacy by the MVRD Board on provincial energy matters.

It was MOVED and SECONDED
That the Air Quality and Climate Committee receive for information the report dated June 13, 2025, titled "Manager's Report".

CARRIED

F. INFORMATION ITEMS

1. Metro Vancouver's 2025 Financial Performance Report No. 1

G. OTHER BUSINESS

No items presented.

H. RESOLUTION TO CLOSE MEETING

No items presented.

I. ADJOURNMENT

It was MOVED and SECONDED
That the Air Quality and Climate Committee adjourn its meeting of July 4, 2025.

CARRIED
(Time: 11: 19 am)

Hadir Ali,
Legislative Services Coordinator

Lisa Dominato,
Chair

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Air Quality and Climate Committee

From: Johann Zerbe, Senior Policy and Planning Analyst and
Jason Emmert, Program Manager, Regional Climate Action Policy, Air Quality and Climate Action Services

Date: August 12, 2025 Meeting Date: September 12, 2025

Subject: **Climate 2050 Progress Report 2025**

RECOMMENDATION
That the MVRD Board receive for information the report dated August 12, 2025, titled "Climate 2050 Progress Report 2025".

EXECUTIVE SUMMARY
Despite regional economic and affordability challenges, Metro Vancouver and its member jurisdictions continue to successfully implement climate policy and initiatives. The Climate 2050 Progress Report highlights a range of impactful projects, such as the implementation of EV-ready bylaws in 15 member jurisdictions, a collaborative project with Vancouver Coastal Health to create a Local Government Policy Toolkit for Thermal Safety in Apartment Buildings, and municipal incentives for homeowners to make clean energy upgrades.

As of 2023, regional greenhouse gas (GHG) emissions were still above 2010 levels, but year over year emissions decreased across several sectors, including personal transportation (due to the uptake of EVs and more active transportation use) and waste management. Per capita emissions have decreased by 16% from 2010. Underlying key performance indicators also signal a potential downward trend in emissions over the next few years. Continued implementation of existing climate policies and additional targeted policies, programs and investments can support progress while improving health, affordability, and economic growth in the region.

PURPOSE
To provide an annual status update on the implementation of climate actions in the Metro Vancouver region, guided by *Climate 2050*, including regional emissions trends, key performance metrics and climate project highlights from Metro Vancouver, its member jurisdictions, and other agencies.

BACKGROUND
The Climate 2050 Progress Report 2025 is part of Metro Vancouver's commitment to public accountability and transparency in implementing the MVRD Board-adopted *Climate 2050 Strategic Framework* (Reference 1). It supports Metro Vancouver's Climate 2050 Engagement and Public Education Strategy and aligns with other public climate reporting including the Corporate Climate and Energy Performance Report (refer to report "Corporate Climate and Energy Performance Report" in the AQC September 12, 2025 agenda package) and the Local Government Climate Action

Program (LGCAP) survey response (Reference 2), which is a requirement for receiving funding under the program, and is completed by all local governments in the region (and all regional districts and municipalities provincially).

INSIDE THE CLIMATE 2050 PROGRESS REPORT

The report includes the most recent data on regional GHG emissions trends, developments in climate policy and action**,** and implementation status of the Climate 2050 Roadmap actions. For each of the ten *Climate 2050* issue areas, it provides:

- A sectoral outlook with foundational background, trends, and challenges;
- Key performance indicators, including recent sectoral GHG emissions data; and
- Case studies of climate initiatives by Metro Vancouver and member jurisdictions.

REGIONAL GHG EMISSIONS TRENDS

In 2023, total regional GHG emissions were 17.3 million tonnes CO_2e (carbon dioxide equivalent), 6.8% above 2010 levels. Over this period, regional population grew by 27%. These factors combined for a decrease in per capita GHG emissions of 16% from 6.9 tonnes per person in 2010 to 5.8 tonnes per person in 2023.

Year-over-year GHG emissions were nearly flat from 2022 to 2023. Emissions decreased in several sectors including on-road vehicles, buildings, waste, and marine vessels. Reductions in some sectors (e.g., light duty vehicles and waste) may reflect climate policy and technological change. Trends and causal factors are less clear for other sectors such as building emissions, which are highly dependent on temperature patterns, and where disaggregated data is limited. Emissions in 2023 increased in other sectors such as non-road engines, industry, and agriculture, compared to 2022.

PROGRESS TOWARD CLIMATE GOALS AND TARGETS

Reaching the interim regional target of reducing emissions 45% below 2010 levels by 2030 is unlikely. However, continued collective action to reduce the future impacts of climate change is both feasible and necessary, and with sustained policy action the 2030 regional target can be reached at a later year. Several leading indicators suggest that overall emissions may continue to trend lower in the coming years, including the following.

- Per capita GHG emissions have decreased by 16% since 2010;
- Electric vehicle (EV) sales accounted for 27% of all new passenger vehicle sales in the region, and EVs now make up 7% of the overall vehicle fleet in the region;
- Residents are driving less and travelling more by walking and cycling, likely due to increasingly compact, complete community design and investments in active transportation infrastructure;
- Average daily distance driven by vehicles decreased by 5% while the number of trips by walking and cycling increased by 40% and 61%, respectively; and
- New buildings are 20% more energy efficient than the 2018 building code due to stronger energy and climate standards.

Current challenges include political and economic uncertainty associated with international trade, regional affordability, rising capital costs of infrastructure, and the mounting costs of responding to the impacts of climate change.

Climate policies and action are delivering other important benefits to residents such as expanded parks and green spaces, cooling in buildings, improvements to indoor and outdoor air quality, more transportation options, jobs and economic opportunities, and household cost savings.

CLIMATE 2050 ROADMAP ACTION STATUS

Since the previous progress report, five additional actions have been completed, and 14 additional actions have been initiated (now "in-progress"). Some actions that were planned to start in 2024 did not start, which increased the number of "not started" actions from 16 to 29. Six of the 59 Big Moves have been completed and 35 are "in-progress", including:

- Adoption of higher steps of the Zero Carbon Step Code and Energy Step Code by 14 municipalities;
- Implementation of the *Zero Emissions Vehicle Act*;
- BC Hydro's new EV charging and 'time of use' electricity rates;
- Launch of BC's Output Based pricing system for large industrial emitters;
- Broadway Subway and Surrey-Langley Skytrain extensions; and
- Initiation of a regional climate vulnerability and risk assessment.

As of June 2025, the status of *Climate 2050* actions is as follows:

- Complete: 15
- In-progress: 138
- Not started (i.e., planned start is delayed): 29
- Planned for Future (i.e., expected to start in 2025 or later): 70
- Not Proceeding: 1.

CLIMATE PROJECT HIGHLIGHTS

Metro Vancouver and its member jurisdictions collaborate with other orders of government, businesses, non-profits, and directly with residents on climate policies, programs and projects. The Climate 2050 Progress Report 2024/2025 highlights initiatives that support progress in each of the ten *Climate 2050* issue areas, including:

- Incentives for homeowners to make clean energy upgrades such as installing heat pumps through programs, such as "Energy Save New West" and the North Shore's "Jump on a Heat Pump";
- Technical support for building upgrades through the BC Retrofit Accelerator;
- Expansion of active transportation infrastructure by TransLink and member jurisdictions, and programs to increase access to e-mobility options such as shared e-bike and e-scooter pilots at City of Coquitlam and City of Surrey;
- Implementation of EV-ready bylaws in 15 member jurisdictions (as of June 2025), requiring new buildings to provide EV charging;

- Upgrading infrastructure and using natural stormwater solutions to reduce impacts from extreme rainfall and flooding, such as the City of Vancouver's recently completed St. George Rainway; and
- Working with regional health authorities to protect residents, during extreme heat and wildfire smoke events, including a partnership between Vancouver Coastal Health, City of North Vancouver, City of Vancouver, and Metro Vancouver, to create a Local Government Policy Toolkit for Thermal Safety in Apartment Buildings.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

In collaboration with its member jurisdictions and other partners, Metro Vancouver leverages external financial resources and coordinates climate action, providing efficiency of resources, and advocating for senior government policies to protect residents' affordability. Consistent with past and current financial practices, as specific policy proposals are advanced, their costs and benefits, and partnership opportunities, are outlined for MVRD Board consideration. Planning and budgeting to avoid escalating climate risks is also critical to minimize long-term financial costs. Several projects highlighted in this report can help Metro Vancouver and member jurisdictions better plan, prepare, and budget for climate risks.

CONCLUSION

Progress on *Climate 2050* implementation continued in 2024 and 2025, with more than 60% of the actions now complete or in-progress. While 2023 total regional GHG emissions are still above 2010 levels, emissions decreased in several sectors. These reductions likely reflect a combination of factors including policy, technological shifts, and year-to-year variation. Metro Vancouver, its member jurisdictions, and other agencies are implementing a wide range of projects that are helping to reduce emissions and build resilience to climate change, alongside many other benefits to the region. Staff will continue to seek direction from the Air Quality and Climate Committee and the MVRD Board to advance new projects and initiatives toward *Climate 2050* implementation.

ATTACHMENTS

1. Metro Vancouver Climate 2050 Progress Report 2025, dated August 2025.
2. Presentation re: "Metro Vancouver Climate 2050 Progress Report 2024/2025" dated September 12, 2025.

REFERENCES

1. Metro Vancouver. (July 2019). *Climate 2050 Strategic Framework.* Retrieved from: https://metrovancouver.org/services/air-quality-climate-action/Documents/climate-2050-strategic-framework-2018.pdf
2. Metro Vancouver. (2025, July 28). *2024 Local Government Climate Action Plan Response.* Retrieved from: https://metrovancouver.org/services/air-quality-climate-action/Documents/lgcap-submission-2024.pdf

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Climate 2050
PROGRESS REPORT
2025

Indigenous Territorial Acknowledgement

Metro Vancouver acknowledges that the region's residents live, work, and learn on the shared territories of many Indigenous peoples, including 10 local First Nations: q̓icə̓y̓ (Katzie), q̓ʷɑːn̓ƛ̓ən̓ (Kwantlen), kʷikʷəƛ̓əm (Kwikwetlem), máthxwi (Matsqui), xʷməθkʷəy̓əm (Musqueam), qiqéyt (Qayqayt), Semiahmoo, Sḵwx̱wú7mesh Úxwumixw (Squamish), scəẃaθən məsteyəxʷ (Tsawwassen), and səlilwətaɬ (Tsleil-Waututh).

Metro Vancouver respects the diverse and distinct histories, languages and cultures of First Nations, Métis, and Inuit, which collectively enrich our lives and the region.

About Metro Vancouver

Metro Vancouver is a diverse organization that plans for and delivers regional services, including water, sewers and wastewater treatment, and solid waste management. It also regulates air quality, plans for urban growth, manages a regional parks system, provides affordable housing, and serves as a regional federation. The organization is a federation of 21 municipalities, one electoral area, and one treaty First Nation located in the region of the same name. The organization is governed by four Boards of Directors of elected officials, one for each legal entity making up Metro Vancouver with representation from member jurisdictions.

4515 Central Boulevard, Burnaby, BC, V5H 0C6
metrovancouver.org
August, 2025

Contents

Message from the Chair

Continuing to Work Together for a Resilient Region

Local governments are on the front lines of climate action. At Metro Vancouver we continue to work closely with our members and partners to advance practical solutions that protect health, homes, and quality of life for all residents. The climate solutions in Metro Vancouver's *Climate 2050* strategy also help address broader challenges: they can reduce home energy costs, increase affordable transportation options, and create jobs.

The *2025 Climate 2050 Progress Report* provides an update on the region's climate-related trends and highlights the policies, programs, and infrastructure investments of the past year that are reducing emissions and helping prepare our region for climate change now and in the future.

Fourteen member jurisdictions of Metro Vancouver, representing about 93% of the region's population, have now opted in to strong levels in the Energy Step Code and/or Zero Carbon Step Code. This means that most new homes in the region will be climate-ready, to both protect residents from extreme heat and reduce climate-warming emissions. Major investments in public transit are underway, including the Surrey-Langley SkyTrain and the Broadway Subway Projects, giving residents convenient, affordable, and clean travel options. Our region continues to lead North America in electric vehicle adoption, with EVs representing more than one in four new cars purchased in 2024.

The urgency of the climate crisis remains clear. Climate change is impacting our communities and we know these impacts will continue to grow. In 2024, record-setting rainfall in our region led to flooding and landslides that damaged homes and infrastructure, and even resulted in loss of life. In 2025, Canada is on track for a record wildfire season, with wildfire smoke impacting our region. We need to continue to work together and do our part to reduce emissions and prepare our communities.

Organizations across the region are working to address the increasingly frequent extreme weather events in our region. This includes upgrading infrastructure for better flood protection and protecting and restoring ecosystems so that these natural assets can better manage extreme rainfall.

Metro Vancouver is working to do our part. We are recovering waste heat from our sewers to power communities and preparing to construct a district energy system using excess heat from our Waste-to-Energy Facility, which will provide low-carbon heat to thousands of homes in the region. In 2024, we acquired nearly 80 hectares of land to expand the regional parks network. At Metro Vancouver Housing, we are retrofitting homes and building new housing to protect residents from extreme heat, and lower energy bills. We are also reducing our corporate emissions using renewable fuels in hauling and by electrifying our corporate vehicle fleet and facilities.

The actions in this report demonstrate that climate leadership is possible, and taking action on climate helps solve other challenges that can improve our quality of life. Together, we are building a resilient future for everyone.

Sincerely yours,

Mike Hurley, Chair, Metro Vancouver Board of Directors

About *Climate 2050*

Climate change is driven by excess greenhouse gases (GHGs) from human activities and is affecting residents in our region today. Warming of the atmosphere, oceans, and land is leading to more frequent and severe weather events, and widespread disturbances and damage to natural and human systems. In the future, summers are expected to be hotter and drier, and winters warmer and wetter, with more extreme weather (see Metro Vancouver's Climate Projections Report). Scientists emphasize that reducing global GHG emissions can limit the severity of future impacts.

Climate 2050 is the strategy adopted by the MVRD Board in 2018 that commits to:

- Achieve a carbon-neutral region by 2050
- Reduce GHG emissions by 45% from 2010 levels by 2030; and
- Ensure the region's infrastructure, ecosystems, and communities are resilient to the impacts of climate change.

Carbon Neutral Region

A carbon neutral region is achieved when the annual GHG emissions are equal to the amount of carbon removed from the atmosphere and stored annually by the natural ecosystems (e.g. forests and wetlands).

In our region, these ecosystems remove about 1 million tonnes of carbon from the atmosphere every year. Currently, regional GHG emissions are around 17 million tonnes per year. This means that we must reduce these emissions as much as possible, while ecosystems can help to offset a very small amount of remaining emissions to get to net zero.

In this context "Net Zero" can be used interchangeably with carbon neutral. According the International Panel on Climate Change (IPCC) the world must achieve "net zero" emissions by 2050 to avoid catastrophic climate change.

Progress Toward Climate Goals and Targets

Greenhouse gas emissions are decreasing in some sectors across the region, but total emissions are still rising, and the region is not on track to meet the target of 45% reduction in regional emissions by 2030. Continued collective action remains paramount to reduce the future impacts of climate change. This means increased and more coordinated efforts are needed at all levels of government, in collaboration with partner organizations including public sector organizations, businesses, non-profits, and Metro Vancouver residents.

Positive Trends on Reducing Emissions

- Per capita GHG emissions have dropped by 16% since 2010.
- Following several years of growth, EV sales were stable in 2024, accounting for 27% of all new passenger vehicle sales in the Metro Vancouver region.
- Residents are driving less (- 5%) and travelling more by walking (+ 40%) and cycling (+ 61%), likely due to increasingly compact, complete community design and investments in active transportation infrastructure.
- Stronger energy and climate codes are making new buildings cleaner and more efficient, and buildings constructed since 2023 are about 20% more energy efficient than the 2018 code.
- Globally, investments in renewable energy are outpacing fossil fuels, and growth in GHG emissions has started to decouple from economic growth[1].

Regional GHG Emissions Trends

In 2023, Metro Vancouver's total annual regional GHG emissions were 17.3 million tonnes CO_2e (carbon dioxide equivalent), up 6.8% from 2010 (16.2 million tonnes CO_2e). Year-over-year GHG emissions were nearly flat from 2022 to 2023. Emissions also decreased in several sectors including on-road vehicles, buildings, waste, and marine vessels. Reductions in some sectors (e.g., light duty vehicles and waste) may reflect the impacts of climate policy and technological change. Trends and causal factors are less clear for other sectors such as building emissions, which are highly dependent on temperature patterns, and where availability of disaggregated data is limited. Emissions in 2023 increased in other sectors such as non-road engines, industry, and agriculture, compared to 2022.

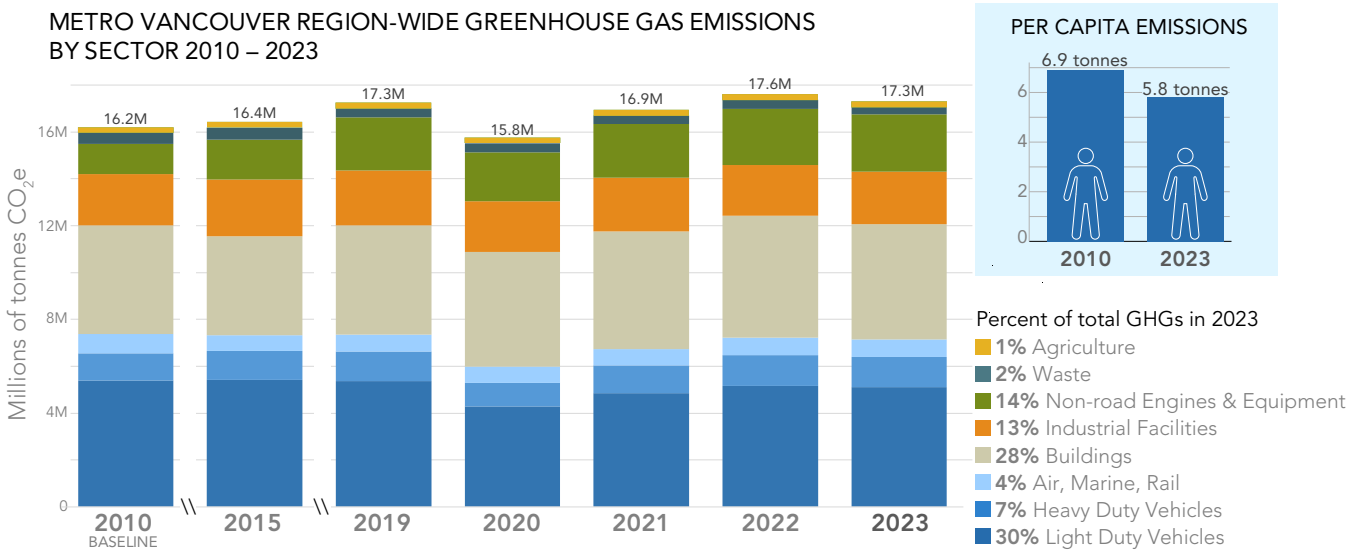
Per-Capita Emissions Are Declining

From 2010 to 2023, regional population grew by 27%, while GHG emissions per person decreased by 16%, from 6.9 tonnes/person to 5.8 tonnes/person, signaling that our buildings, transportation, and economy are becoming cleaner. Total regional emissions are expected to decline in future years, as actions in the Climate 2050 Roadmaps and policies from other orders of government are implemented, and as technology and market shifts continue to take effect[2].

Challenges to Climate Action

Despite these encouraging signals, climate action in the region faces a number of challenges, and total regional emissions continue to rise. These challenges include:

- Political and economic uncertainty associated with international trade.
- Regional affordability challenges
- Rising capital costs of infrastructure
- Mounting costs of responding to the impacts of climate change



Implementing Climate 2050

This *Climate 2050 Progress Report* includes updates on work by Metro Vancouver, member jurisdictions, and other agencies and partners in 2024 and 2025 (to the end of June) to reduce GHG emissions and improve resilience in each of the ten *Climate 2050* issue areas.

For the six approved *Climate 2050 Roadmaps*, the table below provides an update on which actions are complete, in-progress, not started (i.e., delayed), or planned for future years. New climate actions and policies for the remaining four issue areas are being integrated into other existing planning processes and management plans, including *Metro 2050*, the *Clean Air Plan* and updates to Metro Vancouver's *Liquid Waste, Drinking Water, and Solid Waste Management Plans*[3].

See Appendix 1 for a list of actions in Board-endorsed *Climate 2050 Roadmaps*.

***Climate 2050* Action Implementation (from Board-endorsed roadmaps, as of June 2025)**

	59 BIG MOVES	253 TOTAL ACTIONS
Complete	**6**	**15**
In Progress	**35**	**138**
Not Started	**5**	**29**
Planned for Future Years	**12**	**70**
Not Proceeding[4]	**1**	**1**

The icons below indicate the types of actions you will find throughout this report:

Actions that have the most potential to significantly reduce emissions or enhance resilience and adaptation to climate impacts

Actions that reduce greenhouse gas (GHG) emissions

Actions that support adaptation and resilience to climate impacts

Corporate LEADERSHIP

Actions by Metro Vancouver in its corporate operations that demonstrate leadership and support regional action

Actions that support Human Health and Well-Being

Buildings

Creating climate-ready buildings that protect human health, save lives, and stand strong against extreme weather

2024/2025 Regional Outlook

- Recent studies have found that low-emissions buildings have lower annual energy costs compared to conventional buildings and improve health and resilience for residents[5].
- Stronger energy and climate codes are making new buildings cleaner and more efficient, and buildings constructed since 2023 are about 20% more energy efficient than the 2018 code.
- Over 80% of buildings constructed before 2020 are expected to still stand in 2050 and will require upgrades.
- Buildings remain the second-highest source of GHGs across our region. These emissions are still rising, and climate and energy upgrades to existing buildings remain a challenge.

THE CHALLENGE

4.9 million tonnes CO_2e
Total regional GHG emissions from buildings in 2023

28%
of regional GHG emissions are from burning natural gas for heating and hot water in buildings

Over 80% of buildings constructed before 2020 are expected to still stand in 2050, and will require upgrades

PERFORMANCE

6% **increase** in buildings emissions in the region since 2010 (2023)

4,429
heat pump rebates issued in Metro Vancouver region through the CleanBC Better Homes Program (2024), compared to **2,055 in 2023**

14 Metro Vancouver municipalities adopting higher steps of the **Zero Carbon Step Code and/or Energy Step Code**

4% **decrease** in total **GHG emissions** from Metro Vancouver Housing buildings from 2023 to 2024

2024/2025 Case Studies

Safer and More Efficient New Buildings

As of 2025, 14 municipalities in the Metro Vancouver region have adopted higher steps of the Energy Step Code and/or the Zero Carbon Step Code, representing about 93% of the region's population. This means that most new homes in the region will better protect residents from extreme heat, with lower energy costs and emissions. For example, in Richmond, GHG emissions for new detached homes have already decreased by two-thirds since 2022, and energy used for heating, cooling, and ventilation is down 35% compared to buildings completed before 2019.

Supporting Clean Energy Upgrades

Electric heat pumps are increasingly replacing gas heating systems due to their ability to both heat and cool. Some municipalities are providing financial support for residents to install heat pumps in their homes, to help with upfront costs:

- The City of New Westminster provided top-ups to provincial incentives to over 150 homeowners to install electric heat pumps and electrical service upgrades.
- The District of West Vancouver, the District of North Vancouver, and the City of North Vancouver are partnering on the Jump on a New Heat Pump program, which supports homeowners interested in making energy efficiency upgrades to their homes, with a main focus on replacing old heating systems. The program connects homeowners with energy experts to help identify and plan upgrades, review quotations from contractors, and navigate rebate programs. The program was recently expanded to support North Shore residents in condos, co-ops, and rental buildings.

BC Retrofit Accelerator

The BC Retrofit Accelerator program is administered by the Zero Emissions Innovation Centre (ZEIC) and was established with seed funding from Metro Vancouver and other partners. The program supports building owners and property managers to upgrade buildings to achieve deep GHG emissions reductions from larger residential and commercial buildings, and ensure occupants have safe living conditions particularly during heat events caused by climate change. As part of the BC Retrofit Accelerator, the Strata Energy Advisor program has supported 51 buildings representing 4,361 homes in the Metro Vancouver region as of June, 2025.

Reducing Emissions and Improving Resilience at Metro Vancouver Housing

Metro Vancouver Housing is one of the largest non-profit housing providers in the region, with over 3,400 affordable rental homes across 49 sites, serving close to 10,000 people. Metro Vancouver Housing is designing new construction and retrofit projects to increase energy efficiency, reduce greenhouse gas emissions, and improve tenant well-being, for example by including cooling measures to protect residents from extreme heat events. Examples include Heather Place B and Heron's Nest (both fully electric new buildings) and Manor House, which is undergoing building envelope and mechanical system retrofits, which are projected to cut energy use by 51% and GHGs by 65%.

Transportation

Cutting emissions while improving the movement of people and goods across the region

2024/2025 Regional Outlook

- Transportation is the largest source of GHG emissions in our region, with passenger vehicles responsible for about 30% of total regional GHG emissions.
- Metro Vancouver residents are driving less and travelling more by walking and cycling. Between 2017 and 2023, the share of walking trips increased from 14% in 2017 to 18%, and trips by bike increased from 1.7% to 2.4%.
- The Broadway Subway and Langley SkyTrain extensions are under construction and will expand the SkyTrain network by 22 kilometers and 16 new stations, connecting communities with affordable, low-emissions transit.
- Low-carbon transportation modes (transit, walking, cycling and e-mobility) also support affordability, improve health, and reduce air pollution.
- Following several years of growth, EV sales were stable in 2024, accounting for 27% of all new passenger vehicle sales in the Metro Vancouver region[6].
- EVs are becoming cheaper to buy, and are cheaper to operate over their lifetime: when considering the full costs of ownership over a decade, EV drivers can save about $3,000 a year in fuel and maintenance costs compared to a gas vehicle[7].
- Heavy duty vehicles, airplanes, boats, and trains together are responsible for about 12% of total regional GHG emissions. These continue to be challenging to decarbonize, but cleaner alternatives such as electric ferries and seaplanes offer solutions.

THE CHALLENGE

6.4 million tonnes CO_2e
total annual regional GHG emissions from on-road vehicles (2022), making up 37% of regional GHG emissions

37%

0.7 million tonnes CO_2e
total annual regional GHG emissions from **air, marine and rail**[8] (2023), making up **4%** of regional GHG emissions

PERFORMANCE

5% **decrease** in light duty vehicle emissions from 2010-2023

10% **increase** in heavy-duty vehicle emissions from 2010-2023

27% of **new passenger vehicles** sold in region were electric (2024)

EV **7%** of **passenger vehicles** in region are EVs (2024)

2024/2025 Case Studies

Expanding Access and Reducing Emissions of Public Transit

Metro Vancouver's population is growing, and so is the SkyTrain network. The Broadway Subway Project (Millennium Line Extension), opening in 2027, will bring six new stations to one of BC's busiest corridors. Meanwhile, construction of the Surrey Langley SkyTrain continues, with a 16 kilometre extension of the Expo Line from King George SkyTrain Station to Langley City Centre. By 2029, TransLink expects to be able to serve about 20% more customers on the Expo Line, and 50% more on the Millennium Line during the busiest times of the day.

Today, about two-thirds 65 per cent of passenger-kilometres are already on zero-emissions modes such as the all electric SkyTrain and electric-trolley buses. Electrification remains central to TransLink's Climate Action Strategy and Plan. In 2024, it brought 14 new battery-electric buses into service. Work also progressed on the Marpole Transit Centre and Coquitlam Transit Centre, which together will support more than 400 electric buses. Overall TransLink's investments will replace over one-third of its diesel and hybrid-diesel buses by 2030, and together with its use of renewable fuels, TransLink expects to meet or exceed its 45% by 2030 GHG reduction target against its 2010 baseline (in 2024, GHG emissions were 30% below its 2010 GHG baseline).

Enabling Accessible and Safe Active Transportation

Encouraging walking, cycling, and rolling (e.g., electric ride-on and kick-scooters) reduces emissions and traffic congestion, and supports both climate and public health goals. TransLink, Metro Vancouver, member jurisdictions, and the Province, are working to expand active transportation infrastructure across the region.

- In 2024–25, the Province invested $24 million across BC to expand local active transportation infrastructure, supporting eight projects in the Metro Vancouver region.
- TransLink, through their Local Government Funding Program, contributed $144 million to 104 active transportation projects across the region, including 24 bikeway, 21 walkway, and 15 multi-use path projects.
- The success of these efforts can be found in the 2024 State of Cycling Report, which found that nearly 5,000 kilometers of bikeway connects throughout the region.

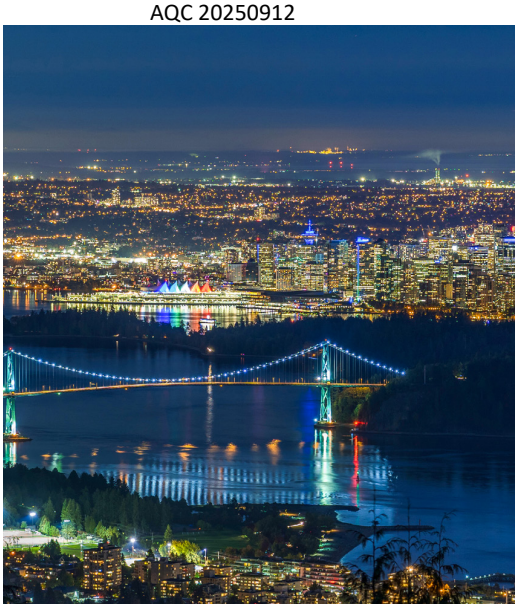
Municipal Shared E-mobility Programs (Coquitlam and Surrey)

In 2024, the City of Surrey and the City of Coquitlam launched shared e-bike and e-scooter pilot programs, helping connect these communities with quick, convenient, and sustainable travel options. Based on high uptake of these programs, both cities have expanded their shared micromobility service areas, improving connectivity to transit stations and commercial centers.

Improving Access to EV Charging in Metro Vancouver

Expanding EV charging infrastructure is necessary to support EV uptake and reduce transportation emissions. The Metro Vancouver region is increasing access to EV charging. For example:

- 15 member jurisdictions have implemented *EV-Ready Bylaws*, requiring new buildings to provide EV charging in homes, workplaces, and public parking. Installing EV charging in new buildings is three to four times cheaper than upgrading an existing building.
- The City of New Westminster introduced an EV-Ready bylaw for new non-residential buildings that requires 50% of parking to be EV-ready, providing charging opportunities for EV drivers who cannot charge at home.
- To increase access to EV charging in existing buildings, Vancouver's multi-unit retrofit program installed 68 EV chargers across 14 rental buildings, giving over 800 households home charging access for the first time.
- Local governments and partners are also installing EV charging infrastructure at their facilities to support charging for corporate fleets, staff, and the public.



THE CHALLENGE

75%

of **energy used in the region comes from burning fossil fuels** (including fossil natural gas, gasoline, diesel, and coal), accounting for 90% of all regional GHG emissions

PERFORMANCE

273,707 GJ

Electricity provided by the Waste-to-Energy Facility to the region in 2024

In 2024, Metro Vancouver produced

569,554 GJ
of biogas for use in its operations and sold

34,837 GJ
of renewable natural gas to FortisBC, reducing emissions in the region by over 1,700 tonnes.

Energy

Powering our region sustainably with clean, renewable energy

2024/2025 Regional Outlook

- 98% of BC's electricity comes from clean and renewable sources, primarily from hydroelectric facilities.
- 75% of energy used in our region is still fossil-fuel based (mostly natural gas, gasoline, and diesel).
- The shift to clean energy is largely driven by the adoption of electric technologies such as EVs and heat pumps, and policies such as the Low Carbon Fuel Standard which is increasing the supply of renewable fuels.
- Through BC Hydro's call for power, and incentives for solar and batteries, more renewable energy is being added to the grid.
- Metro Vancouver and member jurisdictions are recovering waste heat to power communities.

2024/2025 Case Studies

Advancing Clean Power Supply and Energy Efficiency

BC Hydro is taking a number of actions to meet growing electricity demand from population growth and electrification of buildings, transportation, business, and industrial development. These include:

- Adding the Site C hydroelectric project, which will boost supply by 8% and power 500,000 new homes
- Adding 10 new renewable energy projects in the coming years through the 2024 Call for Power, which will increase supply by 8% and power 500,000 new homes
- Investing in energy efficiency, which is expected to result in 2,000 gigawatt hours per year of electricity—or enough to power 200,000 new homes

As part of its Clean Power Action Plan, BC Hydro has launched another "call for power" (a competitive bidding process), aiming to acquire up to 5,000 GWh per year of clean, renewable energy — enough to power approximately 500,000 homes, doubling the supply from the response to its 2024 call, most of which were wind projects. What's more, BC Hydro plans to invest over $700 million over the next three years in energy-efficiency programs, projected to save enough energy each year to meet the needs of another 200,000 homes.

Analyzing Thermal Energy Opportunities Across Metro Vancouver

Thermal energy networks use water pipes to connect to energy sources such as heat from sewer lines, geothermal, solar, and water bodies, to heat and cool buildings. Thermal energy networks use water pipes to connect to energy sources such as heat from sewer lines, geothermal, solar, and water bodies, to heat and cool buildings. Metro Vancouver is recovering heat from wastewater for several district energy projects under design that will cut GHG emissions by about 45,000 tonnes while providing renewable heat to nearby communities.

Metro Vancouver is partnering with BC Hydro and the Zero Emissions Innovation Centre (ZEIC) to evaluate the opportunities for low-carbon thermal energy networks in the region. This study will explore how low-carbon thermal energy networks for heating and cooling buildings can be scaled up in the region, helping local governments to meet energy and greenhouse gas reduction goals, improve local energy resilience and security, foster local economic development, and protect health by enabling cooling in buildings.

Using Sewer Systems to heat and cool communities

Sḵwx̱wú7mesh Úxwumixw (Squamish Nation)'s new Seńáḵw development located at the head of False Creek is Canada's first large-scale net-zero emissions housing development, with over 6,000 homes for 9,000 residents. Construction is underway on a new district energy system that will recover excess heat from Metro Vancouver sewer infrastructure to heat and cool all homes and businesses in the new development. The system is designed to expand in the future to provide thermal energy to surrounding communities. This is expected to reduce GHG emissions by approximately 120,000 tonnes over 30 years compared to natural gas heating. This project is an innovative example of hyper-local, low carbon energy that will provide safe and clean heat for decades.

Developing New Sources of Renewable Fuel

Metro Vancouver Wastewater Treatment facilities are harnessing wastewater energy to create renewable fuels with a wide range of applications. Pilot examples include:

- At Annacis Island Wastewater Treatment Plant, a hydrothermal liquefaction demonstration facility is being constructed to convert wastewater sludge into biocrude. The biocrude will then be refined into low-carbon transportation fuel.
- An ammonia-to-hydrogen pilot is planned at Annacis Island Wastewater Treatment Plant. This pilot will produce green hydrogen from wastewater, which can displace fossil fuel use and reduce GHG emissions.
- At Lulu Island Wastewater Treatment Plant, excess biogas is cleaned up and sold as renewable natural gas to Fortis BC.
- Also at Lulu Island Wastewater Treatment Plant, a bioreactor will be tested to increase microbial production of biomethane from wastewater sludge, creating more renewable natural gas.

Industry & Business

Driving economic growth and prosperity through a thriving local clean energy economy

2024/2025 Regional Outlook

- Emissions from large industrial facilities remain stable, and policies such as industrial carbon pricing, along with new technologies supporting electrification and renewable fuels, are driving innovation and encouraging emissions reduction.
- Non-road equipment emissions have nearly doubled since 2010 in the region, including from construction and manufacturing, likely due to development activity.
- Industry is exploring emerging technologies like carbon capture to reduce emissions from emissions-intensive processes like cement production.

THE CHALLENGE

2.2 million tonnes CO_2e
total regional emissions from **large industrial facilities** in 2023, making up 12% of regional GHG emissions

13%

2.5 million tonnes CO_2e
total regional emissions from **non-road equipment** in 2023, making up 14% of regional GHG emissions

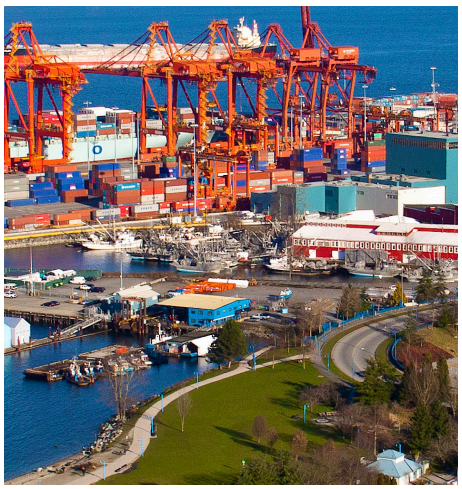
14%

PERFORMANCE

2% **increase** in GHG emissions from **large industrial facilities** from 2010-2023

89% **increase** in GHG emissions from **non- road equipment** from 2010-2023

2024/2025 Case Studies



Decarbonizing Port Operations

The ports in Metro Vancouver handle approximately 20% of Canada's trade. The Vancouver Fraser Port Authority's EcoAction program offers discounts for ships that use lower-emission fuels such as methanol, hydrogen, or liquified natural gas (LNG). Incentives also apply for ships that reduce their emissions by connecting to shore power, wind, or batteries.

A pilot is also underway to use hydrogen-powered cranes that lift and carry large containers through ports instead of diesel fuel. Switching just one crane to hydrogen can eliminate 150,000 litres of diesel per year, or 400 tonnes of GHG emissions annually.

Reducing Harmful Emissions from Boilers and Heaters

Metro Vancouver is updating an existing bylaw for boilers and process heaters, which are commonly used for heating large commercial, industrial, and residential buildings. They also emit air pollutants such as nitrogen oxides (NOx), and fine particulate matter while also forming ground-level ozone, all of which harm human health. Updates to the bylaw will encourage technologies that reduce these emissions, including electric options that also reduce GHG emissions.

Transition Towards Zero-emissions Equipment

Small gas-powered landscaping equipment in the region, like leaf blowers and lawn mowers, produces about half as much air pollutants that can directly harm human health as all the light-duty vehicles in the region. Transitioning this equipment to emission-free alternatives is an important step toward reducing air pollution and protecting public health. Metro Vancouver is engaging with equipment manufacturers and users, industry associations, and others for input on measures to accelerate the transition towards zero-emissions equipment.

Nature & Ecosystems

Protecting and leveraging green spaces to enhance climate resilience and biodiversity

2024/2025 Regional Outlook

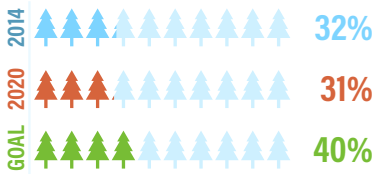
- Ecosystems help to protect people and infrastructure from climate impacts, offer a range of benefits for human health and well-being, and store carbon.
- Urban development is contributing to the loss of natural areas and climate change is impacting ecosystem health in the region.
- Metro Vancouver, member jurisdictions and other partners are also working to protect and restore natural areas, and increase ecosystem connectivity.
- Increased heat events and flooding are highlighting the importance of natural ecosystems for climate-resilient communities.
- For example, municipalities across the region are recognizing the importance of tree canopy in urban areas and are introducing programs and plans to maintain tree canopy cover.

THE CHALLENGE

31% proportion of Urban Containment Boundary with **tree canopy cover** (2020)

54% proportion of the Urban Containment Boundary **covered by impervious surface** (2020)

PERFORMANCE



1% loss of tree canopy cover in Urban Containment Boundary between 2014-2020 (down from 32%).
Metro Vancouver target = 40%

32 restoration projects across 19 regional parks
completed in 2024

2024/2025 Case Studies

Township of Langley Tree Voucher Program

Urban forests help to cool cities, clean the air, manage stormwater, and remove carbon from the atmosphere. Residents in Langley are helping to accelerate the urban tree canopy by planting trees on their property. The Tree Voucher program provides a $350 voucher to purchase trees from local participating nurseries. The program has proven to be very popular amongst residents, and in Spring 2025 over 1,100 trees were planted through the program.

West Vancouver and Maple Ridge Urban Forest Management Plans

Maple Ridge and West Vancouver are implementing urban forest management plans to expand tree canopy — setting ambitious targets of 40% and 52% respectively — while protecting existing green spaces and biodiversity. In Maple Ridge, forests already remove carbon equivalent to the emissions of 884 vehicles annually and prevent billions of litres of stormwater runoff. In fall 2024, West Vancouver also partnered with local schools to plant 60 native trees across 13 campuses, engaging students in environmental stewardship and climate action. In 2025, West Vancouver is continuing tree planting efforts by working with residents to plant trees in their yards.

Protecting Regional Ecosystems Through Land Acquisition

In 2024, Metro Vancouver acquired an additional 79.6 hectares of land in Blaney Bog, Glen Valley, and South Langley Regional Park. The newly protected land includes bog ecosystem that takes carbon out of the atmosphere, a portion of the Fraser River floodplain, and extensive forests that provide cooling for the adjacent neighborhood. Together these additional lands will contribute to our ability to remain resilient in the face of climate change.

Mitigating Wildfire Risk in Regional Parks

Metro Vancouver is conducting a wildfire risk assessment to identify higher-risk areas within regional parks. The project will include risk mapping, development, and prioritization of risk management strategies, and site-level prescriptions for pilot sites to improve forest health and reduce fire risks.

Protecting and Restoring Burns Bog

Burns Bog is a unique raised bog ecosystem, and at 3,000 hectares, is the largest undeveloped urban landmass in North America. The bog is a peatland, which is a special kind of wetland where at least 30 cm of peat (plant matter) has piled up because the very wet conditions have created an environment where decomposition is extremely slow. To promote carbon sequestration and support healthy bog function, Metro Vancouver and Delta are working to raise the water table by blocking drainage ditches, constructing peat berms, removing trees and seedlings, and monitoring water levels and quality. Since 2008, these restoration efforts have prevented over 120,000 tonnes of GHG emissions, mostly methane, a highly potent GHG. Read more about Burns Bog here.

In 2025, Metro Vancouver and City of Delta are partnering to increase the tree seedling removal efforts in an area affected by a fire in 2016. The purpose of this project is to reduce the risk of wildfire in this urban interface area and remove trees that have emerged since the 2016 fire that are competing with bog plants, with the aim of restoring the bog ecosystem.

Agriculture

Protecting farmland to ensure a local, resilient food supply

2024/2025 Regional Outlook

- Metro Vancouver's agriculture sector is an important economic driver for our region and essential for local food production.
- Farmland can also provide valuable ecosystem services such as flood control, soil carbon sequestration and wildlife habitat.
- However, climate impacts such as flooding, extended heat events, annual summer drought, invasive species, and degraded soil conditions, create compounded challenges for the agricultural sector.
- Changing climate conditions, as well as economic uncertainty, highlight the need for a multi-jurisdiction approach to support the agricultural sector to adapt and continue to provide essential products and services for the region.

THE CHALLENGE

0.2 million tonnes CO_2e
total regional emissions from **agricultural sector** in 2023, making **1%** of total regional GHG emissions[9]

1%

PERFORMANCE

12% **increase** in total **agricultural sector** emissions from 2010-2023

2024/2025 Case Studies

Promoting Regenerative Agriculture- Mound Farm Park

In the City of Surrey, a multi-year pilot project at Mound Farm Park across 40 hectares of active farmland involves a collaboration between the City, Kwantlen Polytechnic University and Greenway Farms. The project is studying climate impacts integrated with sustainable agricultural practices, including an area of land left uncultivated to support pollinators, winter cover-cropping, and large-scale ecological restoration. The project includes long-term soil health and carbon monitoring, biodiversity assessments, and adaptive land management practices. Its unique combination of ecological, geological and significance to local First Nations makes Mound Farm Park a model for integrating sustainable agriculture with parkland. Together, the project will help inform future policy changes across other city agricultural lands.

Ensuring Water Availability for Agriculture

At the regional level, Metro Vancouver is conducting a project to understand new ways to protect two critical assets in our region: drinking water and food crops. The Regional Agricultural Drinking Water Demand Study will highlight current sources of water used for agricultural production and calculate the amount of water demand needed for agriculture across our region, including future demand in a changing climate. The findings may also support related research to discover non-potable water sources that could be used to relieve demand on drinking water sources during peak water demand months. These findings can help with resiliency planning across our region.

A similar project is taking place at the City of Surrey: As demands for water rise in a changing climate, Surrey is working to support long-term viability of its agriculture sector. Recognizing that irrigation demands are projected to rise by 20-30% in a hotter and drier climate, the City is conducting an Agricultural Feasibility Study and exploring the use of non-potable water from the Serpentine and Nicomekl River watersheds to support climate-resilient agriculture in the area.

Water and Wastewater Infrastructure

Building climate resilience in our water systems to ensure fresh, safe drinking water and low-carbon resilient wastewater services for all residents

2024/2025 Regional Outlook

- Water and wastewater systems are critical to human health and the environment in the region and need to be resilient to climate change.
- These systems also hold significant opportunities for energy recovery and carbon neutrality.
- Impacts from a changing climate, such as more intense and frequent rainfall in some seasons and drought in other seasons, flooding, landslides, and sea level rise, create challenges for drinking water and wastewater management.
- In 2024, atmospheric river events delivered record rainfall to our region, resulting in flooding, widespread power outages, washed out roads, and landslides.
- Water use per capita in Metro Vancouver has declined from around 500 litres per person daily in 2010 to 379 litres per person in 2023. However, the region is still one of the highest per capita users of water in Canada, with low rates of residential water metering.
- Ensuring water and wastewater systems are resilient to climate change will require significant financial investments, but resource recovery also presents opportunities to harness excess energy to power communities and generate revenue.

THE CHALLENGE

8,084 tonnes CO_2e
Total **corporate energy-related** GHG emissions from **Liquid Waste Services** in 2024

1,886 tonnes CO_2e
Total **corporate energy-related** GHG emissions from **Water Services** in 2024

30% increase in **rainfall** on the wettest days in our region projected by 2050.[10]

PERFORMANCE

23% **decrease** in **daily water use per capita** in the region since 2010 (down from 500 litres/day)

4%
decrease in total **corporate energy-related** GHG emissions from **Liquid Waste Services** from 2023 to 2024

0% change **corporate energy-related** GHG emissions from **Water Services** from 2023 to 2024

In 2024, Metro Vancouver produced

569,554 GJ
of biogas for use in its operations and sold

34,837 GJ
of renewable natural gas to FortisBC, reducing emissions in the region by over 1,700 tonnes.

2024/2025 Case Studies

Using Natural Solutions to Capture Rainwater

City of Vancouver's St. George Rainway began with a group of community volunteers wanting to restore a creek buried below the street. Rainways are networks of green infrastructure that incorporate plants, trees, and soil to manage rainwater. The natural elements work with pipes and streets to capture and clean rainwater before returning it to the ecosystem. This climate friendly project also significantly reduces costs: construction was approximately $1.6 million compared to an estimated pipe upgrade cost of $16 million. The St. George Rainway can divert the equivalent of seven Olympic swimming pools of water per year from the road, and improve resilience to climate change impacts, while providing other ecosystem services such as mitigating extreme heat and creating habitat.

Climate Resilience through Water Metering Programs

Water metering is an essential tool to effectively reduce drinking water demand in the region. Currently 35 per cent of the water service connections in the region are metered, representing about 47 per cent of the total drinking water consumed. Implementing universal water metering is not just a financial or operational decision, it is a necessary step in ensuring the supply of high-quality drinking water into the future. Meters provide accurate water consumption data, detect leaks, support equitable billing, encourage water users to be mindful of their water consumption, and support water conservation initiatives.

Many Metro Vancouver member jurisdictions are working to advance water metering, including approving voluntary metering programs, implementing requirements for metering on new buildings, and accelerating universal metering programs. For example, in 2025, the City of Coquitlam implemented a requirement for water metering on all new builds, and at the City of Burnaby, in addition to requiring metering for all new builds, a universal metering strategy was approved in 2024.

Partnering to Build Climate-Ready Communities

Climate change is increasing flood risk, threatening communities and infrastructure in parts of the region. The City of Coquitlam and kʷikʷəƛ̓əm First Nation are improving flood protection along the confluence of the Coquitlam and Fraser Rivers through the Joint Flood Mitigation Program, which will upgrade the area's flood protection and dike network. The program will also strengthen fish habitat and install new flood boxes to support water connectivity through the dike and drainage system. The $19.9 million program is supported with funding from the Investing in Canada Infrastructure Program, as well as from the Province. Designs are underway and construction is expected for 2027-2029.

Waste

Shaping a low-carbon future through waste prevention and the promotion of a circular economy

2024/2025 Regional Outlook

- Metro Vancouver manages the region's solid waste, which contributes 2% of regional GHG emissions.
- Metro Vancouver and local governments are successfully reducing waste and bringing down emissions, through important programs like organic diversion programs and construction and demolition waste reduction requirements.
- Together with manufacturers, local governments and others, Metro Vancouver is working to implement circular economy principles in the region, to design out waste and ensure products are re-used, repaired, or recycled
- Efforts such as provincewide Extended Producer Responsibility programs as well as Metro Vancouver led behavior change campaigns, and food recovery programs are supporting this work.

THE CHALLENGE

0.4 million tonnes CO_2e
total regional emissions from **solid waste** (2023)[11]

11,629 tonnes CO_2e
total **corporate energy-related** GHG emissions from **Solid Waste Services** in 2024

PERFORMANCE

65% **Recycling rate for regional solid waste** (2023)

2.4 million tonnes
of material recycled in the region (2024)

47% **decrease** in total regional GHGs from the region's solid waste system, 2010-2023

26% **decrease** in regional solid waste recycled since 2011

273,707 GJ
of electricity generated at Waste-to-Energy Facility in 2024

1% **decrease** in total **corporate energy-related** GHG emissions from Solid Waste Services from 2023 to 2024

2024/2025 Case Studies

Construction and Demolition Waste Reduction and Recycling Toolkit

Waste from Construction and Demolition represents about one third of waste sent to landfills in the region. Metro Vancouver is supporting local businesses aiming to find new uses for construction materials that are typically destined for landfill. The Construction and Demolition Recycling toolkit provides practical tips for contractors, designers and homeowners to reuse and recycle building materials. The toolkit includes case studies and a contact directory of service providers and facilities across the region. It also highlights the benefits of alternative demolition methods such as deconstruction, which can salvage and redistribute up to 95% of building materials for reuse or recycling.

Turning Waste into Energy for Nearby Homes

Metro Vancouver's Waste-to-Energy Facility manages approximately a quarter of the region's solid waste, and produces electricity that is sold to BC Hydro to power communities in the region. Metro Vancouver is taking energy recovery at the facility one step further - building a district energy system that will use excess heat from the combustion process to supply heat and hot water for 50,000 homes in Vancouver and Burnaby. The system will also reduce greenhouse gas emissions by up to 70,000 tonnes per year. Construction of the first phase of this project will start in the fall of 2025, and is expected to be complete in 2028. This phase includes the construction of an energy centre adjacent to the Waste-to-Energy Facility and the installation of an approximately 6 km hot water piping system to the River District community in Vancouver.

Food Rescue for Climate Action

Food waste disposed to landfill results in the generation of methane, a powerful greenhouse gas. Metro Vancouver has taken steps to divert edible food away from the landfill. For example, since 2021, Metro Vancouver has supported the development of a regional food recovery network and online platform that rescues and redistributes surplus food. The service provider, Food Mesh, recruits partners, promotes the network, and provides ongoing technical support. Since its inception, the project has diverted more than 12 thousand tonnes of edible food to feed people and animals. This has avoided more than 30,000 tonnes of CO_2e emissions, while creating nearly 70 jobs.

Additionally, Metro Vancouver Housing partners with Food Link Society to reduce food waste and provide residents with free food through the Free Food Program. Food Link Society collects perishable food items nearing their "best before" date from grocery stores and delivers them to housing sites. Over 400 households currently participate in the Free Food Program, which has diverted over 3 million kilograms of food from its inception in 2018 to July 2025.

Turning Waste into Low Carbon Fuel at Surrey Biofuel Facility

Surrey's biofuel facility converts organic waste into renewable natural gas (RNG), reducing GHG emissions and enhancing energy security. Every year, the facility processes organic waste from over 150,000 Surrey households, as well as waste from residential, commercial and industrial operations across the region. The facility can produce up to 120,000 gigajoules (GJ) of renewable natural gas (RNG) annually, or enough to power nearly 2,500 passenger vehicles for a year. This RNG is used to fuel garbage trucks and Surrey's own compressed natural gas vehicles. The facility also produces nutrient-rich compost which is used for landscaping, food crops, and other agricultural applications. Since opening in 2016, the facility has diverted 680,400 tonnes of organic waste from landfills.

Human Health & Well-Being

Safeguarding health and wellbeing as we adapt to the changing climate.

2024/2025 Regional Outlook

- Climate change is already impacting health and well-being in our region, including from degraded air quality during wildfire smoke events, extreme heat events, and flood risks.
- Actions to reduce emissions often have health benefits. For example: heat pumps provide cooling to protect residents from extreme heat; active transportation improves health and wellbeing; and protecting nature provides cooling and supports mental and physical health.
- Safe, affordable housing underpins human health and well-being.
- New programs such as the Rental Apartment Retrofit Accelerator will help accelerate upgrades in rental buildings to add low-emissions heating and cooling.
- Between 2017 and 2023, the share of walking trips increased from 14% to 18%, and trips by bike increased from 1.7% to 2.4% over the same period.

THE CHALLENGE

3 **AIR QUALITY WARNING DAYS**
in Metro Vancouver and Fraser Valley Airshed (2024)

More than **one in three** residents in the region rents their home, and renters tend to live in older and less efficient buildings without cooling.

PERFORMANCE

3 Air Quality Warning Days in Metro Vancouver and Fraser Valley Airshed from sources within the airshed (2024), compared to 5-year average of **3.2 days** (2019-2023).

1% loss of tree canopy cover in Urban Containment Boundary between 2014-2020 (down from 32%).
Metro Vancouver tree canopy cover target = 40%

2024/2025 Case Studies

Fraser Health BREATHE & Cleaner Air Spaces Projects

As wildfire smoke becomes more severe and frequent, improving indoor air quality has become essential for climate resilience. The BREATHE Project, running from 2023 to 2026, is a collaborative initiative involving Fraser Health, Simon Fraser University, and the BC Lung Foundation, and is funded provincially with a Ministry of Health Innovation grant held through Fraser Health Authority. The project empowers communities – especially older adults, new and expecting mothers, people unable to afford commercial air cleaners, Indigenous communities and those living with lung and heart condition – to improve their indoor air quality by building low-cost DIY air cleaners. Workshops and materials are offered in multiple languages across each Health Authority and provide hands-on education about air pollution and health. Fraser Health is also working closely with the First Nations Health Authority on this work. By increasing access to clean air during climate emergencies, the project has contributed to broader regional climate resilience, reducing exposure to air pollution and supporting public health.

Meanwhile, the Cleaner Air Spaces (CASs) project is installing low-cost air quality sensors in community spaces to better understand the effectiveness of these spaces in protecting against wildfire smoke. Community spaces that offer air conditioned and/or filtered air can provide people with cleaner and cooler air when their homes may be too hot and smoky. The project began in 2023 and continues to expand the number of spaces participating in the project. Collaboration with BC Centre for Disease Control as well as libraries, community centers, and government agencies has been central to its implementation. What makes this project unique is its focus on making real-time air quality data accessible to allow for timely informed responses that can lead to more equitable access to cleaner air, directly strengthening regional resilience to climate related air quality threats.

Thermal Safety in Apartment Buildings Toolkit (Partnership with Vancouver Coastal Health, City of North Vancouver, City of Vancouver and Metro Vancouver)

Heat events across BC's Lower Mainland are becoming more frequent and severe. The 2021 heat dome, which brought record-breaking temperatures and resulted in 619 deaths and hundreds of emergency room visits, highlighted the urgent need to adapt buildings to a changing climate.

In response, Vancouver Coastal Health Public Health partnered with the Cities of North Vancouver and Vancouver to develop a Thermal Safety Toolkit. Based on a review of the evidence and consultation with industry and policy experts, this publication outlines 31 actions that local governments and partner agencies from across sectors can consider taking to contribute to advancing thermal safety in existing, multi-family residential buildings. Many of the actions also aim to support broader goals such as affordability, energy efficiency, and emissions reductions.

Indoor Air Quality Grants for Protection During Wildfire Smoke Events

Wildfire smoke, worsened by climate change, severely impacts air quality and health—especially for vulnerable populations. Vancouver Coastal Health awards grants to community organizations for climate resilience actions including to improve air filtration, and support 'train-the-trainer' workshops through the BREATHE Project (see above). Funding will allow BREATHE to expand its engagement with neighbourhood houses, seniors centres, family centres, and other social service organizations that serve populations particularly at-risk from poor air quality. Additional support from the Ministry of Health will help reach even more neighbourhoods in 2025.

THE CHALLENGE

31% proportion of Urban Containment Boundary with **tree canopy cover** (2020)

54% proportion of the Urban Containment Boundary **covered by impervious surface** (2020)

PERFORMANCE

99% of the region's dwelling unit growth within the **Urban Containment Boundary** (2016 to 2021)

41% of the region's dwelling unit growth in **Urban Centres** (2016-2021)

Land Use & Urban Form

Planning healthy and complete communities resilient to climate impacts.

2024/2025 Regional Outlook

- Through *Metro 2050*, Metro Vancouver, member jurisdictions, and other regional partners are planning for the future and developing sustainable and complete communities.
- In 2024, member jurisdictions responded to new provincial legislation requiring increased housing density near transit-oriented areas.
- Population growth will present the region with increased challenges in addressing climate change. Metro Vancouver and member jurisdictions can continue to work collaboratively to use land use tools to reduce emissions and build resilience to changing risks and natural hazards, including flooding, landslide, and wildfire.

2024/2025 Case Studies

A Regional Approach to Assessing Hazard, Risk, and Vulnerability

BC's Emergency and Disaster Management Act will lead to risk assessment requirements for local governments and critical infrastructure owners, including the requirement to incorporate future climate change into risk assessments. Metro Vancouver will be working with key partners to develop a Hazard, Risk and Vulnerability Assessment (HRVA). Given the unique challenges of the region and the interface of hazardous areas across jurisdictional boundaries, there is a critical need for coordination on hazard and risk work. A regional HRVA would deliver a robust understanding of hazards, risks, and vulnerabilities specific to the region and strategies to address them, a coordinated regional resilience network to convene partners, and critical information to support land use planning, climate action, and emergency management efforts.

Protecting Communities against Flooding and Related Hazards

As part of Metro 2050, the regional growth strategy, Metro Vancouver is developing a resource guide to support member jurisdictions build resilience to flooding and related hazards through land use planning. The Guide will consider a range of land use tools, including policies that could be integrated into municipal land use plans, zoning bylaws, and Development

Permit Areas. Other tools may include recommendations for green infrastructure improvements through the development approvals process, the use of covenants, property buy-outs, and site design/urban design considerations for flood proofing.

Delivering Climate Action Through Land Use Planning at City of Surrey

The City of Surrey conducted a review of its *Official Community Plan* (OCP) and *Zoning Bylaw* with the goal of incorporating climate action into future updates, and to align with Surrey's *Climate Change Action Strategy*. This work produced a number of recommendations, along with a Municipal Guidance Report, that is transferable to other BC municipalities. It supports healthy, low-emission buildings and sets a path for resilient community growth.

In addition to supporting climate action through its OCP update, Surrey's new Rapid Transit Development Incentive Program will reduce emissions by supporting new development near rapid transit. The program, which is funded through the Housing Accelerator Fund, will be active until 2026 and provides a 50% rebate on select permit fees for multi-family housing within 1.5 km of SkyTrain or RapidBus corridors. In 2024, the program incentivized 2,613 new homes and rebated over $2.5 million in fees. The initiative supports the City's vision of 15 minute neighbourhoods — walkable, connected communities anchored by low-carbon transportation.

Climate Adaptation to Protect Agriculture

Along the Nicomekl and Serpentine Rivers, climate change is increasing the risk of severe flooding. The City of Surrey is initiating construction on three grant-funded projects to raise the height of sections of the dikes. These upgrades, which are funded through the federal Disaster Management and Adaptation Fund, will increase the resiliency of the diking infrastructure, helping to protect valuable agricultural areas and regionally significant infrastructure.

Rupert and Renfrew Station Area Plan – City of Vancouver

The Rupert and *Renfrew Station Area Plan* will create a comprehensive plan to guide change and growth in the neighbourhood. Approved on July 8, 2025, Vancouver's Rupert and Renfrew Station Area Plan anticipates delivering homes for 18,700 new residents and 8,300 jobs by 2050, centered around transit hubs. It's the first area plan under the Vancouver Plan and delivers climate action by focusing growth near transit while providing job space to sustainable, low-emission living. Other key components of the plan include a focus on complete neighbourhoods (with more shops and services and amenities within easy walking/biking distance), enhancements to regionally significant employment lands, and the long-term restoration of Still Creek to support flood resilience and ecosystem services.

Housing Our Future – City of Delta

In 2024, Delta adopted a new *Official Community Plan* that concentrates housing near transit, shops, and services while meeting new provincial housing requirements. The City also updated its Housing Needs Assessment and zoning bylaws to enable small-scale multi-unit housing in low-density neighbourhoods. Public engagement included over 1,000 conversations and a popular "PLAN-A-THON" event that empowered residents to build climate-friendly housing options.

Conclusion

The *Climate 2050 Progress Report 2025* highlights a range of impactful projects, policies and actions that Metro Vancouver, its member jurisdictions, and other agencies are implementing which are helping to reduce GHG emissions and build resilience to climate change. These initiatives are also delivering important benefits for residents such as expanded parks and green spaces, cooling in buildings, improvements to indoor and outdoor air quality, more transportation options, jobs and economic opportunities, and household cost savings.

In 2023, total regional GHG emissions were 7% higher than 2010, however emissions trends in two sectors (light-duty vehicles and waste) decreased, and per capita emissions dropped by 16%. Coordinated efforts by all levels of government, partner organizations, businesses, and other groups with the participation and support of Metro Vancouver residents have limited growth in regional emissions, and continued action is needed to maintain progress towards reducing emissions and improving climate resilience.

APPENDIX 1 — *Climate 2050* Action Implementation 2024/2025

Buildings

IMPLEMENTATION (AS OF JUNE 2025):
OF 38 TOTAL ACTIONS: 3 COMPLETE, 28 IN PROGRESS, 4 NOT STARTED, 2 PLANNED FOR FUTURE YEARS, 1 NOT PROCEEDING

ACTION	STATUS
New Buildings are Highly Efficient and Electric	Complete
Building Decarbonization Coalition	Complete
Regional Working Group to Reduce Embodied Emissions in Buildings	Complete
GHG Requirements for Existing Large Buildings	Not proceeding
Building Electrification Mandate for BC Hydro	In progress
High Performance Heating and Cooling Equipment Import and Sale Standards	In progress
GHG Performance Requirements for Existing Houses and Townhomes	In progress
Require Greenhouse Gas Reductions During Renovations	In progress
Energy Labels for Homes and Buildings	In progress
Manage Indoor Air Quality in Building Codes	In progress
Significantly Reduce Refrigerant Leaks in Building Equipment	In progress
Expand Low Carbon Upgrade Incentives	In progress
Online Decision Support Tools for Low Carbon Upgrades in Buildings	In progress
New Financing Tools for Low Carbon Upgrades	In progress
Energy Advisor Services for Homes and Large Buildings	In progress
Make Electricity Upgrades Faster and Cheaper	In progress
Increase Public Awareness of the Benefits of Zero Emissions and Resilient Buildings	In progress
Training and Education in Zero Emissions and Resilient Buildings	In progress
Share Lessons from Transitioning Metro Vancouver Corporate Buildings to Zero Emissions	In progress
Test New Zero Emission Building Technologies	In progress

Low Carbon District Energy Policies	In progress
Use Building Materials with Low Embodied Emissions	In progress
Strengthen Metro Vancouver's Corporate Sustainable Design Requirements	In progress
Broaden Applications of Non-Potable Water Use in Buildings	In progress
Support Capacity Building of Non-Potable Water Use Applications on Building Sites	In progress
Incorporate Embodied Emissions into the BC Building Code	In progress
Require Cooling Measures in New Buildings and Major Retrofits	In progress
Expand the Network of Public Buildings that can serve as Cool, Clean Air Centres	In progress
Understand Climate Risk and Resilience for Public Buildings Across the Region	In progress
Integrate Resiliency into Low Carbon Upgrade Solutions	In progress
Provide Education on Retrofit Options that can Increase Resilience to Heatwaves and Wildfires	In progress
Update Climate Projections to Future-Proof Buildings	In progress
Accurately Value Zero Emission and Resilient Buildings	Not started
New Public Buildings Set Embodied Emission Reduction Targets	Not started
Provide Education on Retrofit Options that can Increase Resilience to Severe Storms and Flooding	Not started
Emissions Requirements for District Energy Systems	Not started
Update Climate Projections to Future-Proof Buildings	Planned for Future
Update Climate Projections to Future-Proof Buildings	Planned for Future

Transportation

IMPLEMENTATION (AS OF JUNE 2025):
OF 52 TOTAL ACTIONS: 5 COMPLETE, 29 IN PROGRESS, 14 NOT STARTED, 4 PLANNED FOR FUTURE YEARS

ACTION	STATUS
Accelerate Sales Targets for New Electric Passenger Vehicles	Complete
Regional Electric Vehicle Charging Strategy	Complete
Regional Parking Strategy to Reduce Driving	Complete
Make New Passenger Vehicles Cleaner	Complete

Electric Vehicle Outreach Programs	Complete
Enhance and Improve Regional Transit	In progress
Regional Bike- and Car-Sharing Strategy	In progress
Support Low Emissions Commuting by Staff	In progress
Use Pricing to Reduce Driving and Emissions	In progress
Expand Active Transportation Networks	In progress
More Stable Infrastructure Funding for Regional Active Transportation Networks	In progress
More Stable Funding for Regional Transit	In progress
Support Residents and Businesses in Active Transportation	In progress
Communicate the Benefits of Walking, Cycling and Public Transit	In progress
Implement Trip Reduction Programs	In progress
Develop Regional Emission Requirements for Passenger Vehicles	In progress
Make Electric Vehicles More Affordable	In progress
Expand Electric Vehicle Charging in Buildings	In progress
Transition the Corporate Fleet to Zero Emissions	In progress
Regulate Existing Medium and Heavy Trucks	In progress
Reduce Refuse Trucks Emissions	In progress
Support Innovation in Zero Emission Technology for Medium and Heavy Trucks	In progress
Require Zero Emission Sales Targets for New Medium and Heavy Trucks	In progress
More Stringent Low Carbon Fuel Standards	In progress
Long-term Emissions Strategy for Medium and Heavy Trucks	In progress
Regulate Fuel Economy and Emissions for Medium and Heavy Trucks	In progress
Funding for Zero Carbon Refueling Infrastructure for Medium and Heavy Trucks	In progress
Accelerate Emission Reductions from Marine Vessels	In progress
Support Emission Reduction Actions at Vancouver Fraser Port Authority	In progress
Support Innovation in Low and Zero Emission Marine and Rail Technologies	In progress
Develop Local Sources of Sustainable Aviation Fuel	In progress

Technologies for Zero Emission Aircraft	In progress
Reduce Reliance on Transportation Networks	In progress
Identify Regional Climate Hazards, Risks, and Vulnerabilities Impacting Transportation Networks	In progress
Reduce Delivery Emissions	In progress
Make Low and Zero Emission Medium and Heavy Trucks More Affordable	Not started
Large Fleets to Adopt "ZEV-First" Procurement	Not started
Accelerate Emission Reductions from Rail Locomotives	Not started
Carbon Neutral Aviation Sector	Not started
Support Low Carbon Corporate Business Travel	Not started
Support Regional Emergency Management Planning	Not started
Protect Road Networks	Not started
Protect Key Transportation Hubs	Not started
Adapt Active Transportation and Transit Networks	Not started
Minimize Risk Exposure for New Transportation Infrastructure	Not started
Create Flexible Transportation Networks	Not started
Build Climate Resilient Transportation Infrastructure	Not started
Integrate Resilient Infrastructure in to Transportation Networks	Not started
Electrification Targets for Ride-Hailing Services	Planned for Future
Use Business Licences to Support Emission Reductions	Planned for Future
Zero Carbon Refueling Strategy for Medium and Heavy Trucks	Planned for Future
Prepare for Regional Disruption	Planned for Future

Energy

IMPLEMENTATION (AS OF JUNE 2025):
OF 36 TOTAL ACTIONS: 0 COMPLETE, 26 IN PROGRESS, 8 NOT STARTED, 2 PLANNED FOR FUTURE YEARS

ACTION	STATUS
Align British Columbia's Energy Objectives with Strong Climate Action	In progress
Strong Climate Mandate for Energy Utilities	In progress
Revise Utility Regulation to Align with Strong Climate Action	In progress
Long-term Planning Scenarios for the Transition to 100% Clean, Renewable Energy	In progress
Reduce Energy Poverty	In progress
Regional Climate Action in Energy Utility Regulatory Processes	In progress
Implement Tracking, Verification, and Reporting Requirements for Renewable Natural Gas Supply	In progress
Transition Corporate Energy Use to 100% Clean, Renewable Energy	In progress
Electrification Rates	In progress
Time-of-Use Rates, Demand Response Programs, & EV Peak Reduction Programs	In progress
Modernizing the Electrical Grid	In progress
Regional Grid Constraints	In progress
High Performance Heating and Cooling Equipment Import and Sale Standards	In progress
More Stringent Low Carbon Fuel Standards	In progress
Implement Renewable Gas Content Requirements	In progress
Regional Hydrogen Hub	In progress
Regional Sources of Liquid Biofuels	In progress
Metro Vancouver as a Regional Clean, Renewable Energy Provider	In progress
Innovative Research on Optimizing Energy Recovery from Waste Streams	In progress
Account for the Full Climate Impact of Fossil Fuel Production and Export Projects	In progress
Eliminate Subsidies and Public Financing for Fossil Fuels	In progress
Just Transition Plan for Workers and Communities Engaged in the Fossil Fuel Industry	In progress

Comprehensive Climate Risk and Vulnerability Assessment	In progress
Pilot Innovative Renewable Energy + Storage Systems to Improve Resiliency	In progress
Ensure Critical Regional Infrastructure has Backup Power	In progress
Minimize Air, Land, and Water Impacts	Not started
Prioritize Sustainability in Biofuel Feedstock	Not started
Expand Anaerobic Digestion of Agricultural Waste	Not started
Phase Down Use of Thermal Coal and Petroleum Coke	Not started
Prepare for Regional Disruption due to Extreme Weather Events	Not started
Protect and Increase Resilience of Existing Regional Energy Generation Infrastructure	Not started
Protect and Increase Resilience of Existing Energy Distribution Infrastructure	Not started
Phase Down Use of Thermal Coal and Petroleum Coke	Not started
Streamline Emission Requirements for Anaerobic Digestion Facilities	Planned for Future
Vehicle-to-Grid Technologies	Planned for Future

Industry & Business

IMPLEMENTATION (AS OF JUNE 2025):
OF 28 TOTAL ACTIONS: 2 COMPLETE, 16 IN PROGRESS, 2 NOT STARTED, 8 PLANNED FOR FUTURE YEARS

ACTION	STATUS
More Stringent Greenhouse Gas Requirements for Large Industrial Emitters	Complete
Tighten Emissions Regulation for Non-Road Diesel Engines	Complete
Integrate Greenhouse Gases into Emission Regulations and Permits	In progress
Implement Renewable Gas Content Requirements	In progress
Industrial Emission Reduction Incentives	In progress
Develop Sector-Specific Regulations	In progress
Provincial and Federal Industrial Emission Standards	In progress
Carbon Tariffs	In progress
Phase out High Global Warming Refrigerants	In progress

Emission Standards for New Non-Road Equipment	In progress
Funding for Cleaner Non-Road Equipment	In progress
Identify Infrastructure Needs for Zero Emission Non-Road Equipment	In progress
Encourage Cleaner Non-Road Equipment through Municipal Approvals	In progress
Awareness Program on Zero Emission Non-Road Equipment	In progress
Transition Metro Vancouver's Corporate Non-Road Fleet to Zero Emissions	In progress
Carbon Capture in Metro Vancouver Region	In progress
Low Carbon Metro Vancouver Corporate Procurement	In progress
Assess Regional Climate Risks and Vulnerability to Support Business Decision-making	In progress
Regional Industrial Facilities Emissions Working Group	Not started
Identify Climate Vulnerability by Clusters with Industry and Business Sectors	Not started
Develop Carbon Capture Standards	Planned for Future
Regional Low Carbon Procurement	Planned for Future
Integrate Climate Considerations into Standard Business Practices	Planned for Future
Support Knowledge-Sharing to Increase Resilience to Severe Storms and Flooding	Planned for Future
Coordinate Flood Protection and Flood Risk Management for Industrial Lands	Planned for Future
Support Employers in Developing Response Plans for Extreme Heat and Air Quality Events	Planned for Future
Apply Leading Water Efficiency Standards to Industry	Planned for Future
Promote Water Efficiency Retrofit Incentives and Rebates for Industries and Businesses	Planned for Future

Nature & Ecosystems

IMPLEMENTATION (AS OF JUNE 2025):
OF 31 TOTAL ACTIONS: 1 COMPLETE, 28 IN PROGRESS, 0 NOT STARTED, 2 PLANNED FOR FUTURE YEARS

	ACTION	STATUS
	Explore Opportunities to Overcome Barriers to natural asset management	Complete
BIG Move	Protect an Additional 10% of the Region for Nature	In progress
Corporate LEADERSHIP	Protect, Restore, and Enhance Natural Areas at the Regional Scale	In progress
	Protect, Restore, and Enhance Nature at the Local Scale	In progress
Corporate LEADERSHIP	Incorporate Climate Change Planning into Protected Area Management	In progress
	Prioritize the Conservation of Ecosystem Health and Biodiversity in BC Forest Management	In progress
	Support Ecosystem Protection, Enhancement, and Restoration	In progress
	Reverse the Loss of the Region's Ecosystems	In progress
Corporate LEADERSHIP	Manage Invasive Species	In progress
	Develop a Regional Green Infrastructure Network	In progress
	Green Urban Areas	In progress
Corporate LEADERSHIP	Green the Regional Greenways Network	In progress
	Minimize Ecosystem Fragmentation	In progress
	Develop Data and Resources to Support Ecosystem Connectivity	In progress
BIG Move	Incorporate Natural Assets into Asset Management and Financial Planning	In progress
Corporate LEADERSHIP BIG Move	Integrate Ecosystems and their Services into the Design of Major Infrastructure	In progress
	Consider Ecosystems and their Services in Major Development Decisions	In progress
	Support Natural Asset Management at the Local Level	In progress
BIG Move	Achieve 40% Tree Canopy Cover Within the Region's Urban Areas	In progress
	Provide Data and Resources to Support Urban Forest Management	In progress
	Improve Local Regulations and Management Practices	In progress
	Convene Partners on Urban Forestry Issues	In progress

Consider Equity and Human Health in Urban Forestry Planning	In progress
Explore Innovative Funding and Incentive Programs	In progress
Include Nature-Based Solutions in Climate Action Plans	In progress
Support the Implementation of Nature-based Solutions	In progress
Manage Forests in the Context of a Changing Climate	In progress
Advance Nature-Based Solutions to Address Flood Hazards	In progress
Partner with Others to Address Climate Change Issues in Coastal and Marine Ecosystems	In progress
Plan for Climate Change Impacts on Ecosystems	Planned for Future
Develop our Understanding of Coastal Ecosystems and Blue Carbon Potential	Planned for Future

Agriculture

IMPLEMENTATION (AS OF JUNE 2025):
OF 68 TOTAL ACTIONS: 4 COMPLETE, 11 IN PROGRESS, 1 NOT STARTED, 52 PLANNED FOR FUTURE YEARS

ACTION	STATUS
Reduce Emissions from Greenhouses	Complete
Increase Capacity to integrate climate change into business operations	Complete
Align with the Regional Green Infrastructure Project	Complete
Estimate financial value of ecosystem service on agricultural lands	Complete
Prepare a comprehensive, regional high resolution map of ecosystem services locations on agricultural land.	In progress
Review how regional policy can recognize and support Indigenous Food Sovereignty	In progress
Encourage and Prioritize Local Agriculture	In progress
Determine how Agriculture can Benefit from Restoration and Protection of Ecosystems	In progress
Explore and build a long-term funding mechanism to support payment for ecosystem services	In progress
Undertake a review of the Regional Food System Strategy	In progress
Develop a comprehensive analysis of the sub-regional sources of water used by agricultural sector.	In progress
Provide viable and tangible solutions to ensuring water resources need by agriculture are sustainable.	In progress

Explore innovative sources and new technology for water re-use.	In progress
Explore ways to take advantage of rainfall collection opportunities.	In progress
Update water demand model	In progress
Determine appropriate agricultural-focused uses on land with limited potential for soil-based agriculture	Not started
Prepare an Agricultural Land Protection and Viability Strategy	Planned for Future
Better define agricultural uses, agricultural-supporting uses and clarify role of rural lands	Planned for Future
Develop a comprehensive strategy to manage small lot agricultural lands potentially exempt from the ALCA	Planned for Future
Advocate to Limit Utility Services Extension	Planned for Future
Implement soil movement tracking within agricultural areas	Planned for Future
Change tax structure to reduce incentives for non-farm use development in ALR	Planned for Future
Incentivize, increase viability of, and prioritize soil-based agriculture	Planned for Future
Determine appropriate agricultural-focused uses on land with limited potential for soil-based agriculture	Planned for Future
Review how regional policy can be strengthened to reduce encroachment of urban uses	Planned for Future
Review how regional policy can be strengthened to reduce negative impacts of urban development on adjacent agricultural uses	Planned for Future
Update Section 2.2 of Metro 2050 to be consistent with November 2019 MVRD Board decision	Planned for Future
Enhance funding to develop and implement Environmental Farm Plans	Planned for Future
Enhance funding and develop and promote BMPs to support using Environmental Farm Plans	Planned for Future
Provide reliable incentives and technical guidance to support low emission practices	Planned for Future
Increase awareness and accessibility to the Environmental Farm Plan	Planned for Future
Funding for programs that accelerate the use of cleaner agricultural equipment	Planned for Future
Incentives or programs that help to decommission old equipment in place of zero emission equipment	Planned for Future
Develop pilot study to test wide-spread use of zero emission agriculture equipment	Planned for Future
Expand development of anaerobic digestion facilities	Planned for Future
Help establish new anaerobic digestion facilities	Planned for Future
Support successful operation of existing anaerobic digestion facilities	Planned for Future

Prepare passive design standards specific to greenhouse operations	Planned for Future
Develop simple anaerobic digestion emission regulation	Planned for Future
Develop multi-stakeholder centralized agricultural waste collection facility in the region to support anaerobic digestion	Planned for Future
Create comprehensive information package for the agricultural sector to support anaerobic digestion facilities	Planned for Future
Create comprehensive information package for member jurisdictions on how to support anaerobic digestion facilities	Planned for Future
Provide on-line decision support tools to help greenhouse operators manage upgrades	Planned for Future
Update regional emissions inventory with greenhouse-specific data	Planned for Future
Work with the greenhouse industry to collect data on greenhouse carbon dioxide requirements	Planned for Future
Expand our collective knowledge and understanding of the role of soil health in supporting long-term agricultural viability and resilience and as a local source that can be used to help reduce carbon emissions within the Lower Mainland	Planned for Future
Work with the BC Government, member jurisdictions, the agricultural industry and other regional partners to support the long-term collection and open source provision of soil carbon data	Planned for Future
Work with the BC Government and other key stakeholders to develop actionable programs specific to soil carbon storage and wood perennial sequestration on agricultural lands, including providing benchmarking data	Planned for Future
Strengthen Outreach Program on Reducing Agricultural Emissions	Planned for Future
Prepare a regional vulnerability assessment of agricultural lands specific to climate change impacts	Planned for Future
Support pilot projects to illustrate regenerative agriculture	Planned for Future
Monitor outcomes of the BC Living Lab projects to determine alignment with regional policies	Planned for Future
Pilot program to expand local pollinator populations	Planned for Future
Develop a toolkit about a circular water economy	Planned for Future
Examine feasibility and benefits of committing to programs that address the effects of climate change on agricultural operations	Planned for Future
Introduce and support biovigilance programs to local farmers	Planned for Future
Develop guidance materials to support natural asset management	Planned for Future
Address knowledge gap between agricultural sector and the benefits and applications of regenerative agriculture	Planned for Future
Support financial investment in the agricultural sector through incentive programs and funding sources	Planned for Future

BIG Move	Establish pilot projects that carry the financial and operational burden of testing new technological and agri-tech systems	Planned for Future
BIG Move	Establish a cost-sharing or group purchase program to share new agri-tech innovations across the agricultural sector	Planned for Future
	Collaborate with agricultural-focused research and innovation entities	Planned for Future
	Develop an agricultural information network focusing on cost benefit analysis needed for farmers	Planned for Future
Corporate LEADERSHIP	Prepare an interactive information resource kit	Planned for Future
	Determine how the agricultural community can address issues raised in the Provincial Stewarding Watercourse study	Planned for Future
Corporate LEADERSHIP	Support pilot projects that focus on diversifying local food production	Planned for Future
	Develop regional signage to showcase local food production	Planned for Future
	Advocate for changes to the tax structure for agricultural properties	Planned for Future

Endnotes

1 International Energy Agency. Global Energy Review 2025. https://www.iea.org/reports/global-energy-review-2025

2 Metro Vancouver Carbon Neutral 2050 Policy and Modeling Report, 2021. https://metrovancouver.org/services/air-quality-climate-action/Documents/carbon-neutral-metrovancouver-region.pdf

3 Metro Vancouver Air Quality and Climate Action Committee Report: Climate 2050 Roadmap Update. https://metrovancouver.org/boards/AQC/AQC-2025-05-09-AGE.pdf

4 In January 2024, the Metro Vancouver Board directed staff to not proceed with engagement on a potential regulatory approach that proposed to establish GHG emission limits and GHG reporting requirements for existing large buildings. The board expressed concerns about whether Metro Vancouver was the appropriate jurisdiction to effectively implement regulations for large buildings and about affordability as it related to potential program fees

5 Clean Energy Canada, Morris J. Wosk Centre for Dialogue at Simon Fraser University. 2024. Opening the Door. https://cleanenergycanada.org/report/opening-the-door/

6 S&P Global Mobility Canadian Automotive Insights. Figure uses average of quarterly EV sales data for 2024 for Metro Vancouver CMA

7 Clean Energy Canada, Morris J. Wosk Centre for Dialogue at Simon Fraser University. 2024. The Scenic Route. https://cleanenergycanada.org/report/the-scenic-route

8 Uses 2022 data for rail emissions

9 Total for agriculture does not include GHG emissions from greenhouses, which are included in Buildings sector emissions

10 Climate Projections For Metro Vancouver. Approximately 30% more precipitation can be expected to fall on the 95th percentile wettest days, and approximately 60% more on the 99th percentile wettest days.

11 Includes GHG emissions from the Metro Vancouver region's solid waste system, including Waste-to-Energy and Landfills.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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

Climate 2050 Progress Report 2025

Johann Zerbe
Senior Policy and Planning Analyst

Jason Emmert
Program Manager, Regional Climate Action Policy

Air Quality and Climate Committee Meeting - September 12, 2025

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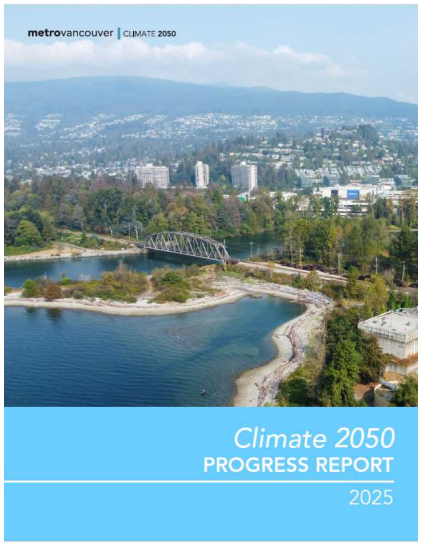
1

INSIDE THE CLIMATE 2050 PROGRESS REPORT

- Highlights of climate action by Metro Vancouver, member jurisdictions, and others
- Updated GHG emissions trends: 2019-2023
- Implementation updates for each Issue Area
- Key Performance Indicators



2

PROJECT HIGHLIGHT: SUPPORTING CLEAN ENERGY UPGRADES IN BUILDINGS

- CleanBC Better Homes program issued 4,429 heat pump rebates in region in 2024
- New Westminster providing top-ups to homeowners to install electric heat pumps
- District of West Vancouver, District of North Vancouver, and City of North Vancouver partnering on the Jump on a Heat Pump program

Heat pumps lower household energy bills and improve health

PROJECT HIGHLIGHT: ENABLING ACCESSIBLE AND SAFE ACTIVE TRANSPORTATION

- TransLink has invested $144 million in 104 active transportation projects across the region
- Shared e-mobility programs in Coquitlam and Surrey saw high uptake and are being expanded

E-mobility pilot program in Coquitlam

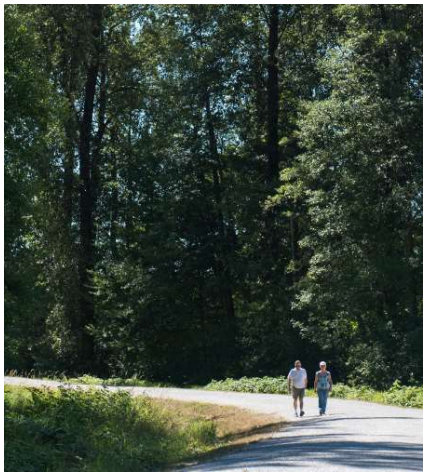
PROJECT HIGHLIGHT: USING SEWER HEAT TO PROVIDE RENEWABLE ENERGY

- 30 projects underway across the region to provide low-carbon heating and cooling through Metro Vancouver's sewer heat
- At Squamish Nation's new Sen̓áḵw development, district energy system will reduce 120,000 tonnes of GHG over 30 years

Squamish Nation's Sen̓áḵw development

PROJECT HIGHLIGHT: EXPANDING URBAN FORESTS TO REDUCE EMISSIONS AND CLIMATE IMPACTS

- Maple Ridge and West Vancouver's Urban Forest Management Plans are helping to increase tree canopy cover
- Township of Langley's Tree Voucher Program is helping residents plant trees on their property to expand tree canopy
- Metro Vancouver's Tree Guide is supporting climate resilient tree species selection

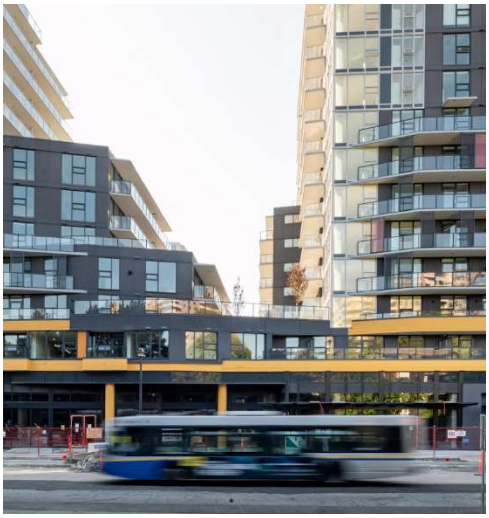


Urban forest in Maple Ridge

PROGRESS TOWARDS CLIMATE 2050 TARGETS

Positive trends and opportunities:

- Per capita GHG emissions have decreased by 16% since 2010
- Electric vehicles make up 27% of new vehicle sales
- Residents are driving less and walking and cycling more
- New buildings are 20% more energy efficient than the 2018 building code



Transit Oriented Development in the region

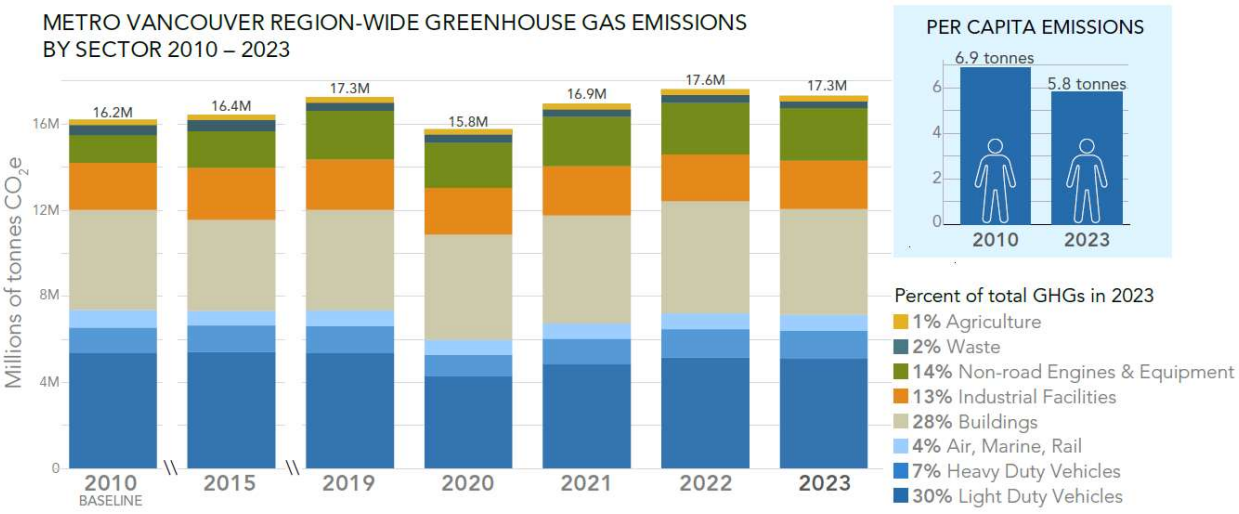
PROGRESS TOWARDS CLIMATE 2050 TARGETS

Challenges:

- Political and economic uncertainty associated with international trade
- Regional affordability challenges
- Rising capital costs of infrastructure
- Mounting costs of responding to the impacts of climate change

Wildfire smoke over Bowen Island

REGIONAL EMISSIONS RISING, PER CAPITA DECREASING



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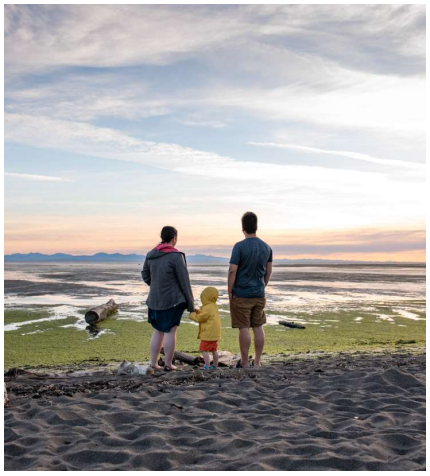
IMPLEMENTING CLIMATE ACTION TOGETHER

- Emissions are starting to decrease in some sectors
- Continued collaboration is needed to reduce emissions and manage climate impacts
- Staff will continue to seek direction from the AQC and Board in implementing *Big Moves* and other key *Climate 2050* actions



Iona Beach Regional Park

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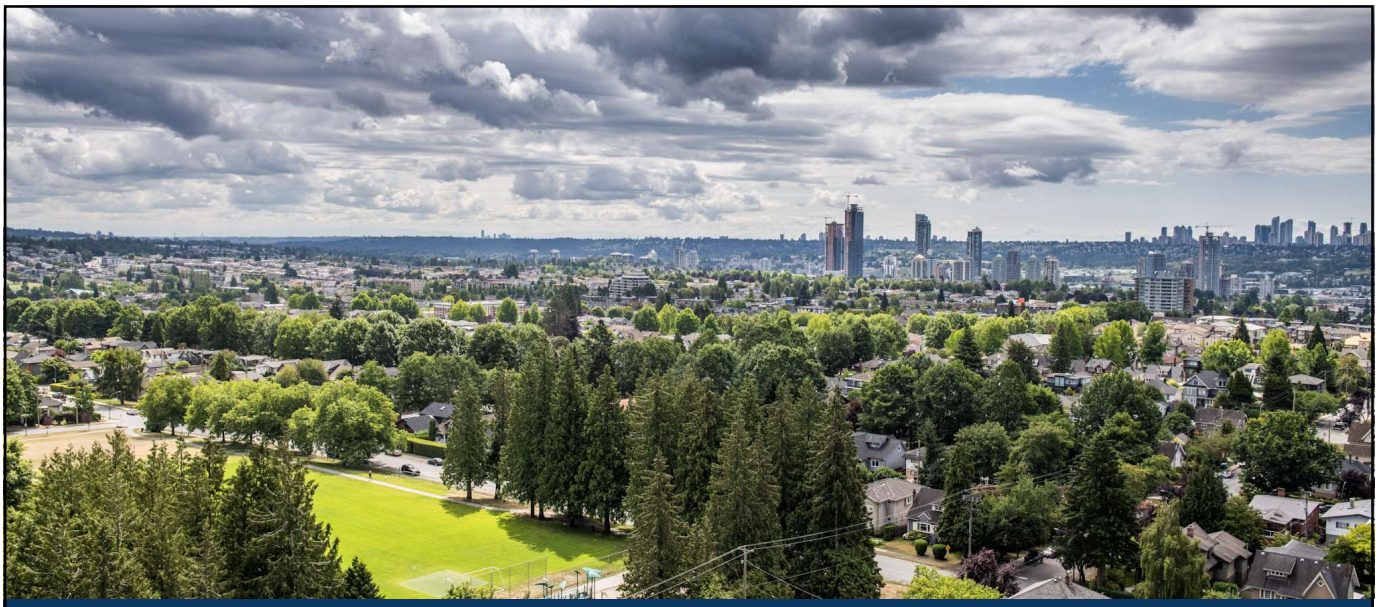

Thank you! Questions?

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Air Quality and Climate Committee

From: Hansi Liu-Atkinson, Division Manager, Corporate Climate Action Services,
Adrian Lynch, Senior Project Engineer, and
Laura Chen, Policy Analyst, Air Quality and Climate Action Services

Date: August 28, 2025 Meeting Date: September 12, 2025

Subject: **Corporate Climate and Energy Performance Report**

RECOMMENDATION

That the MVRD Board receive for information the report titled, "Corporate Climate and Energy Performance Report", dated August 28, 2025.

EXECUTIVE SUMMARY

Metro Vancouver is on track to meet its 2030 target of reducing corporate energy-related greenhouse gas (GHG) emissions by 45% below 2010 levels. In 2024, Metro Vancouver emitted 24,888 tonnes of carbon dioxide equivalent (CO_2e), a 7% reduction from the 2010 baseline, while also decreasing energy purchased and GHG emissions per capita by 2% and 3% respectively from 2023. These improvements were largely driven by increased self-generated renewable energy and the transition to renewable fuels in operations. Metro Vancouver is also implementing projects to proactively manage climate risk, which helps to ensure that infrastructure and facilities remain strong and viable into the future.

PURPOSE

To provide an update to the Air Quality and Climate Committee and the MVRD Board regarding corporate actions and progress towards reducing GHG emissions, increasing energy efficiency, and adapting to climate change.

BACKGROUND

To deliver services to a growing region of over three million residents, Metro Vancouver purchases energy to power its facilities and operations in the form of electricity, as well as fossil and renewable fuels. Metro Vancouver has adopted the following commitments through Board-approved policies to effectively take climate action and reduce energy waste for the organization's facilities and assets:

1. Set climate and energy targets, including achieving corporate carbon neutrality by 2050, as described in *Climate 2050*.
2. Use waste heat from systems to displace fossil fuels, reduce GHG emissions, and increase infrastructure and energy resilience.
3. Transition to low carbon technologies for assets and facilities where proven and financially feasible options exist.
4. Proactively manage climate risk to stay resilient to climate change.

METRO VANCOUVER'S ENERGY AND EMISSIONS PROFILE

In 2024, corporate operations used over 1.7 million gigajoules of energy to power facilities and buildings, with energy expenditures totaling approximately $32 million. Purchased electricity was the primary type of energy consumed, followed by fossil fuels (diesel and natural gas) and renewable fuels (renewable natural gas). Mobile fuels (e.g., hauling of waste and residuals, and corporate fleet) represented the largest portion of energy-related GHG emissions. The second largest source of GHG emissions was stationary fuels, such as fossil natural gas used by facilities.

Metro Vancouver also generates a substantial amount of energy, using most of it and selling the rest to BC Hydro and FortisBC. In 2024, revenue from energy sales totaled $4.4 million, which was lower than normal operating years as the energy-generating turbine at the Waste-to-Energy Facility was offline until mid-2024. In addition to reducing GHG emissions and generating energy, Metro Vancouver's service areas help sequester emissions. For example, approximately 17,800 tonnes CO_2e were sequestered by the region's extensive network of regional parks, which play a critical role in climate action acting as carbon sinks.

PROGRESS TO 2030

Metro Vancouver is projecting to be on track to meet the 2030 target of reducing energy-related emissions by 45%. This is primarily a result of:

- Transitioning away from fossil fuels to renewable diesel for new or updated hauling contracts for waste and utility residuals;
- Switching to renewable natural gas at wastewater treatment facilities;
- Continued electrification of heating, cooling, and ventilation in Metro Vancouver Housing's rental housing; and
- Adopting electric fleet vehicles and other renewable fleet alternatives.

The largest reduction in energy-related GHG emissions on the pathway to meeting the 2030 target is expected to occur in 2025 and 2026, when hauling operations for waste and utility residuals switch from using fossil diesel to renewable diesel.

CORPORATE KEY PERFORMANCE INDICATORS

In addition to tracking absolute GHG emissions, Metro Vancouver uses key performance indicators that offer performance insights to evaluate improvements and reductions. Metro Vancouver's population increased by approximately 1.5% from 2023 to 2024. Despite the region's growth, the organization continues to increase the efficiency of energy use and decrease the intensity of energy-related emissions for services delivered. Energy use per capita and GHG emissions per capita also decreased, as summarized below.

Metro Vancouver's 2024 Energy-Related Key Performance Indicators	
Purchased energy use per capita from 2023	-2%, down to 0.38 GJ/capita
GHG emissions per capita from 2023	-3%, down to 8 $kgCO_2e$/capita
Total energy-related GHG emissions from 2010	-7%, down to 24,888 tonnes CO_2e

ALTERNATIVES
As this is an information report, no alternatives are provided.

FINANCIAL IMPLICATIONS
The 2024 annual budget included funding to advance the corporate climate action and energy management goals and overall, the program achieved an estimated $421,000 target in operational cost savings through improvements in energy use. The program also secured $615,000 in external funding to implement energy efficiency and GHG emissions reduction projects. Continued action on energy management and climate action will be brought back to both the Air Quality and Climate Committee and the MVRD Board in coordination with departmental budgeting and work planning processes.

CONCLUSION
Metro Vancouver has made significant progress to reduce energy-related emissions by implementing transitions to renewable energy in operations, electrifying buildings and fleet vehicles, and supporting energy self-generation. These actions have put the organization on track to meet the 2030 GHG emissions reduction target. Further, Metro Vancouver continues to explore actions to increase resilience to climate change and deliver essential services to a growing region now and for many generations to come.

ATTACHMENTS
1. “Corporate Climate and Energy Performance Report”, dated August 2025.
2. Presentation re: Corporate Climate and Energy Performance Report, dated September 12, 2025.

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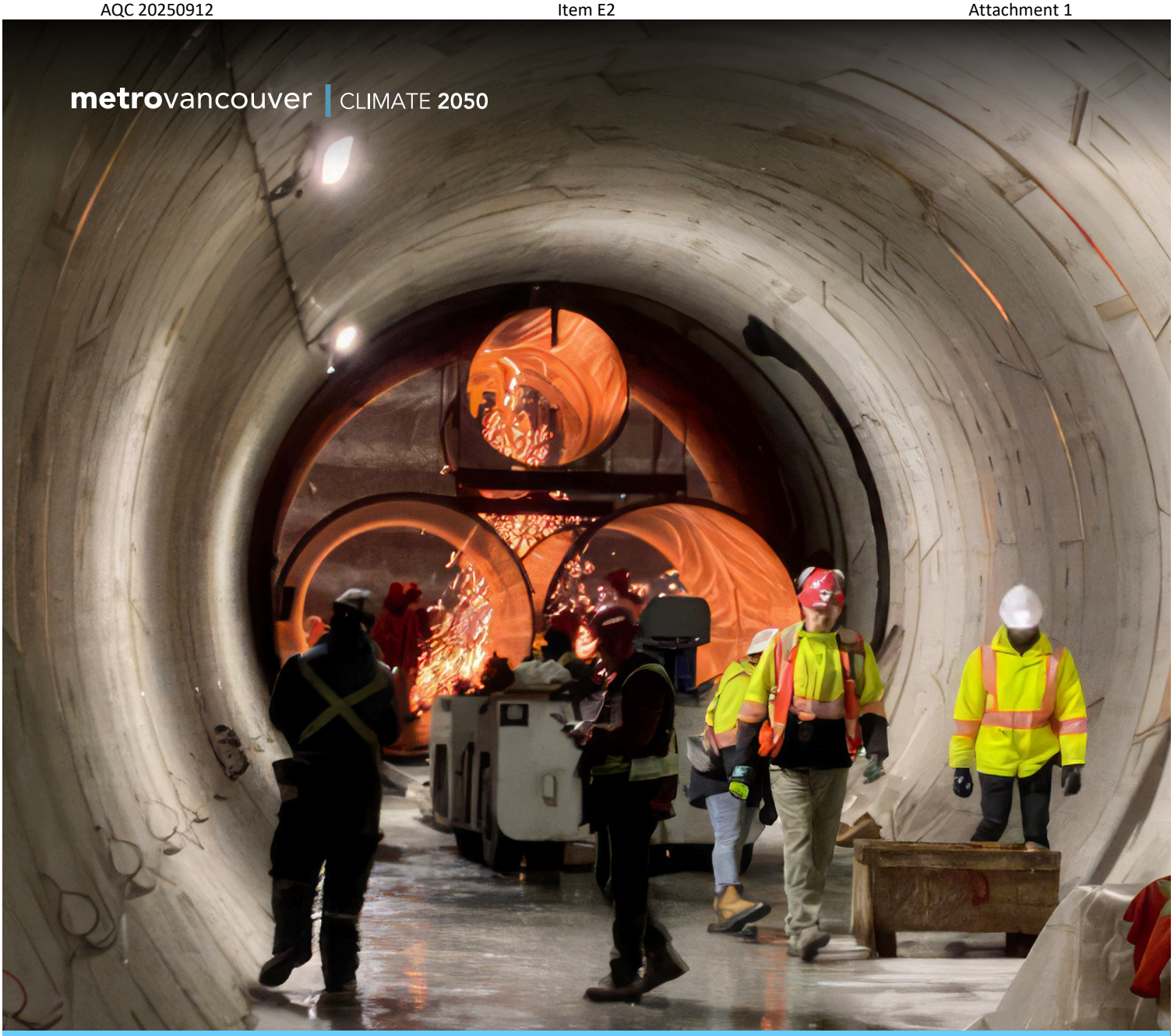


Corporate Climate and Energy Performance Report

2024

Indigenous Territorial Acknowledgement

Metro Vancouver acknowledges that the region's residents live, work, and learn on the shared territories of many Indigenous peoples, including 10 local First Nations: q̓i̓c̓əy̓ (Katzie), q̓ʷɑːn̓ƛ̓ən̓ (Kwantlen), kʷikʷəƛ̓əm (Kwikwetlem), máthxwi (Matsqui), xʷməθkʷəy̓əm (Musqueam), qiqéyt (Qayqayt), Semiahmoo, Sḵwx̱wú7mesh Úxwumixw (Squamish), scəẇaθən məsteyəxʷ (Tsawwassen), and səlilwətaɬ (Tsleil-Waututh).

Metro Vancouver respects the diverse and distinct histories, languages and cultures of First Nations, Métis, and Inuit, which collectively enrich our lives and the region.

About Metro Vancouver

Metro Vancouver is a diverse organization that plans for and delivers regional services, including water, sewers and wastewater treatment, and solid waste management. It also regulates air quality, plans for urban growth, manages a regional parks system, provides affordable housing, and serves as a regional federation. The organization is a federation of 21 municipalities, one electoral area, and one treaty First Nation located in the region of the same name. The organization is governed by four Boards of Directors of elected officials, one for each legal entity making up Metro Vancouver with representation from member jurisdictions.

Cover: Second Narrows tunnel, South Shaft

4515 Central Boulevard, Burnaby, BC, V5H 0C6
metrovancouver.org
August, 2025

Contents


Annacis WWTP Trickling Filter Dome Replacement

Executive Summary

As our region experiences rapid growth, the demand for high-quality essential services is also growing. Every day, Metro Vancouver provides services and solutions to over three million people in their households and jobs. Providing clean drinking water, wastewater treatment, solid waste management, and related activities release almost 25,000 tonnes of greenhouse gas (GHG) emissions per year. The good news is that the organization is well on its way to meeting its target of reducing energy-related GHG emissions by 45 per cent by 2030 with a 2010 baseline. Metro Vancouver is accomplishing this while managing growth, preparing for the future climate, and ensuring infrastructure is resilient for the long term.

Metro Vancouver is investing in cleaner energy, adopting efficient technologies, and continuously improving how energy is used. In addition, GHG emissions per capita is decreasing, even as the region's population and energy demands rise. This is a promising sign of the ability to make more progress in the years ahead.

This report contains snapshots of how energy is used and managed in Metro Vancouver's service areas as well as highlights of projects underway to achieve targets. Also included are resilience projects that aim to manage climate risk. Resilience is foundational to Metro Vancouver's corporate commitments and these projects are designed to help ensure that current infrastructure and facilities remain strong and viable into the future.

Understanding the Organization

Metro Vancouver Organizational Profile

Metro Vancouver provides vital regional services to a growing region of over three million residents. Metro Vancouver's facilities and contractors purchase energy in the form of electricity and both fossil and renewable fuels to power its operations in:

- Liquid Waste Services
- Water Services
- Solid Waste Services
- Metro Vancouver Housing
- Regional Parks
- Corporate Services: Fleet and EV Infrastructure

In 2024, Metro Vancouver consumed over 1.7 million gigajoules of energy, amounting to approximately $32 million in energy purchase costs. That's about enough energy for 17,000 homes[1]. Metro Vancouver also generates a substantial amount of energy, using most of it and selling the rest to BC Hydro and FortisBC. In 2024, revenue from energy sales totaled $4.4 million, which was lower than typical operating years because the energy-generating turbine at the Waste-to-Energy Facility was offline until mid-2024. On average, typical energy sales total approximately $8 million per year.

BC's generation of hydroelectricity produces a relatively clean source of energy, limiting greenhouse gas (GHG) emissions in operations that are powered by electricity. However, the combustion of fossil fuels in buildings, facilities, and fleet vehicles continues to produce significant GHG emissions. In 2024, total energy use resulted in corporate GHG emissions of 24,888 tonnes of carbon dioxide equivalent (CO_2e), comparable to about 8,000 passenger vehicles[1]. Other types of emissions are also produced, such as emissions from processing waste at solid waste and liquid waste facilities.

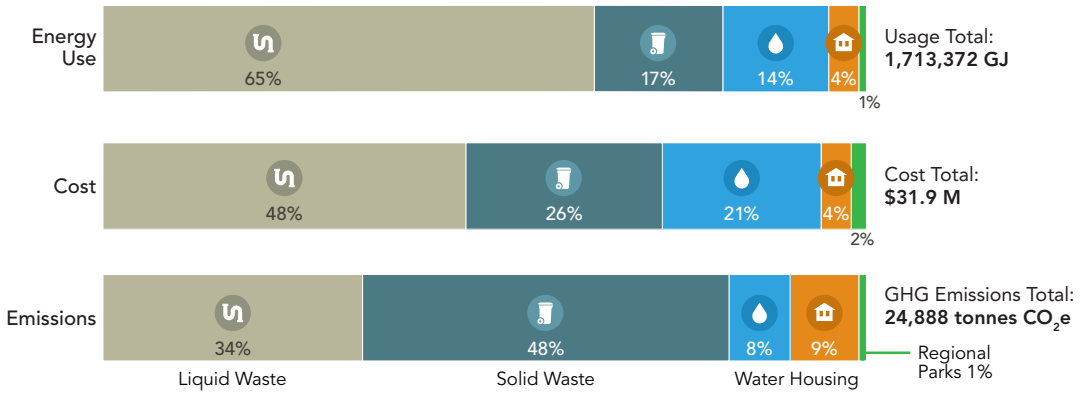
Corporate Climate and Energy Performance Report

Metro Vancouver's *Climate 2050* strategy commits to achieving a carbon neutral, resilient region by 2050 and includes a target to reach corporate carbon neutrality by 2050. Metro Vancouver's management plans detail priorities and initiatives that support this corporate target and the quest for a more resilient, low carbon, and equitable future.

Staff measure performance across all service areas and report to the public through this *Corporate Climate and Energy Performance Report*, which focuses on GHG emissions and energy use for facilities and assets owned by Metro Vancouver.

Metro Vancouver also works with member jurisdictions to set regional targets. Regional progress is reported through the *Climate 2050* annual progress report. Corporate progress contributes to the regional targets, and in many cases demonstrates energy management best practices.

Energy use, cost, and GHG emissions by service area Metro Vancouver 2024



1 Source: Greenhouse Gas Equivalencies Calculator | Natural Resources Canada

Corporate Climate and Energy Management

Pathway to Performance

By managing energy, climate impacts are reduced. Metro Vancouver recognizes that energy use operates in a system of interconnected resources — water, energy, and land. Metro Vancouver applies principles of efficient technology and cleaner energy sources to this system, and regular performance assessments help refine actions and make better decisions.

Systems Thinking

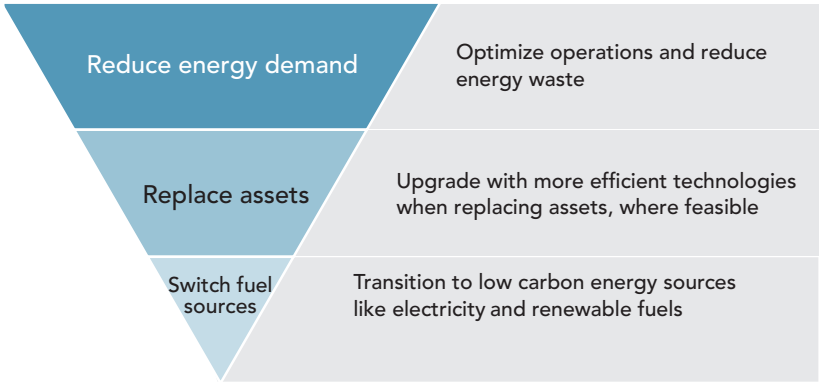
Systems thinking means looking at relationships between services and the region when considering how to manage energy and mitigate or adapt to climate change.

The region is growing, and services, facilities, and operations must expand and adapt so that high-quality essential services can be maintained, meet current and future regulatory requirements, stay resilient, and keep assets in good repair. Achieving corporate carbon neutrality, even as the region grows, requires systems thinking. This means looking beyond individual and isolated actions to consider relationships between energy use and generation, GHG emissions, and the responsibility to maintain important services to the region.

To understand climate and energy as a system, Metro Vancouver uses key performance indicators — such as emissions produced per capita — that represent its services. These allow improvements and reductions to be measured from energy management decisions across the system.

Energy Management Principles

Metro Vancouver is guided by international best practices and core principles of energy management, which are considered in order of impact:



Continuous Improvement

Metro Vancouver prioritizes continuous improvement by regularly assessing performance and refining actions and strategies based on data and criteria. This approach aligns with ISO 50001, requiring the setting of clear commitments and plans, implementing projects that meet these commitments, measuring progress, revaluating plans and performance, and adjusting actions as needed. By committing to this iterative approach, Metro Vancouver strives to make better, science-backed decisions.

Measuring Progress

Metro Vancouver strives to measure progress on climate action and energy management using international standards.

Energy and GHG Emissions Inventory

Metro Vancouver measures progress on corporate GHG emissions using an annual Corporate Energy and GHG Emissions Inventory. This inventory is built using the GHG Protocol, a globally recognized GHG accounting standard for measuring and managing GHG emissions. Metro Vancouver also maintains a region-wide GHG emissions inventory and updates sector-specific information on an annual basis.

ISO 50001

ISO 50001 – Energy Management is an international standard that provides a practical way to improve energy use and GHG emissions. ISO 50001's "Plan, Do, Check, Act" cycle is a tool that helps organizations make progress.

Metro Vancouver is developing a Corporate Climate and Energy Management System (CCEMS), which uses ISO 50001 to standardize the ways operations and projects are managed. The CCEMS will support business practices that balance cost effectiveness, efficiency, and impact. Adoption of ISO 50001 is consistent with other Metro Vancouver management systems, including ISO 9001 – Quality Management System and ISO 14001 – Environmental Management System.

Emissions Not Related to Energy

Emissions originate from sources other than the direct use of energy, such as processes and construction materials. Work is underway to quantify and establish goals for these other types of emissions in water and wastewater collections and treatment systems. Metro Vancouver is also working to better understand embodied emissions from building and upgrading infrastructure.

Corporate Commitments

Guiding Work for Corporate Climate Action

Metro Vancouver's corporate commitments to address climate change and manage energy combine strategic objectives, risk management, and regulatory requirements. These commitments support Metro Vancouver's Corporate Energy Management Policy.

Corporate Commitment 1:

Set Climate and Energy Targets

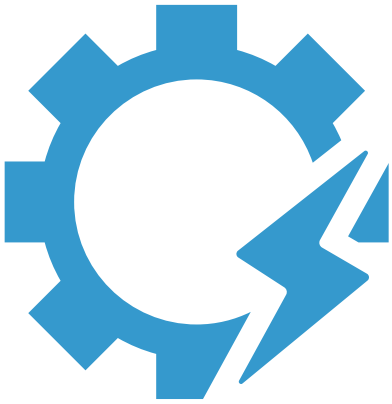
To achieve corporate carbon neutrality by 2050, Metro Vancouver has set an interim target to reduce energy-related emissions by 45 per cent by 2030 compared to a 2010 baseline. Energy-related emissions include emissions from the combustion of fossil fuels (e.g., liquid fuels, natural gas) and electricity use.

To reduce energy waste and save on energy costs, efficiency targets are being developed within each service area. In addition to these targets, work will continue to understand process emissions from water and wastewater treatment systems and embodied emissions from construction materials like concrete.

Corporate Commitment 2:

Use Waste Heat from Systems to Displace Fossil Fuels

Waste heat recovery is a process that reuses heat energy that would otherwise be released into the atmosphere. Reusing this energy from Metro Vancouver's systems displaces fossil fuel use and reduces GHG emissions, increases infrastructure and energy resilience, diversifies energy supply, and reduces waste and operational costs. Metro Vancouver's Sewage and Waste Heat Recovery Policy details the goal to use heat to displace fossil fuel use when feasible. Along with waste heat recovery, electricity is generated at water facilities and used to avoid additional purchased energy.



Corporate Commitment 3:

Transition to Low Carbon Technologies for Assets and Facilities

Metro Vancouver is transitioning to low carbon technologies where proven and financially feasible. When planning and designing facilities, the use of low carbon energy is prioritized, often identifying electricity as the primary energy source.

Metro Vancouver aims to align with Envision Gold, LEED Gold, or an equivalent for infrastructure and building projects in line with Metro Vancouver's Sustainable Infrastructure and Buildings Policy. The Fleet Planning and Acquisition Policy details the goal to transition to zero-emission fleet vehicles, expand electric vehicle (EV) charging infrastructure, and adopt renewable fuels where electrification is not yet possible.

Corporate Commitment 4:

Proactively Manage Climate Risk

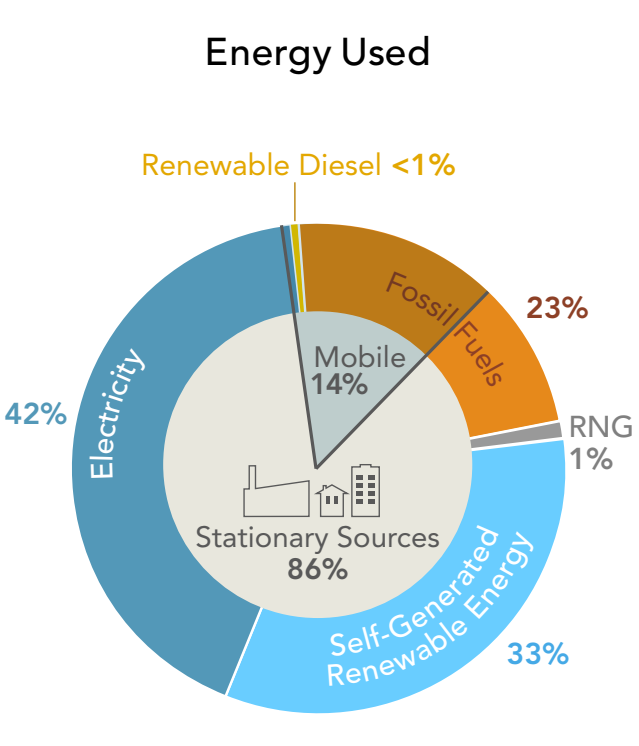
Supporting a resilient region means managing corporate assets — such as infrastructure, buildings, and land — in a way that keeps them resilient to the impacts of climate change. To be proactive, Metro Vancouver uses science-based projections to guide investment in climate adaptation measures. This results in the increased lifespan of physical assets, reduced future costs, and maintenance of high standards of service delivery.

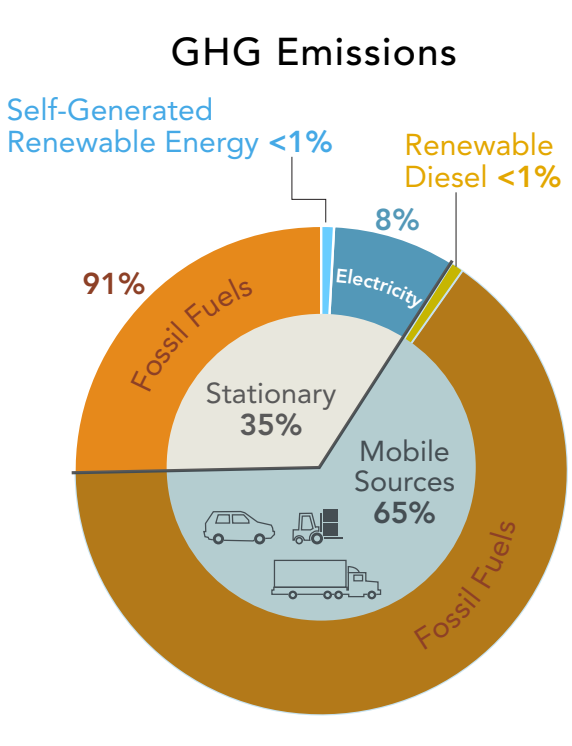
GHG Emissions and Energy Performance

Corporate Energy Use and Emissions in 2024

Energy use and related GHG emissions come from a variety of energy types. Purchased electricity was the primary type of energy consumed by Metro Vancouver in 2024 to power facilities, buildings and EV charging (42 per cent), followed by self-generated renewable energy and renewable natural gas, and fossil fuels (diesel, gasoline, propane and natural gas).

Mobile sources (65 per cent) represented the largest portion of energy-related GHG emissions. This includes corporate fleet and hauling of waste and residuals produced from waste treatment. The second largest source of GHG emissions was from fossil fuel use for stationary sources (26 per cent), such as natural gas used by facilities. Refer to Appendix for corporate energy-related GHG emissions and energy use data from 2020 to 2024.



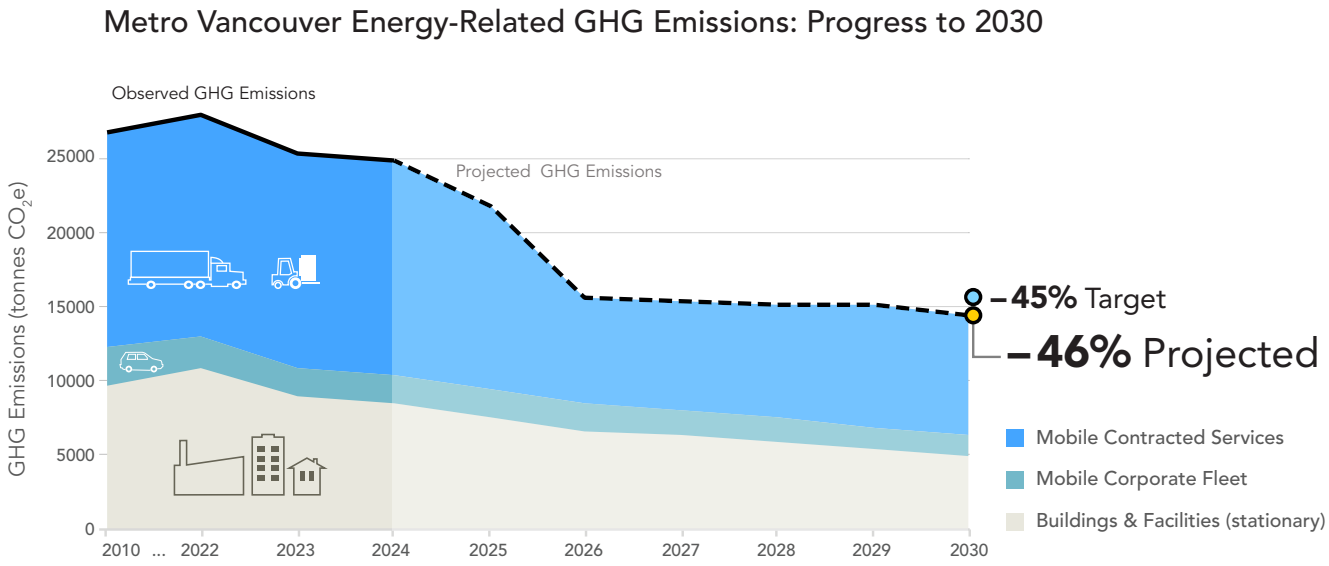


Progress to 2030 for Energy-Related Emissions

Metro Vancouver's 2010 energy-related GHG emissions baseline is 26,744 tonnes CO2e. Compared to the baseline, energy-related GHG emissions have reduced in areas that have the greatest impact, including:

- Transitioning away from fossil fuels in new or updated hauling contracts for waste and utility residuals
- Switching to renewable natural gas at wastewater treatment facilities
- Continued electrification of heating, cooling, and ventilation in rental housing
- Implementation of the Fleet Planning and Acquisition Policy to adopt electric fleet vehicles and other renewable fleet alternatives

These actions, alongside the gradual decrease in GHG emissions from electricity generation by BC Hydro, have put Metro Vancouver on track to meet the 2030 GHG emissions reduction target. In 2024, Metro Vancouver's total energy-related GHG emissions decreased one per cent to 24,888 tonnes CO_2e compared to 25,198 tonnes CO_2e in 2023. The largest reductions in energy-related GHG emissions are expected to occur in 2025 and 2026, when hauling operations for waste and utility residuals switches from using fossil diesel to renewable diesel.

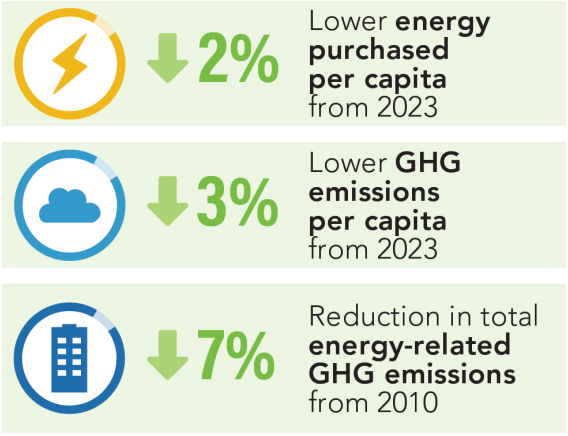


Corporate Key Performance Indicators

In addition to absolute GHG emissions reduction targets, Metro Vancouver uses key performance indicators, such as energy use and GHG emissions per capita, that offer meaningful performance insights to evaluate improvements and reductions.

Metro Vancouver's population increased by approximately 1.5 per cent from 2023 to 2024.[2] Despite the region's growth, the organization continues to increase the efficiency of energy use and decrease the intensity of energy-related emissions for services delivered. Metro Vancouver's purchased energy for corporate use was two per cent lower per capita (at 0.38 GJ/capita) while emissions produced per capita was three per cent lower (at 8 $kgCO_2e$/capita). The improvement in purchased energy efficiency resulted from greater self-generation of energy that was produced and used at wastewater treatment facilities.

Since 2010, energy-related GHG emissions have been gradually decreasing. As of 2024, Metro Vancouver's GHG emissions have decreased by seven per cent compared to 2010 to 24,888 tonnes CO_2e. Reductions in GHG emissions were primarily achieved through proactive changes in the way biosolids and residuals were transported in Liquid Waste Services and Solid Waste Services, along with the substitution of renewable natural gas from fossil natural gas at wastewater treatment plants and the Waste-to-Energy Facility.



Electricity Consumption

Since 2010, Metro Vancouver has partnered with BC Hydro as part of its Strategic Energy Management Program. Energy management initiatives with BC Hydro focus on efficiency (reducing energy waste), capacity (demand response), and electrification (fuel switching).

With BC Hydro's help, Metro Vancouver has achieved over 24 gigawatt hours in incremental operational electricity savings over the last 10 years and has saved approximately $2.4 million in incremental operational costs.

Avoided Emissions and Carbon Sinks

Metro Vancouver implements projects that help avoid the release of emissions, which is outside of the corporate target to reduce energy-related emissions. The organization is doing this by:

- Aligning with Envision Gold, LEED Gold, or equivalent standards for capital infrastructure and buildings
- Using waste heat that would otherwise be released into the atmosphere in renewable energy generation projects
- Offsetting the use of natural gas through district energy projects that replace gas with waste heat

The region's extensive network of parks also plays a critical role in climate action. Natural green spaces are carbon sinks, extracting carbon dioxide from the atmosphere and absorbing more carbon than they release (carbon sequestration). By protecting the Capilano, Seymour, and Coquitlam watersheds for drinking water, Metro Vancouver also protects those watersheds (60,000 hectares) as natural green space.

The system of 24 regional parks, five regional greenways, park reserves, and ecological conservancy areas are credited with total avoided emissions in 2024 of 17,800 tonnes CO2e.

2 Vukicevic, S. (2024, June 21). *Metro Vancouver Population Projections Update.* [Staff report to MVRD Board Meeting, 2024, July 26].

Services Area Performance

Alignment of Service Areas

Metro Vancouver's service areas that contribute to energy use, energy generation, and emissions are:

- Liquid Waste Services
- Water Services
- Solid Waste Services
- Metro Vancouver Housing
- Regional Parks
- Corporate Services: Fleet and EV Infrastructure

As the region continues to grow, it will be increasingly important to consider energy efficiency and diversification of energy supply. Strategic energy management plans are being developed for each service area and will include quantifiable and measurable actions, progress, and key performance indicators.

Liquid Waste Services

466,603 million litres wastewater treated in 2024, a **9% increase** from 2023

PERFORMANCE METRICS

12%
Lower **purchased energy use per ML** of wastewater treated from 2023

12%
Lower **GHG emissions per ML** of wastewater treated from 2023

4%
Reduction in **total energy-related GHG emissions** from 2023

$711,000
Revenue from **Renewable Natural Gas sold** to FortisBC

Metro Vancouver — through the Greater Vancouver Sewerage and Drainage District (GVS&DD) — collects and treats the region's wastewater from homes, businesses, industries, and institutions as well as rainwater runoff and snowmelt in areas with combined sewers. Metro Vancouver maintains a region-wide network of sewers and pump stations, operates five wastewater treatment plants, and conducts environmental monitoring. Nutrient-rich treated wastewater solids, called biosolids, are also managed, aiming to use 100 per cent of biosolids produced for land reclamation.

Liquid Waste Services was Metro Vancouver's largest energy user in 2024. Electricity is used to operate treatment plants and pump stations and renewable natural gas is used to heat facilities. Fossil and renewable fuels are used to fuel trucks that haul wastewater treatment residuals, such as biosolids, grit, and screenings. At wastewater treatment plants, digestion of wastewater solids produces biomethane-rich biogas — a clean, renewable energy source. Most of the biogas is used within the plants to generate heat and electricity. At one facility, excess biogas that is not used within the plant is upgraded and sold to FortisBC as renewable natural gas.

Performance

As the volume of wastewater changes, the energy needed to convey and treat it may also change. However, in 2024, energy purchased for Liquid Waste Services' operations was 12 per cent lower per million litres of wastewater treated compared to 2023, even though the amount of wastewater treated was nine per cent higher. This was primarily driven by increased production of self-generated energy from the cogeneration units at the treatment plants, which reduced the need for purchased energy. GHG emissions per million litres of wastewater treated also improved, showing a 12 per cent reduction. Total revenue from renewable natural gas sold was $711,000.

Total energy-related GHG emissions for 2024 were four per cent lower than 2023. This was driven by a reduction in the total amount of biosolids hauled due to near completion of the removal of the Iona biosolids stockpile. Refer to the Appendix for Liquid Waste Services' energy-related GHG emissions and energy use data from 2020 to 2024.

Key Considerations

In addition to meeting the needs of a growing region, regulatory requirements for higher levels of wastewater treatment will result in higher energy use. Liquid Waste Services focuses on ways to:

- Increase energy efficiency and reduce costs
- Generate low carbon energy like renewable natural gas
- Transition to low — or zero — emission technologies for hauling
- Implement energy and sustainability considerations into capital projects
- Effectively repurpose heat produced by treatment plants that would otherwise be released in the atmosphere
- Support district energy systems that benefit local communities by providing heat from wastewater
- Adapt to the impacts of climate change

Liquid Waste Services is working to understand non-energy-related emissions, such as process emissions from wastewater treatment and fugitive emissions from collection systems and treatment facilities. Liquid Waste Services is designing and implementing a monitoring and sampling plan to identify and analyze the actual sources and magnitudes of fugitive GHG emissions.

Project Highlights

Renewable Diesel for Biosolids Hauling

Liquid Waste Services manages contracts to haul biosolids from Metro Vancouver's wastewater treatment plants to locations across BC where we can use them beneficially — such as in land reclamation projects — and, when needed, to western Alberta for disposal. Hauling and use in land-related projects are important parts of the biosolids program, allowing all biosolids to be beneficially used and contributing to a circular economy.

Biosolids management is also a significant contributor to GHG emissions. In 2025, Liquid Waste Services worked with the hauling contractor to switch from fossil fuel - based diesel to renewable diesel. Renewable diesel will be used on most haul routes, though fossil fuel - based diesel may be required to supplement longer trips. The switch to renewable diesel is expected to reduce GHG emissions from biosolids hauling by 65 per cent, or approximately 11,000 tonnes CO_2e over the next five years. This will be the service area's most significant year-to-year reduction in emissions. It is significant as emissions will remain low in the future through continued use of renewable diesel. As the availability and infrastructure of renewable diesel increases, additional GHG reductions will be achieved.

Hydrothermal Liquefaction Demonstration Facility

Metro Vancouver is building a hydrothermal liquefaction demonstration facility to process sludge at the Annacis Island Wastewater Treatment Plant. Hydrothermal liquefaction uses temperature and pressure to convert wastewater sludge into biocrude. The biocrude from the demonstration facility will be sent to Parkland's nearby refinery for processing into low carbon transportation fuels. The resulting fuels have a carbon intensity that is 80 per cent lower than fossil fuels. Fabrication of the hydrothermal liquefaction demonstration facility kicked off in 2024.

Project Highlights Continued

Northwest Langley Wastewater Treatment Plant Climate and Energy Resilience

Metro Vancouver obtained $13.4 million in funding from the CleanBC Communities Fund to construct a renewable natural gas facility at the Northwest Langley Wastewater Treatment Plant. The facility will clean excess biogas by removing carbon dioxide, leaving biomethane which can be sold as renewable natural gas to FortisBC.

Design of the Northwest Langley Wastewater Treatment Plant will allow service to be expanded to include a larger area of Langley, along with Maple Ridge, Pitt Meadows, and areas of North Surrey. The expanded plant will eventually serve over 280,000 people. Significant ground improvements, including raising the entire site above the 1-in-200-year flood level, will strengthen infrastructure resilience to impacts of climate change and earthquakes.

Ammonia-to-Hydrogen Pilot

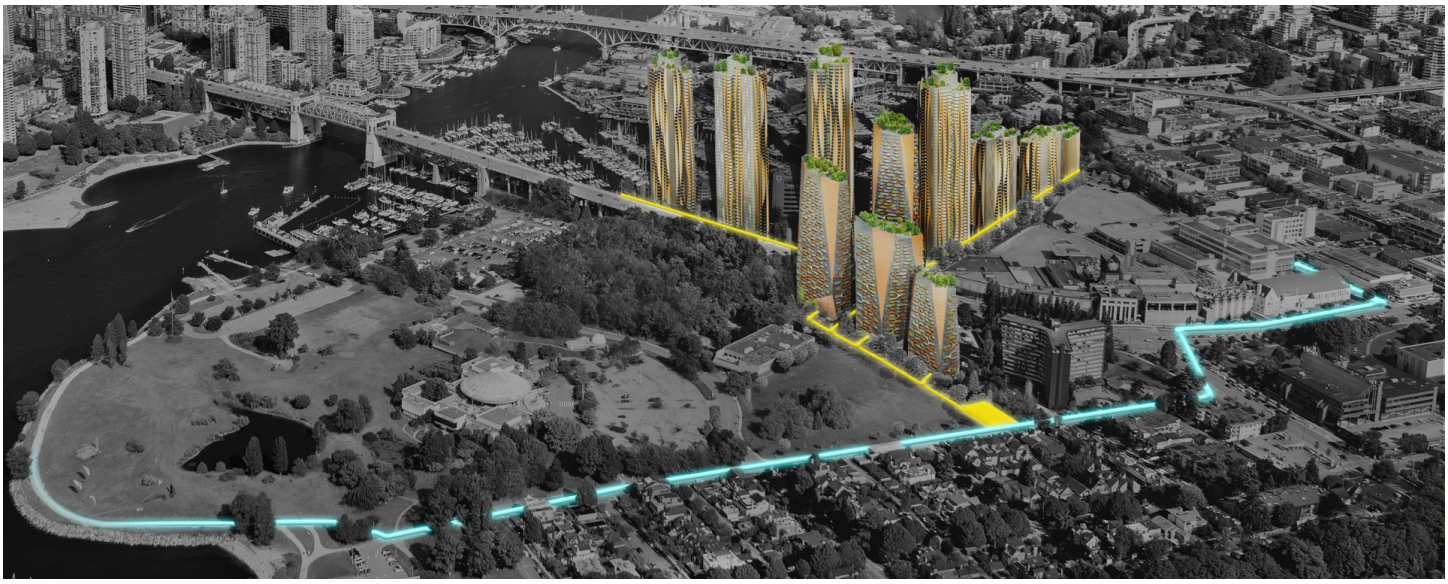
Metro Vancouver is planning an ammonia-to-hydrogen pilot at the Annacis Island Wastewater Treatment Plant. High levels of ammonia in wastewater effluent can result in regulatory non-compliance, and the conventional solution of using microbiological processes to remove ammonia can release nitrous oxide, a potent GHG. A novel approach, being explored in the pilot, is to recover the ammonia and then use electrolysis to convert it to hydrogen. This green hydrogen can be used as a low carbon and renewable fuel for transportation, displacing fossil fuel diesel.

Sewer Heat Recovery

Liquid Waste Services is implementing several sewer heat recovery projects in the region, and evaluating the feasibility of several others. There is enough excess heat in Metro Vancouver's wastewater systems to heat about 700 high-rise buildings. Metro Vancouver is partnering with member jurisdictions, First Nations, and utilities to extract this heat from warm wastewater in sewers to provide renewable, low carbon heat to residents and businesses. Located next to large sewers, energy centres with special heat exchangers extract the heat and use it to heat water, which is then distributed in a pipe network to nearby buildings for space heating and hot water.

Liquid Waste Services recently signed an agreement with the Sen̓áḵw development, allowing the development to recover heat from sewage in the Jervis Forcemain sewer. The recovered heat will be used by residents and businesses in the largest Indigenous-led housing and retail development in the history of Canada.

Metro Vancouver — through the Greater Vancouver Water District (GVWD) — has been providing drinking water to the region for over 100 years. This includes acquiring and maintaining supply as well as treating, testing, and delivering water.



Sen̓áḵw District Energy Development Aerial View


Northwest Langley Wastewater Treatment Plant

Water Services

Water Services uses a system of watersheds, dams, treatment facilities, reservoirs, pump stations, and water mains. Upgrades are regularly made to the water system to maintain the quality and reliability of the delivery for high-quality drinking water.

In 2024, electricity was the main source of energy used by Water Services to operate the water treatment facilities and pump stations. Fossil fuel diesel backup generators are in place to mitigate any power outages that may occur. Diesel and gasoline are also used by Water Services contractors in the transportation of materials, supplies, and residuals, and the periodic monitoring of the snowpack via helicopter.

390,012 million litres water treated in 2024, a **1% decrease** from 2023

PERFORMANCE METRICS

3%
Lower **purchased energy use per ML** of water treated from 2023

2%
Lower **GHG emissions per ML** of water treated from 2023

0%
Change in **total energy-related GHG emissions** from 2023

$488,000
Average annual cost savings from **electricity generation at the Capilano Energy Recovery Facility**

Performance

Compared to 2023, energy use for Water Services' operations per million litres of water treated was three per cent lower, whereas the amount of water treated was only one per cent lower in 2024. GHG emissions produced per million litres of treated was two per cent lower in 2024 compared to 2023, while total energy-related GHG emissions remained the same as the previous year. Refer to the Appendix for Water Services' energy-related GHG emissions and energy use data from 2020 to 2024.

Key Considerations

Water Services is committed to delivering high-quality drinking water to a growing population while maintaining infrastructure resilience. Water Services focuses on ways to:

- Increase efficiency of energy use and reduce cost
- Explore measures to manage peak demand for electricity use
- Implement energy and sustainability considerations into capital projects
- Adapt to the impacts of climate change

Water Services is working to understand non-energy emissions, such as process emissions from the treatment and transmission system.

Project Highlights

Electricity Generation at Capilano Energy Recovery Facility

As drinking water flows from the Seymour Capilano Filtration Plant to the Capilano Energy Recovery Facility, water turns a turbine and generates electricity. This electricity is used to offset a portion of the purchased electricity required to operate pumps at the Capilano Raw Water Pump Station. In 2024, electricity generation resulted in cost savings of $64,000, which was lower than the typical annual savings of approximately $448,000 due to the turbine being offline for maintenance.

Coquitlam Water Treatment Plant Lighting Upgrade

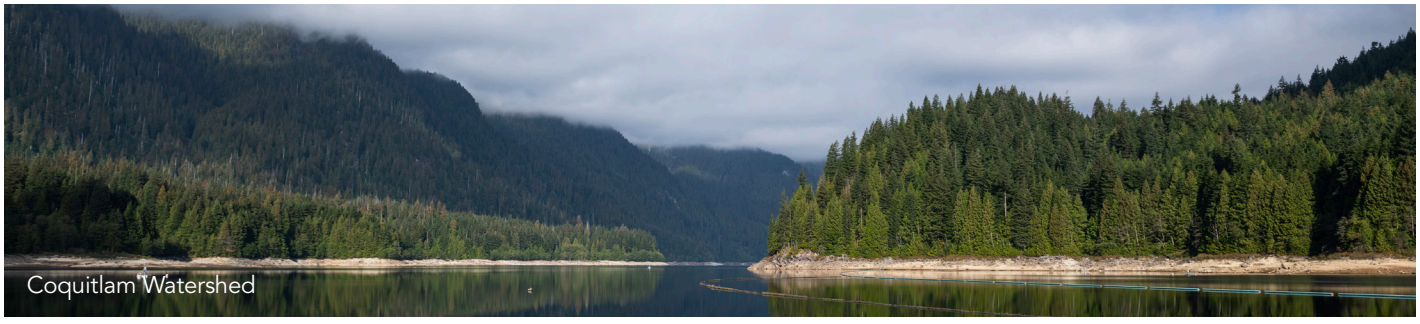
Choosing more energy-efficient lighting is one of the most impactful and beneficial measures to reduce energy cost and energy waste. LED lighting lasts much longer than conventional lighting and requires less maintenance. In 2024, LED lighting was upgraded at the Coquitlam Water Treatment Plant, which is expected to result in up to 75 per cent less energy use. The upgrade also resulted in bright, clear, and uniform lighting that enhanced visibility in the industrial setting.

Capilano Raw Water Pump Station Backup Power

The Capilano Raw Water Pump Station backup power facility, currently under construction, will improve system reliability. During a power outage, the pump station's backup power system will allow continued operation of the facility to maintain water supply from the Capilano Reservoir to the Seymour Capilano Filtration Plant, supporting reliable delivery of drinking water.

Long-Term Resilience Planning

Water Services continuously plans for the impacts of climate change, such as drought and power outages. The team evaluates long-term options to maintain a future supply of high-quality drinking water. For example, the Coquitlam Lake Water Supply Project, which is planned to be in place by the late 2030s, will help avoid seasonal supply shortages and secure an adequate supply of drinking water for future generations.


Coquitlam Watershed

Solid Waste Services

700,981 tonnes of waste were received at Metro Vancouver solid waste facilities in 2024, a **7% increase** from 2023

PERFORMANCE METRICS

5% Lower **purchased energy use per tonne** of waste received from 2023

7% Lower **GHG emissions per tonne** of waste received from 2023

1% Reduction in **total energy-related GHG emissions** from 2023

$8 million **Average annual revenue** from electricity generated at Waste-to-Energy Facility, enough to power **16,000 homes**

Metro Vancouver — through the GVS&DD — is responsible for waste prevention planning, solid waste facility management, and solid waste disposal, reflecting the organization's commitment to high environmental stewardship and keeping waste management affordable. Solid Waste Services manages a network of six recycling and waste centres across the region that offer recycling and waste drop-off services. The network also includes the Waste-to-Energy Facility that provides about 25 per cent of the region's disposal capacity. The remaining garbage generated in the region is delivered to the Vancouver Landfill or contingency landfills. Emissions from these landfills are not included in the corporate inventory.

Solid Waste Services was Metro Vancouver's second largest energy user in 2024, and the largest contributor to energy-related GHG emissions. This energy is used to manage waste throughout the region. In October 2024, Metro Vancouver's primary contractor for operation of recycling and waste centres switched to renewable diesel for the operation of mobile equipment within the facilities and for short-haul transfer of garbage to the Waste-to-Energy Facility and the Vancouver Landfill. Emissions related to garbage processing and transportation are the most significant source of energy-related emissions from the solid waste system, and as such the switch to renewable diesel significantly reduces emissions from the solid waste system.

At the Waste-to-Energy Facility, electricity is used to run the equipment along with a blend of fossil natural gas and renewable natural gas that powers the gas burners. The burners are operated as required to ensure complete combustion of garbage. The combustion of municipal solid waste generates steam that powers a turbine to generate electricity. This electricity is sold to BC Hydro, generating approximately $8 million in revenue each year. The Waste-to-Energy Facility produces enough electricity to power, on average, 16,000 homes per year.

Performance

Compared to 2023, energy use for Solid Waste Services' operations per tonne of waste handled was five per cent lower, even though the amount of waste received was seven per cent higher in 2024. Although waste volumes at the Waste-to-Energy Facility increased in 2024, the variability in the waste composition resulted in a reduction of energy-related GHG emissions, with a seven per cent reduction per tonne of waste handled. Total energy-related GHG emissions for 2024 were one per cent lower than 2023, driven by the use of renewable natural gas at the Waste-to-Energy Facility along with partial use of renewable diesel for hauling of solid waste. Refer to the Appendix for Solid Waste Services' energy-related GHG emissions and energy use data from 2020 to 2024.

Key Considerations

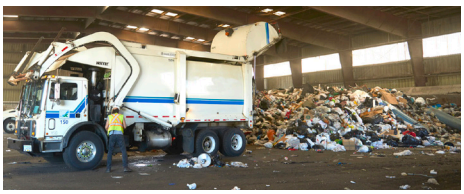
As the region continues to grow, it will be increasingly important to consider energy efficiency and diversification of our energy supply. The waste management hierarchy prioritizes waste reduction, reuse, and recycling before disposal at landfills or the Waste-to-Energy Facility. For energy and climate action, Solid Waste Services focuses on ways to:

- Increase efficiency of energy use and reduce cost
- Maintain outreach programs such as zero-waste initiatives
- Generate renewable energy from waste heat that would otherwise be released into the atmosphere
- Transition to low- or zero-emission technologies for hauling
- Implement energy and sustainability considerations into capital projects
- Support district energy systems to benefit local communities
- Adapt to the impacts of climate change

The Waste-to-Energy Facility is Metro Vancouver's largest source of quantified non-energy GHG emissions. Combustion of solid waste creates non-energy emissions classified as either biogenic (derived through the combustion of organic material) or non-biogenic (derived through the combustion of fossil-based materials such as plastics and natural gas). These process GHG emissions from the Waste-to-Energy Facility were 255,151 tonnes CO_2e in 2024, down nine per cent from 2023. Waste processed at the facility increased in 2024 by 6,891 tonnes, but GHG emissions were lower due to the variability of the waste composition. Garbage from the region's recycling and waste centres is also transported to the Vancouver Landfill and remote contingency disposal landfills. Greenhouse gases are emitted from those facilities in the forms of fugitive methane and carbon dioxide emitted from flare systems, but the emissions are not included in Metro Vancouver's emissions inventory since these facilities are not Metro Vancouver facilities.Bottom ash is also generated during the waste combustion process. Metro Vancouver is advancing pilot tests to make use of bottom ash, which can be used as an alternate material in the cement production process. At full scale, beneficial use of bottom ash could reduce regional solid waste disposal requirements by approximately five per cent and would reduce the need for raw materials in the cement production process, along with the associated GHG emissions from mining and transporting these materials.

Waste-to-Energy Facility

Project Highlights



Renewable Diesel for Waste Hauling

Solid Waste Services is responsible for the operation of six recycling and waste centres. Mobile equipment used to consolidate and transport materials from these facilities to recycling and disposal facilities contributes to overall GHG emissions. The procurement process for new operating contracts for five of the six sites is underway for operations starting in 2026. The new contracts will require renewable fuel for on-site diesel equipment and transportation to the Vancouver Landfill and Waste-to-Energy Facility. Incentives have been included in the contracts to encourage zero-emission equipment and trucks.

In October 2024, the operator of the primary recycling and waste centres switched all on-road transfer trucks and non-electric mobile equipment at four of the recycling and waste centres to renewable diesel, which is expected to reduce emissions by up to 88 per cent depending on the blend of renewable diesel used.

Resilient and Energy-Efficient Design of Recycling Depots

Solid Waste Services is prioritizing climate resilience and energy efficiency for new recycling depots, including facilities in North Surrey and Langley. Planning and design of these depots will follow the *Sustainable Infrastructure and Buildings Policy* to mitigate GHG emissions through the use of energy-efficient lighting systems, energy-efficient and low GHG emissions heating systems, tree planting, and electric vehicle charging.

Biosolids Processing

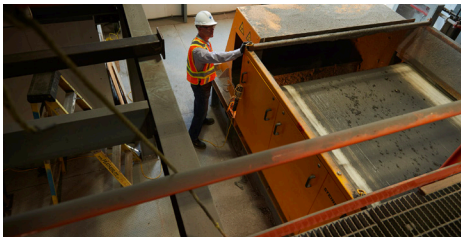
Planning is underway for an upgrade to the Waste-to-Energy Facility to allow the facility to process biosolids, which will create another local option for the beneficial use of biosolids. This upgrade will reduce the need for long distance hauling of biosolids to remote sites, reducing the amount of GHG emissions associated with hauling.

Waste-to-Energy Facility District Energy

Since 1988, the Waste-to-Energy Facility has been managing municipal solid waste and generating steam. Since 2003, steam has been used to generate electricity sold to BC Hydro.

Metro Vancouver is now developing a district energy system that will use excess heat from the combustion process to supply heat and hot water to up to 50,000 homes in Vancouver, Burnaby, and potentially New Westminster.

Procurement has started on the construction of the first phase of this project, which is expected to be complete in 2028. The first phase includes the construction of an energy centre adjacent to the Waste-to-Energy Facility and the installation of approximately six kilometres of hot water piping to supply the River District community in Vancouver. The second phase of this project will extend the district energy system to the Metrotown and Edmonds areas where the City of Burnaby is developing a district energy utility.



Non-Ferrous Metals Recovery

Ferrous metal has been recovered at the Waste-to-Energy Facility since the start of operations. Since 2018, non-ferrous metal, including copper and aluminum, has also been recovered. The project uses magnetic separators and an eddy current separator to recover valuable non-ferrous metals such as aluminum and copper from bottom ash collected at the facility. In 2024, 300 tonnes of non-ferrous metals were recovered, resulting in 930 tonnes CO_2e of avoided GHG emissions by allowing these materials to stay in use.


Biosolids - Mountain Highway

Metro Vancouver Housing

3,400 **affordable housing units** across 49 sites in 2024

PERFORMANCE METRICS

7% Lower **purchased energy use per m²** of housing floor area from 2023

7% Lower **GHG emissions per m²** of housing floor area from 2023

4% Reduction in **total energy-related GHG emissions** from 2023

66% Lower GHG emissions for the **50-unit Manor House retrofit**, along with a **56% decrease in energy use**

Metro Vancouver Housing — through the Metro Vancouver Housing Corporation (MVHC) — has provided non-profit housing since 1974 with over 3,400 affordable rental homes on 49 sites across the region, serving close to 10,000 residents. Metro Vancouver Housing provides affordable rental homes primarily for families, seniors, and people with disabilities with low to moderate incomes.

Electricity, natural gas, and steam are used throughout the Metro Vancouver Housing portfolio to light, ventilate, heat, and cool our residential buildings. New developments are being constructed to be fully electric, while existing buildings are generally heated using fossil natural gas. Since 2016, significant investments have been made in energy-efficient space and hot water heating equipment, building envelope upgrades, and tenant energy awareness campaigns.

Performance

The Metro Vancouver Housing 10-Year Plan (2019) commits to reducing GHG emissions by 45 per cent compared to 2010 levels and energy consumption by 25 per cent for major rehabilitations such as comprehensive building envelope upgrades and new construction. As of 2024, GHG emissions from buildings have been reduced by 23 per cent from 2010 levels.

Compared to 2023, energy use for operations per square metre was seven per cent lower. GHG emissions produced per square metre of operations was also seven per cent lower in 2024. Improvements in both energy efficiency and emissions were driven by the advancement of major rehabilitation projects that featured energy-efficiency improvements such as enhanced envelope insulation, upgraded windows, and modernized mechanical systems. Total energy-related GHG emissions for 2024 decreased by four per cent from 2023, driven by a reduction in the use of fossil natural gas — a benefit resulting from building envelope projects — along with further electrification of mechanical systems in the Metro Vancouver Housing portfolio. Refer to the Appendix for Metro Vancouver Housing's energy-related GHG emissions and energy use data from 2020 to 2024.

Key Considerations

As one of the largest affordable housing providers in the region, Metro Vancouver Housing recognizes both the need and opportunity to increase the housing portfolio. At the same time, existing housing is aging and requires ongoing investment. Balancing the renewal of existing housing with the creation of new affordable housing will require significant investment, innovation, and collaboration. Metro Vancouver Housing focuses on ways to:

- Increase efficiency of energy use and reduce costs
- Implement energy and sustainability considerations into new construction
- Use electricity instead of fossil fuels for heating and cooling
- Adapt to the impacts of climate change

Project Highlights

An example of Metro Vancouver Housing's work to take meaningful action to address climate change and renew the existing housing supply is the Reframed Initiative. This multi-partner collaboration undertakes deep energy retrofits on existing multi-unit residential buildings to reduce energy use and GHG emissions. Manor House and Heron's Nest are two such projects.

Manor House

Metro Vancouver Housing, in partnership with FortisBC, has undertaken a deep energy retrofit at Manor House, a 50-unit affordable rental building in North Vancouver built in 1972. This project aims to enhance energy efficiency, reduce GHG emissions, and improve tenant wellbeing. Upgrades to the building's envelope — walls, windows, doors, and insulation — along with improvements to mechanical systems, including heating, hot water, and ventilation, are expected to cut GHG emissions by 66 per cent and energy use by 56 per cent. Beyond lower energy costs, these upgrades have modernized the building's exterior and extend its lifespan by 50 years, while also making it more resilient to climate change, improving indoor air quality, and increasing safety and comfort during extreme weather.

Heron's Nest

Metro Vancouver Housing is developing a six-story, non-market rental project in Pitt Meadows, providing 115 energy-efficient homes. Designed for high performance, the building will offer comfortable living spaces while supporting climate action goals. Adding insulation will reduce the building's embodied carbon by 125 tonnes of CO_2e against the initial design, while lowering its embodied carbon intensity by 13 kilograms CO_2e per square metre. Currently under construction, the building is expected to be completed by 2028.

Regional Parks

13,910 hectares of land protected in 2024

PERFORMANCE METRICS

7%
Lower **purchased energy use per capita** from 2023

25%
Lower **GHG emissions per capita** from 2023

22%
Reduction in **total energy-related GHG emissions** from 2023

17,800 tonnes CO_2e
Avoided emissions through land conservation and restoration efforts

Metro Vancouver manages a system of 24 regional parks and five regional greenways, as well as park reserves and ecological conservancy areas. These green spaces protect diverse natural landscapes and habitats spread out over the region and connect people to nature.

Performance

Compared to 2023, energy use for Regional Parks in 2024 was seven per cent lower. GHG emissions produced per capita associated with operations was 25 per cent lower. Outside of direct GHG emissions and energy use, natural green spaces act as critical carbon sinks in addition to contributing to human health both physical and mental. In 2024, carbon sequestered from Regional Parks measured approximately 17,800 tonnes CO2e. Total energy-related GHG emissions for 2024 decreased by 22 per cent from 2023. This was driven by replacing corporate fleet assets with electric models, along with improved driving practices. Refer to the Appendix for Regional Parks' energy-related GHG emissions and energy use data from 2020 to 2024.

Key Considerations

As the region's population grows and the challenges of climate change intensify, people need parks and the natural areas they protect more than ever. Parks offer spaces for recreation, promoting physical and mental health, and act as important carbon sinks to absorb and store carbon from the atmosphere. Regional Parks focuses on ways to:

- Expand and connect the regional park system through land acquisition
- Adapt to the impacts of climate change and maintain the ecological health of park ecosystems
- Increase efficiency of energy use and reduce cost in asset management, design and development, and emergency planning

Project Highlights

Campbell Valley Regional Park – Round Field Restoration

Regional Parks is restoring the "round" field east of McLean Pond at the Campbell Valley Regional Park, planting the field with hay forage, trees and shrubs, wildflowers, and grass. This project will increase the carbon sink capacity of the field while simultaneously benefiting animals and insects. A new wetland is also planned for this area through capital development.

Pacific Spirit Regional Park

In 2024, Regional Parks undertook restoration of a degraded area of old growth forest in Pacific Spirit Regional Park to improve the ecological health of the understory in this extremely rare but highly impacted old growth coastal rainforest. Community volunteers helped plant over 314 native trees and shrubs, which will contribute to carbon storage capacity, and cleared 75 kilograms of English ivy, which will allow the new plantings room to thrive.

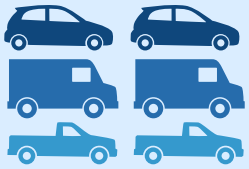
Burns Bog Ecological Conservancy Area

Regional Parks is exploring peatland recovery after wildfires, particularly at the Burns Bog Ecological Conservancy Area. Wildfires in coastal bogs that have significant lodgepole pine tree cover promote dense regeneration of pine seedlings, and this increased tree cover in raised bogs can result in reduced peat production as well as the release of carbon from peat layers as the peat dries. Large-scale removal of regenerating pine may result in expanded sphagnum moss growth and accelerated peat production and storage, thereby increasing the soil's carbon storage potential.

Newly Acquired Park Land

In 2024, Metro Vancouver acquired 80 hectares of land across Blaney Bog, Glen Valley (West Creek Wetland), and South Langley Regional Park. These acquisitions protect rare wetland, bog, and forest ecosystems that provide carbon storage and are increasingly at risk from development and climate change. These acquisitions also prevent further habitat loss and respond to growing recreational demands so that more people can enjoy the parks.

Corporate Services: Fleet and EV Infrastructure



748 total fleet vehicles in 2024

PERFORMANCE METRICS

4% Lower **GHG emissions per fleet vehicle** from 2023

3% Reduction in **total energy-related GHG emissions** from 2023

59 **New EVs** added to corporate fleet in 2024

15 **New EV charging stations** installed in 2024

In 2024, Metro Vancouver operated a fleet of 748 assets that included a variety of vehicles, boats, and off-road equipment. Of these, 462 assets (62 per cent) were on-road vehicles, ranging from passenger vehicles to heavy-duty trucks. Metro Vancouver is transitioning fleet vehicles away from fossil fuels to electricity and other renewable alternatives, as detailed in the Fleet Planning and Acquisition Policy. Transition plans for equipment will also be incorporated as supply and technology allow.

Performance

In 2024, Fleet Services added 59 electric units to the fleet, bringing the total electric units to 163. This includes electric heavy equipment, light-duty work vehicles, passenger sedans, and SUVs. In parallel with fleet electrification efforts, Fleet Services and the Facilities teams collaborated to expand EV charging infrastructure, installing 15 additional charging stations in 2024 for a total of 52 stations.

GHG emissions produced per fleet vehicle in our operations were four per cent lower in 2024 compared to 2023. This was primarily a result of further electrification of fleet vehicles.

Metro Vancouver's Fleet Planning and Acquisition Policy commits to reducing GHG emissions where operationally feasible. As of 2024, GHG emissions from fleet vehicles have been reduced by 32 per cent from 2010 levels.
Total energy-related GHG emissions for 2024 decreased by three per cent from 2023.

Key Considerations

Cost and technology availability are important factors in the feasibility of electric vehicle adoption, particularly for medium- and heavy-duty vehicles. In addition to the adoption of electric vehicles, Fleet Services is also finding ways to reduce or be more efficient with vehicle use. Metro Vancouver is evaluating the impacts of vehicle pooling and sharing based on utilization data.

Project Highlights

EV Charging Infrastructure – Head Office and Lake City Operations Centre

At Lake City Operations Centre, the Facilities team is in the process of installing 45 Level 2 EV chargers and one fast charger, with an expected annual GHG emission reduction of over 400 tonnes CO_2e. A similar initiative is being undertaken at Metro Vancouver's head office, with an expected GHG emissions reduction of over 100 tonnes CO_2e. Ten EV chargers have been installed in different Regional Parks service yards and offices to support electrification of fleet vehicles and equipment.

Electric Demonstrations

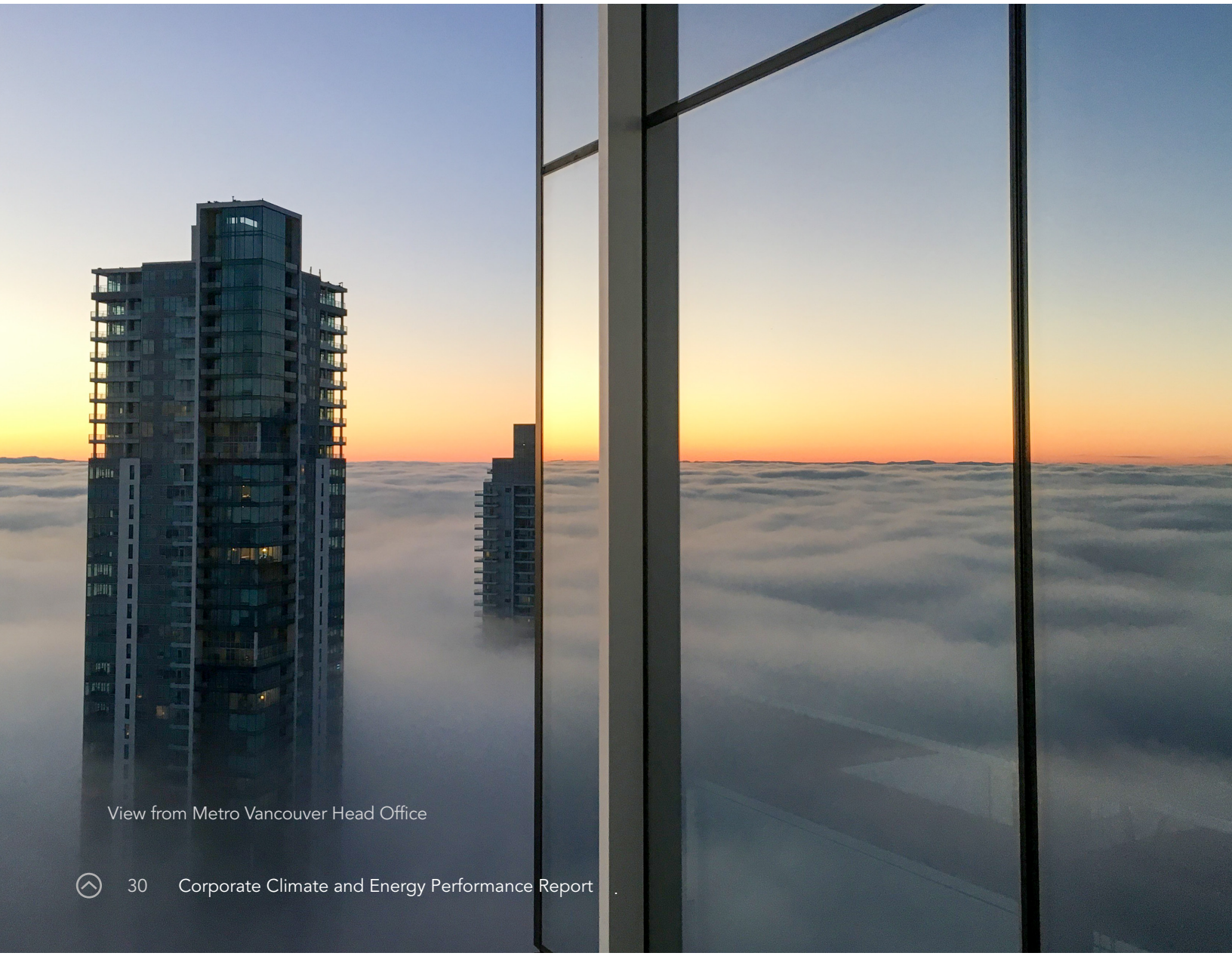
Electric vehicle and electric equipment demonstrations by Regional Parks and Fleet Services in 2024 were conducted for a range of electric vehicles and electric tools. These engaged staff in hands-on trials to help identify suitable electric options and inform procurement decisions. This led to the adoption of 22 new electric vehicles and battery-electric landscaping tools. Based on fleet fuel data, the Central Area fuel use in 2024 dropped by approximately 15 per cent compared to 2023.

Conclusion

Metro Vancouver's commitments to take meaningful action to address climate change and manage energy are shared across service areas. These actions have put the organization on track to meet the 2030 GHG emissions reduction target of 45 per cent compared to a 2010 baseline. In 2024, significant progress was made in reducing energy-related emissions by transitioning to renewable energy in operations and electrifying buildings and fleet.

Beyond energy-related GHG emissions, the organization is preventing the release of GHG emissions into the atmosphere by generating renewable energy, implementing district energy projects, and aligning capital projects with Envision Gold, LEED Gold, or equivalent. Metro Vancouver is also proactively responding to climate risk by planning for resilience in capital projects, making sure the organization is ready during major incidents such as droughts, atmospheric rivers, and power outages.

As the organization looks towards 2050 and responds to climate change, actions such as those presented in this *Corporate Climate and Energy Performance Report* will become increasingly important. Metro Vancouver will continue to learn, adapt, and evolve in delivering essential services to a growing region now and for many generations to come.



View from Metro Vancouver Head Office

Appendix

2020 to 2024 GHG Emissions and Energy Use Data

Metro Vancouver						
	2020	2021	2022	2023	2024	% Change 2023 to 2024
Total Energy Purchased (GJ)	1,040,739	1,111,917	1,110,124	1,156,021	1,150,780	0%
Total GHG Emissions (tCO_2e)	29,168	25,714	27,888	25,198	24,888	-1%
Population	2.77 M	2.81 M	2.85 M	2.99 M	3.03 M	1.5%
GJ / capita	0.376	0.396	0.389	0.387	0.380	-2%
kg CO_2e / capita	10.5	9.2	9.8	8.4	8.2	-3%

Liquid Waste Services						
	2020	2021	2022	2023	2024	% Change 2023 to 2024
Total Energy Purchased (GJ)	483,121	496,521	475,019	542,283	523,858	-3%
Total GHG Emissions (tCO_2e)	10,516	8,548	8,414	8,390	8,084	-4%
ML Collected & Treated	459,118	451,732	435,177	427,816	466,603	9%
GJ / ML Collected & Treated	1.05	1.10	1.09	1.27	1.12	-12%
kg CO_2e / ML	22.9	18.9	19.3	19.6	17.3	-12%

Water Services						
	2020	2021	2022	2023	2024	% Change 2023 to 2024
Total Energy Purchased (GJ)	213,267	241,335	251,496	242,458	230,498	-5%
Total GHG Emissions (tCO_2e)	3,343	2,355	1,932	1,877	1,886	0%
ML Treated & Delivered	378,734	391,709	388,490	395,121	390,012	-1%
GJ / ML Treated & Delivered	0.56	0.62	0.65	0.61	0.59	-3%
kg CO_2e / ML	8.8	6.0	5.0	4.9	4.8	-2%

Solid Waste Services						
	2020	2021	2022	2023	2024	% Change 2023 to 2024
Total Energy Purchased (GJ)	250,167	257,387	290,879	284,018	287,689	1%
Total GHG Emissions (tCO_2e)	10,854	10,686	13,559	11,724	11,629	-1%
Mass Received (Tonnes)	572,222	589,929	589,929	655,532	700,981	7%
GJ / Tonne Received	0.44	0.44	0.48	0.43	0.41	-5%
kg CO_2e / Tonne Received	19.0	18.1	22.3	17.9	16.6	-7%

Housing						
	2020	2021	2022	2023	2024	% Change 2023 to 2024
Total Energy Purchased (GJ)	63,965	67,363	65,806	62,373	59,824	-4%
Total GHG Emissions (tCO_2e)	2,476	2,509	2,403	2,241	2,159	-4%
Million m^2*HDD	787	820	837	752	777	3%
kJ / (m^2*HDD)	81.30	82.16	78.60	82.97	77.04	-7%
g CO_2e / (m^2*HDD)	3.15	3.06	2.87	2.98	2.78	-7%

Regional Parks						
	2020	2021	2022	2023	2024	% Change 2023 to 2024
Total Energy Purchased (GJ)	12,705	13,499	13,652	12,766	11,986	-6%
Total GHG Emissions (tCO_2e)	554	558	491	350	274	-22%
Population	2.77 M	2.81 M	2.85 M	2.99 M	3.03 M	1.5%
MJ / capita	4.59	4.81	4.78	4.27	3.95	-7%
kg CO_2e / capita	0.20	0.20	0.17	0.12	0.09	-25%

Fleet						
	2020	2021	2022	2023	2024	% Change 2023 to 2024
Total Fossil Energy Use (GJ)	35,359	34,543	31,557	30,867	29,963	-3%
Total GHG Emissions (tCO_2e)	2,404	2,344	2,015	1,884	1,831	-3%
Fleet Size (no. vehicles)	699	744	736	739	748	1%
GJ / no. of vehicles	50.59	46.43	42.88	41.77	40.06	-4%
tCO_2e / no. of vehicles	3.44	3.15	2.74	2.55	2.45	-4%

Improvement / Favourable (change less than zero)

Degradation / Unfavourable (change greater than zero)

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

Annacis Wastewater Treatment Plant

Corporate Climate & Energy Performance Report

Hansi Liu-Atkinson
Division Manager, Corporate Climate Action Services

Adrian Lynch
Sr. Project Engineer, Corporate Climate Action Services

metrovancouver

Air Quality and Climate Committee, September 12, 2025
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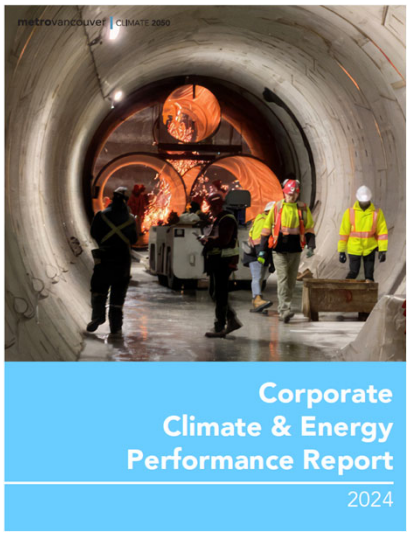
INSIDE THE CORPORATE REPORT

- Update on corporate GHG and energy performance for 2024
  - Service areas
  - Emissions data
  - Key performance indicators
- Communicates corporate commitments to reduce GHG emissions, reduce energy waste, and manage climate risk



2

OUR CORPORATE COMMITMENTS

Set Climate and Energy Targets

Use Waste Heat from Systems to Displace Fossil Fuels

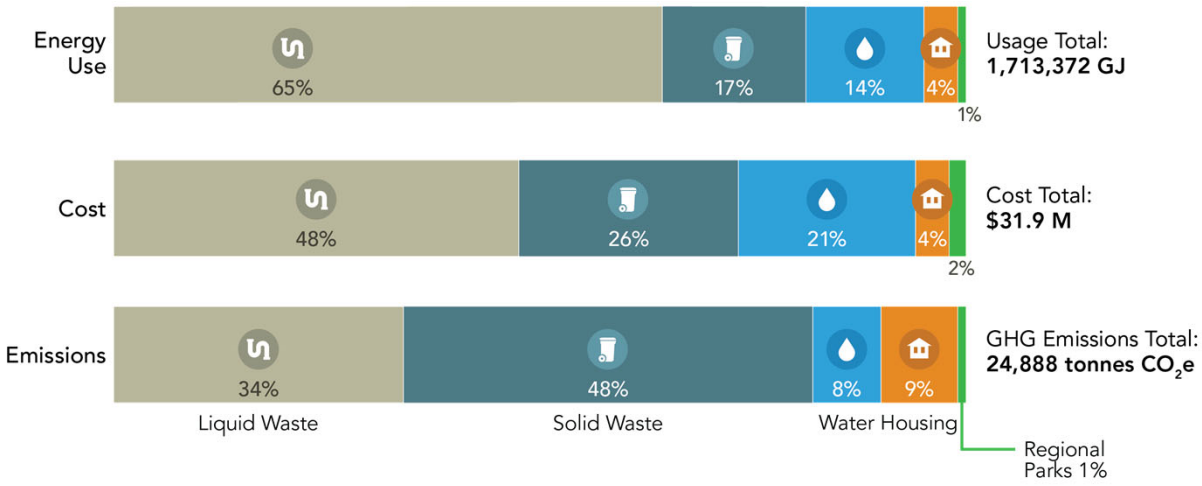
Transition to Low Carbon Technologies for Assets and Facilities

Proactively Manage Climate Risk

3

ENERGY USE, COST, AND GHG EMISSIONS

Metro Vancouver 2024



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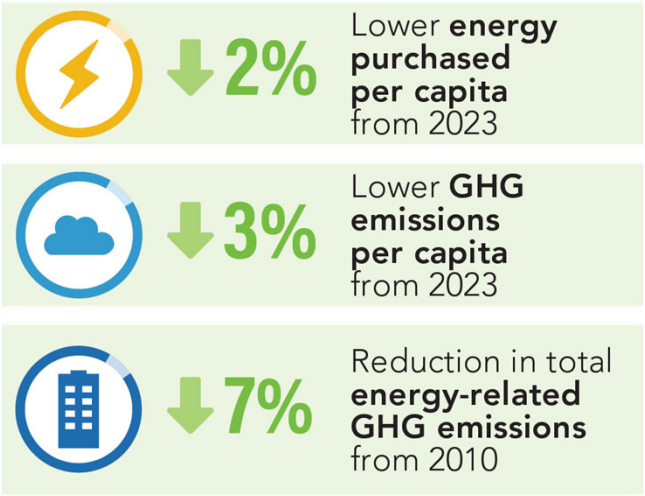
2024 CORPORATE PERFORMANCE INDICATORS



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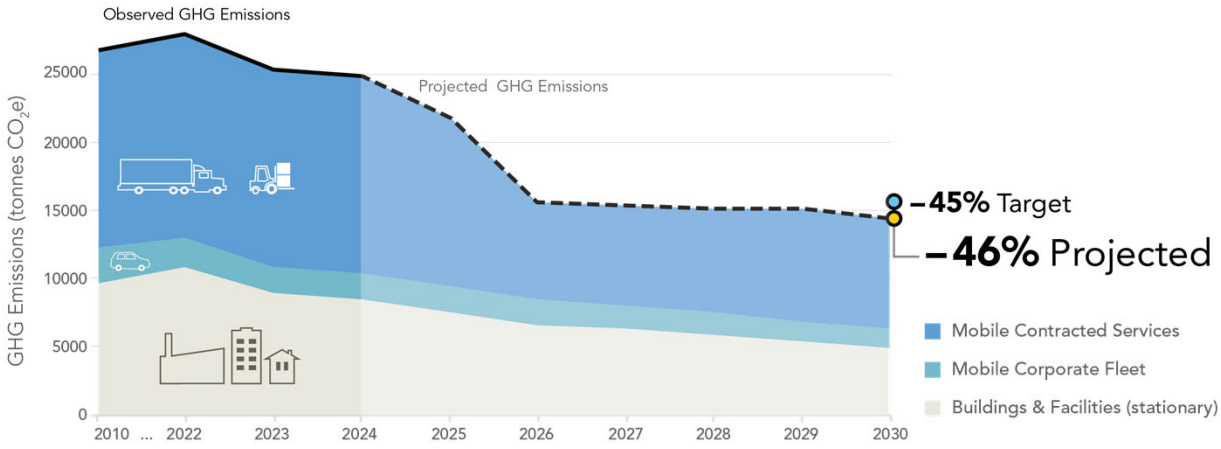
5

PROGRESS TO 2030

Metro Vancouver Energy-related Emissions



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6

PROJECT HIGHLIGHTS

- Renewable diesel in biosolids hauling to reduce emissions by up to 65%
- Electricity generation at Capilano Energy Recovery Facility on average annual savings of $448,000
- Renewable diesel for hauling for recycling and waste centres to reduce emissions by up to 88%

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7

PROJECT HIGHLIGHTS

- Deep energy retrofit at Manor House to reduce emissions by 66% and energy use by 56%
- Restoration of degraded area of Pacific Spirit Regional Park by community volunteers planted over 314 native trees and shrubs
- Electric vehicle and electric equipment demonstrations leading to 22 new electric vehicles and battery-electric landscaping tools

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Air Quality and Climate Committee

From: Conor Reynolds, Director, Air Quality and Climate Action Services

Date: August 15, 2025 Meeting Date: September 12, 2025

Subject: **Manager's Report**

RECOMMENDATION
That the Air Quality and Climate Committee receive for information the report dated August 15, 2025, titled "Manager's Report".

AIR QUALITY AND CLIMATE COMMITTEE 2025 WORK PLAN
Attachment 1 sets out the Committee's Work Plan for 2025. The status of work plan priorities is indicated as pending, in progress, or complete. The work plan is updated, as needed, to include new priorities that arise, items requested by the Committee, and changes to the schedule.

LOCAL GOVERNMENT CLIMATE ACTION PROGRAM – 2024 FUNDING AND REPORTING
On July 28, Metro Vancouver staff submitted the 2024 response to meet reporting requirements for the BC Local Government Climate Action Program (LGCAP; Reference 1). The climate action initiatives and projects reported in the LGCAP submission align with Metro Vancouver's wider climate action reporting, including the 2024/2025 Climate 2050 Progress Report and Metro Vancouver's Corporate Climate and Energy Performance Report.

LGCAP provides funding to all local governments (regional districts and municipalities) and First Nations in BC to implement climate change mitigation and adaptation, and all funding recipients submit annual reporting. In the first two years of the LGCAP program (2022 and 2023), funding was provided annually. In March 2024, the Province of BC provided $732,517 to Metro Vancouver as up-front funding for program years 2024/25, 2025/26 and 2026/27. This is equivalent to $244,172 annually over this period.

LGCAP reporting requirements include metrics on corporate and community (regional) GHG emissions, as well as reporting on projects and initiatives which support the objectives of the CleanBC Roadmap to 2030 and/or the BC Climate Preparedness and Adaptation Strategy. For 2024, Metro Vancouver's LGCAP funding was allocated to support climate staff salaries, research and analysis to support emissions reduction in buildings, and sustainable transportation policy initiatives. The 2024 LGCAP response has been posted to Metro Vancouver's website (Reference 2).

SOLID WASTE CLIMATE 2050 PRIMER UPDATE
On May 9, 2025, the Air Quality and Climate Committee received the report "Climate 2050 Roadmap Update", dated April 9, 2025. The report presented a revised approach for the remaining four *Climate 2050* areas of focus, including solid waste, which integrates climate policy and actions into existing planning processes and strategic plans. Rather than creating a stand-alone solid waste climate roadmap, a *Solid Waste Climate 2050 Primer* has been developed, and climate actions will

be integrated in an updated solid waste management plan. This approach optimizes and streamlines engagement resources and efforts, and responds to Board direction that climate actions are aligned with other plans and policies. The *Solid Waste Climate 2050 Primer* can be found on Metro Vancouver's website (available by visiting metrovancouver.org and searching for 'solid waste 2050 primer') (Reference 3).

METRO VANCOUVER INPUT TO BC HYDRO'S 2025 *INTEGRATED RESOURCE PLAN* (IRP)

In response to a call for input from local governments over a two-week period, Metro Vancouver staff provided a letter of comment (dated July 25, 2025) on materials shared by BC Hydro related to its 2025 Integrated Resource Plan (IRP) (Attachment 2). Staff noted that the IRP directions as shared are generally aligned with Board-approved regional policies but should be accompanied by greater transparency, inclusive engagement, and stronger technical analysis. Improved coordination with local governments is critical to ensure cost-effective and equitable electricity system planning that aligns with regional climate and housing goals. Staff also requested that Metro Vancouver be invited to participate directly in the IRP technical advisory committee for the next IRP update.

NEW CANADIAN AMBIENT AIR QUALITY STANDARDS FOR FINE PARTICULATE MATTER ADOPTED

Exposure to certain air pollutants is linked to increased heart and breathing problems, more frequent hospitalization and premature death, even at the relatively low levels normally experienced by residents in the Metro Vancouver region. Fine particulate matter ($PM_{2.5}$) is the air pollutant with the greatest impact on public health.

In July 2025, the Canadian Council of Ministers of the Environment adopted two new Canadian Ambient Air Quality Standards (CAAQS) for $PM_{2.5}$. CAAQS are national ambient air quality objectives used across Canada, including in the Metro Vancouver region. The new CAAQS were developed following an evidence-based process that included Health Canada, governments and other interest holders. The new $PM_{2.5}$ CAAQS – for 24-hour and annual time periods – take effect in 2030.

Metro Vancouver uses ambient air quality objectives as thresholds to manage regional air quality, and to protect human health and the environment. The new CAAQS for $PM_{2.5}$ could be more stringent than Metro Vancouver's existing $PM_{2.5}$ objectives in some circumstances. Staff are reviewing the implications of the new CAAQS on Metro Vancouver's objectives and may seek direction from the Metro Vancouver Board in the future, to update regional objectives or to initiate engagement on potential changes.

2024 ANNUAL AIR QUALITY SUMMARY

Metro Vancouver's 2024 Annual Air Quality Summary (Reference 4) describes notable air quality events in 2024 and trends over the past decade. It also compares data measured by Metro Vancouver's air quality monitoring network to air quality objectives, to help track Metro Vancouver's progress in improving regional air quality. In Q4, staff will report to the Air Quality and Climate Committee with detailed information about air quality warnings in summer 2025, when the air quality impacts associated with hot weather and wildfire smoke are most prevalent.

Highlights from 2024:

- Metro Vancouver issued one air quality warning in early July for ground-level ozone (smog) due to local emissions, such as those from transportation, and warm weather.
- The average global temperature in 2024 was the warmest on record, beating 2023 for the top spot.

With a changing climate, the Metro Vancouver region can expect warmer, drier summers, and longer periods of drought. This would likely increase the frequency and duration of wildfire smoke and smog in the region.

The summary complements the comprehensive annual Lower Fraser Valley Air Quality Monitoring Reports (Reference 5), which include more detailed analyses of data from Metro Vancouver's air quality monitoring network, typically released at a later stage.

BC LUNG FOUNDATION *2024-25 STATE OF THE AIR REPORT*

In July 2025, the BC Lung Foundation released the BC *State of the Air Report* for 2024-25 (Reference 6). The report is published annually by the BC Lung Foundation, and provides a snapshot of key air quality issues across the province. This year's edition includes a number of articles on wildfire smoke, including health impacts and reducing the risks of exposure to wildfire smoke, a recap of the 2025 Air Quality and Health Workshop on air pollution and brain health, updates from partner agencies on air quality and health actions underway in BC, and a data snapshot of BC's air quality levels in 2023 and 2024.

ENGAGEMENT UPDATE: PROPOSED AMENDMENTS TO MVRD AIR QUALITY MANAGEMENT FEES REGULATION BYLAW NO. 1330, 2021

In May 2025, the MVRD Board directed Metro Vancouver staff to engage with interested audiences on proposed amendments to *MVRD Air Quality Management Fees Regulation Bylaw No. 1330, 2021* (MVRD Bylaw No. 1330, 2021). The purpose of proposed amendments is to improve fairness, transparency, predictability, and ease of use of MVRD Bylaw No. 1330, 2021, while continuing to protect regional air quality and maintaining discharger pay and cost recovery principles.

Public engagement started in early Summer 2025 and has been focused on discussions with regulated industry, health agencies, member municipalities, and other governments. Engagement to date included two public webinars (June 25 and July 9, 2025), presentations to various regional and municipal committees, and meetings with individual permit holders to provide them with additional opportunity to share input. Metro Vancouver received written feedback from several organizations, including input from the Government of BC, which is well aligned with the proposed amendments. All feedback will be considered in finalizing the amendments.

The engagement will continue through the Fall 2025, and the amended MVRD Bylaw No. 1330, 2021 draft is anticipated to be submitted to the MVRD Board for consideration in November 2025.

ATTACHMENTS

1. "Air Quality and Climate Committee 2025 Work Plan", dated August 15, 2025.
2. Correspondence from Metro Vancouver to BC Hydro, dated July 25, 2025 re: "Metro Vancouver Letter of Comment on BC Hydro's 2025 *Integrated Resource Plan* (IRP)".

REFERENCES

1. Province of British Columbia. (2025, April 23). *Local Government Climate Action Program.* Retrieved from: https://www2.gov.bc.ca/gov/content/environment/climate-change/local-governments/local-government-climate-action-program
2. Metro Vancouver. (2025, July 28) *2024 Local Government Climate Action Plan Response.* Retrieved from: https://metrovancouver.org/services/air-quality-climate-action/Documents/lgcap-submission-2024.pdf
3. Metro Vancouver. (2025). Solid Waste Climate 2050 Primer. https://metrovancouver.org/services/air-quality-climate-action/Documents/climate-2050-solid-wate-primer.pdf
4. Metro Vancouver. (2025, September). *2024 Annual Air Quality Summary.* Retrieved from: https://metrovancouver.org/services/air-quality-climate-action/Documents/annual-air-quality-summary-2024.pdf
5. Metro Vancouver. (2025). *Air Quality Reports.* Retrieved from: https://metrovancouver.org/services/air-quality-climate-action/air-quality-reports
6. British Columbia Lung Foundation. (2025). *State of the Air Report 2024-2025.* Retrieved from: https://bclung.ca/wp-content/uploads/2023/07/1228-State-Of-The-Air-2024_R7_F_web-final.pdf

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August 15, 2025

Air Quality and Climate Committee 2025 Work Plan

1st Quarter Priorities	Status
Air Quality and Climate Committee 2025 Meeting Schedule and Work Plan	Complete
Metro Vancouver's Air Quality Management and Regulation Service	Complete
Amendment to Boilers and Process Heaters Emission Regulation Bylaw	Complete
Appointment of Enforcement Officers	Complete
2nd Quarter Priorities	
Outcome of BC Utilities Commission Decisions	Complete
Overview of Air Quality Advisory Program and Preparedness for 2025 Season	Complete
Community Wood Smoke Reduction Program - Update and New Retailers	Pending
Amendment to Notice of Bylaw Violation Enforcement and Dispute Adjudication Bylaw	Complete
Amendment to Ticket Information Utilization Bylaw Amendment Bylaw	Pending
Engagement on Amendments to Air Quality Management Fees Bylaw	Complete
Regional Air Contaminant Emissions Inventory and Trends	Complete
Transportation Emissions Policy Updates	Complete
Resilient Buildings Emissions Policy Updates	Complete
Industrial Emissions Policy Updates	In progress
Land Use Resilience Best Practice Guide – Flooding	Complete
Scan of Flood-related Capital Projects in the Metro Vancouver Region – Preliminary Results	Complete
Regional Flood Resiliency Planning Processes – Update	Complete
3rd Quarter Priorities	
Annual Regional Air Quality Report	In progress
Update to Regional Ground Level Ozone Strategy	Pending
BC Retrofit Accelerator Update	Pending
Approach for Reducing Air Contaminants From Small Gas-Powered Equipment	In progress
Engagement on Managing Air Contaminants from Wood Product Manufacturing	Pending
Climate 2050 – Solid Waste Issue Area Update	Pending
Climate 2050 Progress Report	In progress
Regional Flood Resiliency Planning Processes – Update	In progress
4th Quarter Priorities	
Report on 2025 Air Quality Advisory Season	Pending
Report on Corporate Energy and GHG Management	In progress
Update on Thermal Energy Networks in Metro Vancouver	Pending
Advocate for Long-Term Planning for Energy Transition	In progress
Update on Ecosystem Services on Agricultural Lands	Pending
Ecological Health Framework Progress Report	Pending
Annual Budget and Five-Year Financial Plan	Pending
Regional Flood Risk Reduction Priorities Criteria Matrix	Pending
Regional Flood Resiliency Planning Processes – Update	Pending

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

Air Quality and Climate Action Services
Tel. 604-456-8811 or via Email
Conor.Reynolds@metrovancouver.org

July 25, 2025

File: CP-02-02-BCUC

Bill Clendenning, Director
Energy Planning & Analytics
BC Hydro
333 Dunsmuir Street
Vancouver, BC V6B 5R3
VIA EMAIL: integrated.resource.plan@bchydro.com

Dear Bill Clendenning:

Metro Vancouver Letter of Comment on BC Hydro's 2025 *Integrated Resource Plan* (IRP)

Metro Vancouver staff are writing to provide comments on BC Hydro's *2025 Integrated Resource Plan* (IRP) update for meeting BC's future electricity needs. We acknowledge BC Hydro's continued efforts to ensure a reliable, affordable, and clean electricity system for British Columbia, and support the IRP's broad direction to prioritize energy conservation, accelerate new renewable acquisition, and expand transmission infrastructure.

Metro Vancouver is a federation of 21 municipalities, one Electoral Area, and one Treaty First Nation, delivering services to over three million residents. Energy efficient electrification underpins the Metro Vancouver Regional District (MVRD) Board-adopted *Climate 2050* strategy and *Clean Air Plan*, supporting air quality, regional and corporate climate action, affordable housing, and regional growth. Metro Vancouver has participated as an intervener in several BC Utilities Commission (BCUC) proceedings, including for BC Hydro's 2021 IRP, the Distribution Extension Policy, and 2024 Rate Design, at the direction of the Metro Vancouver Regional District Board.

Our comments suggest opportunities to strengthen the current and future IRP submissions, to ensure they are transparent, data-driven, and inclusive of local government perspectives.

Improve Transparency and Technical Rigor
The 2025 IRP materials could benefit from greater transparency and technical detail to allow meaningful evaluation of opportunities, gaps or tradeoffs, such as load forecast tables, emissions estimates, scenario assumptions, and cost comparisons. BC Hydro could also include more information about how they are responding to hydrological shifts due to climate change.

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Metro Vancouver staff also understand—via colleagues on the IRP Technical Advisory Committee (TAC)—that detailed provincial policy commitments such as the *Highest Efficiency Equipment Standards* (HEES), full implementation of the *Zero Carbon Step Code*, and medium- and heavy-duty zero-emission vehicle sales regulations, are not fully reflected in BC Hydro's load forecasts. Excluding these policies risks underestimating future demand, delaying critical infrastructure investments, and eroding public confidence in these critical climate policies.

The BCUC's 2024 decision on BC Hydro's 2021 IRP (Order G-58-24) directed the utility to account for electrification trends in load forecasting. Metro Vancouver staff recommend that BC Hydro publicly release core assumptions and ensure that all committed provincial policies are included in modeling prior to the October 2025 IRP filing. Future IRP submissions should also be underpinned by robust and transparent data and reporting on climate risks related to electrical supply.

Strengthen Regional and Distribution-Level Planning

In addition to transmission planning and top-down modelling, BC Hydro's IRP should ensure demand forecasting and distribution infrastructure plans reflect growth projections, particularly in urban centres such as Metro Vancouver. Distribution grid constraints can be alleviated in part by incorporating distributed renewable energy and thermal energy networks utilizing waste heat and thermal storage, which are not mentioned in the 2025 IRP. BC Hydro should continue to engage with local governments to ensure plans keep pace with these shifts, including responses to the Province's Small-Scale Multi-Unit Housing (SSMUH) and Transit Oriented Areas (TOAs) housing legislation, consistent with the BCUC's direction (Order G-59-25, pp. 24) of the Distribution Extension Policy.

In future IRP submissions, we recommend that BC Hydro:

- Strengthen coordination with local governments on growth and electrification projections;
- Share spatial load and constraint data to support planning for new housing, transit-oriented areas, and climate action; and
- Explore mechanisms to jointly assess distribution constraints and identify demand-side or distributed solutions.

Affirm the Role of Efficient Electrification

In the 2025 IRP materials, electrification is framed primarily as a source of uncertainty, rather than as a central strategy for emissions reduction, which BC Hydro is uniquely positioned to deliver. Recent changes to BC Hydro's programs, such as heat pump incentives that exclude fossil fuel-to-electric conversions, also raise concerns about the utility's commitment to electrification.

Electrification of space and water heating, transportation, and industry remains one of the most cost-effective and scalable decarbonization pathways. While energy efficiency remains a priority, it should complement—not replace—electrification. Changing policy directions can create confusion for the public, local government decision makers, and industry.

We recommend that future IRPs and policies explicitly recognize the role of "efficient electrification" in supporting BC's climate targets, and reflect a consistent commitment across programs, planning scenarios, and demand forecasts.

Improve Process for Future IRP Updates

BC Hydro's move to a "living" IRP update process can offer benefits in flexibility, but local governments require time to coordinate input and responses, especially given the intersection between electricity planning and land use, housing, and climate mandates. Local governments were given only two weeks to respond to the 2025 IRP survey, and City of Vancouver was the only local government invited to participate on the TAC.

We recommend that BC Hydro:

- Provide at least 4–6 weeks for local government review and feedback on future updates;
- Invite broader local government representation on the TAC; and
- Host inclusive technical workshops to explain modeling inputs, outputs, and assumptions.

Conclusion

Metro Vancouver supports BC Hydro's goal to update the IRP as a living plan, but this approach must include transparent, inclusive, and technically robust processes and improved coordination with local governments.

We request that Metro Vancouver be invited to participate in the IRP TAC going forward, and we look forward to continued collaboration on future IRPs to support an affordable and equitable energy transition.

This letter represents the views of Metro Vancouver staff and has not been reviewed or endorsed by the Metro Vancouver Board of Directors. If you have any questions, please contact Lise Townsend, Division Manager, Air Quality and Climate Action Policy, at 604-360-7946 or Lise.Townsend@metrovancouver.org.

Sincerely,

Conor Reynolds, P. Eng., Ph.D.
Director, Air Quality and Climate Action Services

CR/LT/sm

cc: Heather McNell, Deputy Chief Administrative Officer, Policy and Planning, Metro Vancouver

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Air Quality and Climate Committee

From: Terry Fulton, Senior Project Engineer, Solid Waste Services

Date: August 14, 2025 Meeting Date: September 12, 2025

Subject: **Solid Waste Management Plan Goals and Hierarchy**

The attached report dated June 20, 2025, titled "Solid Waste Management Plan Goals and Hierarchy" was considered by the Zero Waste Committee at its July 3, 2025 meeting. The report presents draft goals and a draft waste hierarchy for an updated solid waste management plan, developed following comprehensive engagement in 2024. The goals and waste hierarchy presented in the report were endorsed by the Zero Waste Committee and approved by the GVS&DD Board on July 25, 2025.

The report is provided here to the Air Quality and Climate Committee for information, as it is directly related to a *Climate 2050* issue area (waste). Greenhouse gas emission reduction and climate change adaption actions will be essential elements of an updated solid waste management plan.

Metro Vancouver is entering the options analysis phase of engagement in fall 2025, and a draft plan is expected in 2026.

ATTACHMENTS

1. Report to Zero Waste Committee, titled "Solid Waste Management Plan Goals and Hierarchy", dated June 20, 2025.

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Zero Waste Committee

From: Terry Fulton, Senior Project Engineer, Solid Waste Services

Date: June 20, 2025 Meeting Date: July 3, 2025

Subject: **Solid Waste Management Plan Goals and Hierarchy**

RECOMMENDATION

That the GVS&DD Board approve the goals and hierarchy for an updated regional solid waste management plan as presented in the report dated June 20, 2025, titled "Solid Waste Management Plan Goals and Hierarchy".

EXECUTIVE SUMMARY

Metro Vancouver is developing an updated solid waste management plan, building on the strengths of the current plan and identifying opportunities for accelerating waste reduction and recycling, reducing greenhouse gas emissions, and promoting a circular economy. Considering research and engagement feedback from prior phases of the plan update process, draft goals and a draft waste hierarchy for the updated plan were developed for consideration. The updated goals and hierarchy build on the goals and hierarchy of the existing solid waste management plan, and reflect a focus on waste prevention and transitioning to a circular economy. Unlike in the current solid waste management plan, both waste-to-energy and landfill are considered disposal in the updated hierarchy. Recovery from the waste stream includes both material recovery and creating alternatives to fossil fuels.

The updated goals and hierarchy outline the long-term aims of the plan and provide an organizing structure for actions and strategies. Both member jurisdiction staff and external advisory committees have been engaged in the development of the draft goals and hierarchy.

PURPOSE

The purpose of this report is to seek approval from the GVS&DD Board on the draft goals and hierarchy for an updated solid waste management plan.

BACKGROUND

On June 28, 2024, the GVS&DD Board approved the vision and guiding principles for an updated solid waste management plan following extensive engagement with First Nations, member jurisdictions, adjacent regional district staff, advisory committees, and the public. Subsequently, engagement on idea generation was launched to hear ideas from interested parties on potential actions and strategies to build on Metro Vancouver's progress to accelerate waste reduction and recycling while reducing greenhouse gases and promoting a circular economy.

The following timeline shows the phases of the solid waste management plan update:

GOALS AND HIERARCHY

The goals and hierarchy outline the long-term aims of the plan and communicate priorities for managing materials. The goals and hierarchy will also provide a structure under which strategies and actions are categorized. Goals are a required component of an updated solid waste management plan, as referenced in *A Guide to Solid Waste Management Planning* provided by the Province. Goals are meant to complement the hierarchy, which has been adapted from the Province's pollution prevention hierarchy. The updated goals and hierarchy build on the goals and hierarchy of the existing solid waste management plan and reflect a focus on waste prevention and transitioning to a circular economy. Unlike in the current solid waste management plan, waste-to-energy and landfill are both considered disposal, whereas energy recovery refers to recovering materials from the waste stream or creating alternatives to fossil fuels.

The goals and associated levels of the waste hierarchy are presented below.

Goals	Components	
1. Enable circular systems that preserve resources	• Design waste-free systems • Transition to a circular economy	Rethink
2. Minimize waste generation	• Prevent • Use less	Reduce
3. Keep materials in use as long as possible	• Share / Donate • Repair / Refurbish • Repurpose	Reuse
4. Make it easier to recycle effectively	• Recycle into new products • Compost and anaerobic digestion	Recycle
5. Recover resources from non-recyclable materials	• Recover materials from the waste stream • Create alternatives to fossil fuels	Recover
6. Dispose only as a last resort	• Landfill and mass burn waste-to-energy	Dispose

The following table describes key updates since the 2011 solid waste management plan:

Goal	Level of Waste Hierarchy	Key Updates from 2011 Solid Waste Management Plan
1. Enable circular systems that preserve resources	Rethink	The idea of transitioning to a circular economy has gained traction within the solid waste and recycling industry since the approval of the 2011 plan, which did not include "Rethink" as part of the hierarchy.
2. Minimize waste generation	Reduce	Metro Vancouver wishes to continue to minimize waste generation, which was also a goal in the 2011 plan.
3. Keep materials in use as long as possible	Reuse	The importance of reuse and repair lead to the creation of an updated goal. Reuse did not have a specific goal in the 2011 plan.
4. Make it easier to recycle effectively	Recycle	While the 2011 plan included a goal to maximize recycling, the updated goal reflects recycling properly rather than recycling as much as possible.
5. Recover resources from non-recyclable materials	Recover	Recover referred to waste-to-energy in the 2011 plan, however has shifted to focus on recovering energy and resources from waste streams that cannot currently be recycled.
6. Dispose only as a last resort	Dispose	Mass burn waste-to-energy is considered disposal in the updated hierarchy and goals, recognizing its primary purpose is managing garbage. The 2011 plan separated landfill and waste-to-energy into separate goals.

Engagement Feedback

Feedback received during both the vision and guiding principles and the idea generation phases of plan development was considered in the goals and hierarchy. Key themes from engagement that influenced the development of the hierarchy are presented below.

Goal	What we heard
Enable circular systems that preserve resources (Rethink)	• Support the shift from a linear to circular model of production and consumption • Promote circular product design • Rethink waste rather than simply reducing it
Minimize waste generation (Reduce)	• Waste prevention should be a priority of the updated plan

Goal	What we heard
	• Promote mindful consumer behaviour • Reduce wasted food, excess packaging and single-use items
Keep materials in use as long as possible (Reuse)	• Scale up repair and reuse infrastructure • Promote reusable and repairable products • Encourage sharing and donation
Make it easier to recycle effectively (Recycle)	• Strengthen public understanding of recycling to promote participation and reduce contamination • Expand opportunities to access recycling services • Improve consistency of recycling systems
Recover resources from non-recyclable materials (Recover)	• Prioritize recycling of materials over using material to create energy • Don't count material used as fuel as recycling
Dispose only as a last resort (Dispose)	• De-emphasize disposal as part of the updated plan

Earlier versions of the draft goals and hierarchy were reviewed with member jurisdiction staff (via the Regional Engineers Advisory Committee and the Regional Engineers Advisory Committee Solid Waste Subcommittee), the Solid Waste Management Plan Public/Technical Advisory Committee, and the Solid Waste and Recycling Industry Advisory Committee. Feedback from these committees contributed to revisions to the draft goals and hierarchy, as described in Attachment 1. A number of members of the Public/Technical Advisory Committee suggested that any management of waste through combustion processes should not be included in the hierarchy. This would be inconsistent with Metro Vancouver's current approach to managing residual garbage, and inconsistent with the Provincial and Federal waste management hierarchies.

Additional Research

In addition to engagement feedback, Metro Vancouver reviewed goals and hierarchies from external jurisdictions, the 2011 solid waste management plan, and the provincial *A Guide to Solid Waste Management Planning*, which recommends a provincial pollution prevention hierarchy but states that a locally relevant hierarchy can be used in its place.

Options Analysis
The options analysis phase of the solid waste management plan update will focus on categorizing and evaluating ideas identified during idea generation engagement and through staff research to determine which strategies and actions become part of a draft updated solid waste management plan. Options analysis criteria based on provincial guidance, the Board Strategic Plan, and the vision & guiding principles of the updated solid waste management plan will be used to assess the suitability of potential strategies and actions. The criteria, incorporating revisions based on advisory committee feedback, are included as Attachment 2. The options analysis phase will also involve a discussion of metrics and targets to measure plan progress.

ALTERNATIVES
1. That the GVS&DD Board approve the goals and hierarchy for an updated regional solid waste management plan as presented in the report dated June 20, 2025, titled “Solid Waste Management Plan Goals and Hierarchy”.

2. That the GVS&DD Board receive for information the report dated June 20, 2025 titled “Solid Waste Management Plan Goals and Hierarchy”.

FINANCIAL IMPLICATIONS
Technical work and engagement on the solid waste management plan updated are included in the approved Solid Waste Services budget.

CONCLUSION
The goals and hierarchy of the updated solid waste management plan were developed considering research and engagement on both vision and guiding principles and idea generation. The goals and hierarchy outline long-term aims to be achieved by the plan and provide a structure by which strategies and actions will be organized. The draft goals and hierarchy were presented to advisory committees in spring 2025 and subsequently updated to reflect feedback. The next phase of the plan update process will focus on evaluating ideas heard from previous phases to determine which actions will form part of the updated solid waste management plan.

ATTACHMENTS
1. Development and Revision of Draft Goals and Hierarchy as a Result of Feedback.
2. Options Analysis Criteria.
3. Presentation re: Solid Waste Management Plan Goals and Hierarchy.

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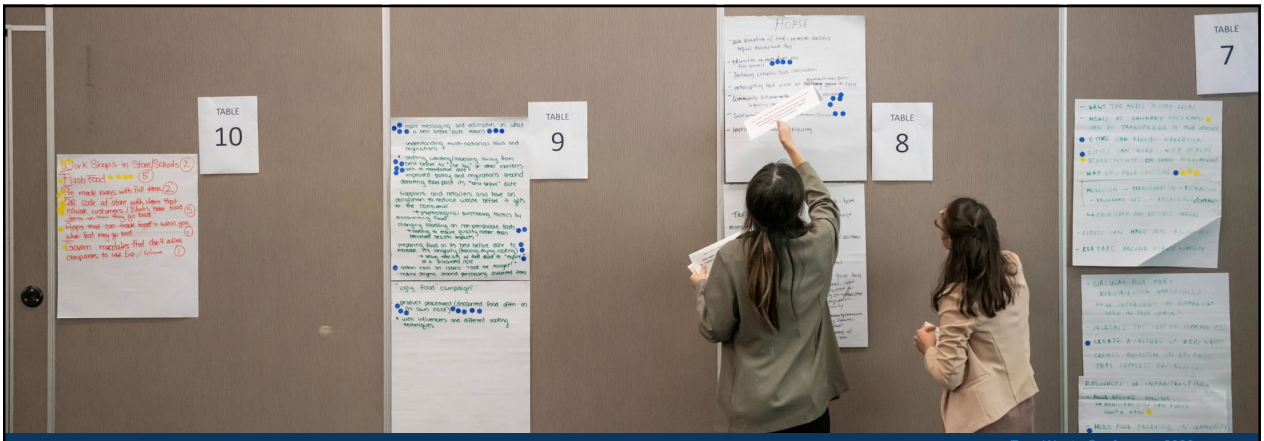
Development and Revision of Draft Goals and Hierarchy as a Result of Feedback

Initial Draft	Examples of Feedback Considered	Revised Draft
Prioritize waste prevention (Reduce) • Prevent • Use Less	• Circular economy is not called out enough and is so important – need a singular distinctive goal that supports a circular economy • "Prioritize waste prevention" is very broad and could be broken into two goals • More goals needed higher up the hierarchy • Consider including "rethink" before prevent and reduce • Have wording on how reducing waste is tracked	Enable circular systems that preserve resources (Rethink) • Design waste-free systems • Transition to a circular economy Minimize waste generation (Reduce) • Prevent • Use Less
Keep materials in use as long as possible (Reuse) • Reuse for original purpose • Repair • Repurpose	• Consider adding "Share" under reuse • Unclear where under reuse food donation fits • Distinction between "reuse for original purpose" and "repair" is unclear	Keep materials in use as long as possible (Reuse) • Share/Donate • Repair/Refurbish • Repurpose
Make it easier to recycle effectively (Recycle as Material)	• The proposed hierarchy doesn't show where composting fits • Composting and anaerobic digestion are not included	Make it easier to recycle effectively (Recycle) • Recycle into new products • Compost and anaerobic digestion
Make it easier to recycle effectively (Recycle as Energy)	• "Recycle as energy" is confusing/not clear • "Recycling for energy" isn't actually recycling • Recycling should be only for materials • Materials are more valuable than energy	Recover resources from non-recyclable materials (Recover) • Recover materials from the waste stream • Create alternatives to fossil fuel
Dispose of remaining garbage responsibly (Dispose) • Landfill and Waste-to-Energy	• Goal to prevent as much disposal as possible seems to be missing • There should be differentiation between waste-to-energy disposal vs. recycling for energy	Dispose only as a last resort (Dispose) • Landfill and mass burn waste-to-energy

Options Analysis Criteria

General		
• Practicality of Implementation • Accountability • Transparency		• Consistency/ harmonization • Collaboration • Resilience
Economic	**Environment**	**Social**
• Affordability • Economic prosperity • Innovation	• Circularity • Waste reduction • Greenhouse gas emissions reduction • Environmental stewardship	• Inclusion • Convenience • Community participation • Supports waste prevention habits and actions



Zero Waste Conference 2023

Solid Waste Management Plan Update

DRAFT GOALS AND HIERARCHY

Terry Fulton, P.Eng.
Senior Project Engineer, Solid Waste Services

Zero Waste Committee, July 3, 2025
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PROJECT TIMELINE UPDATE

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PLAN COMPONENTS

Vision & Guiding Principles

- Set the plan direction and reflect fundamental values

Goals

- Long-term aims to be achieved as an outcome of the plan

Metrics & Targets

- A way of measuring progress

Strategies & Actions

- Product of idea generation and options analysis

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3

ORGANIZING THE PLAN

Goals – long term aims to be achieved as an outcome of the plan

Strategies – approaches to accomplish the plan goals

Actions – specific programs, policies and initiatives

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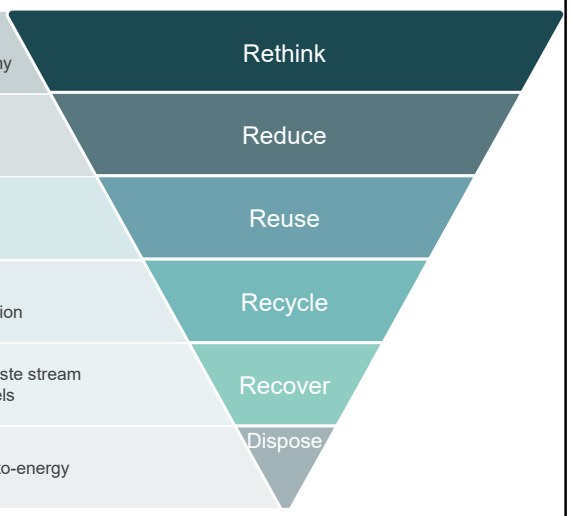
4

DRAFT HIERARCHY AND GOALS

Goals	Components
1. Enable circular systems that preserve resources	• Design waste-free systems • Transition to a circular economy
2. Minimize waste generation	• Prevent • Use less
3. Keep materials in use as long as possible	• Share / Donate • Repair / Refurbish • Repurpose
4. Make it easier to recycle effectively	• Recycle into new products • Compost and anaerobic digestion
5. Recover resources from non-recyclable materials	• Recover materials from the waste stream • Create alternatives to fossil fuels
6. Dispose only as a last resort	• Landfill and mass burn waste-to-energy



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CREATING THE DRAFT GOALS AND HIERARCHY

Engagement Feedback

Goal	What we heard
Enable circular systems that preserve resources (Rethink)	• Support the shift from a linear to circular model of production and consumption • Promote circular product design • Rethink waste rather than simply reducing it
Minimize waste generation (Reduce)	• Waste prevention should be a priority of the updated plan • Promote mindful consumer behaviour • Reduce wasted food, excess packaging and single-use items
Keep materials in use as long as possible (Reuse)	• Scale up repair and reuse infrastructure • Promote reusable and repairable products • Encourage sharing and donation

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6

CREATING THE DRAFT GOALS AND HIERARCHY

Engagement Feedback

Goal	What we heard
Make it easier to recycle effectively (Recycle)	• Strengthen public understanding of recycling to promote participation and reduce contamination • Expand opportunities to access recycling services • Improve consistency of recycling systems
Recover resources from non-recyclable materials (Recover)	• Prioritize recycling of materials over using material to create energy • Don't count material used as fuel as recycling
Dispose only as a last resort (Dispose)	• De-emphasize disposal as part of the updated plan

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7

EVALUATION CRITERIA

For developing options

General	
• Practicality of Implementation • Accountability • Transparency	• Consistency/ harmonization • Collaboration • Resilience

Economic	Environment	Social
• Affordability • Economic prosperity • Innovation	• Circularity • Waste reduction • Greenhouse gas emissions reduction • Environmental stewardship	• Inclusion • Convenience • Community participation • Supports waste prevention habits and actions

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8


Observers
Peter Fassbender
PTAC Presentation Day
Thank You
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9

9

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Air Quality and Climate Committee

From: Stephanie Liu, Program Manager, Community Engagement, Solid Waste Services

Date: August 14, 2025 Meeting Date: September 12, 2025

Subject: **Solid Waste Management Plan Update – Idea Generation Engagement Summary**

The attached report dated June 24, 2025, titled "Solid Waste Management Plan Update – Idea Generation Engagement Summary" was received for information by the Zero Waste Committee on July 3, 2025, and by the GVS&DD Board on July 25, 2025. The report provides a summary of engagement feedback received in 2024 during the idea generation phase of engagement on updating the regional solid waste management plan.

The report is provided here to the Air Quality and Climate Committee for information, as it is directly related to a *Climate 2050* issue area (waste). Greenhouse gas emission reduction and climate change adaptation actions will be essential elements of an updated solid waste management plan.

Metro Vancouver is entering the options analysis phase of engagement in fall 2025, and a draft plan is expected in 2026.

ATTACHMENTS

1. Report to Zero Waste Committee, titled "Solid Waste Management Plan Update – Idea Generation Engagement Summary", dated June 24, 2025.

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Zero Waste Committee

From: Stephanie Liu, Program Manager, Community Engagement, Solid Waste Services

Date: June 24, 2025 Meeting Date: July 3, 2025

Subject: **Solid Waste Management Plan Update – Idea Generation Engagement Summary**

RECOMMENDATION

That the GVS&DD Board receive for information the report dated June 24, 2025, titled "Solid Waste Management Plan Update – Idea Generation Engagement Summary".

EXECUTIVE SUMMARY

Metro Vancouver is a North American leader in waste reduction and recycling, having achieved a 65% recycling rate – roughly twice the Canadian average. Metro Vancouver is updating its solid waste management plan, building on the strengths of the current plan and identifying opportunities to further advance waste reduction and recycling, reduce greenhouse gas emissions, and promote a circular economy. The plan update is supported by a robust and inclusive engagement process.

In 2024, Metro Vancouver completed the idea generation phase of engagement, contributing to the development of potential strategies and actions, as well as draft goals and a draft waste hierarchy. An engagement summary report (Reference 1) describes key potential strategies and actions identified through engagement such as improving consistency and compliance in multi-family buildings; expanding infrastructure for repair and reuse; increasing accessible and multilingual communications; and using financial and regulatory mechanisms to encourage waste reduction and recycling.

The ideas gathered through engagement are being compiled and considered using a set of criteria, resulting in a draft set of strategies and actions for further refinement through the next phase of engagement: options analysis.

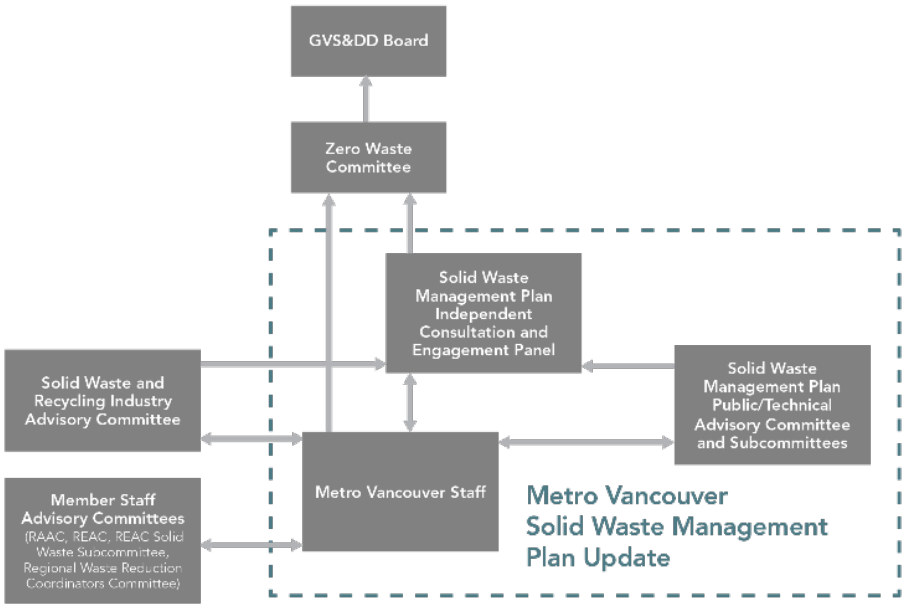
PURPOSE

The purpose of this report is to provide the Zero Waste committee and GVS&DD Board with information on engagement feedback from the idea generation phase in 2024, related to updating the regional solid waste management plan.

BACKGROUND

In November of 2019 the GVS&DD Board (Board) authorized initiating an update of the regional solid waste management plan. Subsequently, a Solid Waste Management Plan Independent Consultation and Engagement Panel (Engagement Panel) was formed to provide third-party expert advice on the development of a comprehensive and inclusive engagement process. Pre-engagement was completed in 2021 to receive feedback on how audiences prefer to be involved moving forward, and the Solid Waste Management Plan Public/Technical Advisory Committee and Solid Waste and Recycling Industry Advisory Committee were formed in 2022.

The following graphic depicts the various committees involved in providing input as the solid waste management plan is updated.



Engagement on vision and guiding principles took place in 2023, and in June 2024 the GVS&DD Board approved the resulting vision statement and guiding principles for an updated solid waste management plan, listed below. The idea generation phase launched shortly after that.

Vision: *A thriving region where nothing is wasted and resources are valued.*

Guiding Principles:

1. *A solid waste and recycling system that is affordable, convenient, and consistent across the region*
2. *A solid waste system that is resilient to climate change and future challenges*
3. *Accountability from residents, businesses and governments to prevent waste*
4. *Environmental stewardship and climate action*
5. *Inclusive solid waste services and programs*
6. *Innovation and collaboration to support a vibrant regional economy that keeps products and materials in circulation*
7. *Transparency about what happens to garbage and recycling*

The following timeline shows the multiple engagement phases of the solid waste management plan update process.

IDEA GENERATION ENGAGEMENT

During the idea generation phase in 2024, Metro Vancouver sought to hear from interested parties about potential actions and strategies that could be included in an updated solid waste management plan. These ideas will be evaluated in the subsequent phase, options analysis, by applying a set of criteria and conducting engagement on the draft strategies and actions.

Idea generation engagement activities were designed and carried out to reflect Metro Vancouver's commitment to delivering a robust and inclusive engagement process and to ensure voices from impacted residents and businesses in Metro Vancouver are considered. The engagement approach was also informed by guidance from an independent panel of engagement experts.

Feedback

Metro Vancouver heard from a wide range of audiences including First Nations, member jurisdictions, neighbouring regional districts, hospitality and food retail sectors, health authorities, not-for-profit organizations, and the public. Feedback from each meeting, workshop, or conversation was recorded and compiled in a feedback log consisting of nearly 3,000 discrete lines of data.

The feedback was analyzed and organized into 13 categories. The engagement summary report (Reference 1) provides detail about the types of ideas falling under these categories, and Metro Vancouver's response. Many of the comments were already incorporated in the vision and guiding principles for the draft plan, other comments helped to inform draft goals and a draft waste hierarchy for an updated plan, and other comments were identified as potential strategies and actions to consider as part of the options analysis phase. The feedback log (Reference 2) provides a full record of engagement feedback.

Feedback that represented ideas for strategies and actions were identified; that data has been consolidated, and is undergoing further evaluation using a set of criteria, developed based on the Board Strategic Plan, the vision and guiding principles, and engagement feedback. The resulting short list of strategies and actions, along with the full list of ideas from idea generation, will be shared publicly during the options analysis phase of engagement.

Below is a snapshot of the categories of feedback, listed alphabetically:

- **Accessibility and inclusivity** to achieve equity in waste systems by addressing barriers users may experience.
- **Accountability and transparency** for residents to understand what happens to their waste and recycling, including providing detailed data and clearer definitions.
- **Affordability, convenience, and consistency** including better support for multi-family buildings, consistent services across the region, and simplified infrastructure.
- Shifting towards a **circular economy**, including promoting circular product and packaging design, and expanding infrastructure and programs for repair and reuse.
- **Collaboration** through stronger partnerships across jurisdictions and sectors to share knowledge and drive systems change.
- **Education, engagement, and awareness** by using clear, accessible, and multilingual communications to increase public understanding and participation in waste reduction.
- **Environmental stewardship and climate action**, linking waste reduction to greenhouse gas emission reduction and sustainable resource management.
- **Infrastructure and capacity**, including suggestion for decentralized systems and expanding capacity to accommodate long-term needs.
- **Innovation and technology**, including ideas on using artificial intelligence and smart tools to improve sorting, reduce contamination, and enhance user experience.
- **Markets and economy**, including the need for stable recycling markets, ideas on tax incentives and rewards to promote recycling, and stronger engagement with businesses to scale circular solutions.
- Ideas on consistent **policy and regulation** across the region included expansion of extended producer responsibility programs, penalties for excess packaging, mandated recycling, and regulations on construction waste.
- Ideas for increasing participation and reducing contamination in **recycling and composting** programs included improved labelling, education, incentives, and regulation.
- **Waste prevention** was a top priority, with excess packaging, single-use items, and food waste being prominent topics discussed.

Engagement Process

In 2024, Metro Vancouver engaged with local First Nations and member jurisdictions, adjacent regional districts, advisory committees, and the public to generate a set of potential actions and strategies for inclusion in the updated plan. These ideas will be evaluated in the upcoming phase: options analysis.

The engagement process was guided by a set of seven issue/opportunity discussion questions which were developed based on a review of the existing solid waste management plan, previous engagement feedback, and solid waste management statistics. These discussion questions served as a framework during idea generation engagement and were discussed by multiple audiences including member jurisdiction staff, adjacent regional districts, advisory committees, and the public. Some groups addressed one or two topics that were most relevant to their community or industry, while other groups addressed several or all of the topics:

What actions can build on our success to:

- *Rethink and prevent waste in the first place?*
- *Enhance accountability for eliminating waste?*
- *Leverage knowledge and expertise through collaboration?*
- *Increase participation and reduce contamination in organics and recycling programs?*
- *Promote confidence in recycling systems?*
- *Help us expand inclusive programs and services?*
- *Plan for future infrastructure and systems for waste management across the region?*

Metro Vancouver's overall approach to the idea generation phase was to meet audiences where they were. This meant providing accessible online engagement options, attending community events where people were already gathered, and working with not-for-profit organizations that had long-standing, established relationships with their membership or networks. In addition, Metro Vancouver had a dedicated engagement web page (Reference 3) with an online questionnaire that was open to the public.

First Nations, Member Jurisdictions, Neighbouring Regional Districts

Metro Vancouver began Idea Generation engagement by sending letters to First Nations, member jurisdiction mayors and councils, and neighbouring regional district boards (Fraser Valley Regional District, Sunshine Coast Regional District, and Squamish-Lillooet Regional District) to describe this phase and invite participation.

Metro Vancouver received input from the Regional Engineers Advisory Committee, Regional Engineers Advisory Committee Solid Waste Sub-Committee, and the Regional Waste Reduction Coordinators' Committee through the Metro Vancouver Conference Day event, a workshop, and regular committee meetings. Metro Vancouver received feedback from neighbouring regional district staff through a virtual meeting and presented to the FVRD Board.

In July 2024, four local First Nations attended a joint meeting to discuss potential strategies, actions, and priority goals for the updated solid waste management plan. Meeting participants included representatives from the following local First Nations:

- q̓ʷɑ:ṁɬ̓əṁ (Kwantlen)
- kʷikʷəɬ̓əm (Kwikwetlem)
- Sḵwx̱wú7mesh Úxwumixw (Squamish)
- Semiahmoo

Feedback received at the July 2024 meeting included questions about the regional recycling rate, increasing services for repurposing materials and reducing plastic packaging, tracking the effectiveness of the plan update implementation and transparency of data, options for expanding existing solid waste facilities, and investment into new technologies for innovative solutions in renewable energy and reducing greenhouse gas emissions. Detailed feedback from First Nations will be provided to the Ministry of Environment and Parks.

Solid Waste Management Plan Public/Technical Advisory Committee

The Solid Waste Management Plan Public/Technical Advisory Committee chose to form working groups to contribute their feedback to the idea generation phase of the plan update. The chosen topics for three working groups were Construction and Demolition Waste Management, Food Waste and Organics Management, and Plastics Management. In addition, six regular committee meetings were held in 2024. Eighteen committee members participated in one or more working groups and each working group was led by a committee member chair. Staff provided administrative support to the working groups.

Working groups met several times, resulting in a final presentation and recommendations. Working group meeting notes and recommendations are published on the committee website (Reference 4). Some of the recommendations included setting waste reduction and collection targets including interim goals, embedding a construction zero waste hierarchy within Metro Vancouver's procurement and policies, and working across sectors and levels of government to improve food waste policies. The committee also had other opportunities at regular meetings to contribute feedback on idea generation to ensure committee members who were not a part of the working groups had a chance to provide feedback.

Solid Waste and Recycling Industry Advisory Committee

The Industry Advisory Committee elected to incorporate small group discussions into regular meetings to allow deeper focus on key topics related to the solid waste management plan update. Members also took part in two in-person workshops during the idea generation phase to contribute directly to the plan development. Feedback from this group demonstrated their commitment to leveraging solid waste management opportunities and innovative solutions for the region, highlighted the importance of public and private sector collaboration, and included ideas on planning, infrastructure, accountability, and education. Meeting notes, including small group feedback summaries, are available on the committee web page (Reference 5).

Public

In fall 2024, staff engaged the public through various channels including an online questionnaire, community events, and opportunities to present directly to the Zero Waste Committee, Solid Waste Management Plan Public/Technical Advisory Committee, and Independent Consultation and Engagement Panel. Engagement was promoted through an e-blast, newspaper advertisements, QR codes on weigh scale receipts, and social media posts. Metro Vancouver received 228 responses to the online questionnaire and engaged 1,385 residents at community events, and 6,500 residents at the PNE who participated in an engagement activity.

Metro Vancouver made efforts to reach out to sectors, particularly those that are impacted by the solid waste management plan but have not participated in previous phases of the plan update process, including seniors, food retail and food service, construction and demolition, and multi-family housing. Four virtual dialogue sessions were facilitated with representatives from key sectors including food and beverage, health care, and tourism. Three interviews were held with representatives from housing and food retail sectors.

Collaborative Engagement

Metro Vancouver initially introduced the Collaborative Engagement program during the vision and guiding principles phase, offering funding and support to not-for-profit organizations to conduct engagement with their members or networks. To help reduce barriers for the participating organizations, Metro Vancouver provided a comprehensive toolkit of resources including materials to support engagement planning. The success of the program in its first year led Metro Vancouver to repeat the program during the idea generation phase, with a few improvements based on participant feedback in the previous year. These improvements included providing printable resources to ensure groups without access to technology could participate, simplifying technical language to increase accessibility, and increasing the amount of time for organizations to plan and schedule their engagement activities.

Through this program, Metro Vancouver heard from over 1,500 individuals from underrepresented or equity-denied communities. These participants were very grateful to be given the opportunity to contribute to the solid waste management plan update process and they would not be participating without this program. The program also took a non-directive approach for engagement, allowing participating organizations to decide what engagement activity would work for them and their audiences.

In 2024 Metro Vancouver worked with 16 organizations and reached over 650 residents. Participating organizations delivered engagement activities including workshops, questionnaires, focus groups, interviews, newsletters, a shoreline cleanup event, virtual forums, and social media engagement. The Collaborative Engagement program will continue in Fall 2025 during the options analysis phase.

More information can be found on the Collaborative Engagement web page (Reference 6).

Solid Waste Management Plan Independent Consultation and Engagement Panel

Metro Vancouver receives guidance from the Solid Waste Management Plan Independent Consultation and Engagement Panel (Engagement Panel) on the development and implementation of engagement on the solid waste management plan update. The Engagement Panel is an independent, third-party panel including: Andrea Reimer (Chair), Cheryl Brooks, Peter Fassbender, and Veronika Bylicki. Sarah Kirby-Yung, Metro Vancouver Board Director and Chair of the Zero Waste Committee, is the Zero Waste Committee liaison on the panel. In addition to providing advice during engagement planning and implementation, the public was invited to present directly to the Engagement Panel, offering an opportunity to provide feedback on the engagement process itself.

Below is a message provided directly by the Engagement Panel:

> *The idea generation engagement summary is an important milestone in the work to build Metro Vancouver's next solid waste management plan, and the Panel is pleased to offer our comments on it.*
>
> *As Zero Waste Committee members may remember from earlier submissions, through pre-engagement in the early stages of our work the Panel established three main tests by which to judge the effectiveness of engagement. These are (1) transparency of both the process and the information that staff are using to inform the process; (2) provision of multiple engagement avenues to allow participants to "right size" their participation, and (3) persistent innovation in reaching those that have not traditionally had effective pathways for participation, including First Nations and equity-denied groups.*
>
> *In our opinion this most recent phase has met these tests through continuous innovation by staff of processes that support these outcomes. The engagement in the idea generation phase has also substantively addressed some general areas of focus we suggested in our last report to the Zero Waste Committee in June 2024, on the occasion of the vision and guiding principles engagement report. Specific items that have seen good progress in this phase of engagement:*
>
> - *We were heartened to see that diligent efforts to engage local First Nations resulted in a direct meeting with some First Nations, as well as ongoing efforts by Metro Vancouver to increase First Nations engagement with the creation and expansion of several working groups.*
>
> - *Specific sectors with high touchpoints on solid waste such as hospitality and tourism which have been difficult to engage, were the most engaged we've seen since this work began in 2020. Specific factors in this success are an expanded Collaborative Engagement program and through targeted outreach that builds*

on the relationships staff have built in these sectors over the course of the engagement work.

Thank you for the opportunity to provide comments on this phase of engagement and we are happy to answer questions as they arise.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Engagement on the solid waste management plan update is included in the approved Solid Waste Services budget.

CONCLUSION

Metro Vancouver is a North American leader in waste reduction and recycling. Through updating the regional solid waste management plan, it strives to further advance waste reduction and recycling, reduce greenhouse gas emissions, and promote a circular economy. The plan update process is supported by a robust and inclusive engagement process, going above and beyond provincial requirements. In 2024, Metro Vancouver completed the idea generation phase of engagement contributing to the development of potential strategies and actions, as well as draft goals and a draft waste hierarchy. An engagement summary report describes key potential strategies and actions identified through engagement, organized into categories. The ideas gathered through engagement are being consolidated and assessed using key criteria, to produce a draft set of strategies and actions for engagement in the next phase: options analysis.

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