

MEMORANDUM

December 2, 2024

TO: Mayor and Council

CC: Paul Mochrie, City Manager
Armin Amrolia, Deputy City Manager
Karen Levitt, Deputy City Manager
Sandra Singh, Deputy City Manager
Katrina Leckovic, City Clerk
Maria Pontikis, Chief Communications Officer, CEC
Colin Knight, General Manager, Finance and Supply Chain
Lon Laclaire, General Manager, Engineering Services
Teresa Jong, Administration Services Manager, City Manager's Office
Mellisa Morphy, Director of Policy, Mayor's Office
Trevor Ford, Chief of Staff, Mayor's Office

FROM: Josh White
General Manager, Planning, Urban Design and Sustainability

SUBJECT: Climate Budget 2025

RTS #: 16493

This memo provides a consolidated statement of the City of Vancouver's climate-related investments. This comprises investments related to the Climate Emergency Action Plan (CEAP) and Climate Change Adaptation Strategy (CCAS) in the Draft Annual Budget, and projected future needs in order to achieve the City's climate targets. Investments reported in the Climate Budget are a subset of the 2025 Draft Budget and are not separate requests.

Climate Investments in 2025 Draft Annual Budget

The 2025 Capital and Operating Budgets include \$79.6 million of capital investments and operating expenditures related to CEAP and CCAS projects (see Appendix A). Staff continue to focus on delivering existing work versus beginning wholly new projects.

- *\$51.6M capital budget*: includes active transportation and transit projects, zero-emission building and City facility retrofit programs, EV charger installations, park and street tree planting, water-meter deployment, and green infrastructure.
- *\$28.0M operating budget*: includes all CEAP and CCAS programs, much of which overlaps with core functions and ongoing operations and staffing in multiple departments (e.g., DBL, ENG, Parks, FSC, PDS, CSO, REFM). This also funds community support programs, renewable fuel, and policy development.

Staff continue to seek external grant opportunities. Recent successes include:

- UBCM Disaster Risk Reduction Fund: \$5.3M for city-wide coastal adaptation and flood management policy work and safe-centre mechanical upgrades at Carnegie and Kensington Community Centres for extreme heat and air quality events; and
- CleanBC Industry Fund: \$8.8M to expand landfill gas collection capacity at the Vancouver Landfill.

Future Investment Needs

Last year's Climate Budget included a list of unfunded immediate-priority CEAP and CCAS projects. This informed the Capital Mid-Term Update in 2024, which addressed many of these (e.g., active transportation and transit-related projects). Other projects were also successfully funded through external grant funding or through budget reallocation. No unfunded short-term projects have been identified for 2025, as staff focus on existing program delivery.

Estimated investment levels needed from a medium-term perspective are as follows. These presume sufficient operating and resource capacity to deliver this work.

- *CEAP (2024-2026)*: an estimate in the 2024 Climate Budget of \$215M investment over 3 years, informed by remaining available Capital Plan allocations and anticipated revenue, leading to an estimated "climate investment deficit" of \$97M.
- *CCAS (2024-2025)*: an estimate in the 2024-25 CCAS Refresh of \$77M investment over 2 years, informed by existing budgets available for reallocation and identified funding opportunities. 97% of 2024-25 CCAS actions were funded.

Staff will continue to prioritize regulatory and advocacy tools and pursue funding opportunities. Examples include:

- *Regulation*: carbon benchmarking requirement for large buildings; rainwater retention tank requirements in new construction
- *Advocacy*: advocating for BC Hydro to reduce service connection timelines and costs; advocating to the province to make it easier for residents in multi-unit residential buildings to make cooling upgrades
- *Funding*: \$28M of climate-related grant applications (e.g., city-wide tree-planting, indoor cooling upgrades) in progress with the federal and provincial governments

Next Steps

Climate budgets are becoming common for larger municipalities. The City and other leading cities are actively participating in guidance development through ICLEI Canada's Net Zero Action Research Partnership (N-ZAP) Climate Budget Toolkit project (see Appendix B). Going forward, staff will be estimating localized costs of climate inaction (see Appendix C); continuing to refine internal climate-budgeting processes; and revising CEAP and CCAS future investment needs as part of the 2026-30 Climate Plan refresh next fall, to inform 2027-30 Capital Plan and operating budget processes beginning late-2025.



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APPENDIX A

Climate Investments

The 2025 Draft Capital and Operating Budgets include \$79.6 million of Climate Priority capital investments and operating expenditures.

Figure 1 and Table 3 list the capital investments totalling \$51.6M in 2025:

- \$28.0M for active transportation projects and bus transit improvements
- \$7.9M for EV charger deployment in the public-realm and in private rental buildings, and electrification of City fleet vehicles
- \$2.6M for zero-emission buildings, such as rental/non-market housing retrofit supports
- \$3.2M for extreme heat and air quality measures, such as park and street tree planting and City facility air-quality upgrades
- \$1.5M for accelerated water-meter deployment
- \$8.4M for green infrastructure planning, design and deployment

The suites of actions within each Big Move and each climate hazard focus area are a balance of regulation, investment, and advocacy with external partners, senior levels of government, utilities, etc. For instance, active transportation projects focus on infrastructure deployment and therefore form a higher proportion of our overall investments. Zero-emission vehicle and zero emission programs are a mix of infrastructure, incentives, and policy development and regulation. These are lower investment areas, where climate outcomes will be achieved through policy leadership and regulatory means.

\$28.0M operating budget includes all CEAP and CCAS programs, much of which overlaps with core functions and ongoing expenses for operations and staffing, as well as community support programs for extreme heat; NEU and Park Board equipment, fleet and renewable fuels; public bike-share operation; urban forestry; and climate-related policy development.

Figure 1 – 2025 Climate Budget (Focus Areas)

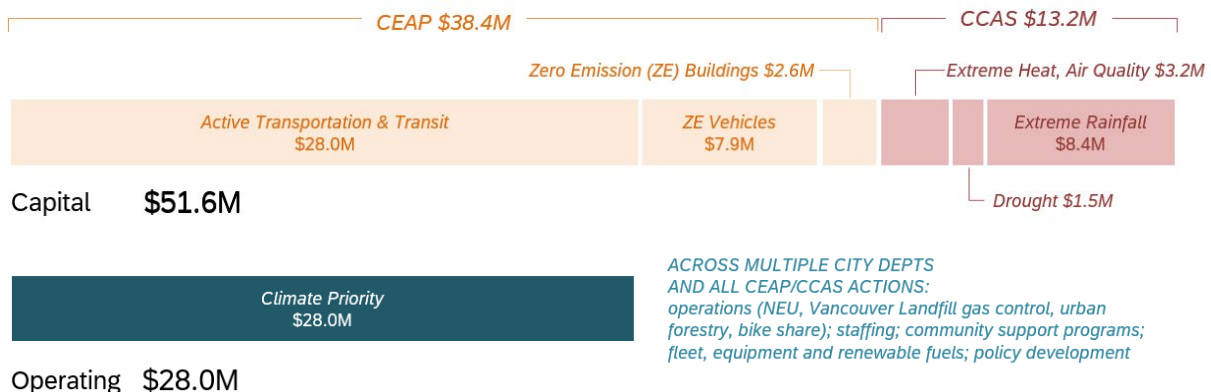


Table 1 – 2025 Draft Capital Budget: Climate Budget Initiatives and Funding Sources

Focus Area	Service Areas	Capital Plan Program / Project Name	2025 Draft Budget Allocation, \$M				Funding Source				
			CEAP	CEAP/CCAS	CCAS	Grand Total	Tax	Debt	Utility Fees	Dev. Contrib.	Partner Funding
BM2	<ul style="list-style-type: none"> Active transportation corridors & complete streets Traffic signals Transportation safety & accessibility Transit integration & reliability 	2023-26 Active Transportation - Staffing	\$1.1			\$1.1				\$1.1	
		2023-26 Active transportation-Beatty Str	\$1.0			\$1.0				\$0.5	\$0.5
		2023-26 Bus Transit Improvements	\$3.3			\$3.3					\$3.3
		2023-26 New Active Transport Improvements	\$8.8			\$8.8				\$3.8	\$5.0
		2023-26 New Signals	\$3.0			\$3.0				\$2.4	\$0.6
		2023-26 Rapid Transit - Staffing	\$1.8			\$1.8				\$1.3	\$0.6
		2023-26 School Program	\$0.8			\$0.8				\$0.8	
		Bus Operations & Accessibility	\$2.0			\$2.0					\$2.0
		Upgrade to Active Transportation Network	\$6.2			\$6.2				\$3.6	\$2.6
BM3	Vehicles & equipment	2023-26 Electrification Fleet-Sanitation	\$0.7			\$0.7			\$0.7		
		2023-26 Electrification of Fleet - Parks	\$1.3			\$1.3	\$1.3				
		2023-26 Electrification of Fleet -Street	\$1.0			\$1.0	\$1.0				
		2023-26 Electrification Of Veh - VFRS	\$0.1			\$0.1	\$0.1				
		2023-26 Electrification Of Veh - VPD	\$1.8			\$1.8	\$1.8				
	Zero emission vehicles	2023-2026 Off-Street Electrical Vehicle Charging Infrastructure: Non-City Buildings	\$1.8			\$1.8	\$1.8				
		2023-2026 Public realm EV charging	\$1.1			\$1.1		\$1.1			
BM4	Green buildings	2023-2026 Energy Retrofits: Non-City Buildings	\$2.5			\$2.5	\$2.5				
	Generation	New Low Carbon (existing network) - Planning	\$0.1			\$0.1		\$0.1			
BM6, Extreme Heat, Air Quality	Urban forest	2023-2026 Park Trees - New		\$0.5		\$0.5				\$0.5	
		2023-2026 Street Trees - Replacement		\$1.3		\$1.3	\$1.3				
	Climate adaptation	2023-2026 Tree Pits			\$1.1	\$1.1		\$1.1			
Core network		2023-26 Cap Maintenance - Fire & Rescue			\$0.3	\$0.3	\$0.3				
Drought	Resilience	AMI Reading Technology			\$1.5	\$1.5			\$1.5		
Extreme Rainfall	Core Network	2023-26 GRI asset renewal			\$0.3	\$0.3		\$0.2	\$0.2		
		2023-26 GRI Planning and Design			\$2.9	\$2.9				\$2.9	
		2023-26 GRI utility upgrades (C)			\$5.3	\$5.3				\$5.3	
Total, \$M			\$38.4	\$1.8	\$11.4	\$51.6	\$10.1	\$2.5	\$2.4	\$22.0	\$14.6
% of 2025 Draft Capital Budget (\$629M)			6.0%	0.3%	1.8%	8.2%					

Climate Investment in the 2023-26 Capital Plan

The 2023-26 Capital Plan includes \$276M of Climate Priority investments, which also advance City core functions and other priorities such as public realm and safety improvements, transportation and traffic management, wastewater management, and access to green space. This total includes restatements to include programs governed by the refreshed 2024-25 Climate Change Adaptation Strategy, and adjustments following the Capital Plan Mid-Term Update in 2024.

Table 2 – 2023-26 Capital Plan: Climate Budget Initiatives and Funding Sources

Goal Area	Service Areas	Capital Plan Program / Project Name	2023-26 Plan Investment, \$M				Funding Source				
			CEAP	CEAP/CCAS	CCAS	Grand Total	Tax	Debt	Utility Fees	Dev. Contrib.	Partner Funding
BM2	<ul style="list-style-type: none"> Active transportation & complete streets Traffic signals Transportation safety & accessibility Transit reliability 	Active transportation & complete Streets	\$61.7			\$61.7				\$31.4	\$30.3
		New signals	\$22.0			\$22.0		\$1.5		\$1.5	\$19.0
		School program	\$8.4			\$8.4				\$6.7	\$1.7
		West End public space/transport improvements	\$7.1			\$7.1				\$5.4	\$1.7
		Rapid transit office	\$3.2			\$3.2				\$3.2	
BM3	<ul style="list-style-type: none"> Vehicles & equipment Zero emission vehicles Streetscape amenities 	Electrification of vehicle & equipment: Sewers	\$0.5			\$0.5		\$0.3	\$0.3		
		Disposal	\$0.2			\$0.2			\$0.2		
		Water	\$0.2			\$0.2			\$0.2		
		Parks	\$3.4			\$3.4	\$3.4				
		Sanitation	\$1.1			\$1.1			\$1.1		
		Streets	\$4.1			\$4.1	\$4.1				
		VFRS	\$0.2			\$0.2	\$0.2				
		VPD	\$3.4			\$3.4	\$3.4				
		Other	\$0.8			\$0.8	\$0.8				
		Off-street EV charging infrastructure for non-City buildings	\$6.6			\$6.6	\$6.0				\$0.6
		Public realm EV charging infrastructure	\$4.3			\$4.3		\$4.3			
BM4	<ul style="list-style-type: none"> Programs Green buildings Renewable Energy Generation 	Energy optimization program: City buildings	\$8.5			\$8.5	\$8.5				
		Energy retrofits: non-City buildings	\$23.6			\$23.6	\$23.6				
		New low carbon base load capacity for existing network (planning & design)	\$2.5			\$2.5		\$2.5			
		Prior Plan - NEU programs	\$0.2			\$0.2		\$0.2			

Goal Area	Service Areas	Capital Plan Program / Project Name	2023-26 Plan Investment, \$M				Funding Source					
			CEAP	CEAP/CCAS	CCAS	Grand Total	Tax	Debt	Utility Fees	Dev. Contrib.	Partner Funding	
BM5	• Green Buildings	Embodied Carbon in Non-City Buildings	\$3.0			\$3.0						\$3.0
BM6, Extreme Heat, Air Quality	• Urban forest	Park trees - new		\$2.5		\$2.5					\$2.5	\$0.0
		Street trees - replacement		\$5.0		\$5.0	\$5.0					\$0.0
	• Climate adaptation	Climate adaptation initiatives (seawall reconstruction, urban canopy, etc.)			\$24.9	\$24.9		\$20.0				\$4.9
Drought	• Core network	Capital maintenance - Fire & rescue			\$1.9	\$1.9	\$1.9					
	• Resilience	Accelerated water meter deployment program			\$23.0	\$23.0			\$23.0			
Extreme Rainfall, Sea Level Rise	• Core network	Flood protection & drainage			\$5.5	\$5.5		\$2.8	\$2.8			
	• Seawall & shoreline	Green infrastructure renewal & upgrades			\$41.6	\$41.6		\$2.5	\$2.5	\$36.0	\$0.6	
		Seawall/shoreline planning - Coastal Flood Protection and Resiliency			\$6.7	\$6.7	\$3.5			\$3.1	\$0.1	
Total, \$M			\$164.8	\$7.5	\$103.6	\$276.0	\$57.4	\$34.0	\$30.0	\$89.8	\$64.8	
<i>% of 4yr Capital Plan (\$3,103M)</i>			<i>5.3%</i>	<i>0.2%</i>	<i>3.3%</i>	<i>8.9%</i>						

APPENDIX B

Vancouver's Approach vs. Emerging Best-Practice

Vancouver and many cities in Canada and abroad are pursuing climate budget approaches, including Edmonton, Toronto, Montreal and others. The City is an active participant in the development of local government guidance through the Net Zero Action Research Partnership (N-ZAP) Climate Budget Toolkit project by ICLEI Canada, University of Waterloo, and the Federation of Canadian Municipalities. This guidance, currently at draft stage, is expected in 2025. Staff conducted a gap analysis, comparing our approach against this and C40's A Step-By-Step Guide to Climate Budgeting, an internationally focussed guide published in 2024.

The analysis found Vancouver's practice is aligned with both guides in many areas:

- *Publicly accountable*: the Climate Budget is a public-facing document integrated with the main City budget reporting cycle.
- *Science- and policy-driven*: a greenhouse gas inventory is produced annually using an internationally recognized protocol; climate actions are governed by climate policies and centrally coordinated by the Sustainability Division within PDS.
- *Progress towards targets*: the Climate Budget (along with CEAP and CCAS Annual Reports) demonstrates how the city plans to deliver its short-and longer-term climate targets.
- *Traceable funding and responsibility*: climate actions are connected to budget line items; engaged stakeholders across relevant departments are responsible for the delivery of climate measures.
- *Funding gap*: disclosing funded and unfunded actions within the current capital budget transparently highlights funding-related barriers to achieving climate targets.

Best-practice guidance also reference the challenges municipalities face in publicly communicating the climate budget, as a community-wide approach may lead to misconceptions about municipal control over all climate impacts. City-controlled targets for CEAP and CCAS are currently under development, with a release expected in late-2025. These are intended to clearly distinguish impacts and actions within the City's ability to influence, from those under the jurisdiction of other authorities.

The analysis also found opportunities for future improvements:

- *Decision-usefulness*: ensure climate budget information is integrated at decision-useful points in the City's financial and budget planning processes; update financial policies to integrate climate budgeting earlier in the process, rather than generating climate budgeting after the ordinary budget has already been established; link climate action prioritization to overall budget considerations, negotiating alongside other city priorities such as health, education, and transportation; incorporate broader cost-benefit assessments, including equity implications, to aid decision-making.
- *Climate-literate governance*: improve climate literacy through change management and training for staff, management and Council; establish strong leadership and ownership of climate budgeting through a unified team comprising members from Finance and Sustainability, with the CFO taking a leading role and ensuring climate literacy within the Finance Department.
- *Project-level climate assessments*: develop systematic approaches to assess and prioritize all municipal projects based on their climate and co-benefit impacts, such as a documented "Climate Lens" process.

- *Accurate resourcing, cost, and outcome tracking*: traceable, repeatable financial and outputs/outcomes data are foundational to informed budgeting decisions and ensures reliability and accountability.

In 2025, staff are addressing through the following work:

- Completing the N-ZAP Climate Budget Toolkit project and determining which recommendations to implement
- Completing the Cost of Doing Nothing study currently underway with ICLEI Canada, to produce localized estimates of cost of climate inaction or delayed action
- Enhancing internal processes, such as exploring the inclusion of investment and expenditures related to *responding* to the aftermath of climate impacts
- Revising CEAP and CCAS Future Investment Needs for Council's consideration next fall as part of the 2026-30 Climate Plan refresh, to inform financial planning in the 2027-30 Capital Plan process beginning late-2025

Staff will continue to prioritize regulatory or advocacy tools over financial incentives or infrastructure investments where outcomes are similar; optimize project delivery; and advocate for and pursue more sustained external funding opportunities. Staff continue to work to address fiscal and operating capacity through the ordinary budget and financial planning processes.

APPENDIX C

Cost of Climate Inaction

Quantifying the costs of climate inaction and benefits of timely action can help prioritize climate work. Studies in other cities and nationally show that investing in climate action now can lead to significant avoided costs in the future. For instance, Canada's National Adaptation Strategy found that every \$1 invested in early adaptation measures accrues \$13-15 in total benefits.

Costs of climate impacts were made apparent this year. The Insurance Bureau of Canada recently reported on national and local cost-of-damage in 2024:

- Nationally, the summer of 2024 was ranked the most destructive season in Canadian history for insured losses caused by severe weather, with a year-to-date estimate (as of late-September 2024) of over \$7.7 billion¹.
- Locally, a Category 4 atmospheric river in October 2024 caused significant flood damage to properties in Coquitlam, Burnaby, West Vancouver, North Vancouver, Metro Vancouver and Surrey. The intense rainfall and strong wind gusts resulted in rivers overflowing and multiple instances of sewer backups, as well as flooded basements, roads and parking garages. Initial estimates of insured damage sit at over \$110 million².

Last year, City staff conducted a review of Canadian national and sub-national level studies into avoided costs and projected benefits from climate initiatives. Building on this work in 2024, staff began a Cost of Doing Nothing study in partnership with ICLEI Canada, with results expected in mid-2025. The objective is to assess the costs of inaction or delayed action within their own local context, how those costs are distributed across society, and support business-cases in our climate adaptation planning process. Beyond the clear, *direct* financial costs associated with extreme weather events, this will explore cascading or *indirect* costs often not accounted for in cost estimates, including disruptions to municipal service, supply chain, transportation network and business sector, as well as power outages, food/water shortages, and other significant non-market costs.

¹ Insurance Bureau of Canada, "Summer 2024 shatters records for severe weather damage: Over \$7 billion in insured losses from floods, fires and hailstorms", September 24, 2024, available at <https://www.ibc.ca/news-insights/news/summer-2024-shatters-records-for-severe-weather-damage-over-7-billion-in-insured-losses-from-floods-fires-and-hailstorms>

² Insurance Bureau of Canada, "Insured damage from October storms in Southern BC surpass \$110 million", November 15, 2024, available at <https://www.ibc.ca/news-insights/news/insured-damage-from-october-storms-in-southern-bc-surpass-110-million>