

# Climate

**T**he City of Winnipeg has committed to achieve net zero emissions by 2050, an emissions reductions target that is shared by both the government of Manitoba and the Canadian federal government.<sup>1</sup> The City has also committed to a more immediate 2030 target of 20 per cent reduction in emissions relative to 2011, below the federal target of 40–45 per cent reduction by 2030.<sup>2</sup> Despite these commitments, emissions continue to rise in Winnipeg and in Manitoba as a whole.<sup>3</sup>

Transitioning to a society that produces net zero emissions is a profound challenge as virtually every sector of our economy utilizes fossil fuels. Effective emissions reductions plans must be transformational in nature, reflecting the scale and urgency of the climate crisis. The most effective way for the City of Winnipeg to reduce emissions is to focus on transportation and buildings, accounting for 50 per cent and 42 per cent of emissions in Winnipeg, respectively.<sup>4</sup>

Winnipeg's current net zero strategy is guided by a climate action plan from 2018 and a climate roadmap from 2022.<sup>5</sup> These documents reflect the level of political comfort the City has with climate action and suggest a series of policies to embrace. While there are some promising ideas in these documents, achieving climate targets will require ratcheting up ambition, firm commitments, and following through with actions.

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## Economic modeling

A limitation of the City's current climate approach is a heavy reliance on economic modelling in both the 2018 climate plan and 2022



**Bumblebee pollinating a shrub rose** / Alanna Yuen

climate roadmap. Economic modelling uses computer programming to quantitatively evaluate future policy scenarios taking factors into consideration such as emissions reductions, employment, GDP, etc.

Economic modelling has been widely criticized by climate scientists for distorting climate action priorities.<sup>6</sup> By assigning a numerical value to the breakdown of complex ecological and social systems, modelling reduces climate action to a cost-optimization exercise.<sup>7</sup> Rather than critically evaluating how energy is used in our society and building public capacity to enact structural changes, modelling tends to rely on hypothetical technological advancements.<sup>8</sup> Alternative climate frameworks would prioritize structural energy demand reduction.

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## Transportation

The most important focus for the city's climate plan is transportation because it is the highest emitting sector in the city and because the City of Winnipeg has direct authority over central aspects of the transportation

system: land use planning, public transit operations, and active transportation infrastructure. Advancing complete communities (mixed-use neighbourhoods including places to live, shop, work, learn, and play) that facilitate a large-scale shift away from car use and towards active and public transportation is central to climate action. Beyond emissions reductions, complete communities generate wide-ranging benefits across society, including health, safety, cost savings, mental well-being, and economic activity. Please see the transit and active transportation chapters for AMB actions in these areas.

The City's climate documents highlight complete communities as a key element of transportation emissions reductions, as do the City's key planning documents.<sup>9</sup> These plans emphasize strategic investment in active transportation, public transit, and transit-oriented development.

Municipal climate action plans must articulate firm, measurable commitments that directly constrain sprawl and reduce car dependence. Without clear targets tied to land use, infrastructure spending, and transportation outcomes, policies that support complete communities risk remaining symbolic rather than transformative. Sharply reducing car ownership and creating mixed-use communities must be priorities.

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## Buildings

Buildings must also be a major focus of the city's climate plan, as they account for approximately 42 per cent of city-wide emissions. This sector presents challenges for municipal action, as building codes fall under provincial jurisdiction and energy efficiency upgrades like Deep Energy Retrofits (DERs) require major upfront funding.

Several ideas identified in the City's Community Energy Investment Roadmap (CEIR) can be scaled up into effective policy. The proposed City-wide Zero Emissions Buildings coalition could coordinate stakeholders, while a dedicated municipal office could streamline permitting and approvals for deep energy retrofit projects. The City could also demonstrate leadership by committing to DERs for city-owned buildings. Large-scale retrofits of municipal buildings, including the deployment of ground-source heat pumps, would invest in the local building efficiency industry, creating spin-off benefits for households and the wider municipal economy.

More ambitious plans could reduce buildings even further. The city could provide loans needed to launch a GSHP industry, for e.g.

drilling equipment. Cities such as Montreal and the province of British Columbia are moving forward with banning natural gas installation in new construction, which would also support a shift away from fossil fuels.

The City can leverage its public capacity to enable buildings decarbonization policy by streamlining permitting, coordinating approvals, and using its own building portfolio to support the local DER and ground-source heat pump industry. These actions require relatively modest public expenditure but can significantly reduce project costs, accelerate deployment, and attract senior-government and private capital into Winnipeg's building sector.

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## Funding climate action

Winnipeg is currently struggling with an \$8 billion infrastructure deficit, driven in large part by long-standing land-use patterns that fail to account for the full lifecycle costs of infrastructure costs.<sup>10</sup> Car-centric suburban sprawl involves large upfront and ongoing infrastructure. Analysis of urban growth dynamics in the Greater Golden Horseshoe region surrounding Toronto has found that many low-density neighbourhoods cost more to service than they generate in municipal revenue.<sup>11</sup>

By carefully evaluating infrastructure costs and municipal revenues across neighbourhoods, Spatial Fiscal Impact Assessments show that compact, mixed-use development reduces car dependence and emissions while delivering higher fiscal returns.<sup>12</sup> Shifting toward complete communities would therefore reduce emissions and strengthen the city's fiscal position. The decision to expand Kenaston Boulevard (Route 90) is a costly example of increasing reliance on fossil-fuel infrastructure instead of investing in quality public transit. A future City Council can reverse or alter this decision as the project is still in its early stages and its massive \$757 million price tag is heavily contingent on uncommitted federal and provincial funding. While Winnipeg City Council approved \$5 million in the 2026 budget to begin property acquisitions, heavy construction is not slated to begin until 2027 or 2028, there are several pathways where the decision could be overturned or scaled back.<sup>13</sup>

City public works staff have already proposed a fallback plan to focus strictly on replacing and rehabilitating the aging St. James Street bridges instead of widening the entire corridor. Due to the high costs, environmental impacts, and alternative investments in public transit,

cancelling the expansion should be a priority of progressive City Councillors.

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## Climate adaptation

Adapting to a changing climate is also a critical part of climate action. An increase in the number of days with extreme heat as well as an increase in intensity of precipitation are some of the key impacts of climate in Winnipeg.<sup>14</sup> The City is currently in the process of developing a climate adaptation strategy.

There are several key adaptation investments that the city could make. Utilizing public spaces like libraries, leisure centres and community centres as cooling centres can also serve as useful tools for those requiring relief from extreme heat events. Maintaining and expanding the city's tree canopy would help to keep urban spaces cool in heat waves. Flooding mitigation efforts such as rainwater harvesting can be cost-effective ways to help manage water in the ground rather than overwhelm the stormwater system.

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## Actions

- **The AMB will** increase funding for complete communities by investing in planning capacity, community councils, and neighbourhood-scale capital projects that repurpose road space for public use. \$4 million dollars per year will be allocated to a capital reserve fund for projects that further the creation of complete communities.
- **The AMB will** establish a City-wide Deep Energy Retrofit (DER) Program with a dedicated municipal office to streamline permitting and approvals for deep energy retrofit projects; a commitment to undertake deep energy retrofits of City-owned buildings, including the deployment of ground-source heat pumps where appropriate; and a revolving loan or financing program to support capital investments by local retrofit and ground-source heat pump contractors, including specialized equipment required for installation. \$4 million dollars per year will be allocated to a capital reserve fund for Deep Energy Retrofits.

# Notes

- 1 City of Winnipeg. (2022). "Community Energy Investment Roadmap." <https://www.winnipeg.ca/services-programs/trees-environment/climate-action/community-energy-investment-roadmap>; Government of Canada. (2024). "Net-Zero Emissions by 2050." <https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/net-zero-emissions-2050.html>; Province of Manitoba. (2020). "Manitoba's Path to Net Zero." <https://www.gov.mb.ca/netzero/index.html>
- 2 City of Winnipeg. (2022). "Community Energy Investment Roadmap." <https://www.winnipeg.ca/services-programs/trees-environment/climate-action/community-energy-investment-roadmap>
- 3 The City of Winnipeg does not provide annual city-wide emissions numbers. In 2015, total city emissions were 4.525 million tonnes. In 2022, emissions had risen to 4.79 million tonnes. City of Winnipeg. (2022). "Community Energy Investment Roadmap Energy and Emissions Modelling 2016 to 2050" [https://data.winnipeg.ca/Organizational-Support-Services/Community-Energy-Investment-Roadmap-Energy-and-Emi/xmyz-yuti/about\\_data](https://data.winnipeg.ca/Organizational-Support-Services/Community-Energy-Investment-Roadmap-Energy-and-Emi/xmyz-yuti/about_data); City of Winnipeg. (2022). Community Energy Investment Roadmap; Climate Change Connection. "GHG Emissions – Manitoba | Climate Change Connection." <https://climatechangeconnection.org/emissions/manitoba-ghg-emissions/>
- 4 City of Winnipeg. (2024). "Winnipeg Climate Action Plan – 2024 Annual Report." <https://clkapps.winnipeg.ca/DMIS/ViewDoc.asp?DocId=26928&SectionId=774462&InitUrl=>
- 5 City of Winnipeg. (2018). "Winnipeg's Climate Action Plan Planning for Climate Change." <https://legacywinnipeg.ca/sustainability/PublicEngagement/ClimateActionPlan/pdfs/WinnipegsClimateActionPlan.pdf>; City of Winnipeg. Community Energy Investment Roadmap.
- 6 Stoddard, Isak et al. (2021). "Three Decades of Climate Mitigation: Why Haven't We Bent the Global Emissions Curve?" *Annual Review of Environment and Resources* 46, no. 1. Page 653–89. June 29, 2021. <https://doi.org/10.1146/annurev-environ-012220-011104>
- 7 Buller, Adrienne. (2022). "The Value of a Whale." Manchester University Press.
- 8 Tavoni, Massimo and Socolow, Robert. (2013). "Modeling Meets Science and Technology: An Introduction to a Special Issue on Negative Emissions." *Climatic Change* 118, no. 1. Page 1–14. April 17, 2013. <https://doi.org/10.1007/s10584-013-0757-9>
- 9 City of Winnipeg. (2022). "Complete Communities Direction Strategy 2.0" <https://www.winnipeg.ca/building-development/city-planning-design/ourwinnipeg/complete-communities-direction-strategy-20>; City of Winnipeg. (2022). "OurWinnipeg 2045 Development Plan" <https://clkapps.winnipeg.ca/DMIS/DocExt/ViewDoc.asp?DocumentTypeId=1&DocId=8222>
- 10 City of Winnipeg. (2024). "2024 Infrastructure Plan." <https://www.winnipeg.ca/city-governance/documents-reports/2024-infrastructure-plan>



- 11** Tomalty, Ray. (2022). "Municipal Finances and Growth Planning in the Greater Golden Horseshoe: Opportunities for Better Integration to Support Smart Growth" Smart Cities Research. [https://assets.nationbuilder.com/greenbelt/pages/14845/attachments/original/1666021200/GB\\_MunicipalFinancesandGrowth\\_REPORT\\_2022\\_E-ver.pdf?1666021200](https://assets.nationbuilder.com/greenbelt/pages/14845/attachments/original/1666021200/GB_MunicipalFinancesandGrowth_REPORT_2022_E-ver.pdf?1666021200)
- 12** Metro Vancouver – Regional Planning. (2023). "Costs of Providing Infrastructure and Services to Different Residential Densities." September 2023. <https://metrovanancouver.org/services/regional-planning/Documents/costs-of-providing-infrastructure-and-services-to-different-residential-densities.pdf>; Arthur Nelson et al. (2022) "Rationale for Smart Growth Fiscal Impact Analysis and Model Fiscal Impact Assessment Ordinance." Smart Growth America. August 2024. [https://wordpress.smartgrowthamerica.org/wp-content/uploads/2024/08/Rationale-for-Smart-Growth-Fiscal-Impact-Analysis-and-Model-Fiscal-Impact-Assessment-Ordinance\\_2023.pdf](https://wordpress.smartgrowthamerica.org/wp-content/uploads/2024/08/Rationale-for-Smart-Growth-Fiscal-Impact-Analysis-and-Model-Fiscal-Impact-Assessment-Ordinance_2023.pdf); Regional Planning – Halifax Regional Municipality. (2005). "Settlement Pattern and Form with Service Cost Analysis." <https://lede-admin.usa.streetsblog.org/wp-content/uploads/sites/46/2015/03/Halifax-data.pdf>; Tomaselli, Linda. (2019) "Spatial Planning and Fiscal Impact Analysis: A Toolkit for Existing and Proposed Land Use." Routledge. February 13, 2019. <https://doi.org/10.4324/9780429425912>
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