Agenda – Council – April 30, 2025

Report – Standing Policy Committee on Water, Waste and Environment – April 11, 2025

Item No. 1 Building Emissions Reduction Strategy

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On April 22, 2025, the Executive Policy Committee submitted the following to Council:

1. That the recommendation of the Standing Policy Committee on Water, Waste and Environment be referred to the Climate Action and Resilience Committee for review and report back to Council at its June 26, 2025 meeting, namely:

    "A. That the Building Emissions Reduction Strategy, attached as Appendix A, be adopted as a long-term strategic plan to guide energy efficiency retrofits, electrification, and renewable energy integration in order to achieve significant greenhouse gas reductions while enhancing building performance and operational savings.

    B. That funding for the Building Emissions Reduction Strategy initiatives, inclusive of capital, be referred to the 2026 Budget Review Process."

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Report – Standing Policy Committee on Water, Waste and Environment – April 11, 2025

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On April 22, 2025, the Executive Policy Committee recommended the following to Council:

1. That the recommendation of the Standing Policy Committee on Water, Waste and Environment be referred to the Climate Action and Resilience Committee for review and report back to Council at its June 26, 2025 meeting, namely:

    "A. That the Building Emissions Reduction Strategy, attached as Appendix A, be adopted as a long-term strategic plan to guide energy efficiency retrofits, electrification, and renewable energy integration in order to achieve significant greenhouse gas reductions while enhancing building performance and operational savings.

    B. That funding for the Building Emissions Reduction Strategy initiatives, inclusive of capital, be referred to the 2026 Budget Review Process."

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

STANDING COMMITTEE RECOMMENDATION:

On April 11, 2025, the Standing Policy Committee on Water, Waste and Environment concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

Laura Tyler submitted a communication in support of the matter.

COUNCIL DECISION:

On October 24, 2024, Council concurred in the recommendation of the Standing Policy Committee on Water, Waste and Environment and adopted the following:

1. That an extension of time of up to 180 days be granted for the Winnipeg Public Service to report back on the development of a building emissions reduction strategy to reduce energy and carbon in City buildings including:

Report – Standing Policy Committee on Water, Waste and Environment – April 11, 2025

DECISION MAKING HISTORY (continued):

COUNCIL DECISION (continued):

A. Asset Management Assessment and Prioritization Approach;

B. Funding and Resource Requirements;

C. Implementation Plan.

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

David Grant submitted a communication with respect to the matter.

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On October 16, 2024, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Water, Waste and Environment and submitted the matter to Council.

David Grant submitted a communication in opposition to the matter.

STANDING COMMITTEE RECOMMENDATION:

On October 4, 2024, the Standing Policy Committee on Water, Waste and Environment concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

David Grant submitted a communication in opposition to the matter.

COUNCIL DECISION:

On September 26, 2024, Council concurred in the recommendation of the Standing Policy Committee on Water, Waste and Environment and adopted the following:

1. That an extension of time of 30 days be granted for the Standing Committee to consider the recommendation of the Winnipeg Public Service, namely:

Report – Standing Policy Committee on Water, Waste and Environment – April 11, 2025

DECISION MAKING HISTORY (continued):

COUNCIL DECISION (continued):

A. That an extension of time of 180 days be granted for the Winnipeg Public Service to report back on developing a building emissions reduction strategy to reduce energy and carbon in City buildings, including:

i. Asset Management Assessment and Prioritization Approach;

ii. Funding and Resource Requirements;

iii. Implementation Plan.

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On September 17, 2024, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Water, Waste and Environment and submitted the matter to Council.

STANDING COMMITTEE RECOMMENDATION:

On September 9, 2024, the Standing Policy Committee on Water, Waste and Environment submitted the following to the Executive Policy Committee and Council:

1 That an extension of time of 30 days be granted for the Standing Committee to consider the recommendation of the Winnipeg Public Service, namely:

A. That an extension of time of 180 days be granted for the Winnipeg Public Service to report back on developing a building emissions reduction strategy to reduce energy and carbon in City buildings, including:

i. Asset Management Assessment and Prioritization Approach;

ii. Funding and Resource Requirements;

Report – Standing Policy Committee on Water, Waste and Environment – April 11, 2025

DECISION MAKING HISTORY (continued):

STANDING COMMITTEE RECOMMENDATION (continued):

iii. Implementation Plan.

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

David Grant submitted a communication in opposition to the matter.

COUNCIL DECISION:

On September 29, 2023, Council adopted the recommendation of the Standing Policy Committee on Water, Waste and Environment, which included the following:

1. That the Public Service develop a building emissions reduction strategy to reduce energy and carbon in City buildings and report back to Council in Q3 2024, including:

   A. Asset Management Assessment and Prioritization Approach;

   B. Funding and Resource Requirements;

   C. Implementation Plan.

ADMINISTRATIVE REPORT

Title: Building Emissions Reduction Strategy

Critical Path: Standing Policy Committee on Water, Waste and Environment – Executive Policy Committee – Council

AUTHORIZATION

Author	Department Head	CFO	CAO
B. Erickson	G. Patton	T. Graham	S. Armbruster, Interim CAO

EXECUTIVE SUMMARY

The Building Emissions Reduction Strategy (BERS) is the City's roadmap to lowering greenhouse gas (GHG) emissions in City-owned buildings.

Buildings are a major source of GHG emissions for the City of Winnipeg. In 2022, energy use in City-owned buildings represented over 34 percent of total energy use in Winnipeg. City-owned buildings also contributed 21 percent of Winnipeg's GHG emissions. This underscores the importance of reducing emissions in this sector.

The City of Winnipeg has set a goal to achieve net-zero emissions in buildings by 2050. To meet this target, substantial emissions reductions are needed.

The strategy focuses on Asset Management, Operational Adjustments, and Monitoring and Feedback. These initiatives aim to:

- reduce energy consumption,
- lower operational costs, and
- decrease greenhouse gas emissions.

This report does not include any estimated savings in the Financial Impact Statement as uncertainties remain regarding future utility rates and the potential reimplementation of the carbon tax.

All analysis within this strategy has been conducted without including the carbon tax, ensuring an up-to-date and realistic financial assessment. To support cost-effective implementation and long-term financial viability, the City actively collaborates with Efficiency Manitoba, the Federation of Canadian Municipalities (FCM), and both Provincial and Federal funding programs to take full advantage of available incentives and grants.

RECOMMENDATIONS

1. That the Building Emissions Reduction Strategy, attached as Appendix A, be adopted as a long-term strategic plan to guide energy efficiency retrofits, electrification, and renewable energy integration in order to achieve significant greenhouse gas reductions while enhancing building performance and operational savings.

2. That funding for the Building Emissions Reduction Strategy initiatives, inclusive of capital, be referred to the 2026 budget cycle.

3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

REASON FOR THE REPORT

On September 29, 2023, Council concurred in the recommendation of the Standing Policy Committee on Water, Waste and Environment and adopted the following:

1. That the Public Service develop a building emissions reduction strategy to reduce energy and carbon in City buildings and report back to Council in Q3 2024, including:

    A. Asset Management Assessment and Prioritization Approach;

    B. Funding and Resource Requirements;

    C. Implementation Plan.

On October 24, 2024, Council concurred in the recommendation of the Standing Policy Committee on Water, Waste and Environment and adopted the following:

1. That an extension of time of up to 180 days be granted for the Winnipeg Public Service to report back on the development of a building emissions reduction strategy to reduce energy and carbon in City buildings including.

IMPLICATIONS OF THE RECOMMENDATIONS

The Building Emissions Reduction Strategy (BERS) will serve as the City of Winnipeg's strategic plan and guiding framework for managing and reducing fossil fuel emissions across municipal buildings. Its adoption will have significant implications for operational efficiency and financial planning. As noted in the Financial Impact Statement, these implications are subject to Council approval through the budget process.

By optimizing energy use and reducing greenhouse gas emissions, BERS will enhance building performance, lower operational costs, and extend asset lifespans through proactive maintenance and the integration of advanced technologies. The strategy's phased approach ensures a balanced transition, allowing the City to achieve meaningful emission reductions while maintaining fiscal responsibility.

HISTORY/DISCUSSION

OurWinnipeg 2045 sets out the City's climate target of net zero emissions by 2050 which aligns with federal and international targets. The Community Energy Investment Roadmap (CEIR) identifies City and community-wide systems level actions and investments to achieve this updated target. Council directed the Public Service to implement CEIR in July 2022.

The development of a Building Emissions Reduction Strategy (BERS) for existing municipal buildings aims to reduce greenhouse gas emissions, improve energy efficiency, enhance resilience and monitor and report progress. In addition, it aims to leverage funding and incentives. The Office of Sustainability provided feedback on the strategy during its development.

The Building Emissions Reduction Strategy (BERS) addresses the following three components:

A. Asset Management Assessment and Prioritization Approach;
B. Funding and Resource Requirements;
C. Implementation Plan.

1. Asset Management Assessment and Prioritization Approaches

BERS incorporates an asset management-based framework to assess and prioritize municipal buildings for energy efficiency and emissions reduction efforts. Key considerations include:

- **Baseline Assessments:** Evaluating current building performance, energy use intensity (EUI), and greenhouse gas (GHG) emissions.
- **Risk and Opportunity Analysis:** Identifying buildings with the highest potential for energy savings, emissions reductions, and cost-effectiveness.
- **Lifecycle Planning:** Aligning energy retrofits and decarbonization measures with the natural lifecycle of building systems, minimizing disruption and leveraging planned upgrades.
- **Decision-Making Criteria:** Using data-driven methods (e.g. energy audits, benchmarking, and predictive modeling) to prioritize actions in a way that maximizes environmental and operational benefits.

2. Funding and Resource Requirements

BERS outlines the financial and resource considerations needed for successful implementation:

- **Cost Estimates:** Providing indicative budgets for emission reduction projects.
- **Funding Sources:** Identifying a mix of funding mechanisms, including:
    - Municipal capital budgets
    - Provincial and federal grants
    - Incentives (e.g. Efficiency Manitoba)

- **Capacity Building:** Addressing internal resource gaps by training staff, hiring specialized consultants, and collaborating with external stakeholders to ensure effective execution of projects.
- **Financial Planning:** Encouraging long-term financial strategies to balance upfront investment.

3. Implementation Plan

The implementation plan serves as a roadmap for achieving Building Emissions Reduction Strategy targets:

- **Key Actions:**
    - Building Management System (Metasys) Upgrades and Retro-Commissioning
    - Building Energy Optimization and Sustainable Practices
    - Comprehensive End-of-Life Portfolio and Strategic Planning

These elements ensure that the strategy is actionable, cost-effective, and adaptable over time, aligning with the City of Winnipeg's broader climate action goals while ensuring transparency, accountability, and optimal resource utilization.

The Building Emissions Reduction Strategy (BERS) directly aligns with the City of Winnipeg's Climate Action Plan, OurWinnipeg2045 and Green Building Policies by advancing the City's commitment to sustainability, energy efficiency, and emissions reduction. Additionally, it promotes deep energy retrofits, electrification, and renewable energy adoption in both new and existing facilities. Additionally, BERS integrates climate resilience principles by prioritizing lifecycle planning, resource efficiency, and sustainable funding mechanisms.

SUMMARY OF STRATEGIC PRIORITIES FOR BUILDING EMISSIONS REDUCTION

The Building Emissions Reduction Strategy (BERS) focuses on three interconnected priorities to drive meaningful energy and carbon reductions across Winnipeg's municipal buildings. These priorities include Building Management System Upgrades and Retro-Commissioning, Building Energy Optimization and Sustainable Practices, and Comprehensive End-of-Life Portfolio and Strategic Planning.

Each priority outlines targeted actions, from deploying advanced building controls and conducting energy audits to replacing outdated systems and planning for electrification. Together, these strategies enhance energy efficiency, reduce greenhouse gas emissions, and future-proof City-owned buildings, ensuring they remain sustainable, resilient, and cost-effective.

Priority 1: Building Management System Upgrades and Retro-Commissioning
Optimizing building operations through Building Management Systems (Metasys) and retro-commissioning is cost-effective for reducing energy use and emissions. Winnipeg's Metasys system centralizes building control, enhanced by SkySpark analytics for performance monitoring. Retro-commissioning ensures that building operations align with actual usage patterns, though further efforts are needed to address all City assets. Notable results include a 40 percent energy reduction in ice arena pump systems. Key steps include BMS installations, SkySpark integration, and retro-commissioning audits to optimize systems.

Priority 2: Building Energy Optimization and Sustainable Practices
With 34 percent of municipal energy use linked to City buildings, targeted retrofits include HVAC upgrades, LED lighting, and insulation improvements. Heat pumps and dual-fuel systems reduce reliance on fossil fuels, while energy audits identify opportunities for carbon reduction. Funding support from Efficiency Manitoba and other grants are critical for these efforts. Actions include additional audits, efficient replacements, quick-win upgrades, energy-use dashboards, and facility manager training, ensuring sustainability and readiness for future renewable energy systems.

Priority 3: Comprehensive End-of-Life Portfolio and Strategic Planning
A holistic lifecycle approach integrates retrofits with infrastructure upgrades, prioritizing electrification and future-proofing. End-of-life planning minimizes failures and optimizes resource allocation, aligning equipment replacements with carbon reduction goals. Measures include creating a long-term portfolio, phased electrification, exploring financing options, and reinvesting savings, whilst Monitoring and Verification (M&V) tracks energy and carbon performance, ensuring accountability and alignment with climate goals.

The Public Service will conduct a comprehensive update in 2027, the year before the next multi-year budget cycle for 2028-2031, to ensure that strategies, priorities, and resource allocations align with the latest data, technological advancements, and evolving municipal goals. This update will allow the Public Service to assess progress, identify new opportunities for optimization, and integrate lessons learned from ongoing initiatives. By doing so, the City can refine its approach, enhance energy management practices, and ensure that future investments support long-term sustainability and operational efficiency.

Funding and Resource Requirements

All cost estimates remain at Class 5 (conceptual level) and are subject to Council approval. Additionally, the strategy is designed to be scalable, allowing for adjustments based on funding availability and implementation feasibility.

The table below outlines the funding required for each priority and its associated tasks, as detailed on pages 13-31 of Appendix A.

Priority	Initiative	Total Costs
1a.	BMS Installation	$2,525,000
1b.	SkySpark Integration	$100,000
1c.	Retro-Commissioning	$674,800 + 3 Permanent FTE (1 Technologist & 2 Electricians)
2a.	Building Energy Audits	$400,000
2b.	Energy Efficient Replacement Plan	$100,000
2c.	Immediate Energy Savings Initiatives	$150,000
2d.	Implement Heat Pump Systems	$100,000 per system
2e.	Install Renewable Energy Systems	$100,000 per system

Priority	Initiative	Total Costs
2f.	Energy Use Transparency	$150,000
2g.	Funding and Incentive Utilization	$100,000
2h.	Stakeholder Training	$75,000
2i.	Implement M&V Process	$15,000 annually
3a.	Creation of Long-Term End-of-Life Portfolio	$550,000
3b.	Electrification Roadmap	$150,000
3c.	Financing opportunities	$50,000
3d.	Dedicated Energy Savings Reinvestment Plans	$75,000
	TOTAL	$6,174,800

In addition to the key priorities, a list of specific building retrofits has been compiled. For further details, refer to page 26 of Appendix A.

Building	Cost of Retrofit Investments
Confederation Building	$50,000
Mandarin Building	$250,000
Public Works Yard & Administrative Offices	$300,000
Westdale Outdoor Pool	$50,000
Winnipeg Fire Paramedic Service Academy	$250,000
Transcona Kinsmen Centennial Pool	$100,000
Fort Garry Lions Outdoor Pool	$100,000
WPS Police Headquarters	$8,000,000
Animal Services Agency	$250,000
Civic Centre Complex	$8,000,000
Pan Am Pool	$5,000,000
Cindy Klassen Recreation Complex	$200,000
Fort Garry Library	$250,000
Public Works East Yards Complex	$5,000,000
St. James-Assiniboia Library	$1,000,000
Turtle Island Neighbourhood Centre	$1,000,000
Winnipeg Transit Fort Rouge Garage	$1,000,000
North End Sewage Treatment Plant	$5,000,000
TOTAL	$35,800,000

SAVINGS

If all Building Management System (Metasys) installations and retro-commissioning projects (1a. - 1c.) were implemented, annual utility cost savings are estimated at $212,040. These savings are expected to increase over time as further refinements to building operations are made and utility rates rise.

Additionally, implementing all specific building retrofit projects could result in an estimated $722,706 in annual utility cost savings. These savings would materialize progressively as the projects are completed and optimized.

It is important to note that some initiatives detailed in the Building Emission Reduction Strategy are supportive and serve as foundational steps, enabling the City of Winnipeg to advance its energy and carbon reduction efforts.

These estimated savings have not been included in the Financial Impact Statement, as uncertainties remain regarding future utility rates and the potential reimplementation of the carbon tax.

CONCLUSION

The Building Emissions Reduction Strategy intends to lower greenhouse gas emissions from City-owned buildings, which currently account for 21 percent of total GHG emissions. By prioritizing investments in carbon-saving technologies, optimizing building systems, and implementing proactive maintenance practices, the City will address maintenance issues while improving energy efficiency.

This strategy emphasizes upgrading existing facilities, enhancing transparency in energy use, and leveraging funding sources to support retrofitting initiatives. Ultimately, these efforts will improve occupant health, reduce operating costs, and build resilience against extreme weather, positioning Winnipeg as a leader in sustainable development.

FINANCIAL IMPACT

Financial Impact Statement

Date: March 20, 2025

Project Name:

Building Emissions Reduction Strategy

First Year of Program 2026

	2026	2027	2028	2029	2030
Capital					
Capital Expenditures Required	$ 2,242,000	$ 10,650,000	$ 11,167,000	$ 9,300,000	$ 5,966,000
Less: Existing Budgeted Costs	-	-	-	-	-
Additional Capital Budget Required	$ 2,242,000	$ 10,650,000	$ 11,167,000	$ 9,300,000	$ 5,966,000
Funding Sources:					
Debt - Internal	$ -	$ -	$ -	$ -	$ -
Debt - External	2,242,000	10,650,000	11,167,000	9,300,000	5,966,000
Grants (Enter Description Here)	-	-	-	-	-
Reserves, Equity, Surplus	-	-	-	-	-
Other - Enter Description Here	-	-	-	-	-
Total Funding	$ 2,242,000	$ 10,650,000	$ 11,167,000	$ 9,300,000	$ 5,966,000
Total Additional Capital Budget Required	$ 39,325,000				
Total Additional Debt Required	$ 39,325,000				
Current Expenditures/Revenues					
Direct Costs	$ 1,345,000	$ 2,139,000	$ 3,072,000	$ 4,443,000	$ 5,470,000
Less: Incremental Revenue/Recovery	118,000	559,000	586,000	488,000	313,000
Net Cost/(Benefit)	$ 1,227,000	$ 1,580,000	$ 2,486,000	$ 3,955,000	$ 5,157,000
Less: Existing Budget Amounts	-	-	-	-	-
Net Budget Adjustment Required	$ 1,227,000	$ 1,580,000	$ 2,486,000	$ 3,955,000	$ 5,157,000

Additional Comments: Capital expenditures consist of the items identified in Appendix B as capital expenditures while direct costs consist of the items in Appendix B identified as operating expenditures + debt and finance charges on $39.325 million in capital expenditures net of recoveries for corporate short-term interest and administration and Municipal Accommodations project management overheads. See Appendix C for sample capital detail sheet. Note: the above financial implications are subject to Council approval of Recommendation 2 contained in this report.

Mike McGinn March 20, 2025

Mike McGinn, CPA, CA
Manager of Finance

CONSULTATION

This Report has been prepared in consultation with:

N/A

OURWINNIPEG POLICY ALIGNMENT

This report is in accordance with OurWinnipeg 2045 through:

Goal: Leadership and Good Governance
Objective: Establish and implement priority actions through evidence-informed decision-making processes.
Policies:
1.3 Integrated Service Planning and Outcomes
Advance operational plans that align with this Plan's sustainability goals through responsive, innovative and integrated government leadership.

1.4 Integrated Knowledge and Resources
Coordinate inter-departmental systems, projects and resources, making the best use of internal and external expertise to better understand service needs, find the most appropriate solutions, optimize resources and maximize community outcomes.

1.7 Equitable Service Access
Identify and provide access to a base level of municipal services to everyone, directly or facilitated through partnerships. Remove systemic barriers to participation, based on race, national or ethnic origin, colour religion, age, sex, sexual orientation, gender identity or expression, marital status, family status, physical or mental ability, official language used, citizenship status, socio-economic status, geographic location or climate change vulnerabilities.

Goal: Environmental Resilience
Objective: Promote low-carbon energy efficient buildings through low-energy building design, construction and retrofitting.
Policies:
2.1 Climate Action Targets
Meet and exceed greenhouse gas emissions reduction targets of 20 percent by 2030, relative to 2011, and net zero by 2050, by working towards partnerships with the community, businesses, and government bodies including Indigenous, Federal and Provincial governments.

2.3 Climate Action Leadership
Demonstrate municipal environmental leadership through an integrated, proactive organizational culture that applies innovative practices, including piloting new initiatives and evaluating and sharing results to eliminate the use of fossil fuels and enhance climate resilience in the built and natural environment.

2.12 Eliminate Fossil Fuel Dependence
Reduce greenhouse gas emissions from existing and new buildings, including municipally-owned buildings and facilities, and associated infrastructure, through the promotion of

renewable energy sources; energy efficiency use and performance measures; and low-carbon construction, retrofit and demolition methods that maximize the lifecycle of buildings.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

This report is in accordance with the Winnipeg Climate Action Plan (WCAP) as per Strategic Opportunity #1, Corporate Leadership, Direction 1.3 *Implement Low Carbon and Energy Efficient City Facilities (p.29).*

This report is also in accordance with Strategic Opportunity #5, Low Carbon and Energy Efficient Buildings, Direction 5.1 *Increase Energy Performance of Existing Buildings (p.46).*

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

This report is in accordance with the Poverty Reduction Strategy through:

Poverty Reduction Strategy Goal: All City Services are Equitable, Inclusive and Accessible

- Objectives
    - Residents have equitable access to City services, in particular demographic groups who experience marginalization.
    - Community development models and collaborative approaches are enhanced or initiated for service planning and delivery in areas of higher poverty.
    - Use of City tools and resources are maximized to reduce systemic inequities.

SUBMITTED BY

Department: Assets and Project Management
Division: Municipal Accommodations
Prepared by: M. Chatfield, Energy Analyst
Date: March 20, 2025
File No: MA2025-013

Attachments:

Appendix A – Building Energy Reduction Strategy – PowerPoint
Appendix B – Costing
Appendix C – Sample Capital Detail Sheet