Agenda – Council – June 22, 2023

Report – Standing Policy Committee on Property and Development – June 1, 2023

Item No. 3 Status Update for the Manitoba Energy Code for Buildings

STANDING COMMITTEE RECOMMENDATION:

On June 12, 2023, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Property and Development and submitted the following to Council:

1. That this report be received as information.

Report – Standing Policy Committee on Property and Development – June 1, 2023

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On June 12, 2023, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Property and Development and submitted the matter to Council.

STANDING COMMITTEE RECOMMENDATION:

On June 1, 2023, the Standing Policy Committee on Property and Development concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

On April 6, 2023, the Standing Policy Committee on Property and Development granted an extension of time to its June 1, 2023 meeting for the Winnipeg Public Service to report back on the upcoming changes to the current status of the Manitoba Energy Code for Buildings, specifically as they relate to energy efficiency certification.

COUNCIL DECISION:

On February 23, 2023, Council concurred in the recommendation of the Standing Policy Committee on Property and Development, as amended by the Executive Policy Committee, and adopted the following:

1. That the Winnipeg Public Service be directed to report back within 60 days to the Standing Policy Committee on Property and Development on the upcoming changes to the current status of the Manitoba Energy Code for Buildings, specifically as they relate to energy efficiency certification.

2. That the Winnipeg Public Service be directed to report back within 60 days to the Standing Policy Committee on Water, Waste and Environment on the current status of the Community Energy Investment Roadmap (CEIR) and ways that the Manitoba Energy Code may enhance targets outlined in the roadmap.

3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing On December 15, 2022, Council ruled automatic referral of the following motion to the Standing Policy Committee on Property and Development:

Report – Standing Policy Committee on Property and Development – June 1, 2023

DECISION MAKING HISTORY (continued)

COUNCIL DECISION (continued):

On December 15, 2022, Council ruled automatic referral of the following motion to the Standing Policy Committee on Property and Development:

Moved by Councillor Allard,
Seconded by Councillor Schreyer,

WHEREAS according to the latest reporting on greenhouse gas emissions in the city of Winnipeg 2011 Community Greenhouse Gas Emissions Report, buildings are the 2nd-largest source of community emissions, second only to transportation;

AND WHEREAS there may be an opportunity for the City of Winnipeg to guide the shape of buildings in order for them to be more energy efficient

AND WHEREAS a south-facing flat wall may be ideal for solar voltaic power insulation, or another configuration that allows for solar panel operations throughout the day regardless of the position of the sun;

AND WHEREAS there may be other opportunities to reduce the energy consumption of homes by considering things likes the placement of windows, such as placements of windows on the south side to allow the sun inside in the summer as well blocking the sun with an awning in the summer;

AND WHEREAS there may be other ways to improve energy efficiency at no cost to the builder;

THEREFORE BE IT RESOLVED that the Public Service report back on opportunities to encourage the use of energy efficiency concepts in the development approval process of new buildings.

ADMINISTRATIVE REPORT

Title: Status Update for the Manitoba Energy Code for Buildings

Critical Path: Standing Policy Committee on Property and Development – Executive Policy Committee

AUTHORIZATION

Author	Department Head	CFO	CAO
A. Crocker	M. Pittet (Acting)	N/A	M. Jack

EXECUTIVE SUMMARY

In this report, the Public Service provides an update on the current status of the National Energy Code of Canada for Buildings (NECB) and National Building Code of Canada (NBC), referred to in the province as the Manitoba Energy Code for Buildings and Manitoba Building Code respectively when adopted, and ways they may enhance targets outlined in the Community Energy Investment Roadmap (CEIR).

RECOMMENDATIONS

That this report be received as information.

REASON FOR THE REPORT

On February 23, 2023, Council concurred in the recommendation of the Standing Policy Committee on Property and Development, as amended by the Executive Policy Committee, and directed the Public Service to report back to the Standing Policy Committee on Property and Development on the upcoming changes to the current status of the Manitoba Energy Code for Buildings, specifically as they relate to energy efficiency certification.

IMPLICATIONS OF THE RECOMMENDATIONS

There are no implications associated with the recommendations of this report.

HISTORY/DISCUSSION

Regulatory Framework for Code Adoption in Manitoba

National building codes are adopted in Manitoba at the provincial level through the Buildings and Mobile Homes Act. Municipalities are then responsible for the adoption and enforcement of

these codes and may use by-laws as a means for implementation. The City uses the Winnipeg Building By-law No. 4555/1987 to establish administrative requirements and procedures for the adoption of building construction codes in Winnipeg.

Building and energy codes are applied to different building types based on their size. In Manitoba, large buildings are required to follow the National Energy Code for Buildings (NECB) 2011 with a series of Manitoba-specific amendments, adopted as the Manitoba Energy Code for Buildings (MECB). The MECB was adopted through regulation 213/2013 of the Buildings and Mobile Homes Act and is applicable to the construction of new buildings and additions governed under Part 3 of the Manitoba Building Code (MBC). This regulation came into force on December 1, 2014, and applies to the construction of new buildings and additions subject to Part 3 of the MBC. Part 3 includes larger buildings – exceeding 600m^2 or three storeys in building height.

The MBC was adopted through regulation 31/2011 of the Buildings and Mobile Homes Act. Housing and small buildings in Manitoba are currently required to follow the 2010 version of the National Building Code of Canada (NBC) with a series of Manitoba-specific amendments. Housing and small buildings are captured under Part 9 of the MBC, with energy efficiency requirements detailed in Section 9.36 - Energy Efficiency, which came into effect on April 1, 2016. The MECB still regulates Part 9 buildings that are:

- Non-residential occupancies whose combined total floor area exceeds 300 m2, or
- Medium-hazard industrial (F-2) occupancies.

The National Energy Code of Canada for Buildings (NECB) 2020 and the National Building Code of Canada (NBC) 2020 are the most recent versions of the energy and building codes to be published by the National Research Council of Canada. New versions of the national codes have not been adopted in Manitoba since the adoption of the MECB and MBC in 2014 and 2011, respectively.

Since the adoption of those codes, the 2015 NBC and the 2017 NECB have been published Nationally and adopted in other Provinces for building enforcement but have not seen enactment in Manitoba.

Administration of Section 9.36 of the MECB in Winnipeg

The construction of new buildings involves numerous disciplines (structural, architectural, mechanical and electrical) to ensure compliance with building codes. Due to the complexity of those areas of construction, professionals (Architects and/or Engineers) are required to provide sealed drawings and designs. Energy mandates in the MECB cross the same disciplines and the City has created a system of compliance that necessitates a single professional to review and coordinate the Energy Code responsibilities for compliance.

The Coordinating Registered Professional is obligated to review all aspects of the MECB and submit a declaration of Professional Responsibility and Certificate of Compliance for Part 3 building projects.

An MECB Coordinating Registered Professional must be:

- A registered member of the Manitoba Association of Architects, authorized to practice architecture in the Province of Manitoba; or

- A registered member of the Engineers and Geoscientists of Manitoba, authorized to practice engineering in the Province of Manitoba and skilled in the appropriate area of work concerned.

The MECB Coordinating Registered Professional shall:

- Ascertain which disciplines relating to the MECB are required and which registered professionals, including professionals of record, must be retained.
- Ensure the design requirements are coordinated between the professionals of record and comply with the applicable provisions of the MECB.
- Complete the MECB Declaration of Professional Responsibility. In cases of a base building application, an additional Declaration will be required for each initial tenant improvement.
- Ensure the Compliance Checklist issued by The Office of the Fire Commissioner is completed, retained as a record for seven years, and be available in the event of an audit. It is also required that a final copy of the Checklist be issued to the building owner.
- Ensure the field reviews are coordinated between the professionals of record.
- Certify that the construction substantially complies with the applicable provisions of the MECB.
- Submit a Final MECB Certificate of Compliance under seal at the completion of construction and prior to final occupancy. Note: In submitting the Certificate of Compliance, the coordinating professional is not responsible for ensuring the compliance of design or construction with respect to the MECB for those aspects which are the responsibility of other professionals under seal and, as such, is entitled to reasonably rely on pre- and post-construction certificates required by the City of Winnipeg of professionals of record and/or other statements provided by other professionals pertaining to the design and construction of the project.

Further information on the City's Coordinating Registered Professional program can be found at: https://legacy.winnipeg.ca/ppd/Documents/InfoCentre/InformationBulletins/2022/2022-017-ABEMPS.pdf

Part 9 buildings regulated under Section 9.36 of the MBC are reviewed under the regular permitting process for compliance. Plan Examiners review plans for design compliance, and the building inspectors review construction for site compliance before issuing final inspection reports.

National Energy Code for Buildings 2020 (NECB 2020)

The NECB 2020 sets out technical requirements for the energy-efficient design and construction of new larger buildings and additions. One of the key updates to the NECB 2020 is the

introduction of a four-tier building energy performance compliance path. This tiered path provides a framework for achieving higher levels of energy efficiency in larger buildings. Each successive tier is increasingly stringent in terms of building energy consumption. Tier 1 is considered as the baseline and is met through the incorporation of minimum code requirements. This tiered framework allows jurisdictions to require buildings to have an increasingly higher-level energy performance in a predictable way, without being required to go through a full new code adoption process. Currently, the code adoption process can take several months or even years.

The table below outlines this tiered energy performance compliance path from NECB 2020 and the corresponding percent building energy target or percent improvement required for each tier. The building energy target is the annual energy consumption of the proposed building expressed as a percentage. Percent improvement is based on the annual energy consumption of a proposed building compared to a reference (baseline) building.

Energy Performance Tier	Percent Building Energy Target (annual energy consumption of proposed building)	Percent Improvement (compared to a modelled reference building)
1	≤100%	≥0%
2	≤75%	≥25%
3	≤50%	≥50%
4	≤40%	≥60%

**Table 10.1.2.1 from NECB 2020*

National Building Code 2020 (NBC 2020)

Energy performance tiers are also established in NBC 2020 to provide a framework for achieving higher levels of energy efficiency in housing and small buildings. There are a total of five tiers in NBC 2020. Like the NECB 2020, Tier 1 in NBC 2020 represents compliance with baseline energy efficiency requirements and each successive tier is increasingly stringent in terms of building energy consumption.

Codes are typically developed over a five-year cycle. Proposed technical requirements related to operational emissions are expected for the 2025 editions of the codes and embodied emissions requirements are expected to be addressed for the 2030 editions. The Federal Government's goal is to move towards net zero emissions in the codes at the national level.

The Province has committed to adopt the 2020 Model Codes (Energy and Building), and the Public Service awaits this implementation.

FINANCIAL IMPACT

Financial Impact Statement

Date: April 24, 2023

Project Name:

Status Update for the Manitoba Energy Code for Buildings

COMMENTS:

There are no financial implications associated with this report.

Mike McGinn Apr. 24, 2023

Mike McGinn, CPA, CA
Manager of Finance

CONSULTATION

This Report has been prepared in consultation with:

- Office of Sustainability, Water and Waste Department

OURWINNIPEG POLICY ALIGNMENT

This report is in accordance with the OurWinnipeg 2045 policies through:

OurWinnipeg Goal: Leadership and Good Governance

Objective: Establish and implement priority actions through evidence-informed decision-making processes.

Policy 1.9: Responsive Change Management

Monitor and evaluate municipal investment and divestment, activities and risk of action or inaction, and outcomes for effectiveness, through a relevant set of sustainability goal indicators, benchmarks and targets, and analysis of local and global community trends.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

5.2 Improve Energy Performance of New Buildings

Action: Work in partnership with the Government of Manitoba, and other stakeholders to continually advance building code standards and other policy tools to increase energy efficiency in residential and commercial buildings.

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

Consideration was given as to whether this report connects to the Winnipeg Poverty Reduction Strategy (PRS) and its Goals and Objectives, and it was determined that the PRS is not applicable to this specific report.

SUBMITTED BY

Department: Planning, Property and Development
Division: Development and Inspections
Prepared by: R. Klassen
Date: April 25, 2023
File No: N/A