



RESORT MUNICIPALITY OF WHISTLER

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STAFF REPORT TO COUNCIL

PRESENTED: May 16, 2023 **REPORT:** 23-061
FROM: Climate and Environment **FILE:** 3900-20-2387
SUBJECT: BUILDING AND PLUMBING REGULATION AMENDMENT BYLAW (ZERO CARBON STEP CODE) NO. 2387, 2023 REPORT

RECOMMENDATION FROM THE CHIEF ADMINISTRATIVE OFFICER

That the recommendation of the General Manager of Climate Action, Planning and Development Services be endorsed.

RECOMMENDATION(S)

That Council consider giving first, second, and third readings to “Building and Plumbing Regulation Amendment Bylaw (Zero Carbon Step Code) No. 2387, 2023”.

PURPOSE OF REPORT

The purpose of this reporting is to seek Council direction to amend “Building and Plumbing Regulation Bylaw No. 1617, 2002”. Staff are requesting that Council consider first, second and third readings for “Building and Plumbing Regulation Amendment Bylaw (Zero Carbon Step Code) No. 2387, 2023” (the Building Bylaw Amendment).

Information Report Administrative Report (Decision or Direction)

DISCUSSION

Background

On December 15, 2020, Council adopted Resort Municipality of Whistler’s (RMOW) 2020 Climate Action Big Moves Strategy (Big Moves Strategy) and new greenhouse gas (GHG) emission reduction target of reducing the RMOW’s GHG emissions by 50 per cent below 2007 levels by 2030. In 2020, buildings accounted for 50 per cent of the RMOW’s community wide GHG emissions and 42 per cent in 2021.

To meet the RMOW’s climate targets, GHG emissions from buildings must be reduced. Local governments in BC have two mechanisms to do this. One is to build better buildings now and the other is to retrofit existing buildings. While our Big Moves Climate Action Implementation Plan identifies initiatives for retrofitting existing buildings such as expanding the current [Retrofit Assist Program](#), as a local government we have greater authority over new construction, making it a priority action. Implementing low carbon building requirements now will avoid increasing GHG emissions from buildings or expensive retrofitting in the future. Early Big Moves Strategy emissions modelling has shown that implementing low carbon building requirements in Whistler has the potential to avoid

approximately 5,200 tonnes of carbon dioxide equivalent by 2030. This is equivalent to eight per cent of the emissions reduction needed to reach our 2030 target.

BC Energy Step Code

Up until now, the primary tool for regulating new building emissions in BC is the BC Energy Step Code (Energy Step Code). The Energy Step Code provides an incremental approach to energy efficient building design and allows local governments to show leadership by implementing higher levels of the Energy Step Code ahead of the provincial timeline, with an eventual province-wide requirement for all new buildings to be net-zero energy-ready by 2032. The RMOW has shown early leadership by adopting the Energy Step Code at Step 3 for Part 9 buildings in 2019 (Step 4 with In-Ground Basement Floor Area Exclusion). Part 9 buildings are simple buildings (e.g., single family homes, duplexes, or townhouse residential buildings) and Part 3 buildings are complex buildings (e.g., multi-unit residential or commercial buildings). As outlined in the Big Moves Strategy, the next steps towards increased energy efficiency will be to adopt higher steps of the Energy Step Code for Part 9 buildings and adopt the Energy Step Code for Part 3 buildings, with the goal to achieve top step for both building types by or before 2030.

On May 1, 2023, the BC Building Code (BCBC) changed. The BCBC now requires that all new construction of Part 9 and Part 3 buildings in BC must be 20 per cent more energy efficient than base 2018 BCBC requirements. This is equivalent to Step 3 for Part 9 buildings and Step 2 for Part 3 Buildings in the Energy Step Code. The current “Building and Plumbing Regulation Bylaw No. 1617, 2002” (Building Bylaw) only includes energy efficiency requirements for Part 9 buildings. Since the requirements are equal to or more stringent than the BCBC, the changes to the BCBC do not impact the requirements for Part 9 buildings in the RMOW. Since the Building Bylaw does not have energy efficiency requirements for Part 3 buildings, the requirements outlined in the BCBC are automatically in effect as of May 1, 2023.

Zero Carbon Step Code

While the Energy Step Code specifies increasing levels of energy efficiency, it does not specify the building's operational GHG emissions. The Province of BC addressed this gap with the latest changes to the BCBC, which include the opt-in Zero Carbon Step Code. The Zero Carbon Step Code is a building carbon pollution standard with the goal to reduce operational GHG emissions in new buildings. The standard does not address embodied carbon emissions or retrofitting existing buildings. Local governments can reference certain steps of GHG emission limits from the Zero Carbon Step Code in their zoning or building bylaws to regulate emissions of new construction in their communities. Similar to the Energy Step Code, the Province plans to integrate the Zero Carbon Step Code into the BCBC, but until then it remains an opt-in strategy for local governments demonstrating climate leadership.

The Zero Carbon Step Code specifies progressively higher steps of GHG emissions limits: Moderate, Strong and Zero Carbon, with Zero Carbon to be achieved province-wide by 2030. These limits are different for Part 9 and Part 3 buildings.

For Part 9 buildings, there are two pathways that a building in Whistler can follow. Figure 1 and Table 1 outline these pathways as specified by the Zero Carbon Step Code. The first pathway is a limit to the overall quantity of annual GHG emissions produced by the building, otherwise known as a base GHG allowance. Homes that exceed this base quantity of GHG will fall under the second pathway. This pathway limits the intensity of GHG emissions produced by a building, otherwise known as GHG intensity (GHGI), which is a measurement of total emissions produced by a building for a year divided

by the building’s floor area. The building will also need to fall under a maximum cap of GHG emissions which is the total GHG emissions produced by the building in a year.

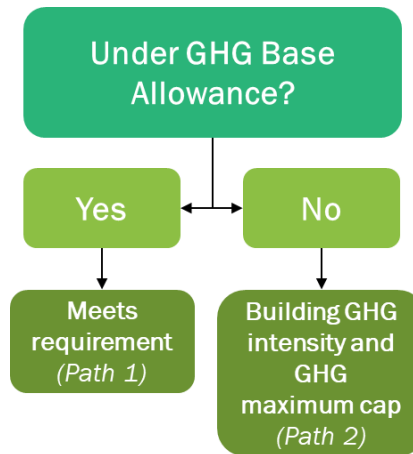


Figure 1. Zero Carbon Step Code Pathways for Part 9 Buildings

Table 1. Zero Carbon Step Code Emissions Levels for Part 9 Buildings

	Moderate (EL-2)	Strong (EL-3)	Zero Carbon (EL-4)
Path 1			
GHG Base Allowance (kg CO ₂ e/unit)	1050	440	265
Path 2			
Building GHG Intensity (kgCO ₂ e/m ² /year)	6	2.5	1.5
GHG Maximum Cap (kg CO ₂ e/unit)	2400	800	500

For Part 3 buildings, The Zero Carbon Step Code specifies that buildings meet a GHGI limit differentiated based on occupancy type. Table 2 outlines these GHGI limits, labelled as Emissions Limits for multi-unit residential buildings (MURBs), offices, retail, and hotels.

Table 2. Zero Carbon Step Code Emissions Levels for Part 3 buildings

Building Type	Moderate (EL-2)*	Strong (EL-3)*	Zero Carbon (EL-4)*
MURB	7	3	1.8
Office	5	3	1.5
Retail	6	3	2
Hotel	9	4	2

*GHG Emission Level in kilograms of carbon dioxide equivalent per metre squared per year (kgCO₂e/m²/year).

Engagement on Whistler’s Step Code Implementation

Since adopting the Energy Step Code in 2019, staff have engaged with industry stakeholders, Council and other local governments in BC on next steps for implementing the Energy Step Code and adopting Provincial GHGI limits.

In the [June 7, 2022 Information Report No. 22-079](#) presentation to Council, the RMOW’s plans to implement higher steps of the Energy Step Code for Part 3 and Part 9 buildings and adopt Provincial GHGI limits were outlined. Staff recommended that the RMOW’s plans be delayed until the province released GHGI limits for adoption.

In November 2022, while the Province was engaging on the Zero Carbon Step Code, RMOW staff interviewed several other local governments in BC who were considering the adoption of Provincial GHGI limits. These local governments outlined their plans to adopt the Zero Carbon Step Code, including the District of Saanich whose Council adopted the Zero Carbon Step Code, effective July 1, 2023. These municipalities reiterated the importance of acting now and clearly communicating plans and timelines to industry.

Engagement with industry stakeholders has taken place between November 2021 and April 2023. A summary of this engagement is provided in the Community Engagement section below and in Appendix A.

Analysis

With the Zero Carbon Step Code available for adoption as of May 1, 2023, the RMOW is now ready to proceed with its Energy Step Code and Zero Carbon Step Code implementation (the Step Code Implementation Plan). Staff propose that the Building Bylaw be amended to increase the Energy Step Code step for Part 9 and residential Part 3 buildings and adopt the Zero Carbon Step Code for all buildings, effective January 1, 2024. Table 3 outlines this proposed plan in detail.

To provide industry stakeholders with a long-term timeline of plans to adopt progressively higher steps of the Energy Step Code and Zero Carbon Step Code, staff have also outlined a proposed Step Code Implementation Plan for 2027 onwards (Table 3). This plan aligns with the Province’s timeline for all new construction built to Net Zero Energy Standard by 2032. This plan is for reference only, and these potential long-term changes are not included in the Building Bylaw Amendment.

Table 3. Whistler’s Proposed Step Code Implementation Plan – Long Term

Building type		Approach*	
		January 2024	2027 onward
Part 9	Single Family Dwelling, duplex, or townhomes	Step 4 with Strong Carbon Performance (EL-3)	Step 4 with Zero Carbon Performance (EL-4)

	SFD or duplex with in-ground basement floor area exclusion	Step 5 with Strong Carbon Performance (EL-3)	Step 5 with Zero Carbon Performance (EL-4)
Part 3	Residential	Step 3 with Strong Carbon Performance (EL-3)	Step 3 with Zero Carbon Performance (EL-4)
	Commercial	Step 2 with Strong Carbon Performance (EL-3)	Step 3 with Zero Carbon Performance (EL-4)

Proposed Building Bylaw Amendments

The proposed amendments are found in the Building Bylaw Amendment in the Council package.

POLICY CONSIDERATIONS

Relevant Council Authority/Previous Decisions

The current version of the Building Bylaw includes an amendment presented to [Council on July 10, 2018](#) that adopts the Energy Step Code for Part 9 buildings, effective January 1, 2019.

The proposed amendments to the Building Bylaw directly support the 2020 Climate Action Big Moves Strategy, in particular the following:

Big Move 4, “Build zero emission buildings”, with the 2030 goal all new buildings achieve the top step in the Energy Step Code, use only low carbon heating systems, and embodied carbon emissions drop by 40 per cent.

- Key initiative 1: “Adopt progressively higher steps on the Energy Step Code to address new building envelope improvements.”
- Key Initiative 2: “Collaborate with the Province on low carbon performance requirements and GHG emission limits for new buildings.”
- Key Initiative 3: “Incentivize low carbon energy systems within new buildings by using regulatory tools such as allowing for higher density or lower step code.”

This report follows the information presented in [June 7, 2022 Information Report No. 22-079](#), Implementation of the Energy Step Code and Low Carbon Energy Systems Pathway. It also follows the recent administrative report presented in [April 18, 2023 Administrative Report No. 23-043](#), Codes Acceleration Fund (CAF) Application – Whistler Step Code Implementation.

2023-2026 Strategic Plan

The 2023-2026 Strategic Plan outlines the high-level direction of the RMOW to help shape community progress during this term of Council. The Strategic Plan contains four priority areas with various associated initiatives that support them. This section identifies how this report links to the Strategic Plan.

Strategic Priorities

Housing

Expedite the delivery of and longer-term planning for employee housing

Climate Action

Mobilize municipal resources toward the implementation of the Big Moves Climate Action Plan

Community Engagement

Strive to connect locals to each other and to the RMOW

Smart Tourism

Preserve and protect Whistler's unique culture, natural assets and infrastructure

Not Applicable

Aligns with core municipal work that falls outside the strategic priorities but improves, maintains, updates and/or protects existing and essential community infrastructure or programs

Community Vision and Official Community Plan

The Official Community Plan (OCP) is the RMOW's most important guiding document that sets the community vision and long-term community direction. This section identifies how this report applies to the OCP.

5.4. Goal: Reduce the environmental and energy impacts of residential neighbourhoods to improve the quality of life and sustainability of the resort community.

10.1. Goal: Municipal decision-making is well-structured to achieve energy efficiency goals and GHG reduction targets.

10.3. Goal: Substantially reduce GHG emissions from buildings and infrastructure.

BUDGET CONSIDERATIONS

No additional budget is required or requested for the amendment of the Building Bylaw.

The Step Code Implementation Plan and associated compliance in the RMOW will ideally be supported by building capacity and training within the RMOW and the Whistler building sector. This will require staff time and ideally a consultant to assist with engagement, and capacity building through facilitating training and hosting educational workshops. The intent of the CAF application submitted in April 2023 is to cover these costs. If this funding is not received, staff time will still be required to support the implementation of the proposed amendment, but a consultant would not be hired.

LÍLWAT NATION & SQUAMISH NATION CONSIDERATIONS

The RMOW is committed to working with the Lílwat People, known in their language as *L'il'wat7úl* and the Squamish People, known in their language as the *Skwxwú7mesh Úxwumíxw* to: create an enduring relationship; establish collaborative processes for Crown land planning; achieve mutual objectives; and enable participation in Whistler's resort economy.

There are no specific considerations to include in this report.

COMMUNITY ENGAGEMENT

Level of community engagement commitment for this project:

Inform Consult Involve Collaborate Empower

Comment(s):

On November 24, 2021, staff hosted a virtual sector-specific workshop on plans to reduce the carbon footprint of new buildings in Whistler. The purpose of this workshop was to seek stakeholder feedback on the RMOW's proposed pathway for reducing the carbon footprint of new buildings, which included the adoption of the Provincial GHGI limits when released. The original proposed timeline for adoption was January 2023. Industry stakeholders indicated general support for the proposed approach and provided the following additional considerations:

- Provide clear implementation timelines to give industry time to adjust.
- Support capacity building for trades and industry.
- Communicate the non-carbon/energy benefits to home and building owners.
- Consider providing flexibility for unique situations.

After the workshop, a 30-day commenting window was opened on the Whistler website. In response to the feedback staff:

- Delayed implementation of the Building Bylaw changes to January 1, 2024.
- Applied for the CAF to support capacity building.
- Chose to implement the Province's GHGI limits rather than defining Whistler's own Low Carbon Energy System pathway to align with other local BC governments as many contractors work across the Sea to Sky, and to leverage Provincial communications and educational materials.

On April 5, 2023, staff hosted a virtual sector-specific information sessions to share RMOW's next steps in implementing the Energy Step Code and adoption of GHGI limits released by the Province. The purpose of this information session was to update the industry on Whistler's proposed plans after the release of the Provincial Zero Carbon Step Code. Since the industry indicated that clear implementation timelines are important to give industry time to adjust, the original timeline of January 2023 was pushed out to January 2024. Staff also provided a timeline for plans for 2027 onwards, to provide the industry with a long-term outlook (outlined in Table 3).

Whistler's Step Code Implementation plan and additional resources have been made available to the public through [Whistler.ca/StepCode](https://whistler.ca/StepCode) website.

REFERENCES

"Building and Plumbing Regulation Amendment Bylaw (Energy Step Code) No. 2387, 2023", included in Council Package

Appendix A – Feedback summary from the November 2021 stakeholder engagement session

SUMMARY

This report requests Council's consideration of first, second and third reading for "Building and Plumbing Regulation Amendment Bylaw (Zero Carbon Step Code) No. 2387, 2023".

SIGN-OFFS

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