



CORPORATION OF THE TOWNSHIP OF ESQUIMALT

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Date	Ver.	Action By	Action	Result
9/26/2022	1	Council	approved	Pass

REQUEST FOR DECISION

DATE: September 21, 2022 Report No. DEV-22-088

TO: Laurie Hurst, Chief Administrative Officer

FROM: Karen Hay, Policy Planner and Bill Brown, Director of Development Services

SUBJECT:

Low Carbon Energy Systems Bylaw for Esquimalt

RECOMMENDATION:

That Council:

1. Direct to staff continue to monitor the Provincial process in adding carbon pollution standards to the next iteration of the BC Building Code, scheduled for December 2022;
2. Direct staff to prepare for a scenario where the Province has not added carbon pollution standards to the BC Building Code in 2022, and staff develop an opt-in option where builders could choose a lower step of the BC Energy Step Code where a low carbon energy system is installed in a new building, or alternatively choose to build to one of the highest Step Code steps, as outlined in Table 3 and 4 of Appendix A to this report; and
3. Direct staff to develop engagement and educational materials to build public awareness and understanding of the benefits of building decarbonization through electrification.

RELEVANT POLICY:

Climate Action Plan
Community Climate Mitigation Plan
Declaration of Climate Emergency
Official Community Plan Bylaw, 2018, No. 2922 [OCP]
Esquimalt Building Bylaw
BC Building Code & BC Energy Step Code
BC Building Act

STRATEGIC RELEVANCE:

This initiative supports the strategic priority: “develop and implement strategies that reduce impact on the environment consistent with our Climate Action Charter goals”.

This initiative supports the climate action objective to: “decarbonize new buildings” and the strategy to: “prioritize a low carbon approach - by encouraging low carbon heating in new buildings” within the Climate Action Plan.

BACKGROUND:

Appendix A: Tables with Low Carbon energy system adoption options

Appendix B: CRD Technical Review - Step Code and Carbon Pollution Standards
CRD, Victoria, Saanich, and C. Saanich

Appendix C: CRD Final Engagement Report - Step Code and Carbon Pollution Standards - CRD,
Victoria, Saanich, and C. Saanich

Council Motion:

At the July 11, 2022, Council meeting, Council resolved to have “staff develop and return to Council a report that explores the possibility of requiring that Low Carbon Energy Systems be adopted in all new construction”.

The timing of this motion aligns well with a project initiated by City of Victoria, District of Saanich, and District of Central Saanich (with assistance by the CRD) to explore options for requiring low carbon building systems in new buildings. Appendix B and C, provide the Technical Review and the Final Engagement Report from that project.

These two reports (Appendix B and C) are supported by a recent Province wide report by the BC Energy Step Code Peer Network that can be accessed here:

https://docs.communityenergy.ca/wp-content/uploads/LowCarbonBuildingSystems_in_ESC_Requirements_Report.pdf

The reports address the requirements/challenges faced by industry and local governments of adopting low carbon energy systems in new construction in the province of BC to support greenhouse gas (GHG) emission reduction targets.

BC Building Act, BC Building Code, and the Energy Step Code:

Local governments are limited by the *BC Building Act* from making technical building requirements, so Esquimalt cannot simply create a bylaw that requires only low carbon heating systems. Esquimalt could provide builders with options.

Though Esquimalt has not adopted the BC Energy Step Code (Step Code) as an optional compliance path in the BC Building Code, the Step Code is scheduled to become the Building Code at the end of this year, 2022. The Step Code allows local governments to require higher levels of energy efficiency in new construction and is focused on two types of residential buildings, Part 3 (complex buildings: multi-unit residential and large commercial) and Part 9 (smaller residential buildings: houses, duplexes, smaller townhouses).

The following figure provides the provincial Step Code adoption timeline.



For further information on Step Code see page 5 of Appendix B, or energystepcode.ca <<https://energystepcode.ca/>>.

Even the highest steps of the Step Code do not require a designer/builder to select a low carbon mechanical system, and gas heating and hot water still adds considerable GHG emissions.

The Province announced earlier this year that carbon pollution standards will be added to the BC Building Code in December 2022, providing local governments with further options to limit GHG emissions from new construction.

Further details are anticipated from the province, though it is expected that there will be four target carbon output levels (GHG emissions):

- Measure-only: requiring measurement of total expected GHG emissions per year for a building and the GHG intensity, “GHGi” (which is a measurement of the kilograms of carbon dioxide emitted per square metre of floor space per year), without requiring reductions,
- Medium carbon,
- Low carbon, and
- Zero carbon ready.

Local governments could choose the level they wish to meet in their community, and builders could choose to meet or exceed those local requirements. Just like the Energy Step Code, the minimum standard would rise gradually until all new buildings are zero-carbon.

The thresholds to meet each level would vary per building type (e.g. small versus large houses, multi-unit residential, retail, hotel, etcetera), with provincial GHGi levels yet to be announced. Generally, to meet low or zero carbon would require full electrification of the space heating and water heating for a building, and medium carbon would require one or the other. It is predicted that the province would require medium carbon by the end of 2024, low carbon by 2028, and 'zero carbon ready' by end of 2030, in order to reach the province's GHG reduction targets. The timelines for GHG reduction targets are generally quicker for Part 9 buildings as these are considered easier to electrify with the use of readily available electric heating or electric heat pumps.

Implementation by other BC Local Governments

Multiple municipalities in the lower mainland (Burnaby, Port Moody, Richmond, Surrey, North Vancouver, West Vancouver, Vancouver) have implemented low carbon building bylaws; offering builders the option to build to a lower step of the Step Code with the installation of low carbon heating and/ or hot water systems. See Appendix B.

Each of the municipalities that have adopted low carbon building bylaws had previously adopted the Step Code and had quickly accelerated to the higher steps, with several having set higher energy efficiency requirements prior to the introduction of the Step Code. The City of Victoria adopted the Step Code in November 2018 with higher steps in effect in January 2020. District of Saanich adopted the Step Code in June 2019 with the higher steps in effect in January 2020.

The engagement with industry in the Greater Victoria region (Appendix C) found that the majority of builders would prefer local governments focus on GHG emissions reductions through implementation of carbon pollution standards over acceleration to the highest steps of the Step Code, and that regional local governments try to standardize their approach.

Setting a Path for Esquimalt

The easiest path for Esquimalt would be to rely on the proposed BC Provincial code route with carbon pollution standards and timelines. There is however a risk that the province may not move forward with the carbon pollution standards in the Building Code as intended. Alternatively, to provide further climate leadership, and consistency across the Greater Victoria region, Esquimalt could consider following the path laid out by Victoria, Saanich, and Central Saanich with an accelerated approach to the proposed provincial standards.

This would require setting an accelerated path to the highest steps of the Step Code while providing an option to meet the provincially mandated step with the installation of low carbon heating and hot water systems. The goal would be to minimize the number of stages, meet GHG emission reduction targets, and provide adequate notice to industry.

Considering the substantial engagement recently completed by Esquimalt's neighbours, a small amount of engagement would be recommended. Esquimalt's website and social media platforms could be used to inform of Esquimalt's intentions, standards, and proposed timelines for implementation.

Appendix A provides timelines and tables to consider with the goal of meeting regional goals over the next two years.

ISSUES:

1. Rationale for Selected Option

- Local governments are limited by the *BC Building Act* from making technical building requirements, though they can provide builders with options.
- The province has announced future versions of the BC Building Code will have carbon pollution standards and measurements of GHG intensity, encouraging the use of low carbon heating systems (space heating and hot water).
- Due to the complexity of calculating future greenhouse gas emissions and emission intensity staff recommend that Esquimalt not try to create a unique set of regulations.
- The Final Engagement Report (Appendix C) found that builders would prefer low carbon options over the highest steps of the Step Code and that Greater Victoria municipalities coordinate their standards.

2. Organizational Implications

Staff time would be needed to write bylaw amendments, training, and creation of public engagement materials.

3. Financial Implications

This Request for Decision has little financial implications, beyond staff time for bylaw preparation, training, and creation of public engagement materials.

4. Sustainability & Environmental Implications

In order to meet Esquimalt's GHG reduction targets, lowering of the emissions from buildings is vital and it is more cost effective to reduce future emissions at the time of construction than through future retrofitting. The Technical Review (Appendix B, pages 20-22) provides further research on the advantages of low carbon mechanical systems over building efficiency through Step Code for GHG emissions reduction.

Use of heat pumps also improves the livability of buildings as they provide cooling for occupants in warm weather.

5. Communication & Engagement

The CRD, Victoria, Saanich and Central Saanich have spent considerable time engaging with industry professionals and regional staff this past year. If Council wishes to move the initiative further it is recommended some engagement with local developers, homeowners, and residents be offered to improve local understanding of the benefits of energy efficiency and electrification of buildings.

ALTERNATIVES:

1. That Council resolves to have staff continue to monitor the provincial process, prepare for a scenario where the province has not added carbon pollution standards to the BC Building Code, and develop engagement and educational materials to build public awareness.
2. That Council does not move ahead with this initiative at this time and continue to monitor proposed provincial legislative changes.
3. That Council provide alternate direction to staff.