

**DISTRICT OF WEST VANCOUVER**  
750 17TH STREET, WEST VANCOUVER BC V7V 3T3

## COUNCIL REPORT

Date:	January 21, 2020
From:	Courtney Miller, Senior Planner
Subject:	Climate Emergency – Bylaw and Policy Amendments
File:	0332-03

**RECOMMENDATION**

THAT opportunities for consultation on the proposed Official Community Plan amendment, with persons, organizations, and authorities, as outlined in the report from the Senior Planner dated January 21, 2020, be endorsed as sufficient consultation for purposes of section 475 of the *Local Government Act*.

**RECOMMENDATION**

THAT proposed "Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5054, 2020" be read a first time.

**RECOMMENDATION**

THAT proposed "Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5055, 2020" be read a first time.

**RECOMMENDATION**

THAT proposed "Building Bylaw No. 4400, 2004, Amendment Bylaw No. 5056, 2020" be read a first time.

**RECOMMENDATION**

THAT proposed "Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5054, 2020" and proposed "Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5055, 2020" be presented at a public hearing scheduled for February 25, 2020 at 6 p.m. in the Municipal Hall Council Chamber, and that statutory notice be given of the scheduled public hearing.

**RECOMMENDATION**

THAT the Province of B.C. be requested to include the District of West Vancouver as a municipal partner in the CleanBC Better Homes Program.

**RECOMMENDATION**

THAT the Province of B.C. be requested to include the District of West Vancouver as a participating local authority in the Tall Wood Early Adoption Initiative.

## 1.0 Purpose

To amend bylaws and policies and to request that the District be included in leading initiatives in order to implement Council's comprehensive climate mitigation strategy to meet the present Intergovernmental Panel on Climate Change (IPCC) targets.

## 2.0 Executive Summary

Council's recognition of a climate emergency directs the District to increase the extent and to accelerate the timing of policy implementation given the understanding that targets must be reached sooner than modeled by the District's *Community Energy and Emissions Plan* (CEE Plan). This report introduces bylaw and policy amendments to support the District's response to this emergency.

## 3.0 Legislation/Bylaw/Policy

The Province of British Columbia (Province) requires that local governments have targets, policies and actions for the reduction of greenhouse gas (GHG) emissions. Council adopted the CEE Plan in October 2016 to guide West Vancouver's GHG reduction actions. Staff updated Council on the implementation status of the CEE Plan in April 2017 and in April 2018, and the CEE Plan informed climate targets and policies included in the *2018 Official Community Plan* (OCP).

In February 2018, West Vancouver adopted the BC Energy Step Code with these regulations coming into force through the District's *Building Bylaw* in July 2018. Council removed bylaw barriers to high-performance buildings in April 2018, and it adopted the *Sustainability Buildings Policy* to direct rezonings to exceed the performance levels—including Step Code and electric vehicle (EV) and bicycle parking standards—otherwise required by bylaw.

Section 475 of the *Local Government Act* (LGA) requires the District to provide opportunity for consultation to those that may be affected by amendments to the OCP. The amendments under consideration do not directly impact neighbouring jurisdictions, First Nations, senior government agencies, nor other groups identified by the LGA for this purpose. It was brought forward in October 2019 in response to Council's recognition that climate change constitutes an emergency.

## 4.0 Financial Implications

There are no financial implications to the proposed bylaw and policy amendments, nor to the request for inclusion in the Tall Wood Mass Timber Early Adoption Initiative.

The District's participation as a municipal partner in the CleanBC Better Homes Program—a \$41 million initiative created, marketed and administered by the Province of BC—requires the commitment of District funds to provide residents an additional financial incentive to convert homes to systems that efficiently use a low-carbon source of energy.

CleanBC is an opportunity to leverage District funds and to encourage market transformation in West Vancouver. The District determines the total amount of municipal funding available, as well as the level of incentive provided to residents who participate in the program. \$30,000 from the District's fund for one-time initiatives is available and would be assigned for this purpose. These funds had previously been identified to support access to external funding and to participate in programs to advance energy efficiency in existing buildings; so there are no new budget impacts from participation. CleanBC will invoice the District quarterly only after residents meet the program rebate requirements, and none of the total \$30,000 costs would be incurred until that time. Additional details about the CleanBC Better Homes Program and the proposed incentive for West Vancouver residents are included in the analysis of this report.

## 5.0 Official Community Plan

The 2018 OCP embedded CEE Plan actions into planning and land use management, including a community GHG reduction target in accordance with LGA section 473. Using 2010 emissions as the baseline, the District's OCP currently targets a 40% reduction by 2040. The OCP includes a range of policies to mitigate GHGs, notably:

- 2.1.23: Advance community energy efficiency and reduce GHG emissions by:
- a. Supporting transportation alternatives through housing location, design and facility provisions, and parking requirements;
  - b. Increasing the percentage of efficient building forms;
  - c. Requiring leading energy efficiency standards and considering site design and orientation;
  - d. Encouraging renewable energy; and
  - e. Considering incentives to support building retrofits for improved energy efficiency.

- 2.6.19: Implement community energy and emissions initiatives to advance towards meeting the District's greenhouse gas emissions reduction target of 40% below 2010 levels by 2040 or sooner, notably through the land use, housing, transportation, and infrastructure policies contained in this plan.
- 2.6.22: Expand the use of green infrastructure through public and private development to enhance long-term ecosystem services that support multiple benefits (e.g., storm water management, air quality, carbon sequestration, water quality, and biodiversity).
- 2.6.23: Seek to incorporate renewable energy in public and private projects, and support the development of renewable energy systems as opportunities arise.

## 6.0 Background

### 6.1 Previous Decisions

This report is a response to Council's recognition that climate change constitutes an emergency and West Vancouver's commitment to meet the IPCC targets. Council considered a notice of motion at the July 8, 2019 Council meeting that led to the unanimous resolution:

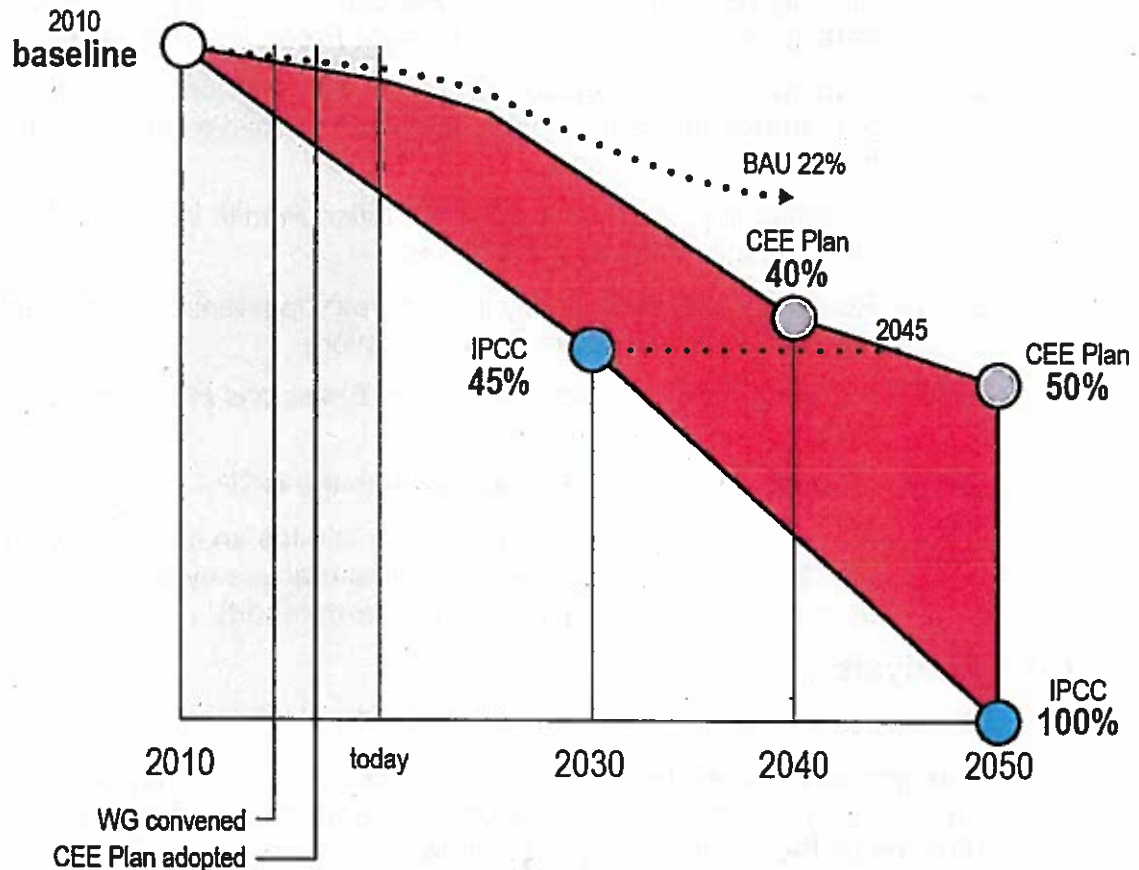
*THEREFORE BE IT RESOLVED THAT:*

- (1) Council recognizes that climate change constitutes an emergency for the District of West Vancouver; and
- (2) Staff be directed to report back at the July 22, 2019, regular Council meeting regarding:
  - i. actions the District is presently taking to reduce GHG emissions (corporate and community) and performance metrics regarding emission targets;
  - ii. actions the District is presently taking to adapt to climate change; and
- (3) Staff be directed to report back within 90 days regarding:
  - i. actions that other municipalities are taking to reduce their GHG emissions; and
  - ii. an approach to a comprehensive climate adaptation strategy that meets the present IPCC climate change target of 45 per cent below 2010 levels by 2030 and 100 per cent below 2010 levels by 2050.

Staff reported to Council two weeks later, in response to provision (2) of the above resolution. This presentation, titled "Climate Emergency— Verbal Update on Current Initiatives", is included as Appendix A. It identified performance metrics and addressed actions that the District is presently taking to reduce GHG emissions and to adapt to climate change.

On October 28, 2019, the report titled “Climate Emergency—Community Approach to Meet IPCC Climate Change Targets”, attached as Appendix B, provided the response to the remaining direction—provision (3) above—of Council’s July 2019 resolution. It illustrated that further action is required to meet the IPCC targets since CEE Plan implementation would result in the gap illustrated in red in Figure 1.

Figure 1: Comparison of CEE Plan and IPCC reduction targets



This report introduced a comprehensive approach to mitigate community GHG emissions. At the October 28, 2019 Council meeting, Council passed the following resolution:

- (1) The approach to a comprehensive climate mitigation strategy to reduce community greenhouse gas (GHG) emissions presented in the report dated October 8, 2019 titled “Climate Emergency—Community Approach to Meet IPCC Climate Change Targets” be received for information;
- (2) Staff commence preparation of the proposed bylaws and policy amendments listed in Table 2 of this report; and
- (3) Staff report back with further information and analysis of the studies listed in Table 3 of this report.

This report is the response to provision (2) above of the October 2019 report. It also includes some of the further analysis—provision (3)—that has been accelerated due to upcoming deadlines to participate in programs directed by the Province of B.C. that support Council's climate change commitment. These programs are addressed later in this report.

## 6.2 History

A summary of the District's history on climate action includes:

- 2001 – Signing the *Municipal Leaders Resolution on Climate Change* to participate in the *Partners for Climate Protection Program*;
- 2008 – Signing the *Climate Action Charter* to plan for compact, complete and energy-efficient communities and to achieve carbon neutrality in corporate operations;
- 2010 – Adopting the *Community Climate Action Plan* to inform OCP climate action targets and policies;
- 2014 – Reaching carbon neutrality in corporate operations due to credits received for Whyte Lake Park protection;
- 2016 – Adopting the *Corporate Energy and Emissions Plan* and CEE Plan;
- 2018 – Embedding the CEE Plan actions into the OCP;
- 2019 – Recognizing that climate change constitutes an emergency and direction to introduce a range of climate action bylaw and policy amendments (the subject of this current report).

## 7.0 Analysis

### 7.1 Discussion

In response to Council's resolution, the discussion for this report is organized by the proposed regulation to be amended, or by the program directed by the Province of BC requiring response:

- i. Official Community Plan 4985, 2018
- ii. Zoning Bylaw No. 4662, 2010
- iii. Building Bylaw 4400, 2004
- iv. Sustainable Buildings Policy (02-80-386)
- v. Tall Wood Early Adoption Initiative (embodied emissions)
- vi. CleanBC Better Homes (retrofits)

### 7.1(i) Official Community Plan No. 4985, 2018

As the District's principal planning and land use management tool, it is critical that the OCP aligns with Council's recognition of a climate emergency. Its 2041 planning horizon allows the OCP to guide both Council decisions and municipal administration towards the reductions required to limit the far-reaching effects of climate change. The recommended approach included as Appendix C proposes to:

- Amend GHG reduction targets to match IPCC;
- Amend mode split baseline and target to reflect new data;
- Add active transportation network connection to site consideration for rezonings;
- Add GHG reduction/low carbon to energy efficiency references; and
- Add direction to reduce embodied emissions to sustainability references.

The first amendment would replace the existing GHG reduction targets to those identified by the IPCC: 45% reduction by 2030, 75% reduction by the OCP 2041 target year and 100% reduction by 2050.<sup>1</sup> It would also revise the transportation baseline and target to reflect 2018 data that had not been released at the time of the OCP writing.

The GHG emissions associated with the operation of a building or vehicle are determined by its efficiency as well as the carbon intensity of the fuel. Although both remain critical, the emphasis for the coming years has shifted more towards reducing carbon intensity than is currently directed by the OCP. The plan includes a number of provisions that encourage energy efficiency and renewables (2.1.23, 2.2.4, 2.3.16, 2.4.21 and 2.6.23), and the proposed amendment—whether focused on buildings, transportation, environment or economy—would add this low carbon focus to these provisions. For buildings, this supports the efficient use of electricity for space and water heating (BC Hydro's GHG intensity for electricity is only 6% of the GHG intensity for natural gas for the same measurement of energy).<sup>2</sup> Similarly, replacement of fossil fuel with electric personal vehicles does not deliver the increased efficiency nor reduce congestion of other transportation modes, but it does dramatically lower GHG emissions.

Other proposed OCP amendments would enable Council to consider future development applications that accelerate behavioural and market responses supportive of GHG mitigation. The first would consider "missing middle" proposals that facilitate the reduction of neighbourhood GHG emissions by enhancing neighbourhood access to daily needs or by completing gaps in the active transportation network (2.1.7). The second would enable Council consideration of centre and corridor development

<sup>1</sup> 2041 OCP target year reduction determined as the linear projection between IPCC 2030 and 2050 targets.

<sup>2</sup> 2017 BC Best Practices Methodology for Quantifying Greenhouse Gas Emissions. BC Ministry of Environment and Climate Change Strategy

applications in advance of LAP adoption that advance emerging low-carbon building construction in the community (2.1.15). This would allow Council to consider innovative proposals leading industry progress towards lower GHG emissions.

#### 7.1(ii) Zoning Bylaw No. 4662, 2010

Meeting the IPCC targets requires significant GHG mitigation across all sectors. This includes the rapid expansion of low-carbon forms of transportation. The Zoning Bylaw amendment under consideration (Appendix D) introduces the District's minimum bicycle and electric vehicle (EV) parking standards as bylaw requirements for all new buildings. Recent rezoning applications have met these at the direction of Council's *Sustainable Buildings Policy*. However, a bylaw requirement would apply these standards to proposals that do not require rezoning to ensure that their provision is considered a minimum requirement.

The Building Act provides the authority for local government regulation of EV parking, and the BC Building Code (BCBC) does not include bicycle parking or access, allowing municipalities to establish local standards. In order to facilitate implementation, the proposed amendments closely reflect similar infrastructure approved during recent years under Council's existing policy that applies to rezonings as well as the bylaws in place in other Metro Vancouver jurisdictions. The implementation of bicycle standards also requires the amendment to West Vancouver's Building Bylaw attached as Appendix E.

The recommended bylaws would also amend provisions that may unduly encourage road congestion and vehicle emissions. This includes the redistribution of parking supply by:

- reconciling inconsistencies to one parking space per single-family home, duplex dwelling or secondary suite dwelling;
- introducing EV and bicycle parking requirements for multifamily, mixed-use and commercial buildings; and
- offsetting the proposed EV and bicycle parking requirements by allowing a reduction in minimum vehicle parking.

Council directed staff in October 2019 to amend the secondary suite parking requirement to align with the one space minimum for a detached secondary suite. The Zoning Bylaw currently structures parking by zone (e.g. RS-3) rather than by use (e.g. single-family dwelling). Reconciling secondary suite parking requires amending the duplex zones that also include secondary suite provisions. For clarity and consistency, the recommended approach is to schedule low-density residential parking requirements in Section 140 Parking Regulations. The proposed bylaw specifies that one off-street parking space be required per single-family home, duplex dwelling, secondary suite or detached secondary suite, throughout the District, irrespective of its location on the lot.



The recommended approach requires that all new residential parking spaces in multifamily buildings, excluding visitor parking spaces, include a labeled and energized outlet capable of providing a minimum Level 2 EV charging. The proposed bylaw permits the use of energy management systems that make available more extensive EV charging capability at lower cost than can be provided with dedicated circuits. It would also require 1.5 secure bicycle parking spaces for all new dwellings.

The new EV and bicycle parking will add cost and physical space needs to future West Vancouver housing. The proposed bylaw amendment will allow a vehicle parking reduction to ensure that expanded low-carbon transportation does not result in larger parking infrastructure (and the associated housing affordability impacts). It offsets the space required for secure bicycle areas by adjusting the minimum required vehicle parking (1 fewer vehicle space for every 6 required secure bicycle spaces), and by amending zoning requirements to allow the lesser—rather than the greater—of one parking space per dwelling or one parking space per 84 square metres. New commercial buildings would be required to provide short-term and secure bicycle parking spaces for the benefit of customers and employees, respectively. No vehicle parking reductions for commercial uses would apply.

#### 7.1(iii) Building Bylaw 4400, 2004

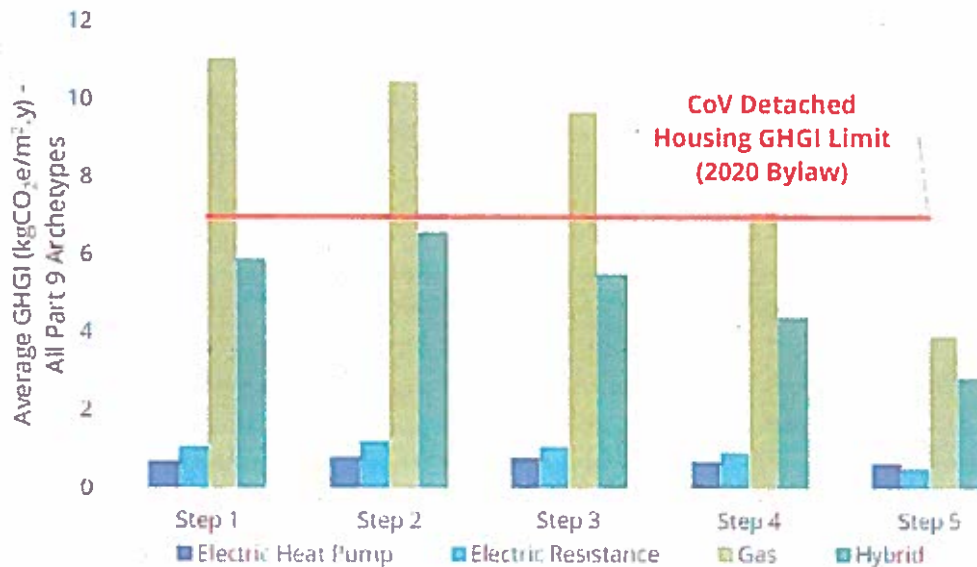
The recommended OCP direction to advance low-carbon approaches across sectors supports the amendment of West Vancouver's *Building Bylaw* requirements (Appendix E). Namely, the District would define a Low Carbon Energy System (LCES)—establishing a maximum carbon intensity for the provision of heat and hot water—as an alternate pathway to meet the Step Code. The Province of BC has provided greater clarity than was available in 2017 when the District first considered Step Code adoption regarding the ability of local governments to provide options under the provincial *Building Act*. The BC Building and Safety Standards Branch (BSSB) has made available *A Best Practices Guide for Local Governments* that specifies that, while the Step Code targets overall energy efficiency, many local governments are “taking advantage of the standard’s inherent flexibility and pairing it with greenhouse gas intensity policies” identifying Burnaby, Vancouver, Richmond, Surrey and UBC as examples of communities that implemented this approach.<sup>3</sup>

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<sup>3</sup> Energy Step Code Council and Building and Safety Standards Branch. BC Energy Step Code. A Best Practices Guide for Local Governments v2 (July 2019)  
[http://energystepcode.ca/app/uploads/sites/257/2019/08/BCEnergyStepCode\\_GuideDigital\\_v02July2019.pdf](http://energystepcode.ca/app/uploads/sites/257/2019/08/BCEnergyStepCode_GuideDigital_v02July2019.pdf)

Council's climate emergency declaration shifts the emphasis towards GHG emissions over building energy efficiency. As illustrated in Figure 2, the much lower GHG intensity of BC electricity in comparison to natural gas makes buildings that rely on electric building systems produce relatively few GHG emissions in operation, regardless of the step under the Step Code.

Figure 2: GHG Intensity by Mechanical System<sup>4</sup>



The recommended approach would allow applicants the option either to build to a higher step or to maintain the current step but be required to install a LCES. The effect of the LCES pathway would be a lower efficiency building than the alternative, but with only a fraction of the GHG emissions. The difference in minimum step between the options (e.g. Step 3 low carbon versus Step 5) will allow applicants the choice of building new homes to the current efficiency standard required by the District, but with a LCES in support of the community's GHG reduction goals, or to build a net-zero energy ready home but without the LCES.

Council demonstrated leadership by adopting in 2018 the highest community-wide requirements in BC, resulting in significant changes in buildings for both applicants and staff. Increasing airtightness of building envelopes—not previously regulated in most single-family homes—was one important change. The applications first received following the implementation of the Step Code remain under construction today. Increasing the minimum step for single-family homes would require additional shifts in the construction approach prior to the Step Code becoming the industry norm. The recommended LCES option effectively

<sup>4</sup> Integral Group. Implications of the BC Energy Step Code on GHG Emissions. Prepared for the Building and Safety Standards Branch, Ministry of Municipal Affairs and Housing (June 2019)  
[http://energystepcode.ca/app/uploads/sites/257/2019/11/BC-Step-Code-GHGI-Report\\_Nov-2019.pdf](http://energystepcode.ca/app/uploads/sites/257/2019/11/BC-Step-Code-GHGI-Report_Nov-2019.pdf)

reduces the GHG emissions of new homes while allowing time for the Step Code to become the industry norm.

Reflecting the progress underway, other jurisdictions have advanced their own regulations affecting specific building types. West Vancouver currently does not require a standard that exceeds the BCBC for two types of buildings: detached secondary suites and larger (Part 3) commercial buildings. The recommended approach would increase the minimum requirement for these types of buildings from Step 1 to Step 2 in alignment with other local governments and in support of West Vancouver's GHG reduction targets.

In accordance with guidance from the Province of BC, the effective date of these amendments is November 2020, 12 months following Council's direction that staff brings forward an LCES pathway. Staff will continue to monitor industry norms and local practice to ensure that new construction most effectively contributes to the reduction of community GHG emissions. This will inform scheduling future bylaw amendments as West Vancouver transitions to all new buildings being net-zero energy ready.

#### 7.1(iv) Sustainable Buildings Policy

Council approved the Sustainable Buildings corporate policy in April 2018. This policy has supported the improved design and performance of rezoning applications since then. The proposed bylaw amendments listed in sections 7.1(ii) and 7.1(iii) of this report would require EV and bicycle parking requirements for all new development, making some provisions of the existing policy redundant. A potential new Sustainable Buildings Policy—deleting the provisions proposed as part of the amendment bylaws—is included as Appendix F for information. It would continue to enable the expedited processing of Passive House developments, to direct rezoning applications to meet an accelerated Step Code and LCES pathway, and to specify that new commercial buildings include end-of-trip bicycle facilities to support active transportation. Staff will bring forward the proposed "Sustainable Buildings Policy 0014" and recommend rescinding the existing policy should Council proceed with consideration of the bylaws. This concurrent consideration will ensure that there is no disruption in the application of these policy provisions.

#### 7.1(v) CleanBC Better Homes (retrofits)

Staff reported previously to Council on the legislative limitations, distributed ownership and current market economics that are barriers to local government approaches to mitigate climate change impacts associated with space and water heating in existing residential buildings. One opportunity to facilitate West Vancouver retrofits is the \$41 million *CleanBC Better Homes* provincial program encouraging consumers to invest in energy efficiency and fuel switching. The Ministry of Energy, Mines and Petroleum has invited local governments to join the program's

13 existing BC municipal partners that offer their residents a municipal “top-up” through the program. West Vancouver’s offer would be marketed and available to residents starting April 1, 2020. Staff has brought this forward for Council’s consideration with this report since the ministry requires notification by March 1 for inclusion.

Being a municipal partner with CleanBC offers substantial efficiencies over a District-designed, marketed and administered program, of particular importance for a local government with the relatively small population of West Vancouver. Utilizing this approach, each dollar the District commits to this program directly funds an incentive paid to a resident to invest in GHG reduction. This enables the local households to leverage significantly greater provincial investment dollars and to accelerate market transformation in West Vancouver. The District can determine the total amount of municipal funding available, as well as the level of incentive provided to residents who participate in the program.

The recommended approach would notify the Province of BC that West Vancouver will assign \$30,000 from the District’s fund for one-time initiatives for this purpose (Appendix G), although none of the costs will be incurred until after residents meet the program rebate requirements. West Vancouver would offer a “top-up” of \$2,000 to add to the \$3,000 offered by the Province of BC to convert a fossil fuel heating system to an electric heat pump. This incentive matches that currently offered by both the City of North Vancouver and Whistler. Fully subscribed, it will result in \$45,000 from the Province of BC in addition to the proposed \$30,000 District contribution, to be invested in local low-carbon retrofits. Paired with the ministry’s plans to increase direct marketing focused on residents in partnering municipalities, the District’s contribution should increase local participation in the program. Should there be significant uptake on this expanded offer in 2020, staff will report back to Council for further direction.

#### 7.1(vi) Tall Wood Early Adoption Initiative (embodied emissions)

Mass-timber, an emerging type of construction that is structured with prefabricated solid or engineered wood elements, reduces the significant GHG emissions associated with concrete structures. The BSSB administers the Province of BC’s *Tall Wood Early Adoption Initiative* pursuant to section 3 of the *Building Act*, SBC 2015, c.2. This initiative authorizes and regulates the construction of encapsulated mass timber buildings 7 to 12 storeys in height. These buildings meet the equivalent performance standards for safety, structural resilience and fire protection as “conventional” buildings.

In order for West Vancouver to join the 13 BC communities announced in 2019 for inclusion in this jurisdiction specific regulation, the Minister of Municipal Affairs and Housing must accept that it meets the established criteria. In discussions with BSSB, staff anticipates that the next

opportunity for consideration will occur in Spring 2020. For this reason, participation in the initiative has been brought forward for Council consideration with this report.

Following Council's October resolution, Fire, Building and Planning staff has reviewed the initiative and has established organizational alignment. The staff recommendation is that Council request inclusion in the initiative (Appendix H). Council's resolution would ensure that West Vancouver is considered with the next intake. Involvement with this initiative will enable future construction to significantly reduce the embodied GHG emissions, as well as support the provincial forest industry and reduce construction time and impacts.

## 7.2 Sustainability

The reduction of GHG emissions is critical to environmental sustainability. It also contributes to social sustainability by supporting complete, inclusive communities, and it promotes economic sustainability by limiting the potential future impacts of climate change.

## 7.3 Public Engagement and Outreach

The CEE Plan and OCP both included extensive engagement on the community's approach to climate change mitigation. Building on these plans, the purpose of this report is the technical conversion of existing policies to bylaws, the update of District regulations to reflect Council's climate emergency declaration, and the direction to request that West Vancouver be included in leading initiatives led by the Province of B.C. Council directed staff to proceed with this approach in October 2019.

A public hearing must be held to consider the proposed OCP and Zoning amendment bylaws. Given the correlation of the recommendations in this report, the proposed approach would align subsequent readings of the Building amendment bylaw to be concurrent. The recommendation herein projects the public hearing to be held in Council Chamber on February 25, 2020. Notice of the public hearing and consideration of the amendment bylaws will be given in accordance with LGA and District procedures.

## 7.4 Other Communication, Consultation, and Research

The October 2019 report also identified additional, separate studies. Staff will continue this research as required and appropriate to report back to Council.

# 8.0 Options

## 8.1 Recommended Option

Council may introduce the bylaw and policy amendments, and may request that the District be included in leading initiatives as specified in the report dated January 21, 2020 titled "Climate Emergency – Bylaw and Policy Amendments."

## 8.2 Considered Options

Council may:

- a) request inclusion in the Province of BC initiatives, give first readings to the proposed bylaws and set an alternative date (to be specified) for a public hearing; or
- b) defer consideration; or
- c) reject some or all of the proposals.

## 9.0 Conclusion

This report provides bylaw and policy amendments in response to Council's recognition of a climate emergency. It also requests that the District be included in leading initiatives to better approach the present IPCC targets. The District must increase the extent and accelerate the timing of its policy implementation given the understanding that community GHG reductions must be realized sooner than modeled by the 2016 CEE Plan to avoid the most far-reaching effects of climate change. The recommended option will continue and strengthen the approach created by the CEE Plan to create a better climate and a better community.

Author:   
Courtney Miller, Senior Planner

Concurrence:   
David Hawkins, Manager of Community Planning & Sustainability

Concurrence:   
Kevin Spooner, Manager of Permits & Inspections

- Appendix A: July 22, 2019 Presentation: Climate Emergency – Verbal Update on Current Initiatives
- Appendix B: October 28, 2019 Report to Council: Climate Emergency – Community Approach to Meet IPCC Climate Change Targets
- Appendix C: Proposed “Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5054, 2020”
- Appendix D: Proposed “Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5055, 2020”
- Appendix E: Proposed “Building Bylaw No. 4400, 2004, Amendment Bylaw No. 5056, 2020”
- Appendix F: Draft “Corporate Policy #02-80-386 (Sustainable Buildings)”
- Appendix G: Request to the Province of B.C. for inclusion in the CleanBC Better Homes Program
- Appendix H: Request to the Province of B.C. for inclusion in the Tall Wood Mass Timber Early Adoption Initiative

Presentation to Council (July 22, 2019)

## Climate Emergency – Verbal Update on Current Initiatives

July 22, 2019

*westvancouver*

### Presentation Outline

1. **Background**
2. **Actions to reduce GHG emissions**
3. **Actions to adapt to the impacts of climate change**
4. **Metrics and targets**
5. **Recommendation**

# 1 Background

CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

west vancouver

## History

- 2001 – *Municipal Leaders Resolution on Climate Change* signed to participate in the *Partners for Climate Protection Program*
- 2008 – *Climate Action Charter* signed to plan for compact, complete and energy-efficient communities and to achieve carbon neutrality in corporate operations
- 2010 – *Community Climate Action Plan* adopted to inform OCP climate action targets and policies
- 2014 – District achieves corporate carbon neutrality due to credits received for Whyte Lake Park protection
- 2016 – *Corporate Energy and Emissions Plan* and *Community Energy and Emissions Plan (CEE Plan)* adopted
- 2018 – CEE Plan actions embedded into OCP
- 2019 – Council recognizes that climate change constitutes an emergency

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CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

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# Previous decision - July 8, 2019

THEREFORE BE IT RESOLVED THAT:

- (1) Council recognizes that climate change constitutes an emergency for the District of West Vancouver; and
- (2) Staff be directed to report back at the July 22, 2019, regular Council meeting regarding:
  - i. actions the District is presently taking to reduce GHG emissions (corporate and community) and performance metrics regarding emission targets;
  - ii. actions the District is presently taking to *adapt* to climate change; and
- (3) Staff be directed to report back within 90 days regarding:
  - i. actions that other municipalities are taking to reduce their GHG emissions; and
  - ii. an approach to a comprehensive climate adaptation strategy that meets the present IPCC climate change target of 45 per cent below 2010 levels by 2030 and 100 per cent below 2010 levels by 2050.

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CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

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## Definitions

**Mitigation** addresses the causes:

Reducing GHG emissions

**Adaptation** addresses the impacts:

Preparing for the impacts of climate change

**Corporate:**

Emissions associated with the delivery of local government services

**Community:**

Emissions associated with activity community-wide (e.g. homes, cars)

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CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

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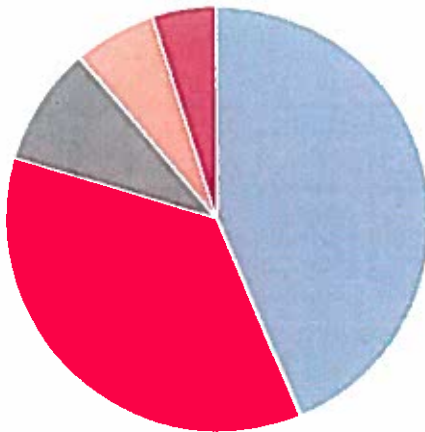
# 2 Actions to reduce GHG emissions

CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES



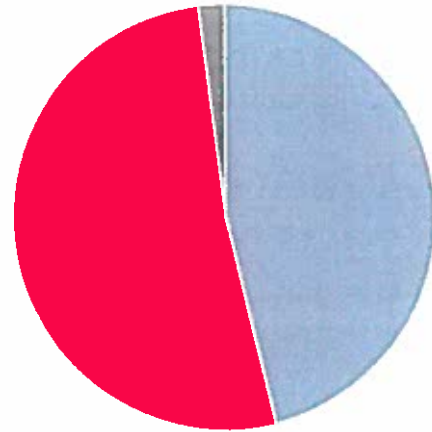
## Sources of GHGs

Corporate



Fleet and equipment Public facilities Utilities Admin facilities Fire

Community



Transportation Buildings Solid waste

CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES



## Corporate actions to reduce GHGs

### Facilities

- Reprogrammed building system controls to improve management of the heat exchange between the ice arena and pool
- Improved control of gas-fired heaters in the ice arena spectator area, and boiler controls in DWV hall
- Upgrading facilities' light fixtures and streetlights to LED
- Installed EV charging stations
- Demolished underutilized buildings

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CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

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## Corporate actions to reduce GHGs

### Fleet

- Increased use of B10 biofuel to 25%
- Retrofitting utility vehicles with anti-idling modules and auxiliary heaters
- Purchasing plug-in hybrids and EV vehicles including Parks service carts and Police front line patrol vehicles
- Purchasing vehicles with smaller, more efficient engines including single-axle, aluminum-body dump trucks
- Replacing backhoes and other heavy equipment with engines certified to reduced emissions

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CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

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## Corporate actions to reduce GHGs

### Solid Waste

- Operating multi-stream recycling stations in all facilities including an expanded facility at the Operations Centre
- Recycling operational materials including metal, oil and park green waste

### Utilities Construction

- Recycling of construction fill at Operations Centre
- Employing trenchless technology to reduce linear infrastructure impact

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CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

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## Community actions to reduce GHGs

### Land Use

- Completed award-winning, citizen-led *CEE Plan* that integrates climate with broader planning (“Better Climate, Better Community”)
- *CEE Plan* priority actions embedded into the *Official Community Plan*
- Applying climate action lens to Marine Drive and HSB local area plans:
  - Planning for nodal, mixed-use, multifamily development
- Continuing progress on Cypress Village (clustered development, forest protection)
- Considering enhanced tree protection bylaw options
- Promoting senior government and utility education and conservation initiatives

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CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

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## Community actions to reduce GHGs

### Buildings and Development

- Adopted *BC Energy Step Code* and *Sustainable Buildings Policy*, and securing higher performance through development applications
- Processing and recommending Council's consideration of multifamily residential and mixed-use proposals (corridors and infill)
- Requiring EV, bicycle parking and car share spaces in new developments through *Sustainable Buildings Policy*
- Incentivizing renewable energy and Passive House construction
- Improving residential water conservation through new rate structure
- Secured external funding for builder rebates, staff and industry training, and student research

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CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

  
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## Community actions to reduce GHGs

### Transportation

- Collaborated on the *Integrated North Shore Transportation Planning Project* and participating in the *North Shore Fixed Link Rapid Transit Study*
- B-Line rapid bus approved to Park Royal
- Installed EV charging stations including support of the Horseshoe Bay DCFC
- Completed *Pedestrian Network Study* and expanding multi-use pathways including Sprit Trail and Hugo Ray
- Supporting active transportation through traffic calming and pedestrian crossing improvements, *Horseshoe Bay Streetscape* project, *School Traffic Safety Advisory Committee* including grants, *Seniors Cycling Club* and *55+ Urban Explorers* programs
- Organized bike rack design competition, and supporting *BC Commuter Challenge* and *Bike-to-Work Week*

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CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

  
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## Community actions to reduce GHGs

### Solid Waste

- Continuing leadership in residential waste reduction and diversion
- Encouraging improved land clearing compliance through *Demolition and Construction Recycling Report*
- Introduced three-stream waste and recycling stations to all business districts, and expanding animal waste disposal program in parks
- Improving awareness through student video contest, online sorting game and regional campaign promotion

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# 3 Actions to adapt to the impacts of climate change

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## Need for adaptation – our geography

WV is nestled between forested Upper Lands and the ocean:



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## Actions to adapt to sea level rise

- Collaborating on the *North Shore Sea Level Rise Risk Assessment and Adaptive Management Strategy* to advance understanding of and response options for sea level rise
- Convened the *Coastal Marine Management Plan Working Group* to develop a comprehensive policy for the management of DWV coastal environment
- Preparing *Development Permit Area for Coastal Flooding Risk and Foreshore Protection* to minimize risk to people and property from sea level rise

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## Actions to adapt to wildfire risk

- Improving safety and reduce risk along the wildland urban interface through development of a *Community Wildfire Protection Plan*
- Preparing a *Development Permit Area for Wildfire Risk* to minimize risk to people and property from wildfires

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## Actions to adapt to changing weather patterns

- Adopted *Drinking Water Conservation Plan Bylaw* to respond to changing seasonal weather patterns
- Updated *Integrated Stormwater Management Plans* and requiring stormwater management plans for new development

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# 4 Metrics and targets

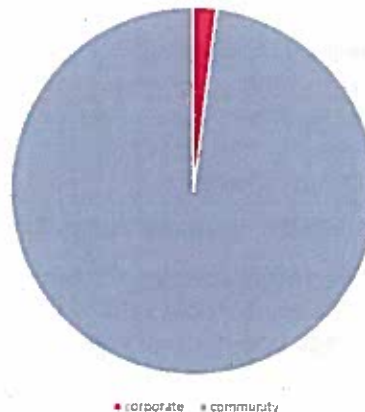
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## Energy and Emissions Plans

- **Corporate**  
GHG reduction targets (from 2007)
  - 33% by 2020
  - 80% by 2050Plan update scheduled for 2020
- **Community (CEE Plan)**  
GHG reduction target (from 2010)
  - 40% reduction by 2040Plan update scheduled for 2025

District share of community emissions



**These targets are embedded in the OCP (2.5.19 and 2.6.19)**

CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES



## Current status – corporate

- Climate Action Revenue Incentive Program (CARIP)

Annual corporate emissions report

Weather and improved accounting of contractor emissions impact totals



CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES



## Current status – community

- Community Energy and Emissions Inventory (CEEI)

Inventory—including transportation—of energy use, GHG emissions and supporting indicators at the community level

2012 CEEI released in 2017

Future releases in this form are not expected due to data no longer being available



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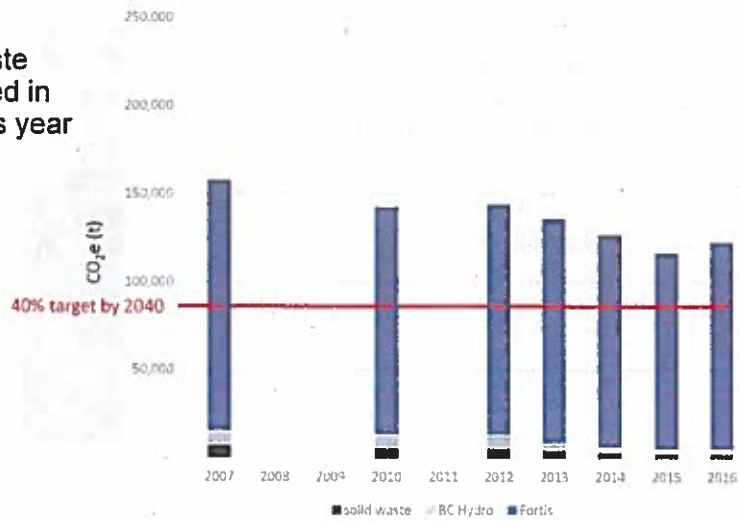


## Current status – community

- Provincial Greenhouse Gas Emissions Inventory

Utilities and landfill waste data is typically released in the Fall for the previous year

Does not include transportation



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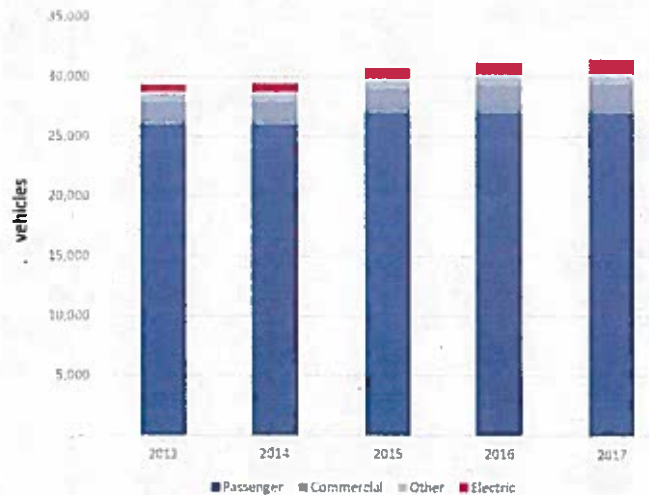
## Current status – community

- ICBC Vehicle Insurance Policies in Force (2017)

Number of vehicles in the community is increasing

Electric vehicles now constitute 3.5% of the total

We don't know how far each of these vehicles is driving



CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

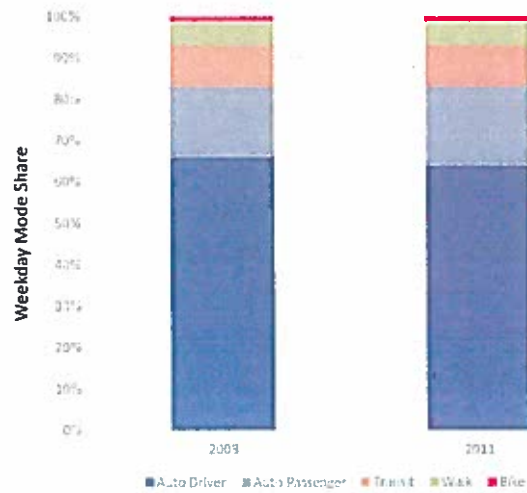


## Current status – community

- Metro Vancouver Regional Trip Diary Survey (2011)

Mode share consistent between 2008 and 2011 with 83% of weekday trips made by car in each

2017 survey has not yet been released



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# 5 Recommendations

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## Previous decision

THEREFORE BE IT RESOLVED THAT:

- (1) Council recognizes that climate change constitutes an emergency for the District of West Vancouver; and
  - (2) Staff be directed to report back at the July 22, 2019, regular Council meeting regarding:
    - i. actions the District is presently taking to reduce GHG emissions (corporate and community) and performance metrics regarding emission targets;
    - ii. actions the District is presently taking to *adapt* to climate change; and
  - (3) Staff be directed to report back within 90 days regarding:
    - i. actions that other municipalities are taking to reduce their GHG emissions; and
    - ii. an approach to a comprehensive climate adaptation strategy that meets the present IPCC climate change target of 45 per cent below 2010 levels by 2030 and 100 per cent below 2010 levels by 2050.
- 

CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

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## Recommendation

**THAT the presentation regarding Climate Emergency – Verbal Update on Current Initiatives be received for information.**

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CLIMATE EMERGENCY – VERBAL UPDATE ON CURRENT INITIATIVES

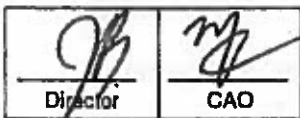
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**DISTRICT OF WEST VANCOUVER**  
750 17TH STREET, WEST VANCOUVER BC V7V 3T3

## COUNCIL REPORT

Date:	October 8, 2019
From:	Courtney Miller, Senior Planner
Subject:	Climate Emergency – Community Approach to Meet IPCC Climate Change Targets
File:	01-0332-03

### RECOMMENDATION

THAT

1. The approach to a comprehensive climate mitigation strategy to reduce community greenhouse gas (GHG) emissions presented in the report dated October 8, 2019 titled "Climate Emergency – Community Approach to Meet IPCC Climate Change Targets" be received for information;
2. Staff commence preparation of the proposed bylaws and policy amendments listed in Table 2 of this report; and
3. Staff report back with further information and analysis of the studies listed in Table 3 of this report.

#### 1.0 Purpose

To update Council on actions other municipalities are taking to reduce community greenhouse gas (GHG) emissions, and to present to Council an approach to a comprehensive climate mitigation strategy to meet the present Intergovernmental Panel on Climate Change (IPCC) targets.

#### 2.0 Executive Summary

The international scientific consensus is that GHG emissions must be reduced sooner than previously understood in order to avoid the most far-reaching effects of climate change. This finding demands that governments, industries and communities take immediate action, and it supports Council's unanimous resolution that climate change constitutes an emergency.

West Vancouver's ongoing commitment to address climate change means that Council has previously identified a suite of leading mitigation policies. A review of approaches taken by other jurisdictions to date confirms that these policies are appropriate to reduce substantially community GHG emissions. However, Council's recognition of an emergency directs the District to increase the extent and to accelerate the timing of policy implementation given the understanding that targets must be reached sooner than modeled by West Vancouver's current plan.

### 3.0 Legislation/Bylaw/Policy

The Province of British Columbia (Province) requires that local governments have targets, policies and actions for the reduction of GHG emissions. Council adopted the *Community Energy and Emissions Plan* (CEE Plan) in October 2016 to guide West Vancouver's GHG reduction actions. Staff updated Council on the implementation status of the CEE Plan in April 2017 and in April 2018. The CEE Plan informed climate targets and policies included in the *2018 Official Community Plan* (OCP).

### 4.0 Official Community Plan

The 2018 OCP embedded CEE Plan actions into planning and land use management, including a community GHG reduction target in accordance with Section 473 of the *Local Government Act* (LGA). Using 2010 emissions as the baseline, the District targets a 40% reduction by 2040. The OCP includes a range of policies to mitigate GHGs including:

- 2.1.23: Advance community energy efficiency and reduce GHG emissions by:
  - a. Supporting transportation alternatives through housing location, design and facility provisions, and parking requirements;
  - b. Increasing the percentage of efficient building forms;
  - c. Requiring leading energy efficiency standards and considering site design and orientation;
  - d. Encouraging renewable energy; and
  - e. Considering incentives to support building retrofits for improved energy efficiency.
- 2.6.19: Implement community energy and emissions initiatives to advance towards meeting the District's greenhouse gas emissions reduction target of 40% below 2010 levels by 2040 or sooner, notably through the land use, housing, transportation, and infrastructure policies contained in this plan.
- 2.6.22: Expand the use of green infrastructure through public and private development to enhance long-term ecosystem services that support multiple benefits (e.g., storm water management, air quality, carbon sequestration, water quality, and biodiversity).
- 2.6.23: Seek to incorporate renewable energy in public and private projects, and support the development of renewable energy systems as opportunities arise.

### 5.0 Background

#### 5.1 Previous Decisions

At the July 8, 2019 Council meeting, Council passed the following resolution:



**THEREFORE BE IT RESOLVED THAT:**

- (1) Council recognizes that climate change constitutes an emergency for the District of West Vancouver; and
- (2) Staff be directed to report back at the July 22, 2019, regular Council meeting regarding:
  - i. actions the District is presently taking to reduce GHG emissions (corporate and community) and performance metrics regarding emission targets;
  - ii. actions the District is presently taking to adapt to climate change; and
- (3) Staff be directed to report back within 90 days regarding:
  - i. actions that other municipalities are taking to reduce their GHG emissions; and
  - ii. an approach to a comprehensive climate adaptation strategy that meets the present IPCC climate change target of 45 per cent below 2010 levels by 2030 and 100 per cent below 2010 levels by 2050.

Staff reported to Council on July 22, 2019, in response to provision (2) of the above resolution. This presentation, titled "Climate Emergency—Verbal Update on Current Initiatives", is included as Appendix A. It defined performance metrics and addressed actions that the District is presently taking to reduce GHG emissions and to adapt to climate change. This report is in response to the remaining direction—provision (3)—of the July 8, 2019 resolution.

## 5.2 History

A summary of the District's history on climate action includes:

- 2001 – Signing the *Municipal Leaders Resolution on Climate Change* to participate in the *Partners for Climate Protection Program*;
- 2008 – Signing the *Climate Action Charter* to plan for compact, complete and energy-efficient communities and to achieve carbon neutrality in corporate operations;
- 2010 – Adopting the *Community Climate Action Plan* to inform OCP climate action targets and policies;
- 2014 – Reaching carbon neutrality in corporate operations due to credits received for Whyte Lake Park protection;
- 2016 – Adopting the *Corporate Energy and Emissions Plan* and *Community Energy and Emissions Plan (CEE Plan)*;
- 2018 – Embedding the CEE Plan actions into the OCP;
- 2019 – Recognizing that climate change constitutes an emergency.

## 6.0 Analysis

### 6.1 Discussion

In response to Council's resolution, the discussion for this report is organized into the following sections:

- i. IPCC target and description of issue
- ii. BC local government influence and comparison
- iii. Proposed approach to meet the IPCC target

#### 6.1(i) IPCC TARGET AND DESCRIPTION OF ISSUE

The United Nations (UN) has identified climate change as the defining issue of our era with impacts that are global in scope and unprecedented in scale.<sup>1</sup> The scientific consensus is that global warming is occurring and is human-caused. Ambitious action is required at every level with local governments positioned to have a meaningful role. This section clarifies terms, reviews West Vancouver's CEE Plan, and summarizes the conclusions of the IPCC report.

#### Mitigation versus adaptation

Since climate change impacts to the environment and the community are already observable, West Vancouver's response includes two distinct approaches: reducing GHG emissions (mitigation) and addressing their impacts (adaptation). Reducing annual emissions and stabilizing the existing levels of GHGs in the atmosphere is the function of mitigation and the subject of this report. Policies and plans to advance adaptation are also underway. Staff will be updating Council on local climate change impacts—notably increased wildfire risk and sea level rise—at future Council meetings.

#### CEE Plan

The July 22, 2019 staff presentation (Appendix A) emphasized the relationship between the West Vancouver corporate and community plans: the District has greater knowledge of and control over its facilities and fleets than of the community's homes, businesses and vehicles, but corporate emissions total less than 2% of overall community emissions. Distinct approaches are required to meet reductions in each, and a separate report addressing corporate GHG reduction is being provided at the October 28, 2019 Council meeting.

West Vancouver's award-winning, Working-Group created community CEE Plan identified 39 Strategic Directions, 22 Quick Wins and 56 Big Wins. These have directed the District's actions since the October 2016 adoption of the plan, and the current implementation status is included as Appendix B. The effect of the potential mitigation under each CEE Plan strategic direction was modeled to define strategies that would meet the community targets. While the plan anticipated its own review and renewal

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<sup>1</sup> Accessed: <https://www.ipcc.ch/sr15>

in 2025, the updated IPCC targets require that the District take additional action sooner than this date.

The District has advanced a number of the actions identified through the CEE Plan, but tracking progress is an imperfect and technically challenging exercise. West Vancouver relies on the Province for several key metrics to assess accurately change across the community. The release of this information is inconsistent and the data is subject to many limitations (Appendix A).

### **IPCC report**

The UN Environment Programme and the World Meteorological Organization first established the IPCC in 1988 to provide a scientific view of climate change, including its impacts, risks, and options for response. At the invitation from the UN, the IPCC prepared its most recent report "Global Warming of 1.5°C" which it released in October 2018. Its assessment is that human-caused emissions of carbon dioxide need to be reduced by 45% from 2010 levels by 2030 and 100% by 2050 to limit global warming to no more than 1.5 degrees Celsius, a threshold considered critical to avoid the most far-reaching effects of climate change.

The overarching conclusion from the IPCC report is that the climate is changing faster than expected, and that efforts to date to address human-caused emissions have been insufficient. In order to meet this new reduction target, West Vancouver's interpolated CEE Plan GHG reduction target for 2045 should be reached fifteen years sooner, and only 11 years from today (Figure 1). This leaves a significant quantity of reductions (indicated in red in Figure 1) that were not addressed in the 2016 analysis completed for the CEE Plan. Due to the short time horizon introduced by the IPCC, this 2030 target is necessarily the focus of this report: if West Vancouver intends to meet the newly recommended IPCC 2030 target, actions will be required during the current Council's term (2018-2022).

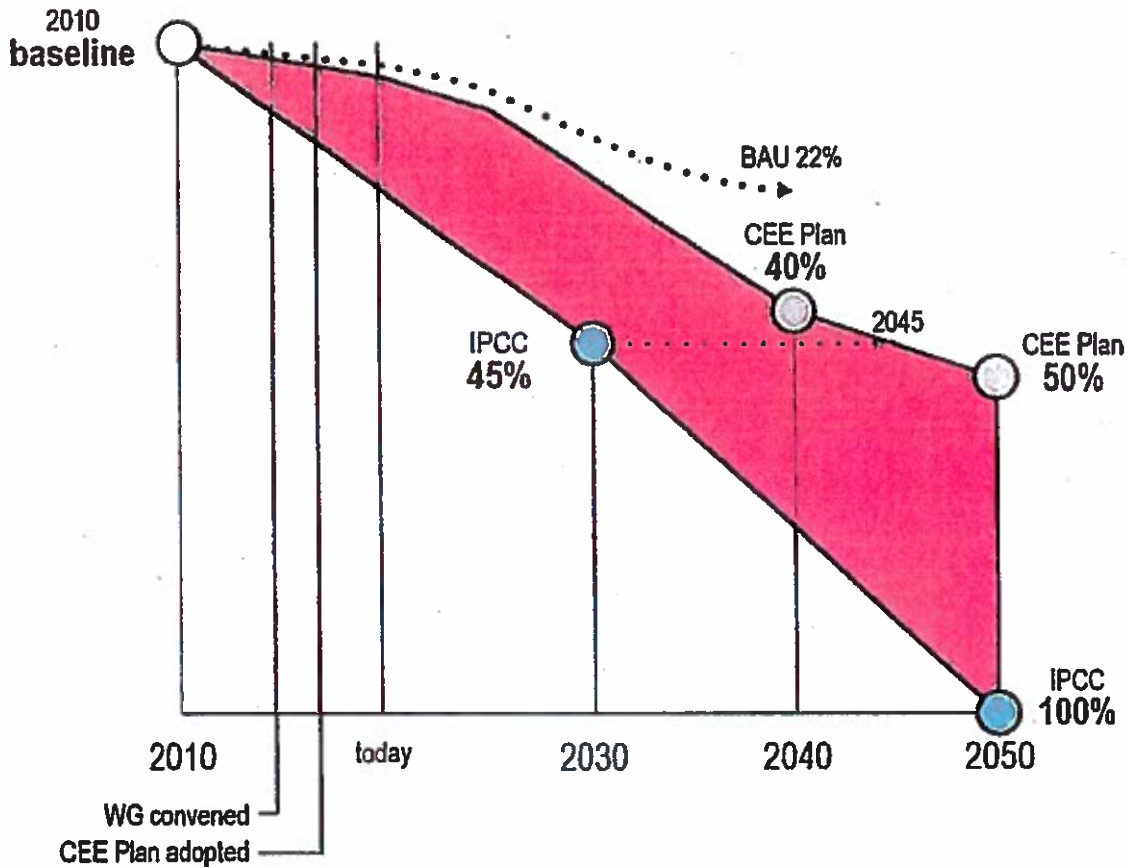
### **Baseline**

Figure 1 includes Business as Usual (BAU), demonstrating the gradual reductions that will occur absent any local government action. This includes the effect of several scheduled, senior government regulations such as minimum renewable fuel content (BC's *Low Carbon Fuel Standard* targets a 20% reduction by 2030) as well as more stringent limits to vehicle tailpipe emissions. While these reductions have a role, they alone are insufficient to meet even the CEE Plan targets.

A wide range of factors that are not directly controlled by the District influence community emissions. For instance, West Vancouver was the only local government in Metro Vancouver with a declining population during the last Census period. Fewer residents and workers—all other factors held constant—will have fewer associated GHG emissions. The

same impact would be expected should residents live in West Vancouver for only part of the year or should there otherwise be an increase in the number of vacant homes in the community. There are also impacts typically observed in communities with an aging population, such as a reduction in some types of daily trips, that may contribute to a declining emissions baseline outside of specific local government intervention.

Figure 1: Comparison of CEE Plan and IPCC reduction targets



**Data availability and consistency**

Determining the GHG emissions associated with the daily activities of residents and workers is a complex and evolving process. Local governments are dependent on external sources for measurement and reporting that itself is subject to delays. More frequent and timely assessment relies on modeling that projects past trends to estimate current emissions. Varied protocols can limit comparability and updated methodologies can result in adjustments to both the reporting year as well as data from previous years. While the Province and regional authorities provide data specific to local government jurisdictions, reporting community GHG emissions nevertheless faces a number of challenges.

This is particularly observed with transportation data. For instance, staff reported to Council on July 22, 2019 (Appendix A) that the transportation mode split for West Vancouver residents was largely unchanged given the

most recent information available (2011 and 2014). In late September 2019, TransLink made available online partial results from the *2017 Trip Diary Survey*, cautioning that final validation could result in further adjustments. The survey presented dramatically different results for West Vancouver in 2017 and revised the previously released 2014 findings to improve data comparability.<sup>2</sup> These preliminary results are included later in this report.

Sources of emissions that are external to West Vancouver's inventory have the potential to cause reported data to differ from community perception. For example, it is challenging to assign emissions from vehicles licensed outside of West Vancouver but that travel local roads for landscaping, grocery delivery, home health care, or to provide other services. Further, year-to-year utility consumption is impacted by the annual variability of weather since residential building emissions are heavily influenced by building heating.

The challenges in data availability and consistency can contribute to delays in measuring the impacts from Council's decisions to mitigate community emissions. Despite this limitation, the imperative to address GHG emissions is well established, and Council can direct its climate actions.

#### **6.1(ii) BC LOCAL GOVERNMENT INFLUENCE AND COMPARISON**

This section outlines the ability of local governments to mitigate GHG emissions. It provides an overview of municipal powers under the LGA and identifies emission sources over which local governments have the greatest jurisdiction. A summary of actions taken by other Metro Vancouver municipalities to address community GHG emissions is included as Appendix C.

##### **Municipal influence**

Local governments play a critical role in the mitigation of community GHG emissions. West Vancouver is one of 450 Canadian jurisdictions—in addition to the Assembly of First Nations and House of Commons—that has declared a climate emergency. However, its role, similar to other Canadian local governments, is bounded by legislative structures as a “creature of the province,” meaning that its powers are only those granted by the provincial government. As a result, municipalities have brought forward a range of regulatory motions on climate change in recent years for consideration at the Union of BC Municipalities (UBCM). While Council's support on appropriate climate change issues is important, the District has no control on timing or potential delivery of any senior government response. Council's recognition that climate change constitutes an emergency for West Vancouver, paired with the IPCC's identification of 2030 as the target year, means that the District's attention

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<sup>2</sup> Accessed: <https://www.translink.ca/Plans-and-Projects/Transportation-Surveys>

should be focused on what the local government controls or can meaningfully influence in the next decade.

### **Learning from others**

Local governments have taken a range of actions in recent years to mitigate community GHG emissions. Although the District can benefit from a wide range of ideas and actions, regional examples are most immediately implementable since they reflect many of the same factors (e.g. legislative structure, local climate, energy prices, senior government regulation, and building practices and forms) that influence the viability of potential responses in West Vancouver.

Directions for staff to report back generally accompanied the climate emergency declarations by Metro Vancouver municipalities, which include the City of Vancouver, District of North Vancouver, City of New Westminster, City of Port Moody, City of Richmond and City of Burnaby. Most did not establish a date for subsequent consideration, and some municipalities anticipate reporting back in the upcoming year. While each community has unique characteristics that inform its specific actions to achieve emissions reductions, there are similarities in approaches taken at the local government level (Appendix C).

Among these responses, Vancouver—considered a leader among North American cities in prioritizing climate change—provides the best illustration of actions required to meet IPCC targets.<sup>3</sup> It was the first municipality in the region to make a declaration in January 2019, and its Council subsequently authorized the implementation of accelerated actions in April 2019. In the past decade, Vancouver has reduced emissions by 7% while its population has increased by over 9%.<sup>4</sup> The staff report illustrates that development has supported the investment in infrastructure that positions the city to pursue deeper reductions moving forward. Vancouver's approach has many parallels to the priority actions identified in West Vancouver's CEE Plan, and the extent of action that it determined is necessary to meet the IPCC targets is provided in the sections that follow.

### **6.1(iii) PROPOSED APPROACH TO MEET THE IPCC TARGET**

Directed by the 2016 CEE Plan and informed by the actions of other local governments, this report proposes a climate mitigation strategy to meet the more urgent IPCC targets. With only a decade to make significant reductions in community GHGs, action is required today.

### **Policy versus implementation**

West Vancouver's CEE Plan and OCP direct its climate change mitigation actions. Neither ongoing refinement of the scientific understanding of climate change nor the competing assumptions regarding the severity of

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<sup>3</sup> Accessed: <https://council.vancouver.ca/20190424/documents/clsc1.pdf>

<sup>4</sup> *Metro Vancouver 2016 Census Bulletin*

the resulting impacts are barriers to action. Rather, the prevailing directions to mitigate community GHG emissions remain largely constant.

The limited progress demonstrated to date to reduce community GHG emissions is due to implementation barriers rather than the absence of directing policy. Council's recognition of an emergency is a call for accelerated implementation of these previously supported strategies. Staff identifies that—notwithstanding some specific actions provided later in this report—West Vancouver has the policies it requires to pursue the IPCC targets. The fact that greater mitigation is required sooner means that the speed and intensity of Council's policy implementation must increase if it is to minimize the future costs of adaptation and limit the far-reaching effects of climate change.

### **Planning local neighbourhoods**

Building efficient communities is a critical part of the solution. Land use tools direct capital and infrastructure investment, and the Province recognizes GHG mitigation to be a community benefit under the LGA. Continuing to plan local neighbourhoods to allow residents safe and convenient access to daily needs positively impacts community GHG emissions as well as advancing a range of co-benefits.

Currently, 23% of residents and 30% of homes are within the District's Ambleside, Taylor Way, Marine Drive and Horseshoe Bay Local Area Plan (LAP) boundaries as shown in the OCP. The evolution of centres and corridors enables broader community GHG reductions by improving access to shops and services for residents of adjacent neighbourhoods. Another example is the nodal growth centred on the future Cypress Village identified in the OCP that both limits the deforestation possible under the existing zoning while supporting the Upper Lands to be a more complete community. For comparison, in response to the climate emergency, Vancouver has targeted doubling (from 45% to 90%) the number of residents living within proximity to daily needs by 2030.

Redevelopment has historically been a lengthy process in West Vancouver. Table 1 lists the approved development applications since the October 2016 CEE Plan adoption. Two-thirds of net new units District-wide are within two projects along Marine Drive, and the total increase is equal to an annual growth rate of 0.7%. Even assuming that all of these units are constructed, approvals are still roughly 20% behind the future housing need identified in the May 2016 *Demographic, Housing and Employment Projections* prepared by Urban Futures to inform the new OCP.

**Table 1: Approved Net New Units by OCP Local Area Plan Areas since October 2016<sup>5</sup>**

OCP LAP	Projects	Net New Units
Marine Drive	2	290
Ambleside	3	58
Taylor Way	1	48 <sup>6</sup>
Horseshoe Bay	2	2
Remainder of District	6	7
<b>Total</b>	<b>14</b>	<b>405</b>

The OCP identifies centres and corridors where growth can enhance transportation options and improve access to daily needs. Responding to the climate emergency requires investment over time to enable deeper reduction of GHG emissions, and the IPCC targets emphasize the need for timely approval of projects that meet this community objective.

**Climate mitigation strategy**

The proposed strategy has identified three streams of actions to reduce community GHG emissions in order to meet the IPCC targets:

**(1) Continue CEE Plan implementation**

West Vancouver is currently pursuing a range of CEE Plan actions (Appendix B) across the plan sections: Places + Spaces; Bricks + Mortar; Roll + Stroll; Trash + Treasure; and Cross Cutting Action. Staff will continue plan implementation in order to reach the CEE Plan modeled GHG reductions. Additional actions are required to realize the reductions not addressed in the 2016 CEE Plan analysis (indicated in red in Figure 1).

**(2) Commence preparation of proposed bylaw and policy amendments**

Staff is seeking through this report direction to bring forward the bylaw and policy amendments summarized in Table 2 for Council consideration. The proposed revisions would enhance these regulations support of Council's recognition that climate change constitutes an emergency. They would allow staff to apply a contemporary understanding, respond to updated building systems, and—in some instances—act on greater legislative clarity than was available in 2016. These amendments would better ensure that future policy, as well as future development, supports West Vancouver's progress towards these challenging IPCC targets.

<sup>5</sup> Approval considered date of bylaw adoption. For projects not requiring rezoning (i.e. duplexes and coach houses) approval considered date of development permit issuance.

<sup>6</sup> These units comprise 727 Keith Road (Arnica Lions Gate Expansion) which received third reading at the July 8, 2019 Council meeting, but is not approved at the time of report writing.



## **Table 2: Summary of Proposed Bylaw and Policy Amendments**

### **Official Community Plan Bylaw No. 4985, 2018**

- **2041 OCP Targets:**
  - Amend transportation and infrastructure from *17% baseline/25% target to 26% baseline/34% target*
  - Amend parks and environment from *40% reduction/156,500t target to 75% reduction/64,500t target*
- **Expanding missing middle options (2.1.7):**
  - Add proposals that enhance neighbourhood access to daily needs or connect the active transportation network
- **Strengthening our centres and corridors through LAPs (2.1.15):**
  - Add proposals that advance low carbon building construction
- **Advancing housing affordability, accessibility and sustainability (2.1.23):**
  - Amend to reference fuel switching to low carbon sources
- **Managing new development in the Upper Lands (2.2.4):**
  - Amend environmental plan to reference GHG mitigation
- **Promoting opportunities and innovation (2.3.16):**
  - Amend to reference low carbon innovations
- **Promoting sustainability and innovation (2.4.21):**
  - Amend to specifically reference low carbon modes of transportation
- **Mitigating climate change and building resiliency (2.6.19):**
  - Amend target from *40% by 2040 to 45% by 2030 and 100% by 2050* to align with IPCC
- **Mitigating climate change and building resiliency (2.6.23):**
  - Amend to reference fuel switching to low carbon sources

### **Zoning Bylaw No. 4662, 2010**

- **Section 110 Definitions:**
  - Define terms for the following provisions
- **Section 130.05 Secondary Suites:**
  - Amend to align parking requirement with detached secondary suite parking requirement
- **Section 140 Parking:**
  - Add electric vehicle (EV) parking requirements
  - Add bicycle parking requirements

### **Building Bylaw No 4400, 2004**

- **Part 4 Definitions:**
  - Define terms for the following provisions
- **Part 9 Building Permits (9.1):**
  - Add specifications for Low Carbon Energy System (LCES)
- **Part 9 Building Permits (9.7):**
  - Amend to include LCES pathway
  - Amend to schedule future Step Code step increases
  - Amend to include energy budget for single-family buildings

### **Sustainable Buildings Policy 02-80-386**

- **Provision 3.1:**
  - Amend to reference LCES
- **Provision 3.2:**
  - Delete EV parking requirements (added to Zoning Bylaw)
- **Provision 3.3:**
  - Delete bicycle parking requirements (added to Zoning Bylaw)

### **Official Community Plan Bylaw No. 4985, 2018**

The recommended approach directs staff to bring forward for Council consideration an OCP amendment to align West Vancouver's community GHG reduction targets with those identified by the IPCC. Namely, the current target of 40% reduction by 2040 would be replaced with the new targets: 45% reduction by 2030, 75% reduction by the OCP 2041 target year and 100% reduction by 2050.<sup>7</sup> These updated targets would ensure that the OCP—the District's principal planning and land use management tool—is guided by the reductions required to limit the far-reaching effects of climate change.

The GHG emissions associated with the operation of a building or vehicle are determined by its efficiency as well as the carbon intensity of the fuel. Although both remain critical, Council's recognition that climate change constitutes an emergency shifts the emphasis for the coming years further towards reducing the carbon intensity of the fuel than is currently directed by the OCP. The plan includes a number of provisions that encourage energy efficiency and renewables (2.1.23, 2.2.4, 2.3.16, and 2.6.23), and the proposed amendment—whether focused on buildings, transportation, environment or economy—would add this low carbon focus to these provisions. For buildings, this supports the efficient use of electricity for space and water heating (BC Hydro's GHG intensity for electricity is only 6% of the GHG intensity for natural gas for the same measurement of energy).<sup>8</sup> Similarly, replacement of fossil fuel with electric personal vehicles does not deliver the increased efficiency nor reduce congestion of other transportation modes, but it does dramatically lower GHG emissions.

Other proposed OCP amendments would enable Council to consider future development applications that accelerate behavioural and market responses supportive of GHG mitigation. The first would consider missing middle proposals that support the reduction of neighbourhood GHG emissions by enhancing neighbourhood access to daily needs or by completing gaps in the active transportation network (2.1.7). The second would enable Council consideration of centre and corridor development applications in advance of LAP adoption that advance emerging low carbon building construction in the community (2.1.15). This would allow Council to consider innovative proposals leading industry progress towards lower GHG emissions.

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<sup>7</sup> 2041 OCP target year reduction determined as the linear projection between IPCC 2030 and 2050 targets.

<sup>8</sup> 2017 BC Best Practices Methodology for Quantifying Greenhouse Gas Emissions. BC Ministry of Environment and Climate Change Strategy

### **Zoning Bylaw No. 4662, 2010**

Staff recommends promotion of low carbon forms of transportation by bringing forward amendments to the Zoning Bylaw. This would include introducing West Vancouver's minimum bicycle and electric vehicle (EV) parking standards as bylaw requirements for all new buildings. Recent development applications have met these at the direction of Council's *Sustainable Buildings Policy*. However, a bylaw requirement would apply these standards to proposals that do not require rezoning as well as ensure that their provision is considered a minimum requirement versus a community amenity.

Staff also recommends that Council reconcile a bylaw conflict that may unduly encourage vehicle emissions and congestion: a home with a secondary suite requires three parking spaces while a home with a coach house (detached secondary site) requires two. The amendment to require one space per unit would result in a more equitable consideration of these building forms.

### **Building Bylaw No 4400, 2004**

The OCP amendments recommended to advance a low carbon energy approach can also be applied to West Vancouver's *Building Bylaw*. Namely, the District would define a Low Carbon Energy System (LCES)—establishing a maximum carbon intensity for the provision of heat and/or hot water—and an alternate pathway to meet the Step Code. Direction from the Province has provided greater clarity regarding the ability of local governments to provide options under the provincial *Building Act* than was available in 2017 when the District first considered Step Code adoption. The recommended approach would allow applicants the option either to build to a higher step or to maintain the current step but be required to install a LCES. The effect of the LCES pathway would be a lower efficiency building than the alternative, but with only a fraction of the GHG emissions.

The Province enacted the Step Code to transition the minimum energy efficiency requirement so that all new BC buildings will be net-zero energy ready by 2032. Using the *BC Building Code* (BCBC) classification of buildings as either Part 9 (simple buildings such as single-family and apartments up to three storeys) or Part 3 (complex buildings such as larger apartments), the Step Code defines Step 5 as net-zero energy ready for Part 9 buildings and Step 4 as net-zero energy ready for Part 3 buildings. Council adopted, effective July 2018, community-wide standards for new construction that established the minimum as Step 3 for Part 9 buildings and Step 2 for Part 3 buildings, which positioned West Vancouver as a leader in BC. In order to ensure that the District's regulations are on track to require net-zero energy ready buildings on or before the provincial mandate, and to provide the greatest certainty to owners and applicants, the recommended approach would adopt provisions into the bylaw that schedule in

advance the effective dates for future increases in the construction standard.

Council also adopted in 2018 the first community-wide higher step requirement in BC by requiring the small number of very large single-family home proposals considered under Part 3 of the BCBC to be held to a more stringent standard. Staff would review the current and proposed *Building Bylaw* requirements to confirm that larger replacement homes can reasonably be expected to reduce community emissions. A GHG emissions budget—the largest homes are constructed to a higher step so that their climate change impact is similar to other homes—would be one consideration in this review.

**Sustainable Buildings Policy 02-80-386**

Should Council proceed with the bylaw amendments above, this policy would require amendment for the purposes of alignment. Proposed revisions would include consideration of a LCES, as well as the deletion of EV and bicycle parking provisions (proposed to be reintroduced as minimum requirements under the Zoning Bylaw).

**(3) Report back with further information considering other actions**

More action is required than included in the above strategies to respond to the climate emergency. In order to address this gap, a range of other actions are identified in Table 3. However, they require additional consideration—and in some instances expanded legislative authority—or they face other barriers to implementation. As such, they cannot be implemented as readily as the bylaw and policy amendments above. They are distributed across CEE Plan strategic sections and can be considered subsequent steps to reduce community GHG emissions.

**Table 3: Studies Requiring Further Information and Analysis**

**Places + Spaces**

- Encouraging smaller, low carbon homes in neighbourhoods
- Improving development procedures to deliver low carbon homes

**Bricks + Mortar**

- Accelerating retrofits with levy, fund or existing grants
- Adopting the mass-timber building code to reduce construction emissions

**Roll + Stroll**

- Reducing emissions through an updated transportation plan

**Trash + Treasure**

- Continuing diversion and improving demolition practices

**Beyond Net Zero**

- Sequestering carbon on private and District lands

### **Places + Spaces: Encouraging Smaller Homes**

Natural gas used for residential space and water heating is currently the largest source of inventoried West Vancouver community emissions, and fewer GHGs result from heating a smaller home constructed to the same standard and with the same occupancy. Aligned with smaller homes, smaller lots further support the land use directions and associated GHG reductions identified in the OCP.

Council convened the Neighbourhood Character Working Group (NCWG) to propose, consider and review regulations and policies that respect neighbourhood character, protect heritage and reduce the impacts of development in the District's single-family dwelling zones. The NCWG engaged the community in May 2019 to validate the issues it had identified, including building size and housing diversity. It is currently considering solutions and anticipates reporting back to Council in 2020 on its findings. Should the NCWG make recommendations that encourage smaller homes to enhance neighbourhood character, staff can determine how best to reduce GHG emissions as a co-benefit. Potential approaches may include allowing only LCES in new and renovated homes and the incremental delivery of the active transportation network (e.g. strategically adding sidewalks and bicycle lanes) through review of streetscape standards.

### **Places + Spaces: Development Procedures**

Staff can explore bylaw amendments that facilitate effective and efficient community input while also supporting the continued reduction of GHG emissions. This review would consider whether the approval process discourages proposals to construct the lower carbon homes required to meet community GHG targets. For example, in the three years since CEE Plan adoption, only three duplexes and six coach houses have been approved in established neighbourhoods despite these uses being allowed under the respective zoning.

### **Bricks + Mortar: Accelerating Retrofits**

Legislative limitations, distributed ownership and current market economics are all barriers to local government approaches to mitigate climate change impacts associated with space and water heating in existing residential buildings. Recognizing that the significant majority of all buildings that will be operating in 2030 are already constructed, addressing these emissions is critical if the District is to meet its existing OCP as well as the IPCC targets. Staff has attempted to identify the authority, ability and resources to accelerate retrofits of existing buildings in the community. The scope of the change required is reflected in Vancouver's climate emergency response: it has identified the need for 100% of new and replacement heating and domestic hot water systems to be zero emissions by 2025 (the earliest target year of any of the proposed actions). District staff continues to work to define a program that it can

operationalize and will review options to report back to Council for further direction once a viable approach is determined.

Staff prioritizes opportunities to access senior government programs, to secure external funding or otherwise to reduce resources required for project administration. This includes West Vancouver's membership in the Community Energy Association (CEA) and its support of CEA's pilot project to introduce an innovative approach to retrofit Metro Vancouver homes with heat pumps. The CEA has successfully secured multiple grants, involved utility and other regional stakeholders, and will update staff on the pilot business model later this year. In addition, the District received external funding in 2018 to hire students through the *UBC Sustainability Scholars Program* to review approaches to reduce GHG emissions associated with existing homes. Their findings have supported the District's consideration to date.

West Vancouver supports BC Hydro and FortisBC to improve local uptake of utility conservation programs, including the *Appliance Rebate* and *Multi-Unit Residential Pilot*, by making marketing materials available to owners and contractors at Municipal Hall. Further collaboration is possible, but it is challenging for local governments to demonstrate significantly higher community participation in utility programs without the authority to compel nor the resources to offer greater incentives. The Province released CleanBC last year, its most recent program to encourage consumers to invest in energy efficiency and fuel switching.<sup>9</sup> The program is marketed across a range of media and offers rebates for as much as \$10,000 to upgrade insulation, windows, and space and water heating. Other income-qualified, mortgage and tax refund programs are available. A further FortisBC program offers customers the option of purchasing carbon neutral renewable natural gas (RNG). Although this can be an alternative to fuel switching to address the GHG intensity of natural gas, there remains a cost premium and a related limit of economically viable supply.<sup>10</sup> While staff continues to consider approaches to bolster conservation programs—the typical local government role is to supplement rebates (which is costly) or to lead promotion (which is time consuming)—it is difficult to commit District resources without confidence that greater participation will result.

Another approach identified in the CEE Plan is the application of an energy levy on West Vancouver residential properties. Some BC local

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<sup>9</sup> Accessed: <https://betterhomesbc.ca>

<sup>10</sup> RNG is less than 0.5% of BC natural gas supply; FortisBC RNG suppliers produced 0.09% of total BC natural gas demand, short-term achievable is 1.3% of demand and 2035 potential is 27% of current demand. The *GHG Reduction (Clean Energy) Regulation* provides the opportunity for the industry to grow the RNG supply by including a 5% renewable portfolio allowance and the *CleanBC RNG Standard* is 15% by 2030. FortisBC began offering RNG to consumers in 2011 and the current cost is a 60% premium. *Resource Supply Potential for Renewable Natural Gas in B.C.* prepared by HallBar Consulting for Province of BC, FortisBC and Pacific Northern Gas; *Provincial and Territorial Energy Profiles-BC* Canada Energy Regulator; *Renewable Natural Gas* FortisBC.

governments have implemented levies to fund grants or loans to be used towards either corporate or community projects that reduce GHG emissions. Although relating such a levy to the energy consumption of each property could have increased market influence by encouraging owners to invest in improvements, there are significant challenges to this approach. The *Privacy Act* prevents utilities from providing data for individual accounts, and the logistics—should the District incentivize voluntary declaration of utility data by making available a waiver for more efficient homes—of alternatives could be challenging and require additional staff resourcing. A levy could be more fully defined should it be Council's direction.

Staff will continue reviewing options and will report to Council for further consideration once it identifies a viable model to reduce emissions associated with existing West Vancouver buildings. Some approaches may require Council to bring forward a 2020 UBCM resolution, and the District would not have control of the timing of any Provincial response.

#### **Bricks + Mortar: Adopting Mass-Timber**

Mass-timber, an emerging type of construction that is structured with prefabricated solid or engineered wood elements, reduces the significant GHG emissions associated with concrete structures. The Province has enabled local governments to be early adopters of provisions proposed for *National Building Code 2020* that allow mass-timber buildings up to 12 storeys in height. Since the announcement of this option earlier this year, 13 British Columbia communities have elected to be early adopters in advance of the anticipated 2022 enactment into the BCBC. Vancouver has targeted reducing the embodied emissions (resulting from the processes required to produce a building) 40% by 2030 through changing construction materials and methods, and a principal approach is expanding the use of mass timber.

In addition to the significant environmental benefits, mass-timber reduces construction times and impacts, and the use of wood products supports the provincial economy. These buildings meet equivalent performance standards for safety, structural resilience and fire protection. Staff from Planning, Building and Fire would review the effects that early adoption may have on West Vancouver to inform a recommendation for Council's consideration.

#### **Roll + Stroll: Reducing Transportation Emissions**

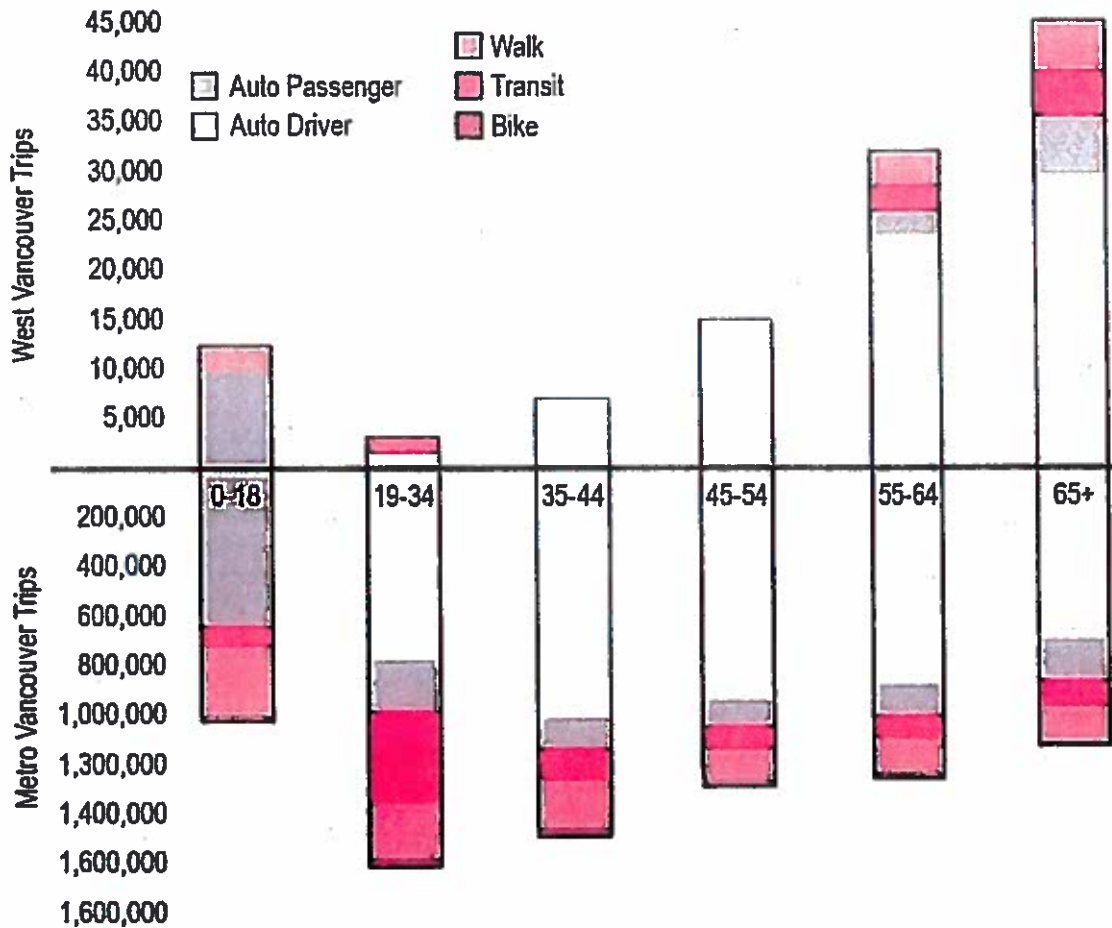
Nearly half of West Vancouver community emissions result from on-road transportation. Reducing the GHG intensity of transportation by shifting vehicle trips to sustainable modes (i.e. walk, bike and transit), improving fuel efficiency and fuel switching vehicles are all critical to meet the 2030 IPCC target. Enabling resident, worker and visitor access to a range of low carbon transportation options is among the most effective approaches to

mitigate emissions, and these reductions can generally be realized in less time than is required for new building construction.

Council has identified as one of its 2019-2020 priorities the preparation of a new *Strategic Transportation Plan* to update the District's current 2010 plan. This update could allow an increased emphasis on sustainability that prioritizes low carbon transportation modes to enhance resident and business mobility. It could incorporate new technologies while reflecting changing trip patterns in the community. TransLink's preliminary *2017 Trip Diary Survey* results find that the mode of transportation varies by age as shown in Figure 2:

- 0 - 18 years      Limited transit use
- 19 - 34 years    Small population with transit as principal mode
- 35 - 54 years    Reliance on driving
- 55+ years        Walking and transit become more important

**Figure 2: Comparison of West Vancouver and Metro Vancouver trips by mode and age<sup>11</sup>**



<sup>11</sup> TransLink 2017 Trip Diary accessed: <https://www.translink.ca/Plans-and-Projects/Transportation-Surveys>



20% of West Vancouver trips by residents age 65 years or older are by means of transit or walking compared to statistically none of the trips for younger adults (age 35-54 years).<sup>12</sup> This is significant considering West Vancouver's aging population and noting that this pattern is not as pronounced between age cohorts in Metro Vancouver, which illustrates a more consistent number of transit and walking trips through adulthood (indicated in shades of red in Figure 2).

Table 4 shows that TransLink's updated methodology has affected West Vancouver's reported mode split. The 2011 total for transit, walk and bike trips combined was adjusted from the previously reported 17% to 12%. However, using this approach, the *2017 Trip Diary Survey* found the share of trips increased to 26% for these modes combined. The share of both walk and transit more than doubled to 11% and 15% of trips respectively. Conversely, the share of auto driver trips declined by 22% between 2011 and 2017. Further study is required to understand if these results are supported by other measures and whether West Vancouver's community transportation emissions are lower than assumed based on projections from earlier inventories.

**Table 4: West Vancouver trips by mode by year**

Mode	TransLink Trip Diary Survey Year			
	2008 <small>released 2009</small>	2011 <small>released 2012</small>	2011 <small>revised 2019</small>	2017 <small>released 2019</small>
Auto driver	66%	64%	72%	56%
Auto passenger	17%	19%	17%	17%
Transit	10%	10%	7%	15%
Walk	6%	6%	5%	11%
Bike	1%	1%	-	-

Regional collaboration such as the *2010 North Shore Area Transit Plan* creates opportunities to direct infrastructure investments that can also respond to the shared concern of climate change. The District will benefit from rapid transit deployment to Park Royal in 2020. Improved reliability, convenience and speed in comparison to a local bus service makes the new service a more attractive transportation option. In addition to connecting a regional retail and entertainment destination, RapidBus service will be within a 5- or 10-minute walk of 8% of West Vancouver homes and 7% of residents as shown in Table 5<sup>13</sup>. These figures do not

<sup>12</sup> This analysis is based solely on the *2017 Trip Survey* data released at the time of this report writing. The relatively small sample size is due to both West Vancouver's population in comparison to Metro, as well as the age distribution in West Vancouver, which causes some modes not to be reported when the number of trips is too low to meet TransLink's threshold for data reliability. The bike share of trips was 0.9% in 2008 and 1.2% in 2011. Accessed: <https://www.translink.ca/Plans-and-Projects/Transportation-Surveys.aspx>

<sup>13</sup> TransLink utilizes the industry standard of 400 metres for a 5-minute walk and 800 metres for a 10-minute walk. Distance is taken from Park Royal RapidBus stop on Marine Drive. Klahanée Park Housing Society is also included

include the 290 homes approved within the *Marine Drive Local Area Plan* (Table 1). Rapid transit supports local business by increasing access for both workers and customers. 76% of workers within the *Marine Drive Local Area Plan* boundary live outside of West Vancouver and nearly all live outside of the immediate neighbourhood.

RapidBus will employ buses each with a capacity equal to as many as 75 passenger vehicles, and the service will be able to move 1,650 passengers per hour along the Marine Drive corridor between Park Royal and Phibbs Exchange<sup>14</sup>. Any potential future extension of a similar service westwards would increase the number of residents within walking distance of rapid transit<sup>15</sup>.

**Table 5: Estimated share of West Vancouver homes and residents in walking distance to rapid transit**

	Homes		Residents	
<b>RapidBus to Park Royal (2020)</b>				
~5 min	~850	~4%	~1,500	~3%
~10 min	~740	~4%	~1,800	~4%

Analogous to buildings, fuel switching vehicles can yield critical reductions. The 2020 RapidBus deployment will utilize hybrid electric vehicles. TransLink has established dates to transition its entire fleet to renewable energy and is currently piloting battery electric buses on a route between Burnaby and Vancouver that features charging stations on each end.

At 3.9% of licensed passenger vehicles, West Vancouver has among the highest per capita EV ownership rates in BC.<sup>16</sup> For comparison, Vancouver, with EVs comprising 3.1% of licensed passenger vehicles, has set a target of zero emissions for 50% of all driving by 2030. The provincial and federal governments incentivize the purchase of EVs—currently \$3,000 through the *Clean Energy Vehicle for BC* purchase incentive program and \$5,000 through Transport Canada’s *Incentives for Zero-Emission Vehicles*—so that, depending on the model, the rebates can cover nearly half the additional incremental cost over a conventional

since it is within 400 metres of the Capilano Road RapidBus stop. Homes are per *BC Assessment* data, and residents are from 2016 *Census* data with residents assigned to dwellings based on average occupancy by dwelling type by Census Tract.

<sup>14</sup> RapidBus capacity per TransLink’s *RapidBus Program*. Comparison assumes only driver in vehicle. TransLink 2017 *Trip Diary Survey* reports that 77% of trips by car originating in West Vancouver were taken by the driver—and not a passenger—of the car.

<sup>15</sup> No extension to the RapidBus beyond Park Royal has been approved.

<sup>16</sup> *ICBC Vehicle Insurance Policies in Force* (2017 reporting year) total of hybrid- and full-electric in comparison to all insured passenger vehicles.

vehicle.<sup>17</sup> Similar to building retrofit incentives, while the District cannot legally compel nor substantially incentivize private EV ownership, staff is considering how to encourage uptake of these senior government programs.

In recent years, the District has removed barriers to EV ownership. It collaborated with BC Hydro in 2018 to install the Horseshoe Bay Direct Current Fast Charging station (part of the provincial electric highway). This station is one of the most used in the network, and BC Hydro is upgrading it to a dual charging station in 2020 to provide additional EV infrastructure in the community. The District also provides public charging at municipal facilities, and Council's *Sustainable Buildings Policy* directs that all new residential parking spaces in rezoned projects include outlets.

#### **Trash + Treasure: Increasing Solid Waste Diversion**

There is greater control of solid waste emissions than those associated with community buildings or transportation. Metro Vancouver is responsible for both the long-term planning and ongoing disposal of waste in the region, and West Vancouver plays a critical role to enhance community understanding, to increase diversion and to ensure quality service for residents and local businesses. Through the ongoing collaboration of District and Metro Vancouver staff (Appendix B), solid waste emissions are decreasing. Particularly due to the successful diversion of organics, it is the sector that has demonstrated in recent years the required rate of reduction to meet IPCC targets.

#### **Beyond Net Zero: Expanding Carbon Sequestration**

At this time, GHG mitigation is the imperative. Should West Vancouver achieve net-zero status—meaning that the community is no longer releasing carbon on an annual basis—further actions would then be required to sequester (i.e. remove and isolate) the excess carbon that remains in the atmosphere. The IPCC reports that, in addition to meeting the 2050 target of net zero emissions, net negative emissions are required during the latter half of the 21<sup>st</sup> century.

Considering the longer term, local governments can begin to identify opportunities for sequestration through a range of approaches including reforestation, enhanced carbon storage in soil and aquatic environments and carbon capture accompanying bioenergy projects. Vancouver has targeted removing one million tonnes of emissions annually through forest and coast restoration by 2060. West Vancouver could begin to explore collaborative approaches, such as the revegetation of private and District lands including street right-of-ways, which could support enhanced carbon sequestration.

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<sup>17</sup> Accessed <https://www.cevforbc.ca>

## 6.2 Sustainability

The reduction of GHG emissions is critical to environmental sustainability. It also contributes to social sustainability by supporting complete, inclusive communities, and it may improve economic sustainability by limiting the cost and disruption of adaptation measures required to address climate change risks.

## 6.3 Public Engagement and Outreach

The CEE Plan and OCP both included extensive engagement on the community's approach to climate change mitigation. The recommended approach would direct staff to begin preparation of the bylaw and policy amendments listed in Table 2 of this report. Pending Council's direction, such amendments would require statutory notice and a public hearing.

## 6.4 Other Communication, Consultation, and Research

The recommended approach would identify the studies listed in Table 3 of this report as areas for further consideration. Pending Council's direction, staff would conduct research as required and appropriate in order to report back to Council for additional direction.

## 7.0 Options

### 7.1 Recommended Option

Council may direct staff to bring forward bylaw and policy amendments and further analysis as specified in the report dated October 8, 2019 titled "Climate Emergency – Community Approach to Meet IPCC Climate Change Targets."


### 7.2 Considered Options


Council may receive this report for information, request further information or provide alternate direction.

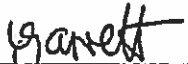
## 8.0 Conclusion


This report updates Council on actions other municipalities are taking to address GHG emissions and presents an approach to a comprehensive climate change mitigation strategy to meet the IPCC targets. This approach identifies recommended bylaw and policy amendments for Council consideration, and it directs staff to report back with further information on studies that could deepen GHG reductions.

In summary, Council's existing policies are consistent with those that other municipalities in the region are proceeding to implement. However, implementation must be accelerated to meet the targets and to avoid the most far-reaching effects of climate change. The recommended option will continue to advance the approach created by West Vancouver's 2016 CEE Plan to create a better climate and a better community.

Author:   
Courtney Miller, Senior Planner

Concurrence:   
David Hawkins, Manager, Community Planning & Sustainability

Concurrence:   
Vanessa Garrett, Manager, Roads & Transportation

Concurrence:   
Emily Willabee, Policy & Programs Planner, Engineering Services

Appendices:

- Appendix A: Climate Emergency – Verbal Update on Current Initiatives Presentation (July 22, 2019)
- Appendix B: CEE Plan Implementation Status Update
- Appendix C: Comparison of Local Government Actions

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District of West Vancouver

**Official Community Plan  
Bylaw No. 4985, 2018,  
Amendment Bylaw No. 5054, 2020**

Effective Date:

# Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5054, 2020

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District of West Vancouver

## **Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5054, 2020**

A bylaw to align objectives and policies with the recognition that climate change constitutes an emergency.

WHEREAS the Council of The Corporation of the District of West Vancouver deems it expedient to provide for the alignment of objectives and policies with the recognition that climate change constitutes an emergency;

NOW THEREFORE, the Council of The Corporation of the District of West Vancouver enacts as follows:

### **Part 1 Citation**

- 1.1 This bylaw may be cited as Official Community Plan Bylaw No. 4985, 2018, Amendment Bylaw No. 5054, 2020.

















### **Part 2 Severability**

- 2.1 If a portion of this bylaw is held invalid by a Court of competent jurisdiction, then the invalid portion must be severed and the remainder of this bylaw is deemed to have been adopted without the severed section, subsection, paragraph, subparagraph, clause or phrase.

### Part 3 Amendment

Official Community Plan Bylaw No. 4985, 2018, is amended as follows:

3.1 In Part 1 Introduction, subsection 1.6 OCP – Action and Vision (page 19), replace the table “2041 OCP Targets” in its entirety with:

	Our baselines are ...	We aim to ...	Which means by 2041...
 HOUSING & NEIGHBOURHOODS	 ~ <b>2/3</b> detached single-family remaining one-third are multi-family homes (2016)	 <b>↑30%</b> more diverse housing	 ~ <b>50-50</b> split between single-family and multi-family homes
 LOCAL ECONOMY	 <b>33</b> jobs per 100 residents (2011)	 <b>↑5%</b> increase in our jobs-to-residents ratio	 <b>38</b> jobs per 100 residents
 TRANSPORTATION & INFRASTRUCTURE	 <b>26%</b> of trips by walking, cycling or transit (2017)	 <b>↑8%</b> increase in walking, cycling and transit trips	 <b>34%</b> of trips by walking, cycling or transit
 PARKS & GREEN SPACES	Community GHG emissions (2010) <b>=258,000 t co2e</b>	 <b>↓75%</b> GHG emissions from 2010 levels	Community GHG emissions <b>=64,500 t co2e</b>
 SOCIAL WELL-BEING	Participation in District services and programs (2017) <b>=1.8 million</b>	 <b>↑20%</b> greater participation in services and programs	Participation in District services and programs <b>=2.15 million</b>

3.2 Following Part A Housing & Neighbourhoods, Policy 2.1.7.b insert the new clause:

- c. Considering sites or assemblies that enhance neighbourhood access to daily needs or connect the active transportation network;

3.3 Renumber Part A: previous 2.1.7.c becomes 2.1.7.d; previous 2.1.7.d becomes 2.1.7.e; previous 2.1.7.e becomes 2.1.7.f; and previous 2.1.7.f becomes 2.1.7.g.

3.4 In Part A Housing & Neighbourhoods, replace Policy 2.1.15.b in its entirety with:

- b. Requiring the proposal's contribution to rental, non-market or supportive housing, or its advancement of low-carbon construction, or its ability to forward the public interest or provide other community benefits as determined by Council;

- 3.5 In Part A Housing & Neighbourhoods, replace Policy 2.1.23.e in its entirety with:
- e. Considering incentives to support energy-efficiency building retrofits and conversion of building systems to low-carbon energy sources.
- 3.6 In Part A Housing & Neighbourhoods, replace Policy 2.2.4.h in its entirety with:
- h. An environmental plan—including stormwater management, energy efficiency and reduced greenhouse gas emissions, risk management (e.g., forest fire), and other mitigation and adaptation strategies—to achieve a sensitive and sustainable development scheme;
- 3.7 Following Part B Local Economy, Policy 2.3.16.d insert the new clause:
- e. Low-carbon building materials and techniques.
- 3.8 In Part C Transportation & Infrastructure, replace Policy 2.4.21 in its entirety with:
- 2.4.21 Prioritize sustainable and low-carbon transportation options (e.g., walk, bike and transit) and transportation demand management strategies.
- 3.9 In Part D Parks & Environment, replace Policy 2.6.19 in its entirety with:
- 2.6.19 Implement community energy and emissions initiatives to advance towards meeting the District's greenhouse gas emissions reduction targets of 45% below 2010 levels by 2030 and 100% by 2050 or sooner, notably through the land use, housing, transportation, and infrastructure policies contained in this plan.
- 3.10 In Part D Parks & Environment, replace Policy 2.6.23 in its entirety with:
- 2.6.23 Seek to incorporate low-carbon and renewable energy in public and private projects, and support the development of low-carbon and renewable energy systems as opportunities arise.

## **Part 4 Offence and Penalty**

- 4.1 Every person who violates a provision of this bylaw, or who consents, allows or permits an act or thing to be done in violation of a provision of this bylaw, or who neglects to or refrains from doing anything required to be done by a provision of this bylaw, is guilty of an offence and is liable to the penalties imposed under this bylaw, and is guilty of a separate offence each day that a violation continues to exist.
- 4.2 Every person who commits an offence is liable on summary conviction to a fine or to imprisonment, or to both a fine and imprisonment, not exceeding the maximum allowed by the *Offence Act*.

READ A FIRST TIME on [Date]

PUBLICATION OF NOTICE OF PUBLIC HEARING on [Date]

PUBLIC HEARING HELD on [Date]

READ A SECOND TIME on [Date]

READ A THIRD TIME on [Date]

ADOPTED by the Council on [Date].

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Mayor

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Corporate Officer

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District of West Vancouver

**Zoning Bylaw**  
**Bylaw No. 4662, 2010,**  
**Amendment Bylaw No. 5055, 2020**

Effective Date:

# Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5055, 2020

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District of West Vancouver

## **Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5055, 2020**

A bylaw to amend vehicle, electric vehicle and bicycle parking requirements.

Previous amendments: Amendment bylaws 4672, 4677, 4678, 4679, 4680, 4689, 4697, 4701, 4710, 4712, 4716, 4726, 4736, 4737, 4752, 4757, 4767, 4772, 4784, 4787, 4788, 4791, 4805, 4809, 4828, 4839, 4854, 4866, 4873, 4895, 4898, 4905, 4927, 4928, 4944, 4962, 4967, 4974, 4982, 4992, 5001, 5009, 5021, and 5024;

WHEREAS the Council of The Corporation of the District of West Vancouver deems it expedient to provide for vehicle, electric vehicle and bicycle parking requirements;

NOW THEREFORE, the Council of The Corporation of the District of West Vancouver enacts as follows:

### **Part 1 Citation**

- 1.1 This bylaw may be cited as Zoning Bylaw No. 4662, 2010, Amendment Bylaw No. 5055, 2020.

### **Part 2 Severability**

- 2.1 If a portion of this bylaw is held invalid by a Court of competent jurisdiction, then the invalid portion must be severed and the remainder of this bylaw is deemed to have been adopted without the severed section, subsection, paragraph, subparagraph, clause or phrase.

## Part 3 Amendment

Zoning Bylaw No. 4662, 2010, is amended as follows:

- 3.1 Following Part 110 Definitions, "Bed and breakfast", insert the new defined terms, definitions, and references:

***Bicycle Locker*** an enclosed space that is limited to one secure bicycle parking space. 143.1

***Bicycle Parking*** the use of land or buildings for the short-term or secure parking of bicycles. 143.1  
143.2

***Bicycle Room*** an enclosed portion of a floor with racks to allow for more than one secure bicycle parking space. 143.1

- 3.2 Following Part 110 Definitions, "Dwelling, two family or duplex", insert the new defined terms, definitions, and references:

***Electric Vehicle*** a vehicle that uses electricity for propulsion and that can use an external source of electricity to charge the vehicle's batteries. 141.01  
142.10

***Electric Vehicle Energy Management System*** a system used to control electric vehicle supply equipment loads through the process of connecting, disconnecting, increasing, or reducing electric power to the loads, and consisting of any of the following: monitor(s), communications equipment, controller(s), timer(s) and other applicable device(s). 142.10

***Energized Outlet*** a connected point in an electrical wiring installation at which current is taken and a source of voltage is connected to supply utilization equipment. 141.01  
142.10

- 3.3 Following Part 110 Definitions, "Lane or alley", insert the new defined term, definition, and reference:

***Level 2 Charging*** Level 2 electric vehicle charging level as defined by SAE International's J1772 standard. 141.01  
142.10

- 3.4 Following Part 110 Definitions, "Secondary suite", insert the new defined term, definition, and reference:

<b>Secure bicycle parking space</b>	an area of land or building used for the parking of a bicycle that is secure and weather- protected.	143.1
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- 3.5 Following Part 110 Definitions, "Setback", insert the new defined term, definition, and reference:

<b>Short-term bicycle parking space</b>	an area of land or building used for the parking of a bicycle that is accessible for parking not exceeding seventy-two hours.	143.2
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- 3.6 In Part 120 General Regulations for all Zones, replace Clause 120.21(2)(g) with:

(g) bicycle parking, parking and loading areas.

- 3.7 In Part 130 General Regulations for Residential Zones and Uses Only, delete Clause 130.05(1)(g) and Clause 130.05(1)(h) in their entirety.

- 3.8 Renumber Zoning Bylaw No. 4662, 2010: Previous 130.05(1)(i) becomes 130.05(1)(g) and 130.05(1)(j) becomes 130.05(1)(h).

- 3.9 In Part 130 General Regulations for Residential Zones and Uses Only, delete Clause 130.051(1)(k).

- 3.10 Renumber Zoning Bylaw No. 4662, 2010: Previous 130.051(1)(l) becomes 130.051(1)(k).

- 3.11 In Part 140 Parking Regulations, replace Clause 141.01 with:

141.01 Parking Spaces

(1) A parking space shall be not less than 2.7 metres length nor less than 5.5 metres width.

(2) The minimum parking provided shall be the sum of that required for the uses on the lot:

Use	Space per dwelling
(a) Single family or duplex	1
(b) Secondary suite or detached secondary suite	1
(c) All other permitted uses	as specified in this bylaw

(3) Parking spaces required under 141.01(2)(a) of this bylaw shall include an energized outlet that is:

- (a) capable of providing Level 2 charging for an electric vehicle; and
- (b) labelled for the use of electric vehicle charging.

3.12 In Part 140 Parking Regulations, delete Clauses 141.02 and 141.04.

3.13 Renumber Zoning Bylaw No. 4662, 2010: Previous 141.03 becomes 141.02 and 141.05 including all sub-clauses becomes 141.03 including all sub-clauses.

3.14 Following Part 140 Parking Regulations, Clause 142.09, insert new clauses:

**142.10 Electric Vehicle Charging Infrastructure**

(1) For new dwelling units, all parking spaces for residential use, except visitor parking, shall include an energized outlet that is:

- (a) capable of providing Level 2 charging for an electric vehicle;
- (b) labelled for the use of electric vehicle charging.

(2) Where an electric vehicle energy management system is implemented, the Director of Planning may specify a minimum performance standard to ensure a sufficient rate of electric vehicle charging.

## 143 Bicycle Parking

### 143.1 Secure Bicycle Parking

- (1) A secure bicycle parking space shall be:
- (a) located in a common area at the level of grade or at the first level of vehicle parking above or beneath grade;
  - (b) accessible from an aisle with a minimum width of 1.2 metres;
  - (c) notwithstanding 143.1(2) of this bylaw, a maximum of 35% of spaces may be vertical to:
    - (i) allow the bicycle to be suspended from an appropriate rack;
    - (ii) reduce the required length of each space to not less than 1.0 metres.
- (2) A secure bicycle parking space shall be provided in one of the following forms:
- (a) Bicycle room:
    - (i) separate from other uses including general storage areas;
    - (ii) enclosing no more than 40 spaces;
    - (iii) with each space not less than 1.8 metres length, 0.6 metres width and 1.9 metres vertical clearance;
    - (iv) that meets the minimum standard in the Building Bylaw No. 4400, 2004;
  - (b) Bicycle locker:
    - (i) with each space not less than 1.8 metres length, 1.2 metres height and 0.6 metres width at the door and 0.22 metres at the end opposite;
    - (ii) that meets the minimum standard in the Building Bylaw No. 4400, 2004.
- (3) The minimum secure bicycle parking spaces provided shall be the sum of that required for the uses on the lot:

Use	Secure bicycle parking space provision
(a) Single family or duplex	none
(b) Townhouse or apartment	1.5 per dwelling
(c) Commercial and institutional	0.3 per 100 m <sup>2</sup>

- (4) The minimum vehicle parking requirement otherwise required by this bylaw shall be reduced for the provision of those secure bicycle parking spaces required under 143.1(3) of this bylaw:

Use	Vehicle parking space reduction for each secure bicycle parking space required
(a) Single family or duplex	none
(b) Townhouse or apartment	0.17 space
(c) Commercial and institutional	none

143.2 Short-Term Bicycle Parking

- (1) A short-term bicycle parking space shall be:

- (a) over a concrete surface and include a rack;
- (b) not less than 1.8 metres length nor less than 0.6 metres width;
- (c) located in a common area that is:
  - (i) visible and accessible to visitors;
  - (ii) within 15m of a main entrance of the building;
  - (iii) off-street, unless on-street placement is approved by the District

- (2) The minimum short-term bicycle parking spaces provided shall be the sum of that required for the uses on the lot:

Use	Short-term bicycle parking space provision
(a) Single family or duplex	none
(b) Townhouse or apartment	0.2 per dwelling
(c) Commercial and institutional	0.4 per 100 m <sup>2</sup>

- (3) A minimum 50% of required short-term bicycle parking space shall be sheltered from the elements where more than six spaces are required.

- 3.15 In Part 200 Single Family Zones, delete Clause 201.12 in its entirety.
- 3.16 In Part 200 Single Family Zones, delete Clause 202.13 in its entirety.
- 3.17 In Part 200 Single Family Zones, delete Clause 203.13 in its entirety.
- 3.18 In Part 200 Single Family Zones, delete Clause 204.13 in its entirety.
- 3.19 Renumber Zoning Bylaw No. 4662, 2010: Previous 204.14 becomes 204.13 and 204.15 including all sub-clauses becomes 204.14 including all sub-clauses.

- 3.20 In Part 200 Single Family Zones, replace Clause 205.13 with:

205.13 Lane Access

Access for parking and garage purposes shall be from the public, open lane where one exists, except in the case of a garage and parking area on the rear half of a corner lot.

- 3.21 In Part 200 Single Family Zones, delete Clause 207.13 in its entirety.
- 3.22 Renumber Zoning Bylaw No. 4662, 2010: Previous 207.14 including all sub-clauses becomes 207.13 including all sub-clauses.
- 3.23 In Part 200 Single Family Zones, delete Clause 208.13 in its entirety.
- 3.24 Renumber Zoning Bylaw No. 4662, 2010: Previous 208.14 including all sub-clauses becomes 208.13 including all sub-clauses.

- 3.25 In Part 200 Single Family Zones, replace Clause 209.11 with:

209.11 Lane Access

Access for parking and garage purposes shall be from the public, open lane where one exists, except in the case of a garage and parking area on the rear half of a corner lot.

- 3.26 In Part 200 Single Family Zones, delete Clause 210.13 in its entirety.
- 3.27 In Part 250 Duplex Dwelling Zones, replace Clause 251.12 with:

251.12 Lane Access

Access for parking and garage purposes shall be from the public, open lane where one exists, except in the case of a garage and parking area on the rear half of a corner lot.

3.28 In Part 250 Duplex Dwelling Zones, replace Clause 252.12 with:

252.12 Lane Access

Access for parking and garage purposes shall be from the public, open lane where one exists, except in the case of a garage and parking area on the rear half of a corner lot.

3.29 In Part 250 Duplex Dwelling Zones, delete Clause 253.12 in its entirety.

3.30 In Part 300 Multiple Dwelling Zones, Clause 301.13(1), replace "greater of" with "lesser of".

3.31 In Part 300 Multiple Dwelling Zones, Clause 302.13(1), replace "greater of" with "lesser of".

3.32 In Part 300 Multiple Dwelling Zones, Clause 303.12(1), replace "greater of" with "lesser of".

3.33 In Part 300 Multiple Dwelling Zones, Clause 303.12(1)(a), replace "and" with "or".

3.34 In Part 300 Multiple Dwelling Zones, replace Clause 305.12(1) with:

- (1) Apartment buildings – a minimum of the lesser of:
  - (a) 1 parking space for each dwelling, or
  - (b) 1 parking space for every 84 square meters of gross floor area,

3.35 In Part 300 Multiple Dwelling Zones, delete Clause 305.12(2) in its entirety.



- 3.36 Renumber Zoning Bylaw No. 4662, 2010: Previous 305.12(3) including all sub-clauses becomes 305.12(2) including all sub-clauses, 305.12(4) becomes 305.12(3), 305.12(5) becomes 305.12(4), 305.12(6) becomes 305.12(5) and 305.12(7) becomes 305.12(6).
- 3.37 In Part 350 Commercial Zones, replace Clause 351.10(1) with:
- (1) 1 parking space minimum for every 18.6 square metres of gross commercial floor area in the building, plus the lesser of:
    - (a) 1 parking space for every 83.6 metres of gross residential floor area in the building, or
    - (b) 1 parking space for every dwelling in the building.
- 3.38 In Part 350 Commercial Zones, replace Clause 352.10(1)(c) with:
- (c) 1 parking space for every 83.6 square metres of gross residential floor area, whichever is the lesser.
- 3.39 In Part 350 Commercial Zones, replace Clause 353.11(1) with:
- (1) 1 parking space minimum for every 55.7 square metres of gross commercial floor area in the building, plus the lesser of:
    - (a) 1 parking space for every 83.6 metres of gross residential floor area in the building, or
    - (b) 1 parking space for every dwelling in the building.
- 3.40 In Part 350 Commercial Zones, Clause 354.10(1), replace "greater of" with "lesser of".
- 3.41 In Part 700 Ambleside Centre Zones, Clause 701.06(1)(b), replace "greater of" with "lesser of".

## Offence and Penalty

- 3.42 Every person who violates a provision of this bylaw, or who consents, allows or permits an act or thing to be done in violation of a provision of this bylaw, or who neglects to or refrains from doing anything required to be done by a provision of this bylaw, is guilty of an offence and is liable to the penalties imposed under this bylaw, and is guilty of a separate offence each day that a violation continues to exist.
- 3.43 Every person who commits an offence is liable on summary conviction to a fine or to imprisonment, or to both a fine and imprisonment, not exceeding the maximum allowed by the *Offence Act*.

READ A FIRST TIME on [Date]

PUBLICATION OF NOTICE OF PUBLIC HEARING on [Date]

PUBLIC HEARING HELD on [Date]

READ A SECOND TIME on [Date]

READ A THIRD TIME on [Date]

ADOPTED by the Council on [Date].

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Corporate Officer



District of West Vancouver

**Building Bylaw**  
**Bylaw No. 4400, 2004,**  
**Amendment Bylaw No. 5056, 2020**

Effective Date:

# Building Bylaw No. 4400, 2004, Amendment Bylaw No. 5056, 2020

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District of West Vancouver

## **Building Bylaw No. 4400, 2004, Amendment Bylaw No. 5056, 2020**

A bylaw to provide options for compliance with the Energy Step Code and to define bicycle storage.

Previous amendments: Amendment bylaws 4521, 4542, 4663, 4685, 4698, 4704, 4720, 4729, 4798, 4933, 4961, and 4970.

WHEREAS the Council of The Corporation of the District of West Vancouver deems it expedient to provide options for compliance with the Energy Step Code and to define bicycle storage.

NOW THEREFORE, the Council of The Corporation of the District of West Vancouver enacts as follows:

### **Part 1 Citation**

- 1.1 This bylaw may be cited as Building Bylaw No. 4400, 2004, Amendment Bylaw No. 5056, 2020.

### **Part 2 Severability**

- 2.1 If a portion of this bylaw is held invalid by a Court of competent jurisdiction, then the invalid portion must be severed and the remainder of this bylaw is deemed to have been adopted without the severed section, subsection, paragraph, subparagraph, clause or phrase.

### Part 3 Energy Step Code Amendment

Building Bylaw No. 4400, 2004, is amended as follows:

- 3.1 Replace 'A Bylaw to provide for health, safety and protection of persons and property, and the conservation of energy.' with:

A Bylaw to provide for health, safety and protection of persons and property, and the reduction of greenhouse gases.

- 3.2 Following Part 4 Definitions, "Letters of Assurance" insert the new definition:

**"Low Carbon Energy System"** means a mechanical system providing all thermal conditioning and all domestic hot water heating for a building primarily from low-carbon energy sources with the following characteristics:

- (a) system seasonal average co-efficient of performance greater than two;
- (b) modelled Greenhouse Gas Intensity of no more than 3 kg CO<sub>2</sub>e/m<sup>2</sup>/yr; and
- (c) any natural gas fired peak demand heating equipment is appropriately sized to augment the primary low carbon system under peak demand conditions;

- 3.3 In Part 9 Building Permits, replace Clause 9.1.16 in its entirety with:

9.1.16 Sufficient documentation to demonstrate compliance with the Energy Step Code, defined by the *Building Code* and specified by S. 9.7 and S. 9.8 of this Bylaw, and the *Low Carbon Energy System* defined by this bylaw, if applicable, to the satisfaction of the *Building Inspector*,

3.4 In Part 9 Building Permits, replace Clause 9.7 in its entirety with:

9.7 A new *Building* used for Residential Occupancies shall be designed to meet the specified requirements of the Energy Step Code defined by the *Building Code*:

		Building with Low-Carbon Energy System		
9.7.1	Part 9 <i>Building</i>	Step 5	or	Step 3
9.7.2	Notwithstanding S. 9.7.1 of this Bylaw, for a detached secondary suite as defined by the <i>Zoning Bylaw</i>	Step 5	or	Step 2
9.7.3	Part 3 <i>Building</i>	Step 4	or	Step 2

3.5 In Part 9 Building Permits, replace Clause 9.8 in its entirety with:

9.8 A new Part 3 *Building* used for Business and Personal Services or Mercantile Occupancies shall be designed to meet the requirements of Step 2 of the Energy Step Code defined by the *Building Code*.

## Part 4 Bicycle Storage Amendment

Building Bylaw No. 4400, 2004, is amended as follows:

4.1 Following Part 4 Definitions, "BCLS" insert the new definitions:

"**Bicycle Locker**" means a fully enclosed space that is limited to one bicycle;

"**Bicycle Rack**" means a stationary fixture to which a bicycle can be securely attached;

"**Bicycle Room**" means an enclosed portion of a floor used for bicycle parking;

4.2 In Part 16 Awnings and Canopies, replace "Awnings and Canopies" with "Specific Regulations".

4.3 Following Part 16 Specific Regulations, Clause 16.1.4. insert new clause:

16.1.5 Be permitted only with a *Letter of Assurance* from a registered Professional Engineer.

4.4 In Part 16 Specific Regulations, delete Clause 16.5.

4.5 Following Part 16 Specific Regulations, Clause 16.4, insert new clauses:

16.5 A *Bicycle Room* shall be:

- 16.5.1 constructed with floor-to-ceiling walls that are solid opaque, expanded metal mesh or industrial-grade chain-link (No. 7 gauge or higher);
- 16.5.2 accessed by means of a secure door with tamper-proof hinges and a separate lock and key or programmed entry system; and
- 16.5.3 designed to allow permanent visual access, with a secure window in rooms with solid opaque walls;

16.6 A *Bicycle Locker* shall be:

- 16.6.1 located to allow clear access to the door opening;
- 16.6.2 constructed of sturdy, theft-resistant material appropriate for use in public areas including a lockable door; and
- 16.6.3 waterproof if located in areas that are not sheltered from the elements;

16.7 A *Bicycle Rack* shall be:

- 16.7.1 constructed of sturdy, theft-resistant material appropriate for use in public areas; and
- 16.7.2 securely anchored to the floor or ground;



- 16.8 *Bicycle Rooms*, and *Bicycle Locker* and *Bicycle Rack* areas shall be lighted with a minimum uniform 160 lux lighting that yields true colours.

## **Part 5 Effective Dates**

- 5.1 Part 3 Energy Step Code Amendment of Building Bylaw No. 4400, 2004, Amendment Bylaw No. 5056, 2020 will be effective on November 1, 2020.
- 5.2 Part 4 Bicycle Storage Amendment of Building Bylaw No. 4400, 2004, Amendment Bylaw No. 5056, 2020 will be effective on the date of this bylaw adoption.

## **Part 6 Offence and Penalty**

- 6.1 Every person who violates a provision of this bylaw, or who consents, allows or permits an act or thing to be done in violation of a provision of this bylaw, or who neglects to or refrains from doing anything required to be done by a provision of this bylaw, is guilty of an offence and is liable to the penalties imposed under this bylaw, and is guilty of a separate offence each day that a violation continues to exist.
- 6.2 Every person who commits an offence is liable on summary conviction to a fine or to imprisonment, or to both a fine and imprisonment, not exceeding the maximum allowed by the *Offence Act*.

READ A FIRST TIME on [Date]

READ A SECOND TIME on [Date]

READ A THIRD TIME on [Date]

ADOPTED by the Council on [Date].

---

Mayor

---

Corporate Officer

Title: Sustainable Buildings Policy  
Division: Planning & Development Services  
Policy Number: 0014  
File Number: 0282-20-0014

---

## **1. Purpose**

- 1.1. To advance sustainability, improve the delivery of community priorities and needs, and increase the efficiency of the permitting process.

## **2. Scope**

- 2.1. This policy applies to development applications proposing bylaw amendment. It is subservient to Official Community Plan and Local Area Plan requirements. Should policy provisions not be viable due to specific constraints of the program or site, commensurate infrastructure should be provided.

## **3. Policy Statement**

### **3.1. Passive House Expedited Processing**

Passive House developments involve an independent certifier that addresses some staff permitting and inspection demands. This allows processing times to be reduced accordingly. In order to be eligible for expedited processing, applicants must provide a design stage assurance letter from a Passive House Institute Accredited Building Certifier confirming that the detailed design meets Passive House requirements. Where this assurance letter is provided, such Passive House applications will be advanced to be considered first in line ahead of other existing applications that are waiting to begin the permit review process.

### **3.2. BC Energy Step Code**

New buildings should comply with the Low-Carbon Energy System pathway and should meet the step higher of the BC Energy Step Code than is otherwise required by Building Bylaw No. 4400, 2004.

### **3.3. Active Transportation Facilities**

New commercial buildings should provide end-of-trip facilities for employee use.

#### 4. Approval

<b>Approved by</b>	<input type="checkbox"/> CAO	<input type="checkbox"/> Mayor and Council
<b>Approval date</b>	Click here to enter a date.	
<b>Council minutes eDocs # (Council Policies only)</b>		
<b>Council report eDocs # (Council Policies only)</b>		
<b>Signature</b>	<div style="border-bottom: 1px solid black; display: inline-block; width: 300px;"> <span style="font-size: 2em; vertical-align: middle;">X</span> </div>	

#### 5. Additional Information

<b>Category</b>	<input type="checkbox"/> Council	<input type="checkbox"/> Administrative
<b>Related procedure</b>	<input type="checkbox"/> Yes (e.g. 0282-20-0001)	<input type="checkbox"/> No
<b>Date of last review</b>	Click here to enter a date.	

Month Day, Year

File: 0332.03/2020

Grant Moonie  
Senior Energy Efficiency Coordinator  
Residential Electricity and Alternative Energy Division  
BC Ministry of Energy, Mines and Petroleum Resources  
PO Box 9314 Stn Prov Govt  
Victoria, BC V8W 9N3

Dear Mr. Moonie:

**RE: District of West Vancouver participation in CleanBC Better Homes Program**

The District of West Vancouver has reviewed the suitability of being a *CleanBC Better Homes Program* municipal partner in order to accelerate retrofits that reduce greenhouse gas emissions. This program offers an opportunity to leverage District funds and to encourage market transformation in West Vancouver. The District agrees that \$2,000 per participant be available as a "Convert to Electric Heat Pump Space Heating Top-up" starting on April 1, 2020. The District has set its total funding to the amount of \$30,000 to be paid upon invoice from CleanBC after residents meet the program rebate requirements. Please contact Courtney Miller, Senior Planner (cmiller@westvancouver.ca, 604.913.2774), to coordinate further.

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Jarrett Hutchinson  
Director, Building Policy  
Building & Safety Standards Branch  
Office of Housing & Construction Standards  
Ministry of Municipal Affairs & Housing  
PO Box 9844 Stn Prov Govt  
Victoria, BC V8W 9T2

Dear Mr. Hutchinson:

**RE: District of West Vancouver eligibility for consideration in *Tall Wood Mass Timber Early Adoption Initiative* jurisdiction-specific regulation**

The District of West Vancouver has reviewed the suitability of innovative and safe mass timber technology for this community. The *Tall Wood Mass Timber Early Adoption Initiative* offers significant environmental benefit, reduces construction time and impact, and supports the provincial economy. The District meets the requirements for consideration, demonstrated by the signatures below attesting to organizational alignment supporting participation in this initiative, the eligibility checklist following and the attached Council resolution. The related report clarifies that this consideration is in regards to regulation pursuant to section 3 of the Building Act, SBC 2015, c. 2, which will authorize and regulate the construction of encapsulated mass timber buildings 7 to 12 stories in height (the "Tall Wood Early Adoption Initiative").

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Jim Bailey  
Director, Planning & Development Services

---

Kevin Spooner  
Manager, Permits & Inspections and Chief Building Officer

---

Dave Clark  
Fire Chief, Fire & Rescue Services

Month Day, Year  
Page: 2

## Request for Participation in a Jurisdiction Specific Regulation under the *Building Act*

### Eligibility for Participation:

1. Political Support: A council or board resolution supporting participation in the initiative is required.
2. Organizational Alignment: This can be documented in the form of a letter from the Chief Administrative Officer stating that the Fire, Building and Planning Departments are comfortable with participating in the initiative OR a copy of the staff report regarding the initiative that went to Council/Board that included sign-off by the Fire, Building and Planning Departments can be supplied.
3. Land Use Bylaws: A building official with a Level 3 certification from the Building Officials Association of B.C. who is either a staff member or contracted for the purposes of this initiative.
4. Organizational Capacity: The community's zoning bylaw or official community plan must support buildings greater than six storeys in height.
5. Local Government Feedback: It is expected that local government staff will participate in provincial working groups or provide feedback and other information on their encapsulated mass timber construction projects to the Building and Safety Standards Branch.

This checklist serves as confirmation that the requirements listed above have been met.

- Copy of a Council Resolution in support of participation
- Fire, Building & Planning Departments concur with participation in the initiative
- Land use bylaws support buildings greater than six storeys in height
- BOABC Level 3 Certified Building Official

Contact person email: kspooner@westvancouver.ca  
Contact person phone number: 604-925-7247

Name of Chief Administrative Officer: Nina Leemhuis

CAO/designate Signature: \_\_\_\_\_

Date:

cc: Lori Roter, Senior Policy Analyst, Building & Safety Standards Branch