

#### AGENDA ENVIRONMENT COMMITTEE

## Wednesday, May 12, 2021, 5:00 P.M. - 7:00 P.M. Virtual Meeting

			Pages
1.	CALL THE MEETING TO ORDER:		
	[Note:	This meeting will be live streamed and video recorded for the public.]	
2.	INTRODUCTION OF LATE ITEMS:		
3.	ADOPTION OF AGENDA:		
4.	ADOPTION OF MINUTES:		
	a.	Minutes	3 - 8
		Minutes of the Environment Committee Meeting held in the Boardroom, Service and Resource Centre, 411 Dunsmuir Street, Nanaimo, BC, on Wednesday, 2021-JAN-27, at 5:01 p.m.	
5.	PRESENTATIONS:		
	a.	Checkout Bag Regulation Bylaw Update	9 - 10
		Presentation:	
		1. Kirsten Gellein, Zero Waste Coordinator.	
	b.	REIMAGINE Nanaimo - Update on Indicators	11 - 20
		Presentation:	
		1. Rob Lawrance, Environmental Planner.	
	с.	Water Supply Strategic Plan	21 - 30
		To be introduced by Bill Sims, General Manager, Engineering and Public Works.	
		Presentation:	

1. Mike Squire, Manager, Water Resources.

	d.	Nanaimo Waterfront Walkway - Departure Bay Update	31 - 47	
		Presentation:		
		1. Bill Corsan, Director, Community Development.		
6.	DELEGATIONS:			
7.	REPORTS:			
	a.	BC Energy Step Code Acceleration Review	48 - 54	
		To be introduced by Rob Lawrance, Environmental Planner.		
		Purpose: To provide the Environment Committee with information and update on the BC Energy Step Code implementation and outline options to reduce GHG emissions from new buildings.		
	b.	Deep Energy Retrofit Feasibility Study for the Nanaimo Region	55 - 57	
		To be introduced by Rob Lawrance, Environmental Planner.		
		Purpose: To provide the Environment Committee with information on the Green Municipal Fund Community Efficiency Financing program and the City's application to fund a feasibility study to review and enhance building retrofit		

#### 8. OTHER BUSINESS:

work in the Nanaimo Region.

#### 9. ADJOURNMENT:

#### MINUTES

#### ENVIRONMENT COMMITTEE MEETING BOARD ROOM, SERVICE AND RESOURCE CENTRE 411 DUNSMUIR STREET, NANAIMO, BC WEDNESDAY, 2021-JAN-27, AT 5:01 P.M.

Present:	Councillor T. Brown (Chair, joined electronically) Councillor B. Geselbracht E. Boulanger, At Large Member (joined electronically) D. Chen, At Large Member (joined electronically) H. DesRoches, At Large Member (joined electronically 5:07 p.m.) L. Frey, At Large Member (joined electronically) J. Lesemann, At Large Member (joined electronically) L. McCunn, At Large Member (joined electronically) W. Wells, At Large Member (joined electronically)
Staff:	<ul> <li>J. Rudolph, Chief Administrative Officer</li> <li>D. Lindsay, General Manager, Development Services</li> <li>B. Sims, General Manager, Engineering and Public Works (joined electronically)</li> <li>J. Holm, Director, Development Approvals</li> <li>L. Bhopalsingh, Manager, Community Planning (joined electronically)</li> <li>K. Kronstal, Social Planner</li> <li>K. Gellein, Zero Waste Coordinator (joined electronically)</li> <li>R. Lawrence, Environmental Planner</li> <li>S. Snelgrove, Deputy Corporate Officer</li> <li>J. Vanderhoef, Recording Secretary</li> </ul>

#### 1. CALL THE ENVIRONMENT COMMITTEE MEETING TO ORDER:

The Environment Committee Meeting was called to order at 5:01 p.m.

#### 2. INTRODUCTION OF LATE ITEMS:

(a) Sky Snelgrove, Deputy Corporate Officer, noted that two committee members had forwarded documents to be distributed to the committee.

It was moved and seconded that the following documents be circulated to Environment Committee Members following the 2021-JAN-27 Environment Committee Meeting:

- "Vancouver Island and Coastal Communities Climate Action Goals Working Draft"
- "Implementing Food Security Indicators"

The motion carried unanimously.

Councillor Geselbracht noted that the document titled "Vancouver Island and Coastal Communities Climate Action Goals – Working Draft" was a visioning document prepared in coordination with multiple communities across Vancouver Island and the version provided is still a draft.

MINUTES – ENVIRONMENT COMMITTEE 2021-JAN-27 PAGE 2

#### 3. ADOPTION OF AGENDA:

It was moved and seconded that the Agenda, as amended, be adopted. The motion carried unanimously.

#### 4. ADOPTION OF MINUTES:

It was moved and seconded that the Minutes of the Environment Committee Meeting held in the Boardroom, Service and Resource Centre, 411 Dunsmuir Street, Nanaimo, BC, on Wednesday, 2020-NOV-04 at 5:00 p.m. The motion carried unanimously.

H. DesRoches joined the meeting electronically at 5:07 p.m.

#### 5. <u>REPORTS:</u>

#### (a) <u>2021 Environment Committee Work plan</u>

Introduced by Rob Lawrance, Environmental Planner.

- Reviewed proposed topics for the 2021 Environment Committee Work plan:
  - REIMAGINE NANAIMO: Doughnut Economic Environmental Indicators, Phase 2 Environmental Policy Options, Climate Action Plan Review and Update
  - Solid Waste Education
  - Step Code Acceleration Options Review
  - Home Energy Retrofit Program
  - o Comprehensive Soils Bylaw

Committee discussion took place. Highlights included:

- Promoting the regeneration (or expansion) of top soil in the region
- Comprehensive Soils Bylaw addressing erosion issues and potentially addressing erosion during the development permit process
- Committee's main focus being on the REIMAGINE NANAIMO process and developing the Doughnut economic framework and the Climate Action Plan to set bases
- Receiving the presentation regarding environmental indicators prior to making a motion and the potential to amend the work plan in the future
- Amendments to the work plan can be recommended to Council in the future if needed

It was moved and seconded that the Environment Committee recommend that Council endorse the 2021 Environment Committee Work Plan as outlined in the report titled "2021 Environment Committee Work Plan", dated 2021-JAN-27. The motion carried unanimously.

#### (b) City Portrait Environmental Indicators

Rob Lawrance, Environmental Planner, introduced and suggested the presentation and review of the Staff report be done in conjunction to better facilitate discussion.

#### Presentation:

- 1. Karin Kronstal, Social Planner, provided a PowerPoint presentation. Highlights included:
  - Noted Council's direction provided during the 2020-DEC-14 Special Council Meeting regarding adoption of the Doughnut Economic Model
  - The goal of the Doughnut Economy is that everybody has enough and the environment is not overtaxed
  - Provided examples of sustainable development goals and other Doughnut diagrams showing the life supporting systems of the planet (including limits of the planet)
  - "City Portrait" reviews the local-social and ecological indicators and contrasts those to the global impacts resulting from economic choices of the community how can the people thrive locally while ensuring global health
  - Provided example of Amsterdam's indicators/topics
  - Listed current City plans that relate to developing the City Portrait:
    - Regional Growth Strategy Annual Update
    - Affordable Housing Strategy
    - Health and Housing Action Plan
    - Economic Development Strategy
    - GIS Mapping of Land Use/Parks
    - Forest Canopy Cover
    - Water Quality Indicators
    - Community Greenhouse Gas Emission Levels

Rob Lawrance, Environmental Planner, spoke regarding the local indicators listed in the Staff report and noted items have been categorized under the headings of Air, Water or Land. He noted that some of the indicators listed have a local or regional lens and some are provincial. He suggested considering items that the City can control and manage directly (under the *Local Government Act* and the *Community Charter*) and items that might have an impact locally (for example the City's Purchasing Policy).

Karin Kronstal, Social Planner, continued her presentation. Highlights included:

- Goals and indicators identified by the Regional District of Nanaimo and the Capital Regional District
- Noted the Nanaimo Health and Housing Action Plan may include potential indicators
- Cautioned against selecting too many indicators
- Provided a diagram (The Local-Social Decision Tree) outlining the methodology for creating a City Portrait
- Next Steps:

- Analysis of Phase 1 engagement for community priorities summary of engagement is scheduled to go forward to the Governance and Priorities Committee 2021-FEB-08
- Review of relevant existing plans and documents for key indicators
- Consultation with key Staff on potential innovative approaches
- Using the tools developed by Doughnut Economics Action Lab (DEAL) to develop a unique Nanaimo portrait

Rob Lawrance, Environmental Planner, spoke regarding the Staff report. Highlights included:

- Indicators suggested in the report being a starting point
- Some indicators could focus on performance of the City (levels of service, permits) while others could focus on a threshold like water quality
- Anticipate adjustments to indicators during the REIMAGINE NANAIMO process

Committee discussion took place. Highlights included:

- Concern regarding potential bias in responses collected during REIMAGINE NANAIMO process
- Committee and community members identifying indicators and including multiple areas of expertise to better coordinate initiatives
- Staff are working interdepartmentally to identify potential lenses/indicators and there will be many other opportunities for discussion

Lisa Bhopalsingh, Manager, Community Planning, spoke regarding cohesiveness and potentially including other committees like the Economic Development Task Force and Health and Housing Task Force in the discussion.

Committee discussion continued. Highlights included:

- Ensuring the correct indicators are selected from the start with the intent of being integrated
- Importance of understanding the data provided by indicators and how to apply that information
- Considering the impacts of COVID-19 on density, office space, transportation needs, and the real estate market
- Accepting that the real costs of accomplishing/implementing large goals/changes will be uncomfortable and cannot be limited by financial budgets or capacity
- Setting the largest goals first and setting milestone goals as a way to progress to that goal
- Using environmental limits to establish sections of Nanaimo's City Portrait and identifying indicators that are unique to Nanaimo
- Global impacts versus local impacts

 Staff and committees identifying goals and indicators and providing those to the community for feedback

Lisa Bhopalsingh, Manager, Community Planning, spoke regarding phase 2 (REIMAGINE NANAIMO) being focused on developing and evaluating scenarios which were identified based on feedback gathered during phase 1. Engagement in phase 2 would be related to the scenarios and not the indicators themselves. She cautioned against setting indicators/scenarios too firmly as there may be a need to reassess items later in the process. She spoke regarding the potential to host larger online sessions and include multiple committees/task forces.

Committee discussion continued. Highlights included:

- Process for selecting indicators/identifying goals and examples/methods used by other municipalities
- Need to identify where data is collected
- Ensuring data is available for tracking
- Tracking indicators and providing annual reports to Council regarding progress and potential adjustments
- Previous City report cards used to review and adjust City policies
- Currently reports are collected at random and the doughnut economics model might be an opportunity to make this more cohesive
- Ensuring there is a way to report out so the community understands and can respond
- Providing a real time dashboard for measuring indicators
- Painting an honest story and not only good news stories
- Making targets relatable/personal to individuals
- Installation in Vienna train station used to relate to people through art regarding expansion of deserts
- Committee members researching potential framework, indicators and goals for next meeting
- Thinking about global target indicators, local indicators and Vancouver Island region targets
- Unlikely to see global indicators move substantially, more impact on local indicators
- Staff potentially scheduling an online half-day charrette with the committee to gain feedback on indicators
- Ensuring information and measurements are useful, important, and meaningful
- Aiming for approximately 12 meaningful indicators
- Inviting other committees/task forces to join the charrette or inviting representatives of other committees/task forces to join
- Using "breakout groups" feature through Zoom to divide discussion
- Committees/Task Forces discussing and selecting their indicators prior to the charrette

It was moved and seconded that the Environment Committee recommend that Council direct Staff to schedule a charrette to help refine indicators for use in developing the City Portrait for Nanaimo as part of the REIMAGINE NANAIMO process. The motion carried unanimously.

Committee discussion continued. Highlights included:

- Committee members researching indicators within their jurisdiction/organization to provide examples for a future discussion and to provide ideas and brainstorm with Staff
- Timeline for submitting potential indicators

#### 6. ADJOURNMENT:

It was moved and seconded at 6:47 p.m. that the meeting adjourn. The motion carried unanimously.

CHAIR

CERTIFIED CORRECT:

CORPORATE OFFICER

# **OVERVIEW**

### B.Y.O.Bags NANAIMO

Encourage the reuse of clean checkout bags

Set fees for selling **PAPER BAGS**That set line t 40%

That contain at least 40% postconsumer recycled content

#### Set fees for selling **REUSABLE BAGS** Designed to be washable

nd capable of 100+ uses

## BAN PLASTIC CHECKOUT BAGS

Including compostable and biodegradable checkout bags

## EXEMPTIONS

Including but not limited to bags:

- Used to package bulk goods, produce, meat, small hardware items, etc.
- Protecting newspapers, oversize linens and bedding, or clothes after dry cleaning
- Sold in packages of multiple bags to be used at home (e.g. green cart liners)

## FEE SCHEDULE

July 1, 2021: \$0.15 paper / \$1.00 reusable January 1, 2022: \$0.25 paper / \$2.00 reusable The City of Nanaimo is dedicated to taking a leadership role to protect our natural environment and municipal infrastructure.

## Background

Consultation with residents and businesses about a potential ban on the use of plastic checkout bags took place in the spring of 2019. Council heard the results of the public discussion in the spring of 2020.

Municipal plastic bag bylaws require provincial approval. Nanaimo's "Checkout Bag Regulation Bylaw 2020 No. 7283" received approval by the Minister of Environment and Climate Change Strategy on February 12, 2021.

The Bylaw returned to Council for adoption on February 22, 2021.



A Guide for Businesses

# CHECKOUT BAG REGULATION

Bylaw No. 7283

## Implementation Date: July 1, 2021

# **For More Information**

Head to our website to sign up for updates and resources.

www.nanaimo.ca/goto/BYOBag

📞 250-756-5390





## BRING YOUR OWN BAGS

Nanaimo is encouraging customers to use, wash and reuse their bags as many times as possible.

## PAPER & REUSABLE CHECKOUT BAGS

The Bylaw includes standardized fees and design standards for reusable and paper checkout bags.

## **Fee Schedule**

If a customer forgets their own bags, paper and reusable bags can be provided to a customer and charged per the fees outlined in *Schedule A*:

	Paper	Reusable
July 1, 2021	\$0.15	\$1.00
January 1, 2022	\$0.25	\$2.00



## **Ordering Bags for your Business**

Section 3.2 allows businesses to sell paper bags and reusable bags that meet the Bylaw's sustainable design standards.

Not all paper and reusable bags are the same! Follow these guidelines when placing your paper and reusable bag orders:

#### Paper bags should:

- ✓ Be made out of paper.
- ✓ Contain at least 40% of post-consumer recycled paper.
- Display the words "Recyclable" and "made from 40% post-consumer recycled content" or other applicable amount on the outside of the bag.

#### **Reusable bags should:**

- ✓ Be designed and manufactured to be capable of at least 100 uses.
- ✓ Be primarily made of cloth or other washable fabric.
   *Visit our webpage for suggestions.*

## BAN PLASTIC CHECKOUT BAGS

Sections 3.1 and 3.3(a) prohibit businesses from providing plastic checkout bags.

Included in the ban are compostable and biodegradable plastic checkout bags, as some do not fully decompose and cause microplastics in the environment.

## **Using up Plastic Bag Stocks**

Section 4.4 exempts all checkout bags that were purchased by a business prior to the Bylaw's adoption date of February 22, 2021.

This means all checkout bag stocks (including plastic bags, paper bags, and reusable bags) purchased by your business before February 22, 2021 can continue to be provided to customers after the Bylaw comes into force, until stocks are depleted.

## Exemptions

Section 4 lists the City of Nanaimo's Checkout Bag Regulation exemptions. For a full list of the exempted bags, businesses are encouraged to visit the project webpage.

The City recognizes COVID-19 has impacted the supply of some paper and reusable bags. We will assess the ongoing impact and post updates on the BYOBag project page.

















































































## A Little Bit Of History

- The Waterfront Walkway project has been identified as a Council priority initiative in each of the last three Strategic Plans.
- In 2017, the City completed an overall Implementation Plan for the creation of a continuous walkway from Departure Bay to the Nanaimo River Estuary.
- The plan was completed with significant input from the community and revealed strong public support for the development of the waterfront walkway.
- The Waterfront Walkway Implementation Plan endorsed by Council in December 2017.



# The Implementation Plan

- Walkway route broken up into segments.
- Provides a framework for each segment which includes:
  - Existing features
  - Recommended alignment and cross-sections
  - Issues and considerations for decision making
  - Amenities to consider





## **Previous Design Work**

- In 2018, a Functional Design was completed for an elevated walkway near the Ferry Terminal.
- Revealed construction costs far exceeded original estimates, in part due to increased costs of structural steel and other specialized construction requirements.
- A Value Engineering Assessment was completed and it was recommended that an on-beach option be considered to reduce projects costs.



## **Current Design Work**

- On 2019-MAR-18 Council allocated \$400,000 from the 2018 general surplus to fund the Waterfront Walkway Feasibility Study and Functional Design
- Staff issued a Request for Statement of Qualifications to identify a multidisciplinary team to deliver the project
- A team led by McElhanney Consultants was selected to undertake the project
- The project has two distinct phases:
  - Phase 1: Feasibility Study (Complete)
  - Phase 2: Functional Design





## Phase 1: Feasibility Study

- Data collection and modelling to understand the challenges and design opportunities.
- The study area included both the foreshore and adjacent lands.
- 3 conceptual designs along the foreshore.
- Costs for the 3 conceptual designs are estimated to be between \$18-\$19M.
- Other Critical Design Direction included:
  - Flood Protection and Resiliency
  - Future Upgrade Allowance for Sea Level Rise
  - Structure Design for Minor Slide Events
  - Extreme Storm Event Risks
  - Works on Crown Land to avoid Impact on Private Property

## Challenge: Wind, Current and Wave Modelling

#### Issue:

 The project needs to account for storm surge, storm wave run up, and freeboard. Modelling of Departure Bay shows impacts during various weather events.

#### **Design Opportunity:**

 Construct the walkway to account for wave action. Use a gradual slope to reduce wave action. Use headlands/reefs to break wave action.



## Challenge: Sea Level Rise

#### Issue:

 Local sea level rise is predicted to be 0.60m in 50 years. Sea level rise was incorporated into the wave modelling.

#### **Design Opportunity:**

 Incorporate sea level rise into project for 50-year horizon. Design with ability to adjust the height when trail needs to be resurfaced.



## Challenge: Geotechnical Concern with Cilaire Bluff

#### Issue:

 There is slope instability in certain areas along the Cilaire Bluff that could result in slumping and vegetation falling

#### **Design Opportunity:**

 Mitigate the erosion of the toe of slope and adjust the alignment to minimize the risk of debris from slope failure in select locations



## Challenge: Environmental Values of Shoreline

#### Issue:

• Work on the foreshore will impact existing habitat. Most of foreshore is considered low-value habitat.

#### **Design Opportunity:**

- The project must be designed to meet "No-Net-Loss" Principle
- Principle is intended to conserve productivity of aquatic habitats
- The project should be designed to ensure a "Net Gain" of habitat





## Challenge: Archaeological

#### Issue:

- Departure Bay lies within the traditional territory of the Snuneymuxw First Nation
- Registered archaeological site within project area is a shell midden near Northfield Creek and has been disturbed
- Remainder of project area considered to have low archaeological potential

#### **Design Opportunity:**

- Ensure early involvement with Snuneymuxw First Nation
- A permit under the Heritage Conservation Act may be required





## Challenge: Permitting

#### Issue:

- Will require permits from DFO and a Lease License or Right-of-Way from the Province (can take upwards of 18 months)
- DFO requires bonding for environmental work
- Approvals required from BC Ferries, Transport Canada, and the Regional District of Nanaimo

#### **Design Opportunity:**

- Permitting requires detailed design work to be completed
- Both DFO and the Province will require consultation with local first nations



# Challenge: Riparian Rights

#### Issue:

- 30 private property owners along the Cilaire Bluff have riparian rights
- Construction of walkway will require each homeowner to provide consent for the project

#### **Design Opportunity:**

• An acquisition program should be started to acquire the riparian rights in advance of permitting



# Conceptual Renderings



# **Conceptual Renderings**



# **Conceptual Renderings**



# **Conceptual Renderings**





# Phase 2: Functional Design

- Prepare 1 preferred option that incorporates key design criteria and design elements from 3 concept designs presented
- Further define foreshore restoration components and estimated project costs
- Optimize to best reflect shoreline conditions approval requirements
- Provide Council with more design details and better cost information centered around a preferred design





# Draft Functional Design





# Draft Functional Design





# Draft Functional Design









# <image>

## **Next Steps**

- Present the initial Functional Design findings to Snuneymuxw First Nation
- Additional public consultation using the City's online platform with a survey to capture feedback and gauge support for continuing the project
- Coordinate a meeting with the RDN to obtain approval in principle for the Functional Design and to discuss rights-of-way details
- Coordinate a meeting with BC Ferries to review their letter of support based on the Functional Design and legal agreements that might be needed to secure access in perpetuity
- Coordinate a meeting with the Department of Fisheries and Oceans to present initial Functional Design findings, review foreshore restoration concepts, and define bonding requirements to meet their obligations
- Review internal City funding mechanisms
- Undertake detailed design of the project in stages

# Recommendation

• That the Environment Committee endorse the Departure Bay Waterfront Walkway Project as a flagship environmental restoration project.





## **Information Report**

File Number: ENV19

DATE OF MEETING MAY 12, 2021

AUTHORED BY ROB LAWRANCE, ENVIRONMENTAL PLANNER

SUBJECT BC ENERGY STEP CODE ACCELERATION REVIEW

#### **OVERVIEW**

#### Purpose of Report:

To provide the Environment Committee with information and update on the BC Energy Step Code implementation and outline options to reduce GHG emissions from new buildings.

#### BACKGROUND

As part of the Environment Committee workplan, a check-in on the status of the City's Energy Step Code implementation and an options discussion for Step Code acceleration was planned for May 2021. This report will review the status of Step Code Implementation in Nanaimo and provide insight into where other communities are in their implementation and what potential next steps are for the City of Nanaimo.

The Province has set a long-term goal of all new buildings being net-zero-energy-ready by 2032 through implementation of the BC Energy Step Code. The Step Code, which applies to new construction in buildings under Part 9 (houses and small buildings) and Part 3 (large and complex buildings) of the BC Building Code (BCBC), was created to help local governments incentivize or require a level of building energy efficiency that goes above and beyond the base requirements of the BCBC.

Across the province to date, when reviewing the Step Code website<sup>1</sup>, Seventy-five local governments in BC have notified the province they have started to consult with their community on adopting the Step Code. Forty-five local governments have developed and adopted policies, programs, or bylaws to implement the Step Code.

In July 2018 Council adopted the BC Energy Step Code Implementation Strategy. The timeline for Step Code implementation proposed by the Strategy allowed for incremental improvements in building energy efficiency that are achievable with minimal impact on the development industry, while building capacity for implementation of higher steps in the future.

At this time, the following recommended Step Code implementation actions have been completed by the City:

- Regional Step Code education and awareness program completed, (2018-2020);
- Established a Home EnerGuide rebate program to encourage more assessments, (2018);

<sup>&</sup>lt;sup>1</sup> BC Energy Step Code: Implementation Updates. <u>https://energystepcode.ca/implementation\_updates/</u>



- Amended 'Schedule D' of the "City of Nanaimo Zoning Bylaw 2011 No. 4500" (amenity requirements for additional density) to provide additional amenity points on development projects that exceed Step 3 and above of the Step Code (2019);
- Amended "Building Bylaw 2016 No. 7224" (2019) to require the Step Code lower steps, beginning with Step 1 in 2020 and gradually increasing to Step 3 in 2022;
- Adopted a "BC Energy Step Code Rezoning Policy No. COU-216" requiring accelerated Step Code for rezoning or installing a Low Carbon Energy System into the building (2021).

The City now requires builders to meet the lower steps (Steps 1 - 3) of the BC Energy Step Code as an alternative to the BCBC minimum prescriptive requirements. The City's Step Code requirements are set out in the Building Bylaw and increase over time as shown in the table below.

	PART 9 Buildings	PART 3 Buildings
Step 1: (Enhanced Compliance) Perform EnerGuide or Energy Modeling to current BCBC requirements	2020-APR-21	2020-APR-21
Step 2: 20% greater than current BCBC requirements	2021-JAN-01	2022-JAN-01
Step 3: 40% greater than current BCBC requirements	2022-JAN-01	TBD

The City has also used incentives to support increased building energy efficiency, such as through changes to the "City of Nanaimo Zoning Bylaw 2011 No. 4500" to offer density amenity points in exchange for meeting higher Step Code levels than what is currently required. See ATTACHMENT A for BC Energy Step Code Implementation for the City's current requirements and incentives.

Additionally, the City has adopted a BC Energy Step Code Rezoning Policy, which requires a commitment for rezoning applications that lead to an increase in density or a change of use to develop under one of the following options: 1) exceed the Step Code requirement for Part 9 and Part 3 buildings by one-step; or 2) meet the Step Code requirement and commit to installation of a low-carbon energy system that meets a set standard for greenhouse gas intensity.

While the City was consulting with the development community on the draft BC Energy Step Code Rezoning Policy, several points were raised regarding the need to maintain dialogue with developers and provide incentives to help soften the impact to any regulation and ease cost burdens and keep homes affordable.

#### Greenhouse Gas Reduction using the Step Code

On 2020-OCT-07, Staff presented a Climate Action Plan update to the Environment Committee as part of the REIMAGINE Nanaimo process. During the presentation, the consultant from C2MP provided a review of the City's Greenhouse Gas (GHG) emission profile. Using fuel and energy use data released by the Province, an analysis conducted shows Nanaimo's GHG emissions have increased by 18% between 2010 and 2017, (the latest year where data is available). When comparing population growth during this period at 14%, it shows emissions are growing faster than population growth.



Growth is particularly dramatic in the building sector, which saw large growth in natural gas use (55% increase), and much smaller increases in electricity (5%). While some of the growth is likely from economic growth and expansion of energy-intensive workplaces, a large proportion is likely due to residents and businesses continuing a long-term shift from electricity to natural gas due to the arrival of natural gas on the Island in the 1990s. As natural gas produces 16 times more emissions than BC Hydro electricity for an equivalent unit of energy, this shift has profound implications for Nanaimo's ability to reach its climate targets.

While the Step Code establishes a framework for reducing energy use in new buildings, it does not explicitly address GHG emissions from buildings. A key study<sup>2</sup> has shown the Step Code does not necessarily achieve low carbon emissions. The choice of energy used to heat and cool the building ultimately dictates the level of GHG emissions. Because of the long life of buildings, priority should be given to phasing in requirements for new construction to be (near) zero carbon emissions.

#### **DISCUSSION**

Currently, there are a number of directions Staff are monitoring that will have significant bearing on how the City develops further regulation on new and existing buildings in the City.

Both the Federal and Provincial government have recently made announcements on increasing energy efficiency incentives, rebates and developing new programs targeting both new and existing buildings.

The Federal government has made commitments in its latest budget to fund an interest free loan program for significant home-energy retrofit projects under the Canadian Mortgage and Housing Corporation and has made recent announcements on increasing its national GHG emissions reduction commitments. The Province of BC, through its recent 2021 Budget announcement, has announced additional funding through CleanBC that will be directed toward building new and existing buildings targeting action to lower GHGs and utilize clean energy.

Several communities across BC have been active in advocating for regulatory changes in local government powers to allow for greater monitoring and reporting of GHGs from the community. Help Cities Lead, is an advocacy group of City leaders and climate experts that have been coordinating an education and awareness campaign to build awareness on collaboration between the Province and local government on building climate policy. Their campaign is advocating the Province to give local government the ability to do the following:

- Mandate home energy labeling. (Policy to require EnerGuide assessments and labeling of new homes);
- Mandate building benchmarking and reporting. (Policy to require owners of commercial, institutional, and multi-unit residential to annually measure, report, and disclose their energy usage and GHG emissions);
- Allow Property Assessed Clean Energy (PACE) financing. (Authority to allow property owners to finance building energy efficiency upgrades through a voluntary property tax

<sup>&</sup>lt;sup>2</sup> Integral Group. (2019) *Implications of the BC Energy Step Code on GHG Emissions*. Building and Safety Standards Branch, Ministry of Municipal Affairs and Housing. http://energystepcode.ca/app/uploads/sites/257/2019/11/BC-Step-Code-GHGI-Report Nov-2019.pdf



assessment. The assessment would be tied to the title of the property and paid back through property tax collection);

- Set GHG requirements for new construction. (Policy to set limits on the quantity of GHG emissions that a new building would be allowed to release), and;
- Set GHG requirements for existing buildings. (Policy to allow local governments to limit GHG emissions from existing buildings).

While there has been discussions about the Province moving forward on some of these measures, nothing has been officially announced. Until the Province makes an announcement, the City can only monitor and continue to voice its support for these measures.

#### **Next Steps**

The City's accomplishments with the current mix of Step Code incentives and policy, can be enhanced with additional work on building energy efficiency and augmented with a focus on zero carbon building technology to accelerate efforts to lower GHG emissions from buildings. To support that work, Council approved a new Manager of Sustainability position, which may be partially funded through the BC Hydro Community Energy Management Program (CEMP). The CEMP offers funding to hire community energy managers who can help oversee and drive opportunities around community wide energy efficiency.

Some options that staff are currently reviewing to reduce GHG emissions from buildings are:

- 1. Including a low carbon building density amenity incentive through Schedule D of the "City of Nanaimo Zoning Bylaw 2011 No. 4500"
- 2. Including a Low Carbon Energy Intensity option as part of an increased Energy Step Code requirement in the City Building Bylaw ("Building Bylaw 2016 No. 7224").

These options require further exploration and consultation and will be brought forward at a future Committee meeting for consideration and recommendation.

#### CONCLUSION

While implementing Step Code will help to improve building energy efficiency and accelerating Step Code could further enhance building energy efficiency, Step Code implementation on its own does not necessarily achieve lower carbon emissions. The choice of energy used to heat and cool buildings has profound implications for Nanaimo's ability to reach its climate targets. It will be important to consider options to reduce GHG emissions from buildings in parallel with consideration of accelerating Step Code implementation.

Going forward, Staff will need to work closely with the development and energy advisor community to build strong connections, and opportunities for dialogue, training, and collaboration around applying the BC Energy Step Code and working toward zero carbon buildings in Nanaimo.



#### SUMMARY POINTS

- Across the province to date, when reviewing the Step Code website<sup>3</sup>, seventy-five local governments in BC have notified the province they have started to consult with their community on adopting the Step Code. Forty-five local governments have gone onto develop and adopt policies, programs or bylaws to implement the Step Code.
- While the Step Code establishes a framework for reducing energy use in new buildings, it does not explicitly address GHG emissions from buildings.
- The City's accomplishments with the current mix of Step Code incentives and policy, can be enhanced with additional work on building energy efficiency and augmented with a focus on zero carbon building technology to accelerate efforts to lower GHG emissions from buildings.
- It will be important to consider options to reduce GHG emissions from buildings in parallel with consideration of accelerating Step Code implementation.

#### ATTACHMENTS:

ATTACHMENT A: BC Energy Step Code Implementation

#### Submitted by:

#### Concurrence by:

Rob Lawrance Environmental Planner Jeremy Holm Director, Development Approvals

Dale Lindsay General Manager, Development Services

<sup>&</sup>lt;sup>3</sup> BC Energy Step Code: Implementation Updates. <u>https://energystepcode.ca/implementation\_updates/</u>

## ATTACHMENT A BC ENERGY STEP CODE IMPLEMENTATION

Zoning Bylaw No.4500: Density Amenity Bonusing – Step Three and above (\*short-term for Step 2)

Part 9 – January 1, 2022 Part 3 – TBD

Part 3 – January 1, 2022 Part 9 – January 1, 2021

Part 3 and 9: 6 months after City of Nanaimo Building Bylaw Adoption



Timeline for Energy Efficiency Regulatory Requirements in the BC Building Code Here's what the province's CleanBC plan will mean for new-construction requirements.

2032	STEP 5	STEP 4	NET-ZERO ENERGY-READY UP TO: 80%
2027*	STEP 4	STEP 3	40%
2022*	STEP 3	STEP 2	
*NEW TARGET DEADLINES	DI PART 9 BUILDINGS	PART 3 BUILDINGS	Energy-efficiency improvement above 2018 BC Building Code requirements



File Number: ENV19

DATE OF MEETING MAY 12, 2021

AUTHORED BY ROB LAWRANCE, ENVIRONMENTAL PLANNER

SUBJECT DEEP ENERGY RETROFIT FEASIBILITY STUDY FOR THE NANAIMO REGION

#### **OVERVIEW**

#### Purpose of Report:

To provide the Environment Committee with information on the Green Municipal Fund Community Efficiency Financing program and the City's application to fund a feasibility study to review and enhance building retrofit work in the Nanaimo Region.

#### BACKGROUND

The Federation of Canadian Municipalities (FCM), Green Municipal Fund's (GMF), Community Efficiency Financing (CEF), initiative supports municipalities to plan, implement and expand community home energy upgrades. Specifically, the fund supports innovative financing models, such as, property assessed clean energy (PACE), local improvement charge financing, utility on-bill financing and third party lending. The program is available to Canadian municipal governments and organizations applying in partnership with a municipal government.

PACE financing allows a property owner to finance upfront costs of building energy efficiency upgrades, such as, more efficient heating systems or windows by paying the costs over time through a voluntary property tax assessment. The assessment would be attached to the property rather than the individual. When the property sells, the financing would continue with the new owner. Currently, PACE financing is available in Alberta, Ontario, and Nova Scotia. Local Governments in British Columbia can currently only work within a very narrow scope that involves creating local improvement charges and seeking provincial approval. There is a strong lobby effort from several local governments to allow for greater flexibility from the Province to utilize PACE. The City of Nanaimo recently wrote the Province expressing support for B.C. legislation enabling PACE by third party administration and confirming the City's interest in having a PACE program when it becomes available

The feasibility study stream of the CEF program provides grant funding for municipalities to explore and assess options on developing a financing program for home energy upgrades. Municipalities are encouraged to collaborate with other local government and community partners. Municipalities may submit one application for 80% funding of eligible project costs up to \$175,000. Applications are accepted year round, although this offer will close when all funding has been allocated.

#### **DISCUSSION**

The City, in collaboration with the Regional District of Nanaimo (RDN), is considering an application for funding under the FCM Community Efficiency Financing (CEF) program to



complete a Deep Energy Retrofit Feasibility Study. The study will explore and assess options for establishing a financing program for home energy upgrades that compliments existing provincial programs and addresses any barriers to local uptake by residents in the City and RDN.

Council's 2019 – 2022 Strategic Plan has set a priority for the City to take a leadership role and focus on our environmental impact and climate change contributions in our decision-making and regional participation. The City has also declared a Climate Emergency in 2019 and has set aggressive greenhouse gas reduction targets for the City to achieve by 2030 (50 to 58% below citywide 2010 GHG levels), and by 2050 (94 to 107% below 2010 citywide GHG levels). In order to achieve these aggressive targets, the City needs to take greater action to address the energy efficiency and GHG emissions of existing buildings.

The feasibility study will work with key municipal and community stakeholders within the Region and establish a baseline of building types, energy use profiles and opportunities for energy upgrades to support GHG emissions reductions. In addition, the study will assess the potential uptake for energy-efficiency and renewable energy upgrades in terms of the number of anticipated projects, the level of investment required, and comparing with the local benefits that could be achieved through energy cost savings for residents, energy and GHG reductions, and/or water savings.

The feasibility study would also seek stakeholder feedback from residents, builders, contractors, and energy advisors in the community, to determine how a financing program could address any barriers to streamline and improve the uptake for residents to take advantage of the incentives available. An evaluation of available financing models will be included in the study, within the context of municipal law, including, the feasibility of establishing a program utilizing PACE-enabled legislation, or another financing instrument.

Staff will be taking a report to the 2021-MAY-15 Finance and Audit Committee for decision on whether to proceed with the application and dedicate City funds toward the study. The RDN is anticipating a parallel report to its Committee of the Whole on 2021-MAY-11 regarding a potential joint application with the City under the CEF program.

Consideration of a regional home energy building retrofit program aligns with the Environment Committee's workplan. It is anticipated that the Committee would play a role in the Deep Energy Retrofit Feasibility Study should the joint application with the RDN under the CEF program prove successful.

#### CONCLUSION

The feasibility study would provide the City and Regional District of Nanaimo with the information necessary to recommend whether or not to proceed with designing a home-energy retrofit financing program for the region. The feasibility study would also provide direction on how a program could best compliment existing rebate programs and support local energy advisors and contractors to accelerate the uptake of home-energy retrofits for the region.

Proceeding with the feasibility study is contingent on a successful grant application. If the grant application is successful, the City would be eligible for up to \$175,000 of funding towards the project.



#### SUMMARY POINTS

- The Federation of Canadian Municipalities (FCM), Green Municipal Fund's (GMF), Community Efficiency Financing (CEF), initiative supports municipalities to plan, implement and expand community home energy upgrades.
- The feasibility study stream of the CEF program provides grant funding for municipalities to explore and assess options on developing a financing program for home energy upgrades.
- The City, in collaboration with the Regional District of Nanaimo (RDN), is considering an application for funding under the FCM CEF program to complete a Deep Energy Retrofit Feasibility Study.
- The study will explore and assess options for establishing a financing program for home energy upgrades that compliments existing provincial programs and addresses any barriers in local uptake by residents in the City and RDN.

#### Submitted by:

Rob Lawrance Environmental Planner

#### Concurrence by:

Jeremy Holm Director, Development Approvals

Dale Lindsay General Manager, Development Services