
TO: Committee of the Whole **MEETING:** October 2, 2018
FROM: Sharon Horsburgh
Sustainability Coordinator **FILE:** 643-05-GBIP

SUBJECT: Regional District of Nanaimo 2017-2018 Green Building Series Summary and 2018-2019 Green Building Series Workshops and Activities.

RECOMMENDATION

To receive the Regional District of Nanaimo's (RDN) 2017-2018 Green Building Series summary and 2018-2019 Green Building Series workshops and activities for information.

SUMMARY

This report provides an overview of the Regional District of Nanaimo's (RDN) 2017-2018 Green Building Series and scheduled 2018-2019 Green Building Series workshops and activities. It also outlines how the RDN has used funding from the BC Hydro Sustainable Communities Program to provide education and raise awareness of recent changes to the BC Building Code arising from the introduction of the BC Energy Step Code (the Step Code).

The 2017-2018 Green Building Series highlighted the Step Code that came into effect December 2017. The Step Code established a set of progressive building performance steps from the current energy efficiency requirements in the BC Building Code for new construction that is designed to move the construction industry towards the target of net-zero energy ready building by 2032. The Information about the Step Code was delivered through a series of workshops and building tours targeting the following stakeholders: local government staff, elected officials, building professionals, the construction industry, and the real estate industry.

In the fall of 2018 and winter 2019 the Green Building Workshop Series will focus on Net Zero Building Design. A forum will provide builders with information on technologies selected by local builders in the region. To support the workshops, home tours will be offered in October 2018 to demonstrate high performing energy efficient homes in the region. Attachment A provides an outline of workshops and events.

BACKGROUND

In 2010, the RDN adopted the Green Building Action Plan to coordinate outreach and educational activities to inspire residents to take action towards building highly energy efficient buildings. The Green Building Series is offered each fall to provide information on the latest developments in building science and to showcase how green buildings techniques contribute to the sustainability of the region.

In addition to the education and awareness programs, the RDN offers green building incentives to residents of the it's seven electoral areas and the District of Lantzville.

RDN Green Building Series 2017-2018

The 2017-2018 Green Building Series focused on the BC Energy Step Code that came into effect in December 2017. This technical regulation is a voluntary compliance path within the BC Building Code for residential and commercial buildings. The Step Code establishes progressive building performance steps that measure air-tightness to demonstrate the level of energy efficiency achieved for new construction projects. It is an incremental process designed to take the construction industry toward the target of net-zero energy ready buildings by 2032.

To increase awareness about the Step Code, the RDN coordinated a series of educational workshops, building tours and materials to promote energy efficient building (see Attachment B). The RDN and the City of Nanaimo worked collaboratively to co-sponsor a number of events and presentations. Some of these events included the Canadian Home Builders' Association Annual General Meeting in January 2018, and then in February 2018 the RDN hosted a Passive House Training Workshop titled Building Enclosures for High Performance Buildings. In addition, the RDN, along with the City of Nanaimo and BC Hydro, continues to support the Real Estate Energy Efficiency Program (REEP), which provides training to the real estate community on energy audits and labeling for existing homes. A summary of the outcomes from the workshops is provided as Attachment C.

The Green Building Series hosted workshops for industry stakeholders and allowed for two way communications with Provincial staff from the Building and Safety Standards Branch, as well as building science experts. Participation in the workshops included representation from regional and local governments as well as local First Nations. The RDN helped coordinate a number of tours of the Nanaimo Aboriginal Centre's new multi-family residential building on Bowen Road in Nanaimo, which has been built to Passive House Standard.

Feedback from Key Stakeholders

Feedback from local governments on Central Vancouver Island indicated that they intend to build local capacity and prepare industry for the eventual Step Code implementation. The RDN is seen to play an important role in facilitation, education and providing resources. Feedback collected from industry representatives that work in all municipalities and electoral areas within the RDN, indicated they need to better understand the cost implications of building to a higher energy efficiency standard.

Based on the feedback through the 2017-2018 Green Building Series, many Vancouver Island municipalities are looking to implement lower levels of the Step Code. The City of Nanaimo recently adopted the requirement for new construction to meet Step Code Level 1. It has been noted that implementation of the lower steps of the Step Code does not require significantly different building techniques than the current requirements under the existing BC Building Code.

2018-2019 Green Building Workshop Series and Home Tours

The RDN's 2018 Green Building Series is tentatively scheduled to include two workshops one on October 19th and a series of home tours. The proposed workshops will be delivered by building science experts and the content will focus on improving energy efficiency, thermal performance, moisture performance, sustainability, durability, and constructability of building envelope assemblies.

This year's workshops are being offered in cooperation with the Vancouver Island Chapter of the Canadian Home Builders' Association and the City of Nanaimo. The RDN is planning to organise home tours with local builders to showcase some of the region's most innovative, energy efficient homes. The workshops will target owner builders, builders, architects, developers, realtors, designers and planners. Learning credits are available for architects, builders, planners and building inspectors.

The RDN will be supporting residents and the local construction industry by hosting workshops demonstrating new building design techniques to achieve a high degree of energy efficiency. The RDN will provide information on the Green Building Incentives as well as the latest incentives implemented by the City of Nanaimo to support the City of Nanaimo's new Step Code 1 requirement. The workshops will also provide an opportunity for input into a possible implementation strategy for the RDN.

Home tours will be hosted in buildings that have achieved a high level of energy efficiency and have incorporated a range of sustainability elements. Homeowners and building experts will be available on site to share their experience and knowledge.

RDN Green Building Series Leadership Approach

The RDN is taking a voluntary approach to the Step Code. The ongoing presence of the Green Building Series in the RDN continues to develop strong community awareness of energy efficient building practices and sustainable building design. This information sharing continues to contribute to local resiliency in the electoral areas and within member municipalities. With a strong partnership with the Canadian Home Builders' Association and a continuation of Green Building Series workshops, the RDN will continue to demonstrate local leadership.

In addition to the Green Building Series, the RDN offers a Green Building Incentive Program. These initiatives have contributed to building a strong expectation of providing education and support to the building community. The construction industry is looking to the RDN for direction with regards to supporting the building community as they move towards adopting the lower steps of the Step Code and building energy efficient homes.

The City of Nanaimo's adoption of Step 1 is consistent with other Island municipalities in the Capital Regional District such as Victoria, Oak Bay and North Saanich. It is anticipated that Esquimalt, Colwood and Saanich will be moving ahead with Step Code adoption this fall.

Those municipalities that adopt the Step Code will provide a six month grace period where building applications will be considered in-stream and will not be subject to Step Code requirements. Building permit applications after a six month grace period will need to

demonstrate compliance with a level of the Step Code. Attachment D provides a list of BC communities that have either adopted or have indicated that they intend to adopt the Step Code.

FINANCIAL IMPLICATIONS

In 2017, the RDN received \$23,625 in BC Hydro funding from BC Hydro's Sustainable Communities program. The Board endorsed using these funds to augment the 2017-2018 Green Building Series.

Further funding is available from BC Hydro for those jurisdictions that adopt the Step Code. For example, if the RDN commits to a timeline to adopt the Step Code at Step 1 or higher for Part 9 new construction by December of 2019.

Through collaborative partnerships the 2018-2019 Green Building Series will be enhanced through the sharing of expenses. This year we are fortunate to be working with BC Housing, Natural Resources Canada, The City of Nanaimo and Canadian Home Builders Association to deliver the Green Building Workshop series.

STRATEGIC PLAN IMPLICATIONS

The funding received from BC Hydro's Sustainable Communities Program is aligned with the RDN Board's 2016-2020 Strategic Plan objectives to enhance collaboration and cooperation between municipalities and electoral areas to improve energy efficiency. The RDN's Green Building Series focused on the Board's strategic priority to develop a collaborative regional model for building capacity to increase knowledge and awareness with regard to constructing energy efficient buildings region wide.

The Green Building Program helps achieve the RDN Strategic Plan to develop sustainable and resilient communities. This can be achieved by constructing high performance energy efficient buildings within the RDN to meet growing demand for affordable housing in the region.



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September 14, 2018

Reviewed by:

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Attachments:

- Attachment A – 2018-2019 Green Building Series - Activities & Workshops
- Attachment B – 2017-2018 Green Building Series - Activities & Workshops
- Attachment C – Key Findings from the 2017-2018 Green Building Series
- Attachment D – Approach to Step Code in other BC Communities

ATTACHMENT A

2018-2019 Green Building Series - Activities & Workshops

DATE	RDN GREEN BUILDING SERIES - ACTIVITIES & WORKSHOPS	LOCATION / PARTNER
Oct 04-18	CANADIAN HOME BUILDERS' ASSOCIATION AGM KICK OFF Introduction Of Energy Efficient Building Technologies	CHBA/RDN/CON
Oct 06-18	NANAIMO ABORIGINAL CENTRE (NAC)—KICK OFF HOME TOUR The NAC is a 25 unit affordable housing project that has been built to passive house standards. Target Audience: General Public, Elected Officials, Local Government Staff, Construction industry	Nanaimo Aboriginal Centre
Oct 19-18	LEEP (Local Energy Efficient Partnerships) <i>Building technology Forum: WORKSHOP #1</i> Target Audience: Construction Industry - Building Inspectors	Nanaimo Golf Club BC Housing & Natural Resources Canada
Oct 13-18 Oct 27-18	HOME TOURS to be finalized Target Audience: General Public, Construction Industry - Building Inspectors	RDN Office
Jan 25/19	CONSTRUCTION INDUSTRY: WORKSHOP #2 <i>Construction Of Energy Efficient Wall Assemblies</i>	CHBA/RDN/BCIT

ATTACHMENT B

2017- 2018 Green Building Series - Activities & Workshops

DATE	RDN GREEN BUILDING SERIES - ACTIVITIES & WORKSHOPS	ATTENDANCE	LOCATION / PARTNER
Oct 17/17	<p><i>NANAIMO ABORIGINAL CENTRE (NAC) - KICK OFF TOUR</i></p> <p>The NAC is a 25 unit affordable housing project that has been built to passive house standards.</p> <p><i>Target Audience: Elected Officials, Senior Staff & Policy Planning Staff</i></p>	40	Nanaimo Aboriginal Centre
Nov 17/17	<p><i>LOCAL GOVERNMENT: WORKSHOP #1</i></p> <p>Working session on BC Energy Step Code Policy & Implementation:</p> <p><i>Target Audience: Elected Officials, Senior Staff & Policy Planning Staff</i></p>	35	RDN Office
Dec 6/17	<p><i>THE BC ENERGY STEP CODE IMPLEMENTATION: WORKSHOP #2</i></p> <p><i>(PART 3 & 9 BUILDINGS):</i></p> <p><i>Target Audience: Local Government - Building Inspectors</i></p>	30	RDN Office
Jan 25/18	<p><i>CANADIAN HOME BUILDERS ASSOCIATION (CHBA) Builders Forum:</i></p> <p>Working with the BC Energy Step Code</p> <p><i>Target Audience: Construction Industry & Architects</i></p>	100	CHBA/RDN
Feb 1/18	<p><i>BUILDING SMART WITH THE BC ENERGY STEP CODE – WORKSHOP #3</i></p> <p>Lower Steps, Climate Zone 5 (Nanaimo)</p> <p><i>Target Audience: General Construction Industry</i></p>	100	BC Housing
Feb 23/18	<p><i>PASSIVE HOUSE CANADA—WORKSHOP # 4</i></p> <p>Building enclosures for high performance buildings</p> <p><i>Target Audience: Local Government, Construction Industry, and Architects</i></p>	35	Passive House Canada / RDN
Mar 27/18	<p><i>SELLING THE BENEFITS OF ENERGY EFFICIENCY/GREEN BUILDING TOUR: WORKSHOP #5</i></p> <p><i>Target Audience: Real Estate Industry</i></p>	30	RDN/VIREB

ATTACHMENT C

Key Findings from the 2017-2018 Green Building Series

OUTCOMES AND REGIONAL OPPORTUNITIES

Key findings from the 2017-2018 Green Building Workshop Series.

1.0 BARRIERS

The following barriers were identified:

- **Financial Comments:**
Owner builders are cost conscious and even small incremental costs may create challenges for affordability of housing.
- **Voluntary Adoption:**
The voluntary nature of Step Code adoption creates challenges for local governments who are sensitive to community and industry feedback. Better if the Province sets implementation dates for adopting levels of the BC Energy Step Code.
- **Lack of Capacity:**
Energy advisor capacity in the region is currently low due to limited demand.
- **Moderately Low Levels of Awareness:**
As the BC Energy Step Code is new there is still moderately low awareness among industry and the public. Increasing awareness will need multiple years and an ongoing engagement strategy.

2.0 HIGH LEVEL OF INTEREST AND ONGOING ENGAGEMENT NEEDED TO PREPARE FOR IMPLEMENTATION

Workshop participants showed a high level of interest in learning about the BC Energy Step Code.

- The BC Energy Step Code is a new policy and all the key stakeholders wanted to hear how to prepare for implementation.
- There is a need for ongoing dialogue and engagement of all key stakeholders.
- There is a need for an online resource for Frequently Asked Questions on the BC Energy Step Code.
- There is interest in accessing model BC Energy Step Code implementation documents.
- There is interest in understanding the baseline of how many builders have been building energy efficient homes prior to the introduction of the BC Energy Step Code and in tracking the future annual uptake in the region.

3.0 REGIONAL COLLABORATION AND COORDINATION

There is a high level of interest in regional collaboration and coordination. The priorities and highlights identified for regional collaboration and coordination include:

- Interest in model BC Energy Step Code processes (process maps) for integrating the BC Energy Compliance Report into existing permitting processes and in model language and materials to assist local governments to implement BC Energy Step Code policies.
- **To gather feedback:** prepare a survey designed for the construction industry to gather feedback on the opportunities and challenges for local builders to meet the BC Energy Step Code.
- **Encouragement of Voluntary Adoption of the BC Energy Step Code:** to assist in building market demand and voluntary industry participation in the BC Energy Step Code.
- **Feedback on preferred options include:**
 - Consumer and real estate industry engagement on value proposition for purchasing energy efficient homes.
 - Supporting BC Energy Step Code builder orientation sessions and learning forums.
 - Consult with a qualified energy advisor early in the design process.
- **Incentives:**

While there is interest in the region for exploring incentive and rebate type programs to encourage industry to build to BC Energy Step Code levels, there are also concerns.

Common concerns highlighted are as follows:

- What are the costs of incenting energy efficient new construction?
- When there is limited budget for other community priorities, what will be the cost to the community?
- How does the BC Energy Step Code impact the affordability of homes?
- **Role for RDN:**

It was highlighted through stakeholder consultation that in order to advance the BC Energy Step Code education, the RDN should continue to play a coordination role and provide the following:

 - Continue bringing together local governments, residents and construction industry stakeholders for workshops and education in 2018-2019.
 - Develop and/or share model BC Energy Step Code policies and programs.
 - Advance discussions on appropriate BC Energy Step Code incentives and rebates.

ATTACHMENT D

Approach to Step Code in Other BC Communities

The following local governments have adopted the Step Code:

- City of North Vancouver
- District of North Vancouver
- District of West Vancouver
- City of Vancouver
- City of Nanaimo
- City of Victoria
- District of North Saanich
- District of Oak Bay

At the time of writing, the local governments listed below have provided a notification to the Province stating their intent to engage with industry on an adoption approach to the Step Code. Together, these municipalities make up more than 60% of residential building permits in BC:

- City of Richmond - June 16, 2017
- City of North Vancouver - July 4, 2017
- City of Campbell River - July 10, 2017
- City of Duncan - August 24, 2017
- District of North Vancouver - September 1, 2017
- City of Victoria - September 27, 2017
- District of Saanich - September 27, 2017
- Comox Valley Regional District - October 3, 2017
- District of North Saanich - October 4, 2017
- Resort Municipality of Whistler - October 5, 2017
- District of West Vancouver - October 24, 2017
- Township of Langley - November 7, 2017
- District of Squamish - November 9, 2017
- City of New Westminster - November 28, 2017
- City of Surrey - December 7, 2017
- City of Kelowna - January 22, 2018
- City of Penticton - January 27, 2018
- City of Burnaby - March 1, 2018
- City of Kimberley - March 12, 2018
- City of Vernon - March 19, 2018
- Village of Belcarra - March 27, 2018
- District of Peachland - March 28, 2018
- City of Nanaimo - June 25, 2018